City of Pittsburg
Community and Economic Development Department – Planning Division
65 Civic Avenue, Pittsburg, CA 94565 | Tel: (925) 252-4920 | Fax: (925) 252-4814

NOTICE OF PREPARATION

To: State Clearinghouse
1400 Tenth Street
Sacramento, California 95814

From: City of Pittsburg, Community & Economic Development Department, Planning Division
65 Civic Avenue
Pittsburg, California 94565

To: Interested Parties; Responsible & Trustee Agencies

Subject: Notice of Preparation of a Draft Environmental Impact Report for the Proposed Harbor View Project

The City of Pittsburg is the lead agency for the preparation of an Environmental Impact Report (EIR) for the Harbor View Project (proposed project). The scope of the EIR has been proposed based upon a determination by the City. The City has directed the preparation of this EIR in compliance with the California Environmental Quality Act (CEQA).

Once a decision is made to prepare an EIR, the lead agency must prepare a Notice of Preparation (NOP) to inform all responsible and trustee agencies that an EIR will be prepared (CEQA Guidelines Section 15082). The purpose of the NOP is to provide agencies with sufficient information describing both the proposed project and the potential environmental effects to enable the agencies to make a meaningful response as to the scope and content of the information to be included in the EIR. The City is also soliciting comments on the scope of the EIR from interested persons.

Project Title: Harbor View Project

Project Applicant: The Harbor View Owner LPV, LLC

Date _____ Signature _____

Title Assistant Planner

Telephone (925) 252-4824

Reference: California Code of Regulations, Title 14, (California Environmental Quality Act Guidelines) Sections 15082(a), 15103, 15375.

PUBLIC SCOPING MEETING AND COMMENT SUBMITTAL

A scoping meeting open to the public will be held to receive public comments and suggestions on the scope of the EIR. At this meeting, staff will give a brief presentation of the EIR process and will take public comment on the scope of the proposed EIR and alternatives. The scoping meeting will be open to the public and held online using the following Zoom Information:

Date: August 23, 2022
Time: 9:00 AM to 10:00 AM Pacific Time
Zoom Link: https://us02web.zoom.us/j/83857381642?pwd=WXpQOHFBZzZkWVNiSkNwZ11 1bStKQT09
Meeting ID: 838 5738 1642
Passcode: 372198

The purpose of the EIR is to provide information about potential significant physical environmental impacts of the proposed project, to identify possible ways to minimize those significant impacts, and to describe and analyze possible alternatives to the proposed project if potential significant impacts are identified. Preparation of an NOP or EIR does not indicate a decision by the City to approve or disapprove the project. However, prior to making any such decision, the City Council must review and consider the information contained in the EIR.

Written comments on the scope of the EIR are encouraged. **Please submit comments by 5:00 PM on September 12, 2022**. Written comments should be sent to Kelsey Gunter, Assistant Planner, at 65 Civic Avenue, Pittsburg, California 94565, or via email at kgunter@pittsburgca.gov.

Questions concerning the environmental review of the proposed project should be directed to Kelsey Gunter at (925) 252-4824; however, please note that comments on the scope of the Draft EIR cannot be accepted over the phone. To be considered during preparation of the EIR, comments must be received in writing by the deadline identified above.

PROJECT LOCATION AND SETTING:

The project site is located at 420 East 3rd Street, southwest of the intersection of East 3rd Street and Harbor Street, approximately one mile north of State Route (SR) 4 in the City of Pittsburg, California (see Figure 1 and Figure 2). The 20.5-acre site is identified by Assessor's Parcel Number 073-050-001. Currently, the project site consists primarily of ruderal grasses and is absent of structures. A 3.46-acre berm area extends north-to-south along the eastern boundary of the project site. Scattered trees are located along the west and south boundaries of the project site. The City of Pittsburg General Plan designates the site as Downtown Commercial and Downtown Medium Density Residential. The site is zoned Pedestrian Commercial (CP) and Downtown Medium Residential – Limited Overlay District (RMD-O).

A portion of the 8th Street Greenbelt, a ten-block linear park, and a tot lot are located directly south of the project site. Single-family residences are located further south, across East 8th Street, and immediately west of the project site. The Railroad Avenue commercial corridor is located further west, approximately 1,200 feet from the project site. Undeveloped land is located north of the project site, across East 3rd Street, and the New York Slough is located further north. Industrial uses, including a glass shop, auto body shop, and the Los Medanos Energy Center, are located east of the project site, across Harbor Street.

Figure 1
Regional Location Map



Figure 2
Project Location and Adjacent Uses



*Project Site boundaries are approximate.

PROJECT COMPONENTS

The proposed project would include the subdivision of the project site and subsequent construction of 227 residential units, as well as associated internal roadways, bioretention facilities, and open space/landscaping (see Figure 3). The project would require approval of a Rezone, Vesting Tentative Map, and Design Review. The aforementioned project components are discussed in further detail below.

Rezone

The proposed project would include a Zoning Overlay Amendment of the project site to modify the existing Limited Overlay of the project site's RMD zoning designation in order to allow for smaller lot sizes, while keeping the average lot size no less than 2,200 sf. The RMD District is intended to provide opportunities for residential development with increased land coverages for attached or detached single-family residences and multifamily residences such as townhouses, apartment complexes with 16 or more units, and condominiums. The RMD District allows for a maximum density of a 2,500-sf lot area per unit.

Vesting Tentative Map

The Vesting Tentative Map would subdivide the project site into 227 residential lots, an internal circulation network, bioretention facilities, and open space/landscaping.

The 20 northernmost lots, which generally front East 3rd Street, would be developed with mixed-use live/work duplexes at a density of 26 to 27 dwelling units per acre (du/ac). The ground floor or each unit would provide approximately 420 square feet (sf) of commercial space and/or private work space, ultimately up to the discretion of the property owner.

Immediately south of the proposed live/work units would be 101 generally 36-foot by 55-foot single-family lots. The residential units would generally be designed with three bedrooms and three or 3.5 bathrooms, and the development density would be 15 to 16 du/ac. The southern half of the project site would consist of 106 generally 42-foot by 55-foot single-family lots. The units would generally be designed with three or four bedrooms and 3.5 bathrooms, and the development density would be 11 to 13 du/ac.

A 2,329-sf neighborhood park lot is proposed west of the driveway entrance from Harbor Street, with a water detention basin extending westward from the park's western edge. Two additional detention basins are proposed to the north and south of the driveway entrance. The northern basin would extend from East 3rd Street along the berm area to the driveway entrance, while the other basin would extend south along the berm area from the driveway entrance to the southernmost residential unit.

Access and Circulation

Site access would be provided by one new 46-foot driveway located off of East 3rd Street from the north, and one new approximately 56-foot driveway located off of Harbor Street from the east. All internal lanes and drive aisles would meet the minimum width that can accommodate an emergency vehicle. The project site would include 83 on-street parking stalls, and each home would include a two-car garage. As a whole, the project site would accommodate 454 parking spaces. Development of the proposed project would also include new curb, gutter, sidewalk, and landscaping along Harbor Street and East 3rd Street.

Figure 3
Project Site Plan



Site Summary

Total acreage:	20.5
Berm/Slope area acreage:	3.46
Development envelope:	17.04
Total unit count:	226
Du/ac (includes water quality):	13.26
Zoning:	RMD - O

Product No.	Net du/ac	Arch product	Plan	Bed/bath	Notes	SF	Unit count
1	15-16	36' x 55'	Plan 1	3/3		1,792	33
			Plan 2	3/3.5		1,829	33
			Plan 3	3/3		1,891	33
			Plan 1-LW	3/3		1,792	2
						Total:	**101**
2	11-13	42' x 55'	Plan 1	3/3.5		1,980	35
			Plan 2	4/3.5		2,060	35
			Plan 3	4/3.5		2,120	35
						Total:	**105**
3	26-27	Live/Work	Plan 1	1/1		1,270	20
						Total:	**20**
						Grand Total:	**226**

Landscaping

As part of the proposed project, each residence, with the exception of the live/work duplexes, would include a private yard space. Trees would be planted along each internal roadway, as well as along the eastern site border along Harbor Street. As detailed above, a new park would be constructed at the Harbor Street entrance and landscape pockets would line the internal loop road. A protected 3.46-acre berm which contains contaminated soils runs along the eastern boundary of the project site, and will be managed and maintained as required by previously approved permits. Bioretention treatment and landscape features are proposed along the eastern boundary of the project site between the site and the berm.

Utilities

Water supply for the proposed project would be provided by the City of Pittsburg through the Contra Costa Water District (CCWD). The City operates a water treatment plant and associated infrastructure facilities, which primarily serve customers within the City limits. The proposed project would include construction of new on-site water lines, which would connect to the existing 16-inch water lines located within Harbor Street and East 3rd Street.

Sewer service for the proposed project would be provided by Delta Diablo, the City's wastewater provider. Existing 16-inch and 18-inch sanitary sewer lines are located within Harbor Street and East 3rd Street, respectively. A new network of sanitary sewer lines would be constructed on-site and would convey approximately 65 percent of the wastewater generated from the site to the existing 18-inch sewer line in East 3rd Street and approximately 35 percent of the wastewater generated from the site to the existing 16-inch sewer line in Harbor Street.

An existing 48-inch storm drain line is located in Harbor Street with two existing 24-inch stubs to the site. A new storm drain system would be constructed on-site and would collect the stormwater from the residential lots, streets, and open space areas and convey the stormwater to bioretention areas located between the residential lots and the berm area. The stormwater would be treated at the on-site bioretention areas prior to being discharged into the existing system in Harbor Street.

Solid waste pickup and disposal for the City is provided by Mt. Diablo Resource Recovery. Residential and commercial solid waste is disposed of at Potrero Hills Landfill, located east of Suisun City, while non-recyclable industrial waste is transported to Keller Canyon Landfill, located southeast of the city limits.

The proposed project would connect to the electricity, natural gas, and telecommunication infrastructure that exists in the project vicinity. Existing overhead utility lines on East 3rd Street would be removed and replaced underground as part of the project.

Design Review

Section 18.36.110 of the City's Municipal Code requires that a project that would subdivide more than five lots is subject to Design Review by the City. As such, the proposed project would be subject to a Design Review, the standards of which are delineated in Section 18.36.220 of the City's Municipal Code. Such review is intended to ensure that new development within the City generally contributes to the character and image of the City, conforms with the nature of the neighborhood, and is in harmony with existing developments in the general area.

Discretionary Actions

The proposed project would require the following discretionary actions by the City of Pittsburg:

- Certification of the EIR;
- Rezone of the project site to modify the existing overlay;
- Vesting Tentative Map; and
- Design Review.

DISCUSSION OF POTENTIAL IMPACTS

An Initial Study was prepared for the proposed project (see Attachment 1), which determined that the content of the EIR shall focus on the following areas of potential impacts: Greenhouse Gas Emissions and Transportation. In addition, statutorily required sections and discussion of project alternatives will be included. Some refinement to the aforementioned issues may be required based on comments received during the NOP scoping process. The following section describes each of the technical chapters of the EIR in further detail.

Information will be drawn from the City of Pittsburg General Plan and General Plan EIR, technical studies prepared, and any other information pertinent to the project area. Consistent with CEQA and the requirements of the City of Pittsburg, each environmental chapter will include an introduction, existing environmental setting, regulatory context, and impacts and mitigation measures.

Greenhouse Gas Emissions

The Greenhouse Gas (GHG) Emissions chapter of the EIR will include a discussion of the existing regulatory setting and context related to GHG Emissions, including Assembly Bill (AB) 32 and Senate Bill (SB) 32, and an impacts and mitigation section with quantitative data showing the project's contribution to the generation of GHG emissions during the construction and operational phases of the project, as well as a qualitative discussion of project consistency with the design features required by the Air District. The significance of impacts will be determined in comparison to the recommended Bay Area Air Quality Management District significance thresholds. Feasible and appropriate mitigation measures to avoid or reduce adverse impacts will be identified, as needed.

Transportation

The Transportation chapter of the EIR will be based on a Transportation Impact Study (TIS) prepared specifically for the proposed project. Impact determination for CEQA purposes will be based on vehicle miles traveled (VMT), consistent with CEQA Guidelines Section 15064.3, which became effective statewide on July 1, 2020. The VMT analysis will be quantitative in nature and will be prepared consistent with Contra Costa County's current guidance regarding analysis of VMT.

The proposed project's impacts to alternative modes of transportation, such as pedestrian, bicycle and transit facilities, will be assessed based on their significance criteria contained in the adopted Contra Costa County guidelines. The EIR chapter will also include an analysis of the proposed project's potential impacts related to conflicting with applicable programs, policies, and ordinances addressing the circulation system,

vehicle safety hazards, and emergency access. Feasible and appropriate mitigation measures to avoid or reduce adverse impacts will be identified, as needed.

Statutorily Required Sections

The Statutorily Required Sections chapter of the EIR will summarize potentially significant, unavoidable, significant irreversible, growth-inducing, and cumulative impacts of the proposed project. The chapter will summarize the cumulative impacts that will be contained in each technical chapter and will be qualitative in nature.

Alternatives to the Proposed Project

In accordance with Section 15126.6(a) of the CEQA Guidelines, the EIR will include an Alternatives analysis. The alternatives chapter will evaluate, at a minimum, three alternatives, including the No Project Alternative. Alternatives will be selected when more information related to project impacts is available so the alternatives can be designed to reduce significant project impacts. Any additional alternatives will be developed during preparation of the EIR to respond to identified significant impacts. The Alternatives chapter will describe the alternatives and identify the environmentally superior alternative. The alternatives will be analyzed at a level of detail less than that of the proposed project; however, the analyses will include sufficient detail to allow a meaningful comparison of the impacts. The Alternatives chapter will also include a section of alternatives considered but dismissed. A matrix comparing the impacts of the proposed project to the three alternatives will also be included.

APPENDIX 1
HARBOR VIEW PROJECT INITIAL STUDY

City of Pittsburg
Community and Economic Development Department
Planning Division

Harbor View Project

Initial Study

August 2022

Prepared by

RANEY PLANNING & MANAGEMENT, INC. 20 years
1501 Sports Drive, Suite A, • Sacramento • CA • 95834
Office 916.372.6100 • Fax 916.419.610

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Appendix A – Air Quality Emissions – CalEEMod Results
Appendix B – Biological Resources Assessment
Appendix C – Geotechnical Feasibility Evaluation
Appendix D – Phase I Environmental Site Assessment
Appendix E – Site Investigation Report
Appendix F – Environmental Noise Assessment

INITIAL STUDY
AUGUST 2022

A. PROJECT SUMMARY

1. Project Title: Harbor View Project

2. Lead Agency Name and Address: City of Pittsburg
Community and Economic Development Department
Planning Division
65 Civic Avenue
Pittsburg, CA 94565

3. Contact Person and Phone Number: Kelsey Gunter
Assistant Planner
(925) 252-4824

4. Project Location: 420 East 3rd Street
Pittsburg, CA 94565
Accessor's Parcel Number (APN): 073-050-001

5. Project Sponsor's Name and Address: Kevin Fryer
500 La Gonda Way
Danville, CA 94526
(925) 899-5065

6. General Plan Designation: Downtown Commercial and
Downtown Medium Density Residential

7. Existing Zoning Designation: Pedestrian Commercial (CP) and
Downtown Medium Residential – Limited Overlay (RMD-O)

8. Proposed Zoning Designation: Downtown Medium Density Residential (RMD-O) and
Pedestrian Commercial (CP)

9. Required Approvals from Other Public Agencies: Department of Toxic Substances Control

10. Surrounding Land Uses and Setting:

The 20.5-acre project site is identified by APN 073-050-001, and is located at 420 East 3rd Street in the City of Pittsburg, California. The project site is undeveloped and relatively flat, with the exception of a 3.46-acre berm area along the eastern boundary of the project site. Scattered trees are present along the western and southern boundaries of the site. The project site is generally bound by Harbor Street to the east, East 8th Street/the East 8th Street Greenbelt to the south, and East 3rd Street to the north. Surrounding existing land uses include industrial uses to the east, across Harbor Street; single-family residences to the west and to the south, across East 8th Street; a portion of the 8th Street Greenbelt and a tot lot to the south; and undeveloped land to the north, across East 3rd

Street, beyond which is the New York Slough. The City of Pittsburg General Plan designates the site as Downtown Commercial and Downtown Medium Density Residential. The site is zoned Pedestrian Commercial (CP) and Downtown Medium Residential – Limited Overlay District (RMD-O).

11. Project Description Summary:

    The Harbor View Project (proposed project) would include subdivision of the project site and subsequent development of 227 residential units. The 20 northernmost units would be live/work duplexes with 420 square feet of ground floor commercial space and/or private work space. Primary site access would be provided by one new driveway off of Harbor Street and one new driveway off of East 3rd Street. Landscaping and trees would be provided throughout the site. A central park is proposed at the Harbor Street entrance. A bioretention area and landscape features are proposed on the western edge of the berm. In addition, existing overhead utility lines along the project frontage on East 3rd Street would be removed and replace underground. The project would require approval of a Rezone; Vesting Tentative Map; and Design Review.

12. Status of Native American Consultation Pursuant to Public Resources Code Section 21080.3.1.

    In compliance with Assembly Bill (AB) 52 (Public Resources Code [PRC] Section 21080.3.1), project notification letters were distributed to the Amah Mutsun Tribal Band of Mission San Juan Bautista, the Chicken Ranch Rancheria of Me-Wuk Indians, the Guidiville Indian Rancheria, the Indian Canyon Mutsun Band of Costanoan, the Muwekma Ohlone Indian Tribe of the San Francisco Bay Area, the Nashville Enterprise Miwok-Maidu-Nishinam Tribe, the North Valley Yokuts Tribe, the Ohlone Indian Tribe, and the Wilton Rancheria. The letters were distributed on April 14, 2022 and requests to consult were not received within the required response period.

B. SOURCES

The following documents are referenced information sources used for the purposes of this Initial Study:

1. Bay Area Air Quality Management District. *California Environmental Quality Act Air Quality Guidelines*. May 2017.
2. California Air Resources Board. *The 2017 Climate Change Scoping Plan Update.* November 2017.
3. California Building Standards Commission. *California Green Building Standards Code*. 2019.
4. California Department of Conservation. *California Tsunami Maps and Data.* Available at: https://www.conservation.ca.gov/cgs/tsunami/maps. Accessed February 2022.
5. California Department of Conservation. *Contra Costa County Important Farmland 2016.* Available at: https://www.conservation.ca.gov/dlrp/fmmp/Pages/ContraCosta.aspx. Accessed December 2021.
6. California Department of Conservation. *Contra Costa County Agricultural Preserves Map 2016.* Available at: https://www.contracosta.ca.gov/DocumentCenter/View/882/Map-of-Properties-Under-Contract?bidId=. Accessed June 2022.
7. California Department of Forestry and Fire Protection. *Contra Costa County, Very High Fire Hazard Severity Zones in LRA*. January 7, 2009.

8. California Department of Resources Recycling and Recovery (CalRecycle). *Facility/Site Summary: Potrero Hills Landfill (48-AA-0075)*. Available at: https://www2.calrecycle.ca.gov/SolidWaste/Site/Summary/3591. Accessed December 2021.
9. California Department of Transportation. *California Scenic Highway Mapping System*. Available at: https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa. Accessed February 2022.
10. California Department of Toxic Substances Control. *Hazardous Waste and Substances Site List*. Available at: https://www.envirostor.dtsc.ca.gov/public/. Accessed June 2022.
11. City of Pittsburg. *City of Pittsburg 2020 Urban Water Management Plan Final Draft.* July 2021.
12. City of Pittsburg. *City of Pittsburg General Plan Environmental Impact Report (SCH No. 1999072109)*. January 2001.
13. City of Pittsburg. *Emergency Operations Plan.* December 2018.
14. City of Pittsburg. *Existing Conditions Report, City of Pittsburg General Plan Update*. November 2019.
15. City of Pittsburg. *General Plan Pittsburg 2020: A Vision for the 21st Century*. Adopted November 16, 2001.
16. City of Pittsburg. *Pittsburg Municipal Code.* May 16, 2022.
17. Contra Costa County Fire Protection District. *Station Address.* Available at: https://www.cccfpd.org/station-address. Accessed February 2022.
18. Contra Costa Water District. *2020 Urban Water Management Plan for the Contra Costa Water District*. June 2021.
19. Delta Diablo Sanitation District. *Sewer System Management Plan*. October 10, 2018.
20. Delta Diablo Sanitation District. *Transforming Wastewater to Resources*. Available at: https:// https://www.deltadiablo.org/about-us. Accessed February 2022.
21. East Contra Costa County Conservancy. *Figure 9-1: Development Fee Zones*. Accessible at: https://www.cocohcp.org/DocumentCenter/View/955/High-Resolution-Development-Fee-Zone-Map-PDF. Accessed July 2022.
22. East Contra Costa County Conservancy. *Final East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan, Chapter 3 Physical and Biological Resources*. Updated December 19, 2006.
23. ENGEO Incorporated. *420 East 3rd Street Development, Pittsburg, California, Geotechnical Feasibility Evaluation.* April 1, 2021.
24. Federal Emergency Management Agency. *Flood Insurance Maps.* Available at: https://msc.fema.gov/portal/search?AddressQuery=420%20East%203rd%20Street%2C%20Pittsburg%2C%20CA#searchresultsanchor. Accessed February 2022.
25. Fehr & Peers. *Draft Transportation Impact Assessment – Pittsburg Harbor View.* June 2022.
26. GSI Environmental Inc. *Site Investigation Report: 420 E. 3rd Street, Pittsburg, California.* June 2021.
27. Helix Environmental Planning, Inc. *Biological and Wetland Constraints Letter Report for the Harbor View Project, City of Pittsburg, Contra Costa County, CA.* March 12, 2021.
28. H.T. Harvey & Associates. *East Contra Costa County Habitat Conservation Plan – Assessment of Plan Effects on CEQA Species.* February 17, 2015.
29. Native American Heritage Commission. *Letter RE: 420 E. 3rd Street Project, Contra Costa County*. February 14, 2022.
30. Northwest Information Center. *Records Search Results for the Proposed 420 East 3rd Street Project*. December 6, 2021.
31. Pittsburg Police Department. *Annual Report – Fiscal Year 2018-2019.* December 2019.

32. Saxelby Acoustics. *Environmental Noise Assessment Harbor View Residential*. June 8, 2022.
33. U.S. Geological Survey. *U.S. Quaternary Faults.* Available at: https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf. Accessed February 2022.
34. United States Census Bureau. *QuickFacts Pittsburg City, California.* Available at: https://www.census.gov/quickfacts/pittsburgcitycalifornia. Accessed February 2022.
35. United States Department of Agriculture, Natural Resources Conservation Service. *Web Soil Survey*. Available at: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed February 2022.
36. Weather Spark. *Average Weather in Pittsburg* Available at: https://weatherspark.com/y/1150/Average-Weather-in-Pittsburg-California-United-States-Year-Round. Accessed June 2022.

C. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant" or as indicated by the checklist on the following pages.

☐ **Aesthetics**	☐ **Agriculture and Forest Resources**	☐ **Air Quality**
☐ **Biological Resources**	☐ **Cultural Resources**	☐ **Energy**
☐ **Geology and Soils**	☒ **Greenhouse Gas Emissions**	☐ **Hazards and Hazardous Materials**
☐ **Hydrology and Water Quality**	☒ **Land Use and Planning**	☐ **Mineral Resources**
☐ **Noise**	☐ **Population and Housing**	☐ **Public Services**
☐ **Recreation**	☒ **Transportation**	☐ **Tribal Cultural Resources**
☐ **Utilities and Service Systems**	☐ **Wildfire**	☐ **Mandatory Findings of Significance**

D. DETERMINATION

On the basis of this initial study:

☐ I find that the Proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the Proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the applicant. A MITIGATED NEGATIVE DECLARATION will be prepared.

☒ I find that the Proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature	Date
Kelsey Gunter, Assistant Planner	City of Pittsburg, Planning Division

E. BACKGROUND AND INTRODUCTION

This Initial Study identifies and analyzes the potential environmental impacts of the Harbor View Project (proposed project). The information and analysis presented in this document is organized in accordance with the order of the California Environmental Quality Act (CEQA) checklist in Appendix G of the CEQA Guidelines.

Where the analysis provided in this document identifies potentially significant environmental effects of the project that can be mitigated to a less-than-significant level, mitigation measures are prescribed. Where the analysis provided in this document identifies potentially significant environmental effects of the project that require additional analysis, further evaluation of such effects will be provided in the Environmental Impact Report (EIR) to be prepared for the project.

In January of 2001, the City of Pittsburg adopted a comprehensive update to the City's General Plan[1] and certified an associated EIR.[2] The City's current General Plan set forth a policy framework to guide the City's long-term growth and development through the year 2020. The City is currently in the process of updating the General Plan so the document can continue to provide critical guidance for development in the City through the year 2040; however, the General Plan Update has not yet been completed. Thus, the current General Plan, adopted in 2001, is still considered the relevant document for the purposes of the analysis included in this Initial Study. Applicable portions of the General Plan and General Plan EIR are incorporated by reference, as necessary, as part of this Initial Study. The General Plan EIR is a program EIR, prepared pursuant to Section 15168 of the CEQA Guidelines (Title 14, California Code of Regulations [CCR], Sections 15000 et seq.). The General Plan EIR analyzed full implementation of the General Plan and identified measures to mitigate the significant adverse impacts associated with the General Plan.

Project-specific technical reports have been prepared for the proposed project and form the basis of several technical sections of this Initial Study. All technical reports used in the preparation of this Initial Study are attached as appendices, and/or available upon request at the City of Pittsburg Community and Economic Development Department, Planning Division.

The mitigation measures prescribed for environmental effects described in this Initial Study would be implemented in conjunction with the project, as required by CEQA, and the mitigation measures would be incorporated into the project. In addition, findings and a project Mitigation Monitoring and Reporting Program (MMRP) would be adopted in conjunction with approval of the project.

F. PROJECT DESCRIPTION

The following section provides a comprehensive description of the proposed project in accordance with CEQA Guidelines, including project location and setting, project site history, and project components.

Project Location and Setting

The project site is located at 420 East 3rd Street, southwest of the intersection of East 3rd Street and Harbor Street, approximately one mile north of State Route (SR) 4 in the City of Pittsburg, California (see Figure 1 and Figure 2). The 20.5-acre site is identified by APN 073-050-001. Currently, the project site consists primarily of ruderal grasses and is absent of structures.

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1 City of Pittsburg. *Pittsburg 2020: A Vision for the 21st Century City of Pittsburg General Plan.* January 2001.
2 City of Pittsburg. *Pittsburg 2020: A Vision for the 21st Century City of Pittsburg General Plan Environmental Impact Report.* January 2001.

Figure 1
Regional Project Location

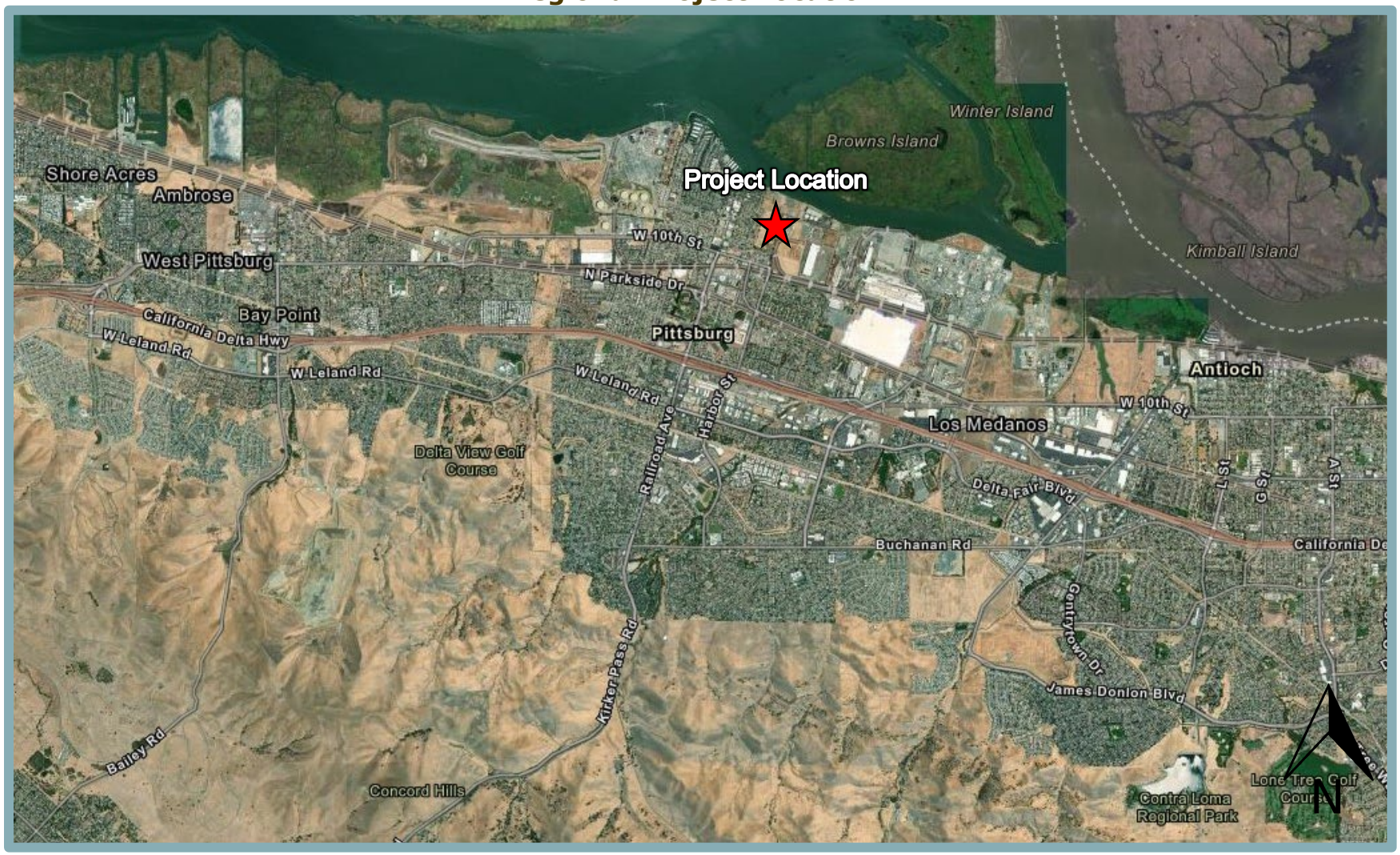


Figure 2
Project Site Boundaries



Project Site boundaries are approximate.

A 3.46-acre berm area runs north-to-south along the eastern boundary of the project site. Scattered trees are located along the west and south boundaries of the project site.

A portion of the 8th Street Greenbelt, a ten-block linear park, and a tot lot are located directly south of the project site. Single-family residences are located further south, across East 8th Street, and immediately west of the project site. The Railroad Avenue commercial corridor is located further west, approximately 1,200 feet from the project site. Undeveloped land is located north of the project site, across East 3rd Street, and the New York Slough is located further north. Industrial uses, including a glass shop, auto body shop, and the Los Medanos Energy Center are located east of the project site, across Harbor Street. The project site is designated Downtown Commercial and Downtown Medium Density Residential by the General Plan land use map and the site is zoned CP and RMD-O.

Project Site History

Historically, the project site was occupied since the mid-1920s by a manufacturing plant that produced asbestos-cement products, asphalt roofing materials, and asbestos-containing pipe covering. Manufacture of asbestos-containing materials ceased in 1980 and commercial-grade roofing materials were manufactured at the plant until 2003, when operations terminated. Several environmental investigations were conducted at the former manufacturing site, beginning in 1986 and continuing through 2005, and areas of potential concern associated with asbestos-containing materials were identified.

The selected remedy for the environmental concerns at the project site was the removal of asbestos-containing materials and petroleum hydrocarbon-affected soil from the site and placement in engineered containment berms along the eastern boundary of the project site. Asbestos-impacted material and debris were placed into a trench excavated to 10 feet below ground surface (bgs) along the eastern boundary of the site, which was then capped by hydrocarbon-impacted soil. An engineered textile and two feet of clean, low-permeability soil was then added to the top of the materials to create the capped, vegetated berms. An automated irrigation system exists to maintain the vegetation. The berms consist of two distinct segments referred to below as the "northern" and "southern" berms. Drainage swales were installed adjacent to the berm and graded such that stormwater runs off toward catch basins on the eastern site boundary. All remedial actions have been completed and approved by the Department of Toxic Substances Control (DTSC);[3] however, ongoing maintenance and monitoring is required. The remediation system is required to be operated and maintained as described in the Site Operation and Maintenance Plan[4] until the DTSC authorizes its modification or discontinuation. The remediation system is also evaluated every five years to determine if human health and the environment are being adequately protected.

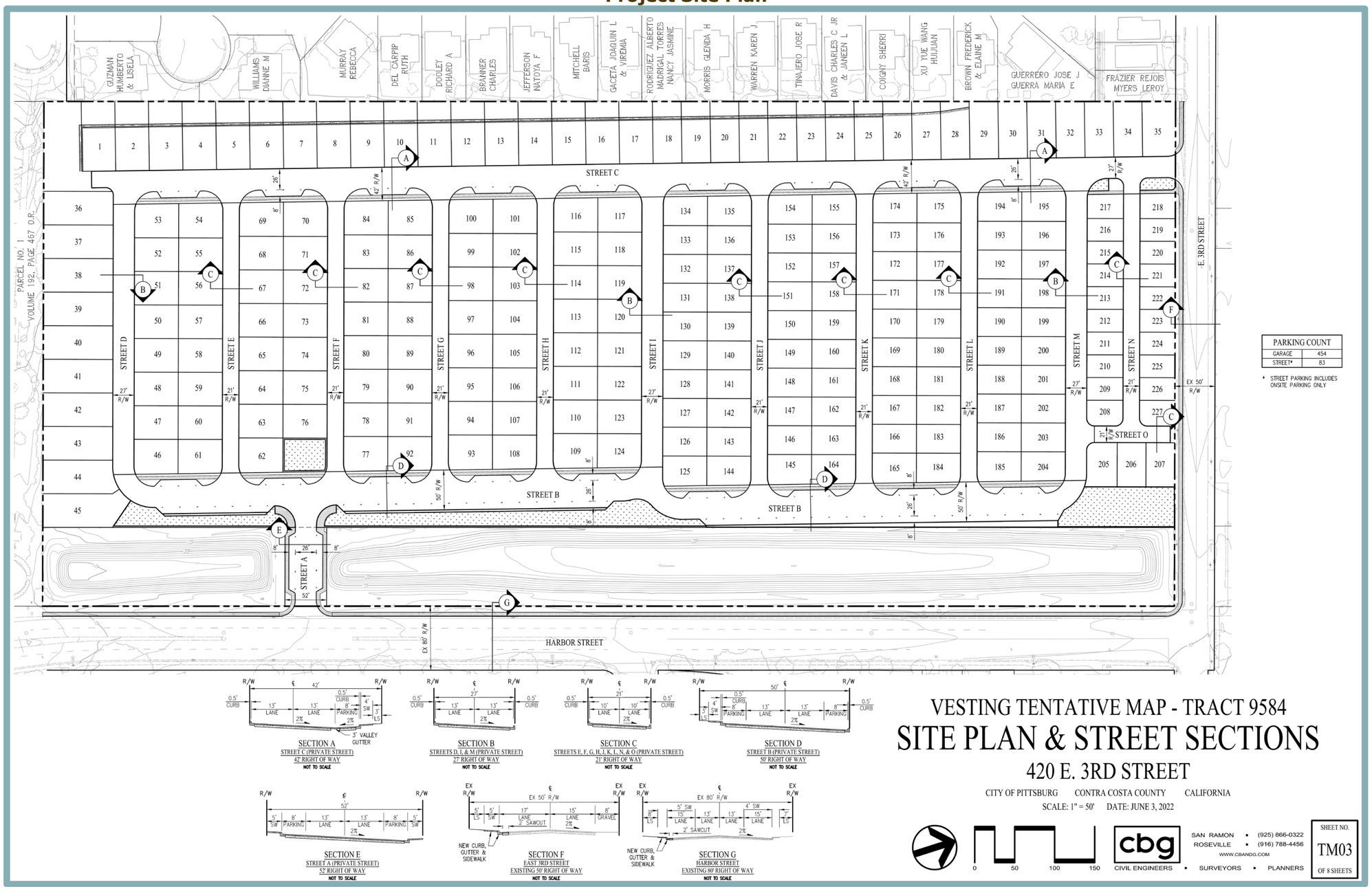
Project Components

The proposed project would include the subdivision of the project site and subsequent construction of 227 residential units, as well as associated internal roadways, bioretention facilities, and open space/landscaping (see Figure 3). The project would require approval of a Rezone, Vesting Tentative Map, and Design Review. The aforementioned project components are discussed in further detail below.

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3 GSI Environmental Inc. *Site Investigation Report: 420 E. 3rd Street, Pittsburg, California.* June 2021.
4 *Ibid.*

Figure 3
Project Site Plan



Rezone

The proposed project would include a Rezone of the project site to modify the existing Limited Overlay of the project site's RMD zoning designation. The Rezone proposes to modify the existing Limited Overlay, which applies only to the RMD portion of the site, to reduce the minimum residential lot size within the Limited Overlay area from 2,200 square feet to 1,980 square feet but require that the average lot size be no less than 2,200 square feet. The RMD District is intended to provide opportunities for residential development with increased land coverages for attached or detached single-family residences and multifamily residences such as townhouses, apartment complexes with 16 or more units, and condominiums. The RMD District allows for a maximum density of a 2,500-sf lot area per unit.

Vesting Tentative Map

The Vesting Tentative Map would subdivide the project site into 227 residential lots, an internal circulation network, bioretention facilities, and open space/landscaping.

The 20 northernmost lots, which generally front East 3rd Street, would be developed with mixed-use live/work duplexes. The ground floor of each unit would provide approximately 420 square feet (sf) of commercial space and/or private work space, ultimately up to the discretion of the property owner. Immediately south of the proposed live/work units would be 101 generally 36-foot by 55-foot single-family lots. The residential units would generally be designed with three bedrooms and three or 3.5 bathrooms. The southern half of the project site would consist of 106 generally 42-foot by 55-foot single-family lots. The units would generally be designed with three or four bedrooms and 3.5 bathrooms. The development density of all on-site residential units would be 13.32 dwelling units per acre (du/ac).

A 2,329-sf neighborhood park lot is proposed west of the driveway entrance from Harbor Street, with a stormwater detention basin extending westward from the park's western edge. Two additional detention basins are proposed to the north and south of the driveway entrance. The northern basin would extend from East 3rd Street along the berm area to the driveway entrance, while the other basin would extend south along the berm area from the driveway entrance to the southernmost residential unit.

Access and Circulation

Site access would be provided by one new 27-foot driveway located off of East 3rd Street from the north, and one new approximately 26-foot driveway located off of Harbor Street from the east. All internal lanes and drive aisles would meet the minimum width that can accommodate an emergency vehicle. The project site would include 83 on-street parking stalls, and each home would include a two-car garage. As a whole, the project site would accommodate 454 parking spaces. Development of the proposed project would also include new curb, gutter, sidewalk, and landscaping along Harbor Street and East 3rd Street.

Landscaping

As part of the proposed project, each residence, with the exception of the live/work duplexes, would include a private yard space. Trees would be planted along each internal roadway, as well as along the eastern site border along Harbor Street. As detailed above, a new park would be constructed at the Harbor Street entrance and landscape pockets would line the internal loop road. As noted previously, a protected 3.46-acre berm extends along the eastern boundary of the project site, which will be managed and maintained as required by previously approved permits. Bioretention areas and landscape features are proposed along the eastern boundary of the project site between the site and the berm.

Utilities

Water supply for the proposed project would be provided by the City of Pittsburg through the Contra Costa Water District (CCWD). The City operates a water treatment plant and associated infrastructure facilities, which primarily serve customers within the City limits. The proposed project would include construction of new on-site water lines, which would connect to the existing 16-inch water lines located within Harbor Street and East 3rd Street.

Sewer service for the proposed project would be provided by Delta Diablo, the City's wastewater provider. Existing 16-inch and 18-inch sanitary sewer lines are located within Harbor Street and East 3rd Street, respectively. A new network of sanitary sewer lines would be constructed on-site and would convey approximately 65 percent of the wastewater generated from the site to the existing 18-inch sewer line in East 3rd Street and approximately 35 percent of the wastewater generated from the site to the existing 16-inch sewer line in Harbor Street.

An existing 48-inch storm drain line is located in Harbor Street with two existing 24-inch stubs to the site. A new storm drain system would be constructed on-site and would collect the stormwater from the residential lots, streets, and open space areas and convey the stormwater to bioretention areas proposed between the residential lots and the berm area. The stormwater would be treated at the on-site bioretention areas prior to being discharged into the existing system in Harbor Street.

Solid waste pickup and disposal for the City is provided by Mt. Diablo Resource Recovery. Residential and commercial solid waste is disposed of at Potrero Hills Landfill, located east of Suisun City.

The proposed project would connect to the electricity, natural gas, and telecommunication infrastructure that exists in the project vicinity. Existing overhead utility lines on East 3rd Street would be removed and replaced underground as part of the project.

Design Review

Section 18.36.110 of the City's Municipal Code requires that a project that would subdivide more than five lots is subject to Design Review by the City. As such, the proposed project would be subject to a Design Review, the standards of which are delineated in Section 18.36.220 of the City's Municipal Code. Such review is intended to ensure that new development within the City generally contributes to the character and image of the City, conforms with the nature of the neighborhood, and is in harmony with existing developments in the general area.

Discretionary Actions

The proposed project would require the following discretionary actions by the City of Pittsburg:

- Certification of the EIR;
- Rezone of the project site to modify the existing overlay;
- Vesting Tentative Map; and
- Design Review.

G. ENVIRONMENTAL CHECKLIST

The following Checklist contains the environmental checklist form presented in Appendix G of the CEQA Guidelines. The checklist form is used to describe the impacts of the proposed project. A discussion follows each environmental issue identified in the checklist. For this checklist, the following designations are used:

Potentially Significant Impact: An impact that could be significant, and for which no mitigation has been identified. If any potentially significant impacts are identified, an EIR must be prepared.

Less Than Significant with Mitigation Incorporated: An impact that requires mitigation to reduce the impact to a less-than-significant level.

Less-Than-Significant Impact: Any impact that would not be considered significant under CEQA relative to existing standards.

No Impact: The project would not have any impact.

I. AESTHETICS. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?	☐	☐	✖	☐
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	☐	☐	✖	☐
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	✖	☐
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	✖	☐

Discussion

a,b. Examples of typical scenic vistas include mountain ranges, ridgelines, or bodies of water as viewed from a highway, public space, or other area designated for the express purpose of viewing and sightseeing. In general, a project's impact to a scenic vista would occur if development of the project would substantially change or remove a scenic vista. The City's General Plan states the most identifying features lending the City a sense of character are the rolling, grassy hills to the south of the City and Suisun Bay/Sacramento River Delta to the north. Partial views of the Delta are available from East 3rd Street; however, the project would not obstruct or change the existing views of the Delta from the area surrounding the site. In addition, existing trees and structures north of the project site, across East 3rd Street, obstruct the existing views across the site. Therefore, the proposed project would not further impair existing views of the Delta in the project area, and, thus, the project would not affect a scenic vista.

According to the California Scenic Highway Mapping System, the proposed project site is located approximately 0.9-mile from SR 4, which has been designated as Eligible for State Scenic Highway listing; however, the project site would not be visible from SR 4.[5] Thus, the proposed project would not alter the views along of SR 4. In addition, SR 4's Eligible status does not qualify the highway as on officially designated State Scenic Highway.

Based on the above, development of the proposed project would not have a substantial adverse effect on a scenic vista and would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway. Thus, a ***less-than-significant*** impact would occur.

c. The project site is located within an urbanized area of the City. Residential development exists to the west and south, and industrial uses exist to the east of the project site, across Harbor Street. Therefore, the relevant threshold would be whether the proposed project would conflict with applicable zoning and other regulations governing scenic quality.

[5] California Department of Transportation. *California Scenic Highway Mapping System*. Available at: https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa. Accessed February 2022.

The project would require a Rezone. However, the height, bulk, pattern, scale and character of the proposed project would not conflict with the visual character of the existing surrounding development. For example, the proposed project would include landscaping and street improvements along the project frontage, which would ensure that the proposed project is partially screened from the surrounding existing development. The City's Municipal Code would require attached and detached residential units to have a maximum height of 35 feet for 75 percent of interior lots and a maximum height of 28 feet for all lots with frontage on more than one public or private street, and no fewer than 25 percent of all interior lots. Finally, it is noted that the project site was previously developed with an industrial facility. Buildout of the proposed project would be more visually consistent with the nearby residential units than the previous use.

The proposed project would also be required to adhere to the City's Design Review guidelines. The design of the buildings would include visually pleasing architectural features and landscaping designs which are consistent with the scenic nature of the project area. The buildings would be designed to include natural colors and glazing that would comply with Title 24 of the California Building Standards Code (CBSC). Given that the project would be consistent with the urbanized nature of the area and comply with the City's Design Review guidelines, the project would not conflict with applicable zoning and other regulations governing scenic quality and a ***less-than-significant*** impact would occur

d. Due to the largely undeveloped nature of the project site, sources of light and glare do not currently exist within the site. It is noted, however, that the previous industrial use included typical sources of light on the project site. Streetlights exist along the northern side of the project site on East 3rd Avenue, and along the eastern side on Harbor Street. In addition, the surrounding developments within the project vicinity feature outdoor and indoor lighting fixtures.

Development of the project site with live/work duplexes and single-family residential units would introduce sources of light and glare associated with interior light spilling through windows, exterior lighting on the proposed structures, and light reflected off windows. Lighting associated with the project would be required to adhere to Section 18.78.050(f) of the City's Municipal Code, which prohibits the use of any light source that would cause any direct illumination on an adjacent street or lot with residential development.[6]

In addition, per Section 18.82.030 of the City's Municipal Code, outdoor lighting must be shielded or directed away from any residential uses in proximity of the project site. Compliance with Section 18.82.030 would be confirmed during Design Review for the proposed project.

Throughout construction of the proposed project, sources of light and glare would be increased as well. Construction activities at nighttime could include the use of lighting fixtures and vehicles producing light on the property. As a result, light and glare may intrude on surrounding properties and roadways during project construction.

Because the project would be required to conform to the City's lighting standards, impacts related to increased lighting and glare on surrounding residential developments during construction and operation of the proposed project would not occur. Thus, implementation of the project would result in a ***less-than-significant*** impact with respect to creating a

[6] City of Pittsburg. *Pittsburg Municipal Code.* May 16, 2022.

new source of substantial light or glare which would adversely affect day or nighttime views in the area.

II. AGRICULTURE AND FOREST RESOURCES. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	✖
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	✖
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	✖
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	✖
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	✖

Discussion

a,e. The project site is currently designated as "Urban and Built-Up Land" per the California Department of Conservation Farmland Mapping and Monitoring Program.[7] In addition, the project site is not used for agricultural purposes. Therefore, development of the proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use, or otherwise result in the loss of Farmland to non-agricultural use. Therefore, ***no impact*** would occur.

b. Currently, the project site is designated Downtown Commercial and Downtown Medium Density Residential per the City's General Plan and zoned as RMD-O and CP. The project includes a Rezone to decrease the minimum lot size, as required by City Council Ordinance 07-1284, from 2,200 sf to 1,980 sf while keeping the average lot size at 2,200 sf. The site is not under a Williamson Act contract[8] and is not zoned for agricultural uses. Therefore, buildout of the proposed project would not conflict with existing zoning for agricultural use or a Williamson Act contract, and ***no impact*** would occur.

c,d. The project area is not considered forest land (as defined in PRC Section 12220[g]), timberland (as defined by PRC Section 4526), and is not zoned Timberland Production (as defined by Government Code Section 51104[g]). Therefore, the proposed project would have ***no impact*** with regard to conversion of forest land or any potential conflict with forest land, timberland, or Timberland Production zoning.

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7 California Department of Conservation. *Contra Costa County Important Farmland 2016.* Available at: https://www.conservation.ca.gov/dlrp/fmmp/Pages/ContraCosta.aspx. Accessed December 2021.

8 California Department of Conservation. *Contra Costa County Agricultural Preserves Map 2016.* Available at: https://www.contracosta.ca.gov/DocumentCenter/View/882/Map-of-Properties-Under-Contract?bidId=. Accessed June 2022.

III. AIR QUALITY. *Would the project:*	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	✖	☐
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	✖	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	✖	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	✖	☐

Discussion

a,b. The City of Pittsburg is located at the northerly border of the San Francisco Bay Area Air Basin (SFBAAB), which is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The SFBAAB area is currently designated as a nonattainment area for the State and federal ozone, State and federal fine particulate matter 2.5 microns in diameter ($PM_{2.5}$), and State respirable particulate matter 10 microns in diameter (PM_{10}) ambient air quality standards (AAQS). The SFBAAB is designated attainment or unclassified for all other AAQS. It should be noted that on January 9, 2013, the U.S. Environmental Protection Agency (USEPA) issued a final rule to determine that the Bay Area has attained the 24-hour $PM_{2.5}$ federal AAQS. Nonetheless, the Bay Area must continue to be designated as nonattainment for the federal $PM_{2.5}$ AAQS until such time as the BAAQMD submits a redesignation request and a maintenance plan to the USEPA, and the USEPA approves the proposed redesignation.

In compliance with regulations, due to the nonattainment designations of the area, the BAAQMD periodically prepares and updates air quality plans that provide emission reduction strategies to achieve attainment of the AAQS, including control strategies to reduce air pollutant emissions through regulations, incentive programs, public education, and partnerships with other agencies. The current air quality plans are prepared in cooperation with the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG).

The most recent federal ozone plan is the 2001 Ozone Attainment Plan, which was adopted on October 24, 2001 and approved by the California Air Resources Board (CARB) on November 1, 2001. The plan was submitted to the USEPA on November 30, 2001 for review and approval. The most recent State ozone plan is the 2017 Clean Air Plan, adopted on April 19, 2017. The 2017 Clean Air Plan was developed as a multi-pollutant plan that provides an integrated control strategy to reduce ozone, PM, toxic air contaminants (TACs), and greenhouse gases (GHGs). Although a plan for achieving the State PM_{10} standard is not required, the BAAQMD has prioritized measures to reduce PM in developing the control strategy for the 2017 Clean Air Plan. The control strategy serves as the backbone of the BAAQMD's current PM control program.

The aforementioned air quality plans contain mobile source controls, stationary source controls, and transportation control measures to be implemented in the region to attain the State and federal AAQS within the SFBAAB. Adopted BAAQMD rules and regulations, as well as the thresholds of significance, have been developed with the intent to ensure

continued attainment of AAQS, or to work towards attainment of AAQS for which the area is currently designated nonattainment, consistent with applicable air quality plans. The BAAQMD's established significance thresholds associated with development projects for emissions of the ozone precursors reactive organic gases (ROG) and oxides of nitrogen (NO_x), as well as for PM_{10}, and $PM_{2.5}$, expressed in pounds per day (lbs/day) and tons per year (tons/yr), are listed in Table 1. Thus, by exceeding the BAAQMD's mass emission thresholds for operational emissions of ROG, NO_X, PM_{10}, or PM_{25} a project would be considered to conflict with or obstruct implementation of the BAAQMD's air quality planning efforts.

Table 1
BAAQMD Thresholds of Significance

Pollutant	Construction	Operational	
	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Maximum Annual Emissions (tons/year)
ROG	54	54	10
NO_x	54	54	10
PM_{10} (exhaust)	82	82	15
$PM_{2.5}$ (exhaust)	54	54	10

Source: BAAQMD, CEQA Guidelines, May 2017.

The proposed project's construction and operational emissions were quantified using the California Emissions Estimator Model (CalEEMod) software version 2020.4.0 – a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions, including GHG emissions, from land use projects. The model applies inherent default values for various land uses, including construction data, trip generation rates, vehicle mix, trip length, average speed, compliance with the CBSC, etc. Where project-specific information is available, such information should be applied in the model. Accordingly, the proposed project's modeling assumes the following project and/or site-specific information:

- Construction would occur over an approximately four-year period;
- The project would include export of 1,000 cubic yards (CY) of material during site preparation;
- Trip generation data was adjusted based on project-specific traffic information provided by Fehr & Peers;
- The project would include natural gas hearths; and
- The project would comply with all relevant provisions of the CBSC and the Model Water Efficient Landscape Ordinance (MWELO).

The proposed project's estimated emissions associated with construction and operations are presented and discussed in further detail below. A discussion of the proposed project's contribution to cumulative air quality conditions is provided below as well. All CalEEMod results are included as Appendix A to this Initial Study.

Construction Emissions

According to the CalEEMod results, the proposed project would result in maximum unmitigated construction criteria air pollutant emissions as shown in Table 2. As shown in the table, the proposed project's construction emissions would be below the applicable thresholds of significance for all criteria pollutants.

Table 2
Maximum Unmitigated Construction Emissions (lbs/day)

Pollutant	Proposed Project Emissions	Threshold of Significance	Exceeds Threshold?
ROG	8.65	54	**NO**
NO_X	34.55	54	**NO**
PM_{10}*	1.42	82	**NO**
$PM_{2.5}$*	1.31	54	**NO**

* Emissions from exhaust only. BAAQMD has not yet adopted thresholds for fugitive PM emissions.

Source: CalEEMod, June 2022.

All projects under the jurisdiction of the BAAQMD are required to implement all of the BAAQMD's Basic Construction Mitigation Measures, which include the following:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 mph.
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of CCR). Clear signage shall be provided for construction workers at all access points.
7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.
8. Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

The proposed project's required implementation of the BAAQMD's Basic Construction Mitigation Measures listed above would help to further minimize construction-related emissions. In particular, implementation of the foregoing measures would reduce fugitive dust emissions resulting from project construction.

Based on the above, construction of the proposed project would result in emissions of criteria pollutants below the BAAQMD's thresholds of significance. Consequently, the proposed project would not conflict with air quality plans during project construction.

Operational Emissions

According to the CalEEMod results, the proposed project would result in maximum unmitigated operational criteria air pollutant emissions as shown in Table 3. As shown in the table, the proposed project's operational emissions would be below the applicable

thresholds of significance. As such, the proposed project would not result in a significant air quality impact during operations.

Table 3
Maximum Unmitigated Operational Emissions

Pollutant	Proposed Project Emissions		Threshold of Significance		Exceeds Threshold?
	lbs/day	tons/yr	lbs/day	tons/yr	
ROG	15.92	2.7	54	10	**NO**
NO_X	9.42	1.15	54	10	**NO**
PM_{10}*	0.51	0.04	82	15	**NO**
$PM_{2.5}$*	0.51	0.04	54	10	**NO**

* Emissions from exhaust only. BAAQMD has not yet adopted thresholds for fugitive PM emissions.

Source: CalEEMod, June 2022.

Cumulative Emissions

Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By nature, air pollution is largely a cumulative impact. A single project is generally not sufficient in size to, by itself, result in nonattainment of AAQS. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant. In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. The thresholds of significance presented in Table 1 represent the levels at which a project's individual emissions of criteria air pollutants or precursors would result in a cumulatively considerable contribution to the SFBAAB's existing air quality conditions. If a project exceeds the significance thresholds presented in Table 1, the proposed project's emissions would be cumulatively considerable, resulting in significant adverse cumulative air quality impacts to the region's existing air quality conditions. As presented above, the proposed project would be below all applicable thresholds for criteria pollutants during construction and operation. Thus, the project would not result in a cumulatively considerable contribution to the region's existing air quality conditions.

Conclusion

As stated previously, the applicable regional air quality plans include the 2001 Ozone Attainment Plan and the 2017 Clean Air Plan. The proposed project would result in operational emissions below all applicable thresholds of significance. In addition, the project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State AAQS. Therefore, the proposed project would not conflict with the applicable regional air quality plan, and a ***less-than-significant*** impact would occur.

c. Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, and/or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Sensitive receptors are typically defined as facilities where sensitive receptor population groups (i.e., children, the elderly,

the acutely ill, and the chronically ill) are likely to be located. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, playgrounds, childcare centers, retirement homes, convalescent homes, hospitals, and medical clinics. In the vicinity of the project site, the nearest existing sensitive land uses include the single-family residences to the west of the project site, with the closest located approximately 50 feet away.

The major pollutant concentrations of concern are localized carbon monoxide (CO) emissions, TAC emissions, and criteria pollutants, which are addressed in further detail below.

Localized CO Emissions

Localized concentrations of CO are related to the levels of traffic and congestion along streets and at intersections. High levels of localized CO concentrations are only expected where background levels are high, and traffic volumes and congestion levels are high. Emissions of CO are of potential concern, as the pollutant is a toxic gas that results from the incomplete combustion of carbon-containing fuels such as gasoline or wood.

In order to provide a conservative indication of whether a project would result in localized CO emissions that would exceed the applicable threshold of significance, the BAAQMD has established screening criteria for localized CO emissions. According to BAAQMD, a proposed project would result in a less-than-significant impact related to localized CO emission concentrations if all of the following conditions are true for the project:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans;
- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; and
- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, underpass, etc.).[9]

The City's General Plan serves to provide traffic forecasts to the Contra Costa Transportation Authority (CCTA). While the proposed project would include a General Plan Amendment and Rezone, the traffic associated with the proposed project would be substantially similar to traffic associated with buildout of the site under the existing land use and zoning designations. As such, traffic associated with development of the site has generally been anticipated, and the project would be consistent with the applicable congestion management plan (CMP), regional transportation plan, and local congestion management agency plans.

According to the City of Pittsburg General Plan Update Existing Conditions Report, the nearest roadway segment to the project site, East 3rd Street, east of Railroad Avenue, experienced approximately 2,500 average daily trips.[10] Other roadway segments in the project vicinity, including Railroad Avenue north of Buchanan Road and East 10th Street east of Railroad Avenue, experienced approximately 15,130 average daily trips and 8,670

[9] Fehr & Peers. *Draft Transportation Impact Assessment – Pittsburg Harbor View.* June 2022.
[10] City of Pittsburg. *City of Pittsburg General Plan Update Existing Conditions Report* [Table 2.2-7]. November 2019.

average daily trips, respectively. Given the size of the proposed project in comparison to the existing development throughout the City, the addition of project-generated vehicle trips would not increase traffic volumes at any intersections within the project vicinity to more than 44,000 vehicles per hour. Furthermore, intersections where vertical and/or horizontal mixing is limited are not located in the project vicinity. Nonetheless, local traffic volumes would remain far below 24,000 vehicles per hour, and the addition of project-generated vehicle trips would not exceed the BAAQMD screening criteria. As such, the proposed project would not be expected to result in substantial levels of localized CO at surrounding intersections.

TAC Emissions

Another category of environmental concern is TACs. Health risks associated with TACs are a function of both the concentration of emissions and the duration of exposure, where the higher the concentration and/or the longer the period of time that a sensitive receptor is exposed to pollutant concentrations would correlate to a higher health risk. As noted above, the nearest sensitive receptors to the project site are the single-family homes to the west of the project site. The CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook) provides recommended setback distances for sensitive land uses from major sources of TACs, including, but not limited to, freeways and high traffic roads, distribution centers, gas dispensing facilities, and rail yards. The CARB has identified diesel particulate matter (DPM) from diesel-fueled engines as a TAC; thus, high volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM.

The proposed project would not include any operations that would be considered a substantial source of TACs. Accordingly, operations of the proposed project would not expose sensitive receptors to excess concentrations of TACs.

Short-term, construction-related activities could result in the generation of TACs, specifically DPM, from on-road haul trucks and off-road equipment exhaust emissions. Construction is temporary and occurs over a relatively short duration in comparison to the operational lifetime of the proposed project. Health risks are typically associated with exposure to high concentrations of TACs over extended periods of time (e.g., 30 years or greater), whereas the construction period associated with the proposed project would likely be limited to approximately four years. All construction equipment and operation thereof would be regulated per the CARB In-Use Off-Road Diesel Vehicle Regulation, which is intended to help reduce emissions associated with off-road diesel vehicles and equipment, including DPM. Project construction would also be required to comply with all applicable BAAQMD rules and regulations, particularly associated with permitting of air pollutant sources. In addition, construction equipment would operate intermittently throughout the day and only on portions of the site at a time. Because construction equipment on-site would not operate for long periods of time and would be used at varying locations within the site, associated emissions of DPM would not occur at the same location (or be evenly spread throughout the entire project site) for long periods of time. In addition, the prevailing wind direction in Pittsburg is from the west.[11] Therefore, emissions of DPM from the use of construction equipment would be blown towards the eastward direction and away from the nearest sensitive receptors.

[11] Weather Spark. *Average Weather in Pittsburg* Available at: https://weatherspark.com/y/1150/Average-Weather-in-Pittsburg-California-United-States-Year-Round. Accessed June 2022.

Due to the temporary nature of construction and the relatively short duration of potential exposure to associated emissions, the potential for any one sensitive receptor in the area to be exposed to concentrations of pollutants for a substantially extended period of time would be low. Therefore, construction associated with the proposed project would not be expected to expose sensitive receptors to substantial pollutant concentrations.

Asbestos

Asbestos is a known carcinogen and, thus, is considered a TAC. Asbestos is strictly regulated due to the serious adverse health effects resulting from exposure, including asbestosis and lung cancer, and based on the natural widespread occurrence of asbestos and the use of asbestos as a building material.

As discussed above, the project site was historically occupied by a manufacturing plant that produced asbestos-cement products, asphalt roofing materials, and asbestos-containing pipe covering. However, the site has undergone extensive remediation to address the asbestos-containing materials located on-site. The remediation activities included removal of asbestos-containing materials and petroleum hydrocarbon-affected soil from the site and placement in engineered containment berms along the eastern boundary of the project site. Asbestos-impacted material and debris were placed into a trench excavated to 10 feet bgs along the eastern boundary of the site, which was then capped by hydrocarbon-impacted soil. An engineered textile and two feet of clean, low-permeability soil was then added to the top of the materials to create the capped, vegetated berms.

All remedial actions have been completed and approved by the DTSC,[12] and the site regularly undergoes maintenance and monitoring as required by a Site Operation and Maintenance Plan prepared for the project site. The remediation system is also evaluated every five years to determine if human health and the environment are being adequately protected. Development of the proposed project would not alter the berms in which the asbestos-containing materials are located. As such, the proposed project would not result in exposure to asbestos-containing materials.

Criteria Pollutants

The BAAQMD thresholds of significance were established with consideration given to the health-based air quality standards established by the National AAQS (NAAQS) and California AAQS (CAAQS), and are designed to aid the District in achieving attainment of the NAAQS and CAAQS.[13] Although the BAAQMD's thresholds of significance are intended to aid achievement of the NAAQS and CAAQS for which the SFBAAB is in nonattainment, the thresholds of significance do not represent a level above which individual project-level emissions would directly result in public health impacts. Nevertheless, a project's compliance with BAAQMD's thresholds of significance provides an indication that criteria pollutants released as a result of project implementation would not inhibit attainment of the health-based regional NAAQS and CAAQS. Because project-related emissions would not exceed the BAAQMD's thresholds, and, thus, would not inhibit attainment of regional NAAQS and CAAQS, the criteria pollutants emitted during project implementation would not be anticipated to result in measurable health impacts to

[12] GSI Environmental Inc. *Site Investigation Report: 420 E. 3rd Street, Pittsburg, California.* June 2021.
[13] Bay Area Air Quality Management District. *California Environmental Quality Act Air Quality Guidelines*. May 2017.

sensitive receptors. Accordingly, the proposed project would not expose sensitive receptors to excess concentrations of criteria pollutants.

Conclusion

Based on the above discussion, the proposed project would not expose nearby sensitive receptors to substantial concentrations of localized CO, TACs, or criteria pollutants during construction and operations of the project. Consequently, the proposed project would result in a ***less-than-significant*** impact related to the exposure of sensitive receptors to substantial pollutant concentrations.

d. Pollutants of principal concern include emissions leading to odors, emission of dust, or emissions considered to constitute air pollutants. Air pollutants have been discussed in section "a" through "c" above. Therefore, the following discussion focuses on emissions of odors and dust.

Per the BAAQMD CEQA Guidelines, odors are generally regarded as an annoyance rather than a health hazard.[14] Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The presence of an odor impact is dependent on a number of variables including: the nature of the odor source; the frequency of odor generation; the intensity of odor; the distance of odor source to sensitive receptors; wind direction; and sensitivity of the receptor. Typical odor-generating land uses include, but are not limited to, wastewater treatment plants, landfills, and composting facilities. The proposed project would not introduce any such land uses.

Construction activities often include diesel-fueled equipment and heavy-duty trucks, which could create odors associated with diesel fumes that may be considered objectionable. However, construction activities would be temporary, and hours of operation for construction equipment would be restricted to the hours of 8:00 AM and 5:00 PM Monday through Friday per Section 18.82.040 of the City of Pittsburg Municipal Code. Project construction would also be required to comply with all applicable BAAQMD rules and regulations, particularly associated with permitting of air pollutant sources. The aforementioned regulations would help to minimize emissions, including emissions leading to odors. Accordingly, substantial objectionable odors would not be expected to occur during construction activities.

Furthermore, the BAAQMD regulates objectionable odors through Regulation 7, Odorous Substances, which does not become applicable until the Air Pollution Control Officer (APCO) receives odor complaints from ten or more complainants within a 90-day period. Once effective, Regulation 7 places general limitations on odorous substances and specific emission limitations on certain odorous compounds, which remain effective until such time that citizen complaints have not been received by the APCO for one year. The limits of Regulation 7 become applicable again when the APCO receives odor complaints from five or more complainants within a 90-day period. Thus, although not anticipated, if odor complaints are made after the proposed project is developed, the BAAQMD would ensure that such odors are addressed, and any potential odor effects are minimized or eliminated.

[14] Bay Area Air Quality Management District. *California Environmental Quality Act Air Quality Guidelines* [pg. 7-1]. May 2017.

As noted previously, all projects under the jurisdiction of BAAQMD are required to implement the BAAQMD's Basic Construction Mitigation Measures. Such measures would act to reduce construction-related dust by ensuring that haul trucks with loose material are covered, reducing vehicle dirt track-out, and limiting vehicle speeds within project site, among other methods, which would ensure that construction of the proposed project does not result in substantial emissions of dust. Following project construction, vehicles operating within the project site would be limited to paved areas of the site, and non-paved areas would be landscaped. Thus, project operations would not include sources of dust that could adversely affect a substantial number of people.

For the aforementioned reasons, construction and operation of the proposed project would not result in emissions, such as those leading to odors, adversely affecting a substantial number of people, and a ***less-than-significant*** impact would result.

IV. BIOLOGICAL RESOURCES. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	✖	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	☐	☐	✖	☐
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	✖	☐
d. Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	☐	☐	✖	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	✖	☐
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	✖	☐

Discussion

a,f. The Federal Endangered Species Act (FESA) of 1973 declares that all federal departments and agencies shall utilize their authority to conserve endangered and threatened plant and animal species. The California Endangered Species Act (CESA) of 1984 parallels the policies of FESA and pertains to native California species.

For the purposes of this Initial Study, special-status species are those that fall into one or more of the following categories, including those:

- listed as endangered or threatened under the Federal Endangered Species Act (FESA; including candidates and species proposed for listing);
- listed as endangered or threatened under the California Endangered Species Act (CESA; including candidates and species proposed for listing);
- designated as rare, protected, or fully protected pursuant to California Fish and Game Code;
- designated a Species of Special Concern (SSC) by the California Department of Fish and Wildlife (CDFW);
- considered by CDFW to be a Watch List species with potential to become an SSC;

- defined as rare or endangered under Section 15380 of the California Environmental Quality Act (CEQA); or
- Having a California Rare Plant Rank (CRPR) of 1A, 1B, 2A, 2B, or 3.

In addition to regulations for special-status species, most birds in the U.S., including non-status species, are protected by the Migratory Bird Treaty Act (MBTA) of 1918. Under the MBTA, destroying active nests, eggs, and young is illegal.

For the purpose of the analysis of biological resources in this Initial Study, a Biological and Wetland Constraints Letter Report (Biological Report) was prepared by Helix Environmental Planning Inc. on March 12, 2021 (Appendix B).[15] As part of the Biological Report, a reconnaissance survey was conducted on March 5, 2021. In addition, the California Natural Diversity Database (CNDDB) was used to determine what special-status species are known to have occurred within a five-mile radius of the project site. The CNDDB query returned several plant and animal species that have the potential to occur in the project area. The habitat requirements of all the identified species were subsequently compared to the habitat on the project site to determine the likelihood of each special-status species occurring at the project site.

It should be noted that the project site is within the boundaries of the East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (ECCC HCP/NCCP). The ECCC HCP/NCCP went into effect on June 30, 2000, and the City of Pittsburg approved the implementing ordinance on April 16, 2007. The purpose of the ECCC HCP/NCCP is to preserve high quality habitat for species of concern throughout the plan area. The ECCC HCP/NCCP accomplishes habitat protection through the establishment of preserves and the collection of development fees. Fees are collected based on established fee zones and land cover types, with developments placed in higher quality habitat land cover types incurring higher development fee rates, and developments placed in low quality habitats or urban areas incurring lower development fees or no development fees. Fee zones and land cover types are presented in the *East Contra Costa County HCP/NCCP Development Fee Zones* figure.[16] Figure 9-1 places the project site in Fee Zone 1. Fee Zone 1 requires a payment of $11,919 per acre. Thus, the project applicant would be required to pay $244,339.50 for Zone 1 fees, or otherwise execute an "in-lieu-of fee" agreement with the East Contra Costa Habitat Conservancy, to mitigate the potential effects of the proposed project. Therefore, the proposed project would not be in conflict with the provisions of an adopted HCP/NCCP, or other approved local, regional or state habitat conservation plan, and would result in a less-than-significant impact.

According to Figure 3-3: *Landcover in the Inventory Area* of the ECCC HCP/NCCP, the project site is characterized as urban, although the project site is currently dominated by vegetation. The Physical and Biological Resources Chapter of the ECCC HCP/NCCP defines urban sites as areas where the native vegetation has been cleared for residential, commercial, industrial, transportation, or recreational structures.[17] Despite the

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15 Helix Environmental Planning, Inc. *Biological and Wetland Constraints Letter Report for the Harbor View Project, City of Pittsburg, Contra Costa County, CA*. March 12, 2021.

16 East Contra Costa County Conservancy. *Figure 9-1: Development Fee Zones*. Accessible at: https://www.cocohcp.org/DocumentCenter/View/955/High-Resolution-Development-Fee-Zone-Map-PDF. Accessed July 2022.

17 East Contra Costa County Conservancy. *Final East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan, Chapter 3 Physical and Biological Resources* [pg. 3-25]. Updated December 19, 2006.

characterization as an urban site, the project site is dominated by ruderal vegetation. Areas surrounding the project site are also considered urban, but some similarly consist primarily of ruderal grasslands, while others are developed with residential and industrial uses.

In February 2015, the East Contra Costa County Habitat Conservancy prepared an ECCC HCP/NCCP Assessment of Plan Effects on CEQA Species.[18] The purpose of the assessment was to provide a programmatic, cumulative CEQA effects analysis for CEQA species not covered by the ECCC HCP/NCCP. The 2015 ECCC HCP/NCCP Assessment of Plan Effects on CEQA Species concluded that mitigation measures required in the ECCC HCP/NCCP also provide mitigation for non-covered species; therefore, projects consistent with the ECCC HCP/NCCP would have a less-than-significant impact on other potential special-status species.

According to the 2015 ECCC HCP/NCCP Assessment of Plan Effects on CEQA Species, for all but two of the potential special-status species addressed (Lime Ridge navarretia [*Navarretia gowenii*] and the Lime Ridge eriastrum [*Eriastrum ertterae]*), impacts would be less than significant under CEQA. Because of uncertainty regarding the distribution of the Lime Ridge navarretia and the Lime Ridge eriastrum, the 2015 ECCC HCP/NCCP Assessment of Plan Effects on CEQA Species concluded that a potentially significant impact could occur related to the two aforementioned species. The project specific search of the CNDDB and did not identify any known occurrences of Lime Ridge navarretia or Lime Ridge eriastrum within the project site or immediate vicinity and, therefore, implementation of the proposed project would not impact the species. Based on the conclusions of the 2015 ECCC HCP/NCCP Assessment of Plan Effects on CEQA Species and the absence of the Lime Ridge navarretia and Lime Ridge eriatrum in the vicinity of the project site, the proposed project would have a less-than-significant impact on any potential special-status wildlife species and potential special-status plant species not covered by the ECCC HCP/NCCP that could occur within the vicinity of the project site because the proposed project would be required to comply with the ECCC HCP/NCCP.

Special-Status Plants

According to the Biological Report prepared for this Initial Study, one reported occurrence of a special-status plant (big tarplant*; Blepharizonia plumosa*) overlaps the site. Other occurrences of special-status plants have not been reported on or adjacent to the site, but several records have occurred within a five-mile radius. The reconnaissance survey conducted for the Biological Report did not observe any special-status plants on the site. Due to the history of site disturbance and lack of suitable habitat present on the site currently, no special-status plant species are expected to occur on the site or be impacted by any future site development. Because special-status plants are not anticipated to occur within the project site, implementation of the proposed project would not result in adverse effects to special-status plants.

Special-Status Wildlife

Numerous regionally-occurring special-status wildlife species were identified in the course of the Biological Report, including the song sparrow. However, suitable habitat for the song sparrow does not occur on-site. The only regionally-occurring special-status species that was identified as having potential habitat or the potential to occur on the site is

[18] H.T. Harvey & Associates. *East Contra Costa County Habitat Conservation Plan – Assessment of Plan Effects on CEQA Species.* February 17, 2015.

burrowing owl, which is covered under the ECCC HCP/NCCP. The ECCC HCP/NCCP Planning Survey Report Form categorically considers certain species to have the potential to occur within specific land use types regardless of existing conditions within the particular site. For instance, any grassland, oak savannah, agricultural land, or ruderal area is assumed to provide habitat to burrowing owl. The burrowing owl is a subterranean nester which is dependent upon other burrowing mammals. The development fees of Zone 1 would require the applicant to pay a per acre fee and apply avoidance measures to ensure the species are not disturbed. All other covered species under the ECCC HCP/NCCP were dismissed due to the specific habitat type of the species.

Burrowing Owl

The nearest reported occurrence of burrowing owl in the CNDDB is approximately 2.5 miles southeast of the project site, in the City of Antioch. This reported occurrence is from 2008 and is listed as possibly extirpated. A few other occurrences of burrowing owl have been reported within a five-mile radius of the project site, including records approximately 4.5 miles southwest of the site. The ruderal grasslands within and adjacent to the project site may provide marginal foraging habitat for the species. One fairly large subterranean burrow was observed in the berm along the western boundary of the site during the reconnaissance survey. The burrow was of a suitable size and depth to provide good habitat for the burrowing owl, but indications of the species presence was not found. Furthermore, the site is mapped as suitable habitat for burrowing owl as modeled in the ECCC HCP/NCCP, and the species is assumed to be present. Although the project site is regularly disturbed and largely surrounded by urban development, if burrowing owls were to utilize the ruderal lot for foraging and/or breeding, construction of the proposed project could cause a substantial adverse effect on the species.

Nesting Raptors and Migratory Birds

Shrubs, trees, and ruderal grasslands on the project site and along the project frontages may be used by other raptors and migratory birds protected by the MBTA. As such, the project site provides suitable habitat for nesting migratory birds, such as mourning dove (*Zenaida macroura*), black phoebe (*Sayornis nigricans*), and killdeer (*Charadrius vociferus*). Nests were not observed during surveys. However, construction activities that adversely affect the nesting success of raptors and migratory birds (i.e., lead to the abandonment of active nests) or result in mortality of individual birds constitute a violation of State and federal laws. Thus, project-related activities that would occur during the breeding season (generally February 1 through August 31) could result in an adverse effect to species protected under the MBTA, should such species be present.

Conclusion

Based on the above, burrowing owl has the potential to occur on-site. However, the project would be required to comply with ECCC HCP/NCCP requirements, including pre-construction surveys. Additionally, although the site and surrounding area contains suitable nest trees for nesting raptors and migratory birds protected by the MBTA, the project would be required to comply with the ECCC HCP/NCCP's Applicable Avoidance and Minimization Measures for nesting and migratory birds. The proposed project would comply with all applicable ECCC HCP/NCCP requirements, which would be ensured as a City condition of approval. Thus, the proposed project would not have an adverse effect, either directly or through habitat modifications, on species identified as special-status species in local or regional plans, policies, or regulations, or by the CDFW or the U.S. Fish and Wildlife Service (USFWS), and a ***less-than-significant*** impact would result.

b,c. The project site consists primarily of ruderal vegetation, and does not support any riparian vegetation or protected wetlands.

According to the Biological Report, waters of the U.S. and waters of the State are not believed to occur on-site. Therefore, the proposed project would not have an adverse effect on riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations, as well as on state or federally protected wetlands. Thus, a ***less-than-significant*** impact could occur.

d. The project site is located in an urbanized area and is bordered by existing roadways to the north and east, residential developments to the west and south, as well as industrial uses to the east. Thus, the developed portions of the surrounding area do not support any substantial wildlife movement corridors. The project site does not include any aquatic features that could be used as a movement corridor by aquatic species. Additionally, the proposed project would mitigate for any impacts to special-status species habitats through site-specific pre-construction surveys, avoidance measures, and payment of applicable mitigation fees. As such, the project would not interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites. Thus, a ***less-than-significant*** impact would occur.

e. Although the project site is vacant and consists primarily of ruderal grasses, an estimated 50 to 60 trees, all of which are non-native, are present on the site and would be removed. Prior to site development, as a condition of approval an arborist inventory would need to be conducted at the project site to identify the presence of any protected trees. Chapter 18.84, Article XIX, Tree Preservation and Protection, of the City's Municipal Code defines protected trees and establishes the requirements governing the removal and preservation of such trees. Pursuant to Section 18.84.845 of the City's Municipal Code, a protected tree may only be removed upon approval of a tree removal permit issued by the City. The information required when submitting a Tree Removal Permit application, includes, but is not limited to, the following:

- The precise number, species, size and location of the tree or trees to be cut down, destroyed or removed and a brief statement of the reason for removal;
- The signature of the property owner authorizing such removal and the signature of the person performing the work, if different than the property owner and if known at the time of the application;
- An arborist report including a tree survey plan specifying the precise location and drip line of all existing trees on or in the vicinity of the project site. The tree survey plan shall also indicate the precise location of existing and proposed buildings and easements within 25 feet of the drip line of the trees, and the plan shall include existing and proposed grades adjacent to the trees along with underground utility services, sub-drains, water, sewer, irrigation and lighting. The arborist report shall also include a table that identifies each tree by number along with the size, and species of each tree (including a statement as to whether or not it is a California native species), as well as a statement indicating whether the tree is proposed to be saved or removed;
- The time and manner in which the removed tree(s) would be replaced, subject to the requirements of Chapter 18.84, Article XIX, of the City's Municipal Code; and

- A biological report or statement for any trees that may serve as potential habitat for any candidate, sensitive or special status species identified in any local or regional plans, policies or regulations, or by CDFW or the USFWS.

In addition, the City would impose tree replacement standards or in-lieu fees pursuant to Section 18.84.855 of the Municipal Code for any protected trees proposed for removal. Replacement options include, but are not limited to:

- Replacement of the removed tree(s) at a four-to-one ratio with 24-inch box trees;
- Replacement of the tree(s) at a 12-to-one ratio with 15-gallon trees;
- Payment of in-lieu fees equal to the replacement trees' value, installation costs and one year of maintenance costs, as calculated with a 12-to-one ratio of 15-gallon trees; or
- A combination of replacement and payment of in-lieu fees.

Many of the trees on-site are too small to meet the criteria to be a protected tree; however, several trees on the site are large enough to be considered protected trees including a line of Peruvian pepper trees (*Schinus molle*) along the southern and western boundaries.[19] Any removal of trees as part of the proposed project would first require the preparation of an arborist report, and then be required to comply with all regulations established in Chapter 18.84 Article XIX of the City's Municipal Code. Thus, the proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation ordinance, and a ***less-than-significant*** impact would occur.

[19] Helix Environmental Planning, Inc. *Biological and Wetland Constraints Letter Report for the Harbor View Project, City of Pittsburg, Contra Costa County, CA*. March 12, 2021.

V. CULTURAL RESOURCES. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	✖	☐	☐
b. Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5?	☐	✖	☐	☐
c. Disturb any human remains, including those interred outside of dedicated cemeteries.	☐	✖	☐	☐

Discussion

a,b,c. Historical resources are features that are associated with the lives of historically important persons and/or historically significant events, that embody the distinctive characteristics of a type, period, region or method of construction, or that have yielded, or may be likely to yield, information important to the pre-history or history of the local area, California, or the nation. Examples of typical historical resources include, but are not limited to, buildings, farmsteads, rail lines, bridges, and trash scatters containing objects such as colored glass and ceramics.

The General Plan EIR indicates that the City of Pittsburg contains multiple historic sites relevant to the history of Pittsburg, including historical resources from the coal and steel eras. As one of the earliest industrial centers in Contra Costa County, the City's historical resources encompass a broad range of activities. Resources include buildings associated with industry including Black Diamond Mines, early railroads along Railroad Avenue, military facility Camp Stoneman, and places of entertainment such as the Black Diamond Theater, the Palace Theater, and Vogue Theater.

A records search of the California Historic Resources Information System (CHRIS) was performed by the Northwest Information Center (NWIC) for cultural resource site records and survey reports within the proposed project area.[20] The CHRIS search found that a previous cultural resource study covered the entirety of the project site, and determined that known archeological resources do not exist on the project site. The State Office of Historic Preservation Built Environment Resources Directory does not list any recorded buildings on structures on or near the project site. In addition, a records search by the Native American Heritage Commission (NAHC) of the Sacred Lands File resulted in negative findings of cultural resources on the project site.[21]

Nonetheless, given the historical occupation of the project area by Native American tribes, the potential exists that unknown archaeological resources, including human remains, and/or historic resources could occur on-site. Should ground-disturbing activity related to project construction encounter such resources, an adverse effect could occur. Therefore, the proposed project could cause a substantial adverse change in the significance of a historic or archaeological resource pursuant to CEQA Guidelines Section 15064.5 and/or

[20] Northwest Information Center. *Records Search Results for the Proposed 420 East 3rd Street Project*. December 6, 2021.

[21] Native American Heritage Commission. *Letter RE: 420 E. 3rd Street Project, Contra Costa County*. February 14, 2022.

disturb human remains, including those interred outside of formal cemeteries during construction. Thus, impacts could be considered ***potentially significant***.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

V-1. *Prior to approval of Improvement Plans, plans shall be reviewed by the Pittsburg Community and Economic Development Department, Planning Division, to ensure the following note is included:*

If any prehistoric or historic artifacts, or other indications of cultural deposits are found once ground disturbing activities are underway, all work within the vicinity of the find(s) shall cease, the Community and Economic Development Department, Planning Division, shall be notified, and the find(s) shall be immediately evaluated by a qualified archaeologist. If the find is determined to be a historical or unique paleontological or archaeological resource, contingency funding and a time allotment to allow for implementation of avoidance measures or appropriate mitigation shall be made available (CEQA Guidelines Section 15064.5). Work may continue on other parts of the project site while historical or unique archaeological resource mitigation takes place (PRC Sections 21083 and 21087).

V-2. *Prior to approval of Improvement Plans, plans shall be reviewed by the Pittsburg Community and Economic Development Department, Planning Division, to ensure the following note is included:*

In the event of the accidental discovery or recognition of any human remains, further excavation or disturbance of the find or any nearby area reasonably suspected to overlie adjacent human remains shall not occur until compliance with the provisions of CEQA Guidelines Section 15064.5(e)(1) and (2) has occurred. The Guidelines specify that in the event of the discovery of human remains other than in a dedicated cemetery, no further excavation at the site or any nearby area suspected to contain human remains shall occur until the County Coroner has been notified to determine if an investigation into the cause of death is required. If the coroner determines that the remains are Native American, then, within 24 hours, the Coroner must notify the Native American Heritage Commission, which in turn will notify the most likely descendants who may recommend treatment of the remains and any grave goods. If the Native American Heritage Commission is unable to identify a most likely descendant or most likely descendant fails to make a recommendation within 48 hours after notification by the Native American Heritage Commission, or the landowner or his authorized agent rejects the recommendation by the most likely descendant and mediation by the Native American Heritage Commission fails to provide a measure acceptable to the landowner, then the landowner or his authorized representative shall rebury the human remains and grave goods with appropriate dignity at a location on the property not subject to further disturbances. Should human remains be encountered, a copy of the

resulting County Coroner report noting any written consultation with the Native American Heritage Commission shall be submitted as proof of compliance to the City's Community and Economic Development Department, Planning Division.

VI. ENERGY. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	✖	☐
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	✖	☐

Discussion

a,b. The main forms of available energy supply are electricity and oil. A description of the 2019 California Green Building Standards Code (CALGreen Code) and the Building Energy Efficiency Standards, with which the proposed project would be required to comply, as well as discussions regarding the proposed project's potential effects related to energy demand during construction and operations are provided below.

California Green Building Standards Code

The 2019 California Green Building Standards Code, otherwise known as the CALGreen Code (CCR Title 24, Part 11) is a portion of the CBSC, which became effective on January 1, 2020.[22] The purpose of the CALGreen Code is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices. The CALGreen standards regulate the method of use, properties, performance, types of materials used in construction, alteration repair, improvement and rehabilitation of a structure or improvement to property. The provisions of the code apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure throughout California. Requirements of the CALGreen Code include, but are not limited to, the following measures:

- Compliance with relevant regulations related to future installation of electric vehicle charging infrastructure in residential and non-residential structures;
- Indoor water use consumption is reduced through the establishment of maximum fixture water use rates;
- Outdoor landscaping must comply with the California Department of Water Resources' MWELO, or a local ordinance, whichever is more stringent, to reduce outdoor water use;
- Diversion of 65 percent of construction and demolition waste from landfills; and
- Mandatory use of low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring, and particle board.

Building Energy Efficiency Standards

The 2019 Building Energy Efficiency Standards is a portion of the CBSC, which expands upon energy efficiency measures from the 2016 Building Energy Efficiency Standards. The 2019 Building Energy Efficiency Standards are in effect for building permit applications submitted after January 1, 2020.

[22] California Building Standards Commission. *California Green Building Standards Code*. Available at: https://www.dgs.ca.gov/BSC/CALGreen. Accessed June 2022.

Energy reductions relative to previous Building Energy Efficiency Standards are achieved through various regulations, including requirements for the use of high-efficacy lighting, improved water heating system efficiency, and high-performance attics and walls. For nonresidential buildings, hotels, motels, and high-rise residential buildings, the most significant changes in compliance with the 2019 standards are in lighting design.[23] Other changes in compliance include alterations to a development's envelope, mechanical systems, and covered processes.

Construction Energy Use

Construction of the proposed project would involve on-site energy demand and consumption related to use of oil in the form of gasoline and diesel fuel for construction worker vehicle trips, hauling and materials delivery truck trips, and operation of off-road construction equipment. In addition, diesel-fueled portable generators may be necessary to provide additional electricity demands for temporary on-site lighting, welding, and for supplying energy to areas of the site where energy supply cannot be met via a hookup to the existing electricity grid. Project construction would not involve the use of natural gas appliances or equipment.

Even during the most intense period of construction, due to the different types of construction activities (e.g., site preparation, grading, building construction), only portions of the project site would be disturbed at a time, with operation of construction equipment occurring at different locations on the project site, rather than a single location. In addition, all construction equipment and operation thereof would be regulated per the CARB In-Use Off-Road Diesel Vehicle Regulation, which is intended to reduce emissions from in-use, off-road, heavy-duty diesel vehicles in California by imposing limits on idling, requiring all vehicles to be reported to CARB, restricting the addition of older vehicles into fleets, and requiring fleets to reduce emissions by retiring, replacing, or repowering older engines, or installing exhaust retrofits. The In-Use Off-Road Diesel Vehicle Regulation would subsequently help to improve fuel efficiency and reduce GHG emissions. Technological innovations and more stringent standards are being researched, such as multi-function equipment, hybrid equipment, or other design changes, which could help to reduce demand on oil and limit emissions associated with construction.

The CARB has prepared the *2017 Climate Change Scoping Plan Update* (2017 Scoping Plan),[24] which builds upon previous efforts to reduce GHG emissions and is designed to continue to shift the California economy away from dependence on fossil fuels. Appendix B of the 2017 Scoping Plan includes examples of local actions (municipal code changes, zoning changes, policy directions, and mitigation measures) that would support the State's climate goals. The examples provided include, but are not limited to, enforcing idling time restrictions for construction vehicles, utilizing existing grid power for electric energy rather than operating temporary gasoline/diesel-powered generators, and increasing use of electric and renewable fuel-powered construction equipment. The In-Use Off-Road Diesel Vehicle Regulation, with which the proposed project must comply, would be consistent with the intention of the 2017 Scoping Plan and the recommended actions included in Appendix B of the 2017 Scoping Plan.

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[23] California Energy Commission. *California Energy Commission 2019 Building Energy Efficiency Standards What's New for Nonresidential*. Available at: https://www.energy.ca.gov/media/3455. Accessed March 2022.

[24] California Air Resources Board. *The 2017 Climate Change Scoping Plan Update*. November 2017.

Based on the above, the temporary increase in energy use occurring during construction of the proposed project would not result in a significant increase in peak or base demands or require additional capacity from local or regional energy supplies. In addition, the proposed project would be required to comply with all applicable regulations related to energy conservation and fuel efficiency, which would help to reduce the temporary increase in demand.

Operational Energy Use

Following implementation of the proposed project, an energy utility in the project vicinity would provide electricity and natural gas to the project site. Energy use associated with operation of the proposed project would be typical of residential and commercial uses, requiring electricity for interior and exterior building lighting, heating, ventilation, and air conditioning (HVAC), electronic equipment, machinery, refrigeration, appliances, security systems, and more. Maintenance activities during operations, such as landscape maintenance, would involve the use of electric or gas-powered equipment. In addition to on-site energy use, the proposed project would result in transportation energy use associated with vehicle trips generated by the proposed development.

The proposed project would be subject to all relevant provisions of the most recent update of the CBSC, including the Building Energy Efficiency Standards. Adherence to the most recent CALGreen Code and the Building Energy Efficiency Standards would ensure that the proposed structures would consume energy efficiently through the incorporation of such features as efficient water heating systems, high performance attics and walls, and high efficacy lighting. Required compliance with the CBSC would ensure that the building energy use associated with the proposed project would not be wasteful, inefficient, or unnecessary. In addition, electricity supplied to the project by PG&E would comply with the State's Renewables Portfolio Standard, which requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020 and to 60 percent by 2030. Thus, a portion of the energy consumed during project operations would originate from renewable sources.

With regard to transportation energy use, the proposed project would comply with all applicable regulations associated with vehicle efficiency and fuel economy.

Conclusion

Based on the above, construction and operation of the proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy resources or conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Thus, a ***less-than-significant*** impact would occur.

VII. GEOLOGY AND SOILS. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	✖	☐
ii. Strong seismic ground shaking?	☐	☐	✖	☐
iii. Seismic-related ground failure, including liquefaction?	☐	✖	☐	☐
iv. Landslides?	☐	✖	☐	☐
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	✖	☐
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	✖	☐	☐
d. Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	✖	☐	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	✖
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	✖	☐	☐

Discussion

ai,aii. According to the City's General Plan EIR, Eastern Contra Costa County, like the San Francisco Bay Area as a whole, is located in a seismically active region. Major earthquakes have occurred in the vicinity of Pittsburg in the past and can be expected to occur again in the near future. Historically active faults in the area include the Concord, Hayward, Calaveras, Green Valley, and Clayton-Marsh Creek-Greenville faults. In addition to the foregoing faults, the San Andreas Fault, located approximately 48 miles west of the project site, is the largest active fault in the region.

Although known fault systems exist within proximity to the project site, the project site is not underlain by any faults and fault rupture hazard is not a significant geologic hazard at the site.[25] Nonetheless, due to the site's proximity to nearby active faults, the project site

[25] U.S. Geological Survey. *U.S. Quaternary Faults.* Available at: https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf. Accessed February 2022.

could be subject to moderate to severe (design-level) earthquakes and associated seismic ground shaking. However, the proposed buildings would be properly engineered in accordance with the CBSC, which includes engineering standards appropriate for the seismic area in which the project site is located. Projects designed in accordance with the CBSC should be able to: 1) resist minor earthquakes without damage, 2) resist moderate earthquakes without structural damage but with some nonstructural damage, and 3) resist major earthquakes without collapse but with some structural as well as nonstructural damage. Conformance with the design standards is enforced through Building Plan Review and approval by the City of Pittsburg Building Division prior to the issuance of Building Permits. Proper engineering of the proposed project would ensure that seismic-related effects would not cause substantial impacts.

Therefore, a ***less-than-significant*** impact would occur related to directly or indirectly causing potential substantial adverse effects, including the risk of loss, injury, or death involving the rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; or strong seismic ground shaking.

aiii,aiv, c,d. The potential effects resulting from implementation of the proposed project related to liquefaction, landslides, lateral spreading, subsidence/settlement, and expansive soils are discussed in detail below. The following discussion is based primarily on the Geotechnical Feasibility Evaluation (GFE) prepared by ENGEO Incorporated for the proposed project (Appendix C).[26]

Liquefaction

Soil liquefaction results from loss of strength during cyclic loading, such as that which is imposed by earthquake ground shaking. Soils most susceptible to liquefaction are clean, loose, saturated, uniformly graded, and fine-grained sediment. According to the GFE, the site is located within a mapped State of California Seismic Hazard Zone for areas that may be susceptible to liquefaction. The existing subsurface data does not provide sufficient information for performing a rigorous liquefaction hazard evaluation. However, an analysis of data from previous investigations indicates up to 5.5 inches of liquefaction-induced settlement in localized areas. Therefore, a potential impact related to liquefaction could occur.

Landslide

Seismically-induced landslides are triggered by earthquake ground shaking. The risk of landslide hazard is greatest in areas with steep, unstable slopes. The topography of the project site is generally flat, with the exception of the engineered and regularly-maintained berms. Therefore, the potential for landslides to adversely affect the proposed project is low, resulting in a less-than-significant impact.

Lateral Spreading

Lateral spreading is horizontal/lateral ground movement of relatively flat-lying soil deposits towards a free face such as an excavation, channel, or open body of water; typically, lateral spreading is associated with liquefaction of one or more subsurface layers near the bottom of the exposed slope. According to the GFE, based on the site location and

[26] ENGEO Incorporated. *420 East 3rd Street Development, Pittsburg, California, Geotechnical Feasibility Evaluation.* April 1, 2021.

distance from New York Slough, the risk for lateral spreading is low. Nevertheless, because the project site may be subject to liquefaction, lateral spreading could occur and further evaluation is required to ensure that adverse effects do not occur.

Subsidence/Settlement

Loose unsaturated sandy soils can settle during strong seismic shaking. Laboratory testing during previous investigations indicates soft clay in the southeastern portion of the project site. Thus, the compressible clay could experience moderate settlement under new fill loads if site grades are raised, with the magnitude of settlement depending on the building loads and height of fill. According to the GFE, settlement could occur at a rate of approximately 0.5-inch per foot of additional fill, and raising of site grades and construction of structures may result in several inches of settlement in areas underlain by compressible material. Therefore, subsidence/settlement have the potential to occur on-site, and further evaluation is required to ensure that impacts are reduced to a less-than-significant level.

Expansive Soil

According to the Natural Resource Conservation Service's Web Soil survey, soils at the project site consist of Clear Lake clay and Rincon clay loam. Rincon clay loam makes up a majority of the project site soils and is known to have high shrink-swell potential.[27] Expansive soils can undergo significant volume change with changes in moisture content. Specifically, such soils shrink and harden when dried and expand and soften when wetted. If structures are underlain by expansive soils, foundation systems must be capable of tolerating or resisting any potentially damaging soil movements, and building foundation areas must be properly drained. Design of the proposed structures without incorporation of such features could expose the proposed structures to potential risks due to expansive soils, should such soils exist within the project site.

Considering the above, without implementation of appropriate design measures, a potentially significant impact could occur related to the location of the project on potentially expansive soil, as defined in Table 18-1B of the Uniform Building Code, creating substantial direct or indirect risks to life or property.

Conclusion

Based on the above discussion, the project site may be susceptible to liquefaction, lateral spreading, subsidence/settlement, and expansive soils. Therefore, implementation of the proposed project could directly or indirectly cause potential substantial adverse effects involving seismic-related ground failure, including liquefaction, or landslides; could be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse; and could be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property. Thus, a ***potentially significant*** impact would occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

[27] United States Department of Agriculture, Natural Resources Conservation Service. *Web Soil Survey*. Available at: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed February 2022.

VII-1. *Prior to Grading Permit issuance, the applicant shall submit a final design-level geotechnical report of the project site that addresses soil stability including liquefaction, lateral spreading, subsidence, and soil expansion. The report shall identify any on-site geotechnical hazards and provide design recommendations for such conditions. The design-level geotechnical report shall be reviewed and approved by the Director of Public Works/City Engineer. A qualified Geotechnical Engineer shall ensure that all geotechnical recommendations specified in the design-level geotechnical report are properly incorporated in the project design.*

b. Issues related to erosion are discussed in Section X, Hydrology and Water Quality, of this Initial Study. As noted therein, the proposed project would not result in substantial soil erosion or the loss of topsoil. Thus, a ***less-than-significant*** impact would occur.

e. Sewer collection for the proposed project would be provided by construction of a new network of sewer lines that would connect to the existing 15-inch and 18-inch sewer lines located in Harbor Street and East 3rd Street, where the wastewater would be directed to the Delta Diablo wastewater treatment plant. The construction or operation of septic tanks or other alternative wastewater disposal systems is not included as part of the project. Therefore, ***no impact*** regarding the capability of soil to adequately support the use of septic tanks or alternative wastewater disposal systems would occur.

f. While archaeological resources have been discovered in the City, the Pittsburg General Plan does not list the City as being a potential site for paleontological resources. Although the potential for paleontological resources to exist on the project site is unknown, the possibility exists that paleontological resources could be discovered during grading, paving, and construction of the proposed project.

As noted in the City's General Plan, the City is underlain by alluvium, which consists mainly of unconsolidated gravel, sand, silt, and clay deposits. Such soil types are not considered unique geologic features and are common within the geographic area of the City. Furthermore, the City's General Plan does not note the existence of any unique geologic features within the City. Consequently, implementation of the proposed project would not be anticipated to have the potential to result in direct or indirect destruction of unique geologic features.

Although the proposed project would not have the potential to result in the destruction of unique geologic features, paleontological resources could exist within the project site. Should previously unknown paleontological resources exist within the project site, ground-disturbing activity, such as grading, trenching or excavating, associated with implementation of the proposed project would have the potential to disturb or destroy such features. Consequently, the proposed project could result in the direct or indirect destruction of a unique paleontological resource and a ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

VII-2. *Implement Mitigation Measure VII-1.*

VIII. GREENHOUSE GAS EMISSIONS. *Would the project:*	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	✖	☐	☐	☐
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gasses?	✖	☐	☐	☐

Discussion

a,b. Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on earth. An individual project's GHG emissions are at a micro-scale level relative to global emissions and effects to global climate change; however, an individual project could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. As such, impacts related to emissions of GHG are inherently considered cumulative impacts.

Estimated GHG emissions attributable to future development would be primarily associated with increases of carbon dioxide (CO_2) and, to a lesser extent, other GHG pollutants, such as methane (CH_4) and nitrous oxide (N_2O) associated with area sources, mobile sources or vehicles, utilities (electricity and natural gas), water usage, wastewater generation, and the generation of solid waste. The primary source of GHG emissions for the project would be expected to be mobile source emissions. The common unit of measurement for GHG is expressed in terms of annual metric tons of CO_2 equivalents ($MTCO_2e$/yr).

Buildout of the proposed project would contribute to increases of GHG emissions that are associated with global climate change during construction and operations of the proposed project. As such, the proposed project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Therefore, impacts related to GHG emissions and global climate change could be cumulatively considerable and considered ***potentially significant***.

Further analysis of the above impact will be included in the Greenhouse Gas Emissions chapter of the Harbor View Project EIR.

IX. HAZARDS AND HAZARDOUS MATERIALS. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	✖	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	☐	☐	✖	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	✖
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	✖	☐
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	✖
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	✖	☐
g. Expose people or structures, either directly or indirectly, to the risk of loss, injury or death involving wildland fires?	☐	☐	✖	☐

Discussion

a. Residential land uses are not typically associated with the routine transport, use, disposal, or generation of substantial amounts of hazardous materials. Future residents may use common household cleaning products, fertilizers, and herbicides on-site, any of which could contain potentially hazardous chemicals; however, such products would be expected to be used in accordance with label instructions. Due to the regulations governing use of such products and the amount utilized on the site, routine use of such products would not represent a substantial risk to public health or the environment. Therefore, the project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, and a ***less-than-significant*** impact would occur.

b. The following discussion is based primarily on a Phase I Environmental Site Assessment (ESA) prepared by GSI Environmental for the proposed project (Appendix D).[28] The Phase I ESA includes an analysis of hazardous and toxic materials that could be used on the

[28] GSI Environmental. *Phase I Environmental Site Assessment – Former Johns Manville Plant Site, 420 East 3rd Street.* April 9, 2021.

project site during construction activities, as well as existing hazardous materials known to be present on the site. The following potential areas of concern were identified in connection with the site.

Construction Activities

Construction activities associated with the proposed project would involve the use of heavy equipment, which would contain fuels and oils, and various other products such as concrete, paints, and adhesives. Small quantities of potentially toxic substances (e.g., petroleum and other chemicals used to operate and maintain construction equipment) would be used at the project site and transported to and from the site during construction. However, the project contractor would be required to comply with all California Health and Safety Codes and local City and County ordinances regulating the handling, storage, and transportation of hazardous and toxic materials. Compliance with such regulations would ensure that the proposed project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment during construction activities, particularly associated with construction equipment.

Existing On-Site Conditions

As previously stated in this document, the project site was occupied since the mid-1920s by a manufacturing plant that produced asbestos-cement products, asphalt roofing materials, and asbestos-containing pipe covering. Manufacture of asbestos-containing materials ceased in 1980 and commercial-grade roofing materials were manufactured at the plant until 2003, when operations terminated. Several environmental investigations were conducted at the former manufacturing site, beginning in 1986 and continuing through 2005, and areas of potential concern associated with asbestos-containing materials were identified.

The selected remedy for the environmental concerns at the project site was the removal of asbestos-containing materials and petroleum hydrocarbon-affected soil from the site and placement in engineered containment berms along the eastern boundary of the project site. Asbestos-containing materials (ACM) and debris were placed into a trench dug to 10 feet bgs along the eastern boundary of the site, which was then capped by hydrocarbon-impacted soil. An engineered textile and two feet of clean, low-permeability soil was then added to the top of the materials to create the capped, vegetated berms. An automated irrigation system exists to maintain the vegetation. The berms consist of two distinct segments referred to below as the “northern” and “southern” berms. Drainage swales were installed adjacent to the berm and graded such that stormwater runs off toward catch basins on the eastern site boundary. The existing drainage swales were installed in cooperation with DTSC-required remedial actions for the project site. The swales and other remediation systems are evaluated every five years by the DTSC. Therefore, an evaluation by the DTSC would confirm that the drainage swales are still operable. Additional remedial actions included the removal of 11 underground storage tanks (USTs), off-site disposal of approximately 10,500 CY of ACM, the off-site disposal of approximately 18,000 CY of petroleum hydrocarbon-impacted soil, and the placement of some impacted soil in the vicinity of the former evaporation pond, now referred to as the Soil Management Area (SMA). All remedial actions have been completed and approved by the DTSC; however, ongoing maintenance and monitoring is required. The remediation system is required to be operated and maintained as described in the Site Operation and Maintenance Plan until the DTSC authorizes its modification or

discontinuation. The remediation system is also evaluated every five years to determine if human health and the environment are being adequately protected.

In the course of preparing the Phase I ESA, groundwater and soil vapor beneath the project site was found to be impacted with volatile organic compounds (VOCs), and petroleum hydrocarbons. The presence of such compounds on the project site is identified as a recognized environmental concern (REC). As such, a Site Investigation Report (SIR) was prepared for the project by GSI Environmental Inc. in response to the findings of the Phase I ESA (Appendix E).[29] The SIR involved a sampling plan to assess the current subsurface conditions at the project site, the scope of which included soil vapor sampling at approximately five feet bgs in an approximate grid pattern across the site, with additional samples placed along the perimeter of the SMA; shallower vapor sampling within the SMA; groundwater sampling at the southwest boundary of the project site to assess impacts from the upgradient dry cleaner property; groundwater sampling around the perimeter of the SMA and at the downgradient property boundary to assess potential groundwater impacts resulting from previous site operations; and soil sampling to assess the quality of fill soil placed in the excavated areas and address areas where adequate sampling may not have been previously conducted (see Figure 4).

To provide context to the analytical results, the soil, groundwater, and soil vapor data was evaluated by comparison to screening criteria recommended by DTSC. Concentrations of pollutants below the respective screening criteria are not considered to pose a significant risk. Concentrations of pollutants above the respective screening levels do not necessarily indicate a risk is present, but rather suggest that additional evaluation is warranted.

VOCs in Soil Vapor and Groundwater

Soil vapor samples were collected at 21 locations throughout the project site and analyzed for VOCs. Of the locations sampled, three sampling areas contained VOC concentrations that exceeded the residential vapor intrusion Environmental Screening Level (ESL). As such, further evaluation was warranted. The VOC data in the three areas of the site that were evaluated in greater detail (upgradient southern boundary, downgradient northern boundary, and adjacent to the south of the SMA) are discussed below.

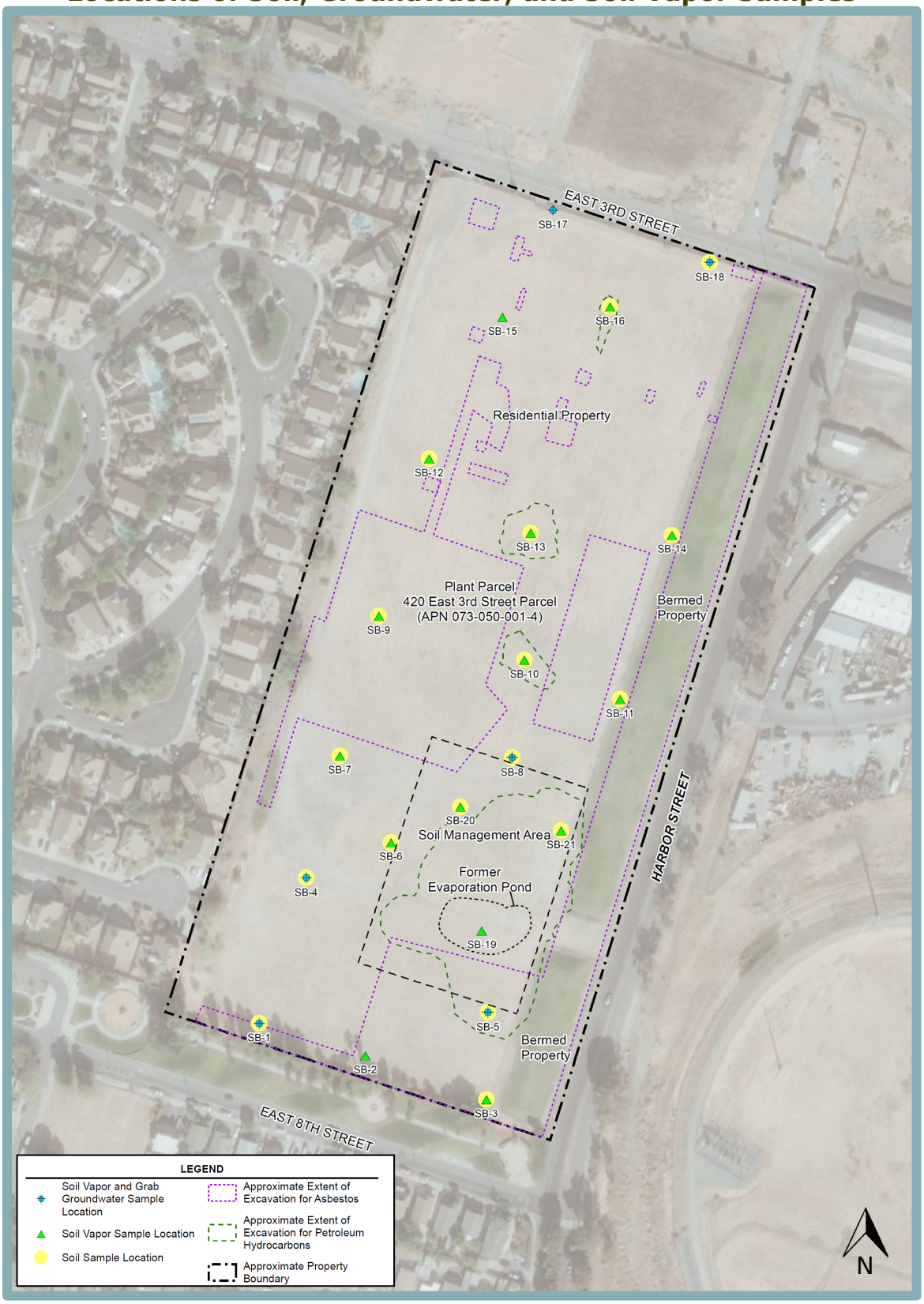
Upgradient Southern Boundary: SB-01

VOCs were detected in groundwater and soil vapor samples at SB-01 located at the southern boundary of the site. Because groundwater flows from the south to the north at the site, VOCs detected in groundwater and soil vapor at this location may be related to an upgradient, off-site source.

Tetrachloroethene (PCE) and trichloroethene (TCE) were detected in groundwater at low concentrations at SB-01. The groundwater sample result for PCE (but not TCE) exceeds the residential vapor intrusion ESL. PCE and TCE also were detected at low concentrations in the soil vapor sample collected at SB-01. The soil vapor results for PCE and TCE were below the DTSC screening levels. The PCE and TCE concentrations in soil vapor samples at SB-01 do not represent a long-term source to groundwater or a vapor intrusion concern for future site redevelopment. Given that SB-01 is at the upgradient portion of the site, it is likely that the PCE and TCE are associated with an off-site source.

[29] GSI Environmental Inc. *Site Investigation Report: 420 E. 3rd Street, Pittsburg, California*. June 2021.

Figure 4
Locations of Soil, Groundwater, and Soil Vapor Samples



Adjacent to the South of the SMA: SB-05

Groundwater and soil vapor samples were collected south of the Former Evaporation Pond and SMA at SB-05. Benzene was detected in the groundwater sample at a low concentration, which exceeds the residential vapor intrusion screening level. Benzene was also detected at a low concentration in the soil vapor sample collected at SB-05; the soil vapor result is below the DTSC screening level. Based on a comparison with DTSC screening levels, the soil vapor data is not indicative of the need of vapor intrusion mitigation at future residential buildings.[30]

Downgradient Northern Boundary: SB-18

Groundwater and soil vapor samples were collected at the downgradient northern boundary of the site at SB-18. In the groundwater sample collected at SB-18, PCE, TCE and vinyl chloride were detected at low concentrations that exceed the residential vapor intrusion screening levels. Thus, the groundwater data indicates additional evaluation of potential vapor intrusion concerns may be warranted at SB-18. In the soil vapor sample collected at SB-18, PCE, TCE, and vinyl chloride were not detected, and the detection limits were below the DTSC screening levels.[31] Thus, the data do not indicate the presence of PCE, TCE, or vinyl chloride in soil vapor, despite the detection of the compounds in underlying groundwater.

The soil vapor and groundwater data collected at SB-18 indicate the presence of low concentrations of PCE, TCE, and vinyl chloride in groundwater. Such VOCs were not detected in soil vapor, which indicate that PCE, TCE, and vinyl chloride in groundwater is limited in extent.

Conclusion

Based on the above, the SIR determined that VOCs were detected in both groundwater and soil vapor; however, the VOCs were detected at low concentrations and with an inconsistent spatial distribution. The magnitude and distribution of the VOC concentrations is not indicative of soil vapor conditions that warrant remediation or mitigation. In addition, VOC and TPH concentrations detected in groundwater samples are below the screening levels that are protective of off-site receptors. In addition, because the proposed project would be required to adhere to all relevant guidelines and ordinances regulating the handling, storage, and transportation of hazardous materials, the project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment, and a ***less-than-significant*** impact would occur.

c. The nearest school to the project site is the Pittsburg High School, located approximately 0.80 mile south of the site. The project site is not located within a quarter mile of any existing or proposed schools. Therefore, the proposed project would have ***no impact*** related to hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

d. The project site is included in the California Department of Toxic Substances Control EnviroStor Database.[32] The Envirostor Database includes information provided by the

[30] GSI Environmental Inc. *Site Investigation Report: 420 E. 3rd Street, Pittsburg, California.* June 2021.
[31] *Ibid.*
[32] California Department of Toxic Substances Control. *Hazardous Waste and Substances Site List*. Available at: https://www.envirostor.dtsc.ca.gov/public/. Accessed June 2022.

DTSC and included in the State's Hazardous Waste and Substances Sites (Cortese) List, which is compiled pursuant to Government Code section 65962.5. While the project site appears on the Cortese List, all remedial actions have been completed and approved by the DTSC. Ongoing maintenance and monitoring are still required. The remediation system is required to be operated and maintained as described in the Site Operation and Maintenance Plan until the DTSC authorizes its modification or discontinuation. The remediation system is also evaluated every five years to determine if human health and the environment are being adequately protected.

Consequently, given that the proposed project would comply with all requirements of the Site Operation and Maintenance Plan, the proposed project would have a ***less-than-significant*** impact related to being located on a site which is included on a list of hazardous materials sites that may create a significant hazard to the public.

e. The nearest airport to the site is the Buchanan Field airport, which is located approximately 12 miles southwest of the site. As such, the project site is not located within two miles of any public airports or private airstrips, and does not fall within an airport land use plan area. Therefore, ***no impact*** related to a safety hazard for people residing or working in the project area related to such would occur.

f. The City of Pittsburg adopted the *City of Pittsburg Emergency Operations Plan* in December 2018.[33] The plan provides a basis for future responses to a wide range of hazards and vulnerabilities. The plan outlines the general authority, organization, and response actions for City of Pittsburg staff when disasters occur. Implementation of the proposed project would not result in any substantial modifications to the existing roadway system already analyzed in the Emergency Operations Plan. Thus, the proposed project would not physically interfere with the Emergency Operations Plan. Additionally, the project would include lanes and drive aisles that would range from 21- to 56-feet wide, which would accommodate emergency vehicle access to the site. Because the project would not involve physical changes that would substantially alter the existing roadway network in a manner that would affect circulation, the proposed project would not interfere with emergency response or evacuation. Therefore, the proposed project would not interfere with an emergency evacuation or response plan, and a ***less-than-significant*** impact would occur.

g. The proposed project site is located in an area with residential development to the west and south, and industrial development to the east. The predominantly urbanized nature of the surrounding area presents a relatively low potential for wildfire. According to the California Department of Forestry and Fire Protection (CAL FIRE) Fire and Resource Assessment Program, the project site is not located within a Very High Fire Hazard Severity Zone.[34] It should be noted, however, that CAL FIRE Fire Hazard Severity Zones Maps are updated every 30 to 50 years. As such, because the project site was mapped in 2009, the potential exists for the Fire Hazard Severity Zone determination to be outdated. In addition, according to the City's General Plan Update Existing Conditions Report, the project site is located in a "High Threat" area for wildfires.[35] However, the proposed project would remove the ruderal weeds and grasses from the site to be replaced with structures.

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33 City of Pittsburg. *Emergency Operations Plan.* December 2018.

34 California Department of Forestry and Fire Protection. *Contra Costa County, Very High Fire Hazard Severity Zones in LRA*. January 7, 2009.

35 City of Pittsburg. *Existing Conditions Report, City of Pittsburg General Plan Update* [Figure 4.4-2]. November 2019.

Thus, the project would not exacerbate the existing level of risk and, rather, would reduce wildland fire risk by removing on-site vegetative fuel. Development of the proposed project would include the installation of fire suppression systems (e.g., fire hydrants, fire sprinklers, smoke detectors) and would be designed in accordance with the latest requirements of the California Fire Code. Therefore, the proposed project would not expose people or structures to the risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands, and a ***less-than-significant*** impact would occur.

X. HYDROLOGY AND WATER QUALITY. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	✖	☐	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	✖	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. Result in substantial erosion or siltation on- or off-site;	☐	✖	☐	☐
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	✖	☐	☐
iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	✖	☐	☐
iv. Impede or redirect flood flows?	☐	☐	✖	☐
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	✖	☐
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	✖	☐

Discussion

a, ci-ciii. The following discussion provides a summary of the proposed project's potential to violate water quality standards/waste discharge requirement, alter the drainage pattern of the site resulting in erosion or siltation, increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site, contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems, or otherwise degrade water quality during construction and operation.

Construction

During the early stages of construction activities, topsoil would be exposed due to grading and excavation of the site. After grading and prior to overlaying the ground surface with impervious surfaces and structures, the potential exists for wind and water erosion to discharge sediment and/or urban pollutants into stormwater runoff, which could adversely affect water quality downstream.

The State Water Resources Control Board (SWRCB) regulates stormwater discharges associated with construction activities where clearing, grading, or excavation results in land disturbance of one or more acres. The City's National Pollutant Discharge Elimination

System (NPDES) permit requires applicants to show proof of coverage under the State's General Construction Permit prior to receipt of any construction permits. The State's General Construction Permit requires a Storm Water Pollution Prevention Plan (SWPPP) to be prepared for the site. A SWPPP describes Best Management Practices (BMPs) to control or minimize pollutants from entering stormwater and must address both grading/erosion impacts and non-point source pollution impacts of the development project. Because the proposed project would disturb greater than one acre of land, the proposed project would be subject to the requirements of the State's General Construction Permit and, with implementation of the required SWPPP and BMPs included therein, the proposed project would not result in a violation of water quality standards and/or degradation of water quality. Furthermore, the proposed project would be required to submit an erosion and sediment control plan with submittal of the grading permit application to ensure water quality is not degraded. The plan would include erosion and sediment control measures that would be implemented during grading and would be approved by the City Engineer.

Operation

Following completion of project buildout, the site would be largely covered with impervious surfaces and topsoil would no longer be exposed. As such, the potential for impacts to water quality due to topsoil erosion and siltation would be reduced. However, impervious surfaces on the project site could contribute incrementally to the degradation of downstream water quality through the release of pollutants during storm events. Typical urban pollutants that would likely be associated with the proposed project include sediment, pesticides, oil and grease, metals, and trash.

The City of Pittsburg has adopted the County C.3 Stormwater Standards, which require new development and redevelopment projects that create or alter 10,000 sf or more of impervious area to contain and treat all stormwater runoff from the project site. The proposed project would result in a total development envelope of 742,262 sf. Thus, the project would be subject to the requirements of the SWRCB and the RWQCB, including the C.3 Standards, which are included in the City's NPDES General Permit. In addition, the proposed project would adhere to Chapter 13.28 of the Municipal Code, which establishes standards for stormwater management and discharge.[36] Prior to issuance of a building permit, the applicant would submit a stormwater control plan that meets the criteria in the most recent version of the Contra Costa Clean Water Program Section C.3 Guidebook. Compliance with such requirements would ensure that impacts to water quality standards or waste discharge requirements would not occur during operation of the proposed project.

The on-site storm drain system would collect the stormwater from the lots, streets and open space areas and convey it to bioretention areas located adjacent to the western borders of the berm areas, where it would be treated prior to being discharged into the existing 16-inch water line located in Harbor Street and East 3rd Street.

Based on the above, the proposed project would be required to comply with the requirements of the SWRCB and RWQCB, and would meet C.3 Standards. Therefore, during operation, the proposed project would comply with all relevant water quality standards and waste discharge requirement, and would not degrade water quality.

[36] City of Pittsburg. *Pittsburg Municipal Code* [Section 13.28.050]. January 22, 2019.

Development of the proposed project would result in an increase in impervious surfaces on the project site, which would alter the existing drainage pattern of the site. However, as discussed above, the project is required to comply with the City's standards for runoff and stormwater control. Consistent with Chapter 13.28 of the Municipal Code, the project would include appropriate site design measures to control the stormwater runoff from the project site.

Conclusion

Based on the above, the proposed project would be required to comply with all applicable regulations during construction and operation, would not involve uses associated with the generation or discharge of polluted water, and would be designed to adequately treat stormwater runoff from the site prior to discharge. However, without the approval of a SWPPP and through the disturbance of the on-site soils during construction activities could result in a ***potentially significant*** impact with regard to violation of water quality standards and degradation of water quality should adequate BMPs not be incorporated during construction and operations in accordance with SWRCB regulations.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

X-1. *Prior to issuance of grading permits, the applicant shall prepare a Storm Water Pollution Prevention Plan (SWPPP). The developer shall file the Notice of Intent (NOI) and associated fee to the SWRCB. The SWPPP shall serve as the framework for identification, assignment, and implementation of BMPs. The SWPPP shall be submitted to the Director of Public Works/City Engineer for review and approval and shall remain on the project site during all phases of construction. Following implementation of the SWPPP, the contractor shall subsequently demonstrate the SWPPP's effectiveness and provide for necessary and appropriate revisions, modifications, and improvements to reduce pollutants in stormwater discharges to the maximum extent practicable. The contractor shall implement BMPs to reduce pollutants in stormwater discharges to the maximum extent practicable.*

X-2. *In addition to a SWPPP, prior to issuance of grading permits, the project applicant shall create an interim and final erosion and sediment control plan which shall include a delineation and brief description of the measures to be undertaken to retain sediment on the site, including but not limited to, the design and specifications of berms and sediment detention basins and a schedule for maintenance. The plan shall also contain a delineation and brief description of the surface runoff and erosion control measures, including but not limited to, types and method of applying mulches, and designs and specifications for diverters, dikes, and drains. The plan shall be reviewed and approved by the City Community and Economic Development Department.*

X-3. *The project applicant shall submit a complete Stormwater Control Plan and Report compliant with the requirements set forth in the City's most current NPDES permit. The C.3 treatment facilities shall be adequately sized to treat the stormwater runoff from the associated drainage management areas. The grading and/or building plans shall include drawings and*

specifications necessary to implement all measures in the approved Stormwater Control Plan. Design features shall incorporate low impact development design standards as outlined in the most current edition of the Contra Costa Clean Water Program's C.3 Guidebook. All plans shall be reviewed and approved by the City Community and Economic Development Department.

b,e. Water supplies for the proposed project would be provided by the City of Pittsburg, which purchases raw water from the CCWD and extracts groundwater. According to the CCWD 2020 Urban Water Management Plan (UWMP),[37] the CCWD is primarily dependent on surface water supplies. Therefore, water demand associated with the proposed project would primarily be met by surface water, and the project would not substantially decrease groundwater supplies.

The City overlies the Pittsburg Plain Groundwater Basin and extracts groundwater using two wells. Approximately 1,353 to 1,480 acre-feet per year of the City's water supply consists of groundwater.[38] The Pittsburg Plain Groundwater Basin is characterized by the California Department of Water Resources as a basin of very low priority, and is not classified as being critically overdrafted.[39] Therefore, the preparation of a groundwater management plan is not required for the Pittsburg Plain Groundwater Basin.

Given that the proposed project would be consistent with the site's current General Plan land use and zoning designations, the project would not result in increased use of water supplies beyond what has been anticipated by the City and accounted for in the City's UWMP. In addition, even if the proposed project could increase water usage beyond what was anticipated, the project would not substantially deplete groundwater supplies, as the City does not primarily use groundwater as a supply source.

The proposed project would disturb approximately 17.04 acres of the 20.5-acre site, and the remainder of the site would consist of existing pervious surfaces, including the berms. Additionally, stormwater runoff from the site would be routed to two new bioretention facilities, located to the north and south of the eastern driveway entrance. The northern basin would extend from East 3rd Street along the berm area to the driveway entrance, while the other basin would extend south along the berm area from the driveway entrance to the southernmost residential unit. Consequently, the pervious areas of the site would allow for stormwater infiltration into underlying soils, and the proposed project would not result in substantial interference with groundwater recharge in the area.

Therefore, the proposed project would not substantially decrease groundwater supplies through excess water usage nor would the project interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management. In addition, the project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Thus, a ***less-than-significant*** impact would occur.

civ. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) for the project site, the project site is located within an Area of Minimal Flood

[37] Contra Costa Water District. *2020 Urban Water Management Plan*. June 2021.
[38] City of Pittsburg. *City of Pittsburg 2020 Urban Water Management Plan Final Draft*. July 2021.
[39] California Department of Water Resources. SGMA Data Viewer. Available at: https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#boundaries. Accessed June 2022.

Hazard (Zone X).[40] Thus, because the project site is not located in a special flood hazard zone, the project would not result in substantial adverse effects as it relates to impeding or redirecting floods. As such, the proposed project would have a ***less-than-significant*** impact regarding alteration of the existing drainage pattern of a site or area which would impede or redirect flood flows.

d. As discussed under question 'civ' above, the project site is not located in a special flood hazard zone. Tsunamis are defined as sea waves created by undersea fault movement, whereas a seiche is a long-wavelength, large-scale wave action set up in a closed body of water such as a lake or reservoir. While the project area is located in proximity to a coastline, the potential for the project to be affected by flooding risks associated with tsunamis is very low.[41] Seiches do not pose a risk to the proposed project, as the project site is not located adjacent to a large closed body of water. Based on the above, the proposed project would not pose a risk related to the release of pollutants from project inundation due to flooding, tsunami, or seiche, and a ***less-than-significant*** impact would occur.

[40] Federal Emergency Management Agency. *Flood Insurance Maps.* Available at: https://msc.fema.gov/portal/search?AddressQuery=420%20East%203rd%20Street%2C%20Pittsburg%2C%20CA#searchresultsanchor. Accessed February 2022.

[41] California Department of Conservation. *California Tsunami Maps and Data.* Available at: https://www.conservation.ca.gov/cgs/tsunami/maps. Accessed February 3, 2022.

XI. LAND USE AND PLANNING. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Physically divide an established community?	☐	☐	✖	☐
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	✖	☐	☐	☐

Discussion

a. A project risks dividing an established community if the project would introduce infrastructure or alter land use so as to change the land use conditions in the surrounding community, or isolate an existing land use. Currently, the project site is vacant and located near existing residential development, industrial uses, and vacant land. Given that the project site is currently vacant, the proposed project would not displace any residents or result in dividing an established community. Therefore, a ***less-than-significant*** impact would occur.

b. The project site is currently designated Downtown Commercial and Downtown Medium Density Residential in the City's General Plan and is zoned as RMD-O and CP. The project requires a Rezone to decrease the minimum lot size, as required by City Council Ordinance 07-1284, from 2,200 sf to 1,980 sf while keeping the average lot size at 2,200 sf.

Given that the project would require a Rezone, the project would not be entirely consistent with land use policies, plans, and regulations for the current designation. Although the project would not be consistent with the current land use and zoning designation, the project would be required to comply with all applicable development standards established by Title 18 of the City's Municipal Code. The development standards include maximum lot coverage, maximum building heights, and building setback requirements. In addition, following approval of the Rezone, the project would be consistent with all land use policies, plans, and regulations for the applicable zoning designation.

As discussed throughout this Initial Study, the proposed project would not conflict with City policies and regulations adopted for the purpose of avoiding or mitigating an environmental effect, including, but not limited to, the standards set forth in Section 18.82.040, Noise; Chapter 18, Article XIX Tree Preservation and Protection; and Chapter 15.88, Grading, Erosion, and Sediment Control, of the City's Municipal Code. For all CEQA issue areas, with the exception of GHG emissions and transportation, this Initial Study includes mitigation to reduce identified environmental impacts to less-than-significant levels. However, the proposed project could conflict with policies that were adopted for the purpose of avoiding or mitigation an environment effect related to GHG emissions and transportation. Therefore, the proposed project could conflict with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental impact, and a ***potentially significant*** impact could occur.

Further analysis of the above impact will be included in the Greenhouse Gas Emissions and Transportation chapters of the Harbor View Project EIR.

XII. MINERAL RESOURCES. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	✖
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	✖

Discussion

a,b. Per the City's General Plan, the City contains one of the two places in the San Francisco Bay Area where coal was mined.[42] The discovery of coal in the 1850s led to construction of Black Diamond Mines. However, due to competition from other energy sources, the mine closed in 1949. Currently, the City does not contain any significant mineral deposits or active mining operations.[43] In addition, mining is not an allowed use in the proposed RMD-O or CP District. Thus, the proposed project would not result in the loss of availability of a known mineral resource or a locally important mineral resource recovery site, and ***no impact*** would occur.

[42] City of Pittsburg. *General Plan Pittsburg 2020: A Vision for the 21st Century* [pg. 9-2]. November 16, 2001.
[43] City of Pittsburg. *General Plan Pittsburg 2020: A Vision for the 21st Century* [pg. 9-4]. November 16, 2001.

XIII. NOISE. *Would the project result in:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	✖	☐
b. Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	✖	☐
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	✖

Discussion

a. The following discussion is based on an Environmental Noise Assessment prepared for the proposed project by Saxelby Acoustics (Appendix F).[44] The following sections present information regarding existing sensitive noise receptors in proximity to the project site, the existing noise environment, and the potential for the proposed project to result in impacts during project construction and operation. The following terms are referenced in the sections below:

- Decibel (dB): A unit of sound energy intensity. An A-weighted decibel (dBA) is a decibel corrected for the variation in frequency response to the typical human ear at commonly encountered noise levels. All references to dB in this discussion will be A-weighted unless noted otherwise.
- Maximum Sound Level (L_{max}): The maximum sound level over a given time-period.
- Day-Night Average Sound Level (DNL or L_{dn}): The average noise over a 24-hour period.
- Equivalent Sound Level (L_{eq}): The average sound level over a period of time.

Significance Criteria

The City of Pittsburg has not established a threshold for significant increases in traffic noise. However, the Federal Interagency Committee on Noise (FICON) has developed guidance for determining increases in traffic noise. Therefore, increases in the ambient noise environment due to the proposed project were evaluated using the criteria developed by FICON. Although the FICON guidelines were originally developed for aircraft noise impacts, the noise increase thresholds are generally considered appropriate for evaluation of noise increases at noise sensitive uses such as single-family residences. The significance criteria are provided in Table 4.

Section 18.82.040 of the City's Municipal Code limits the generation of loud noises on construction sites adjacent to existing development to normal business hours between 8:00 AM and 5:00 PM.

[44] Saxelby Acoustics. *Environmental Noise Assessment Harbor View Residential*. June 8, 2022.

Table 4
Significance of Changes in Noise Exposure (FICON)

Ambient Noise Level Without Project, L_{dn}	Increase Required for Significant Impact
<60 dB	+5.0 dB or more
60-65 dB	+3.0 dB or more
>65 dB	+1.5 dB or more

Source: Saxelby Acoustics, 2021.

In addition, as shown in Figure 5, exterior use areas associated with new single-family residences are considered conditionally acceptable if noise levels range from 55 to 70 dBA DNL, normally unacceptable if noise levels range from 70 to 75 dBA DNL, and clearly unacceptable if noise levels exceed 75 dBA DNL.

Sensitive Noise Receptors

Some land uses are considered more sensitive to noise than others, and, thus, are referred to as sensitive noise receptors. Land uses often associated with sensitive noise receptors generally include residences, schools, libraries, hospitals, and passive recreational areas. Noise sensitive land uses are typically given special attention in order to achieve protection from excessive noise. In the vicinity of the project site, the nearest existing noise sensitive land uses include the single-family residences located approximately 50 feet to the west of the project site.

Existing Noise Environment

The existing noise environment in the project area is primarily defined by traffic on East 3rd Street, Harbor Street, and East 8th Street. To quantify the existing ambient noise environment in the project vicinity, Saxelby Acoustics conducted a continuous noise level measurement at three locations on the project site. Noise measurement locations are shown on Figure 6.

Table 5
Summary of Existing Background Noise Measurement Data

			Daytime			Nighttime		
Site	Date	L_{dn}/CNEL	L_{eq}	L_{50}	L_{max}	L_{eq}	L_{50}	L_{max}
LT-1	10/20/21	67	64	53	83	59	51	78
LT-2	10/20/21	68	65	55	86	61	53	84
LT-3	10/20/21	62	63	50	75	51	48	69

Notes:
- All values shown in dBA
- Daytime hours: 7:00 AM to 10:00 PM.
- Nighttime Hours: 10:00 PM to 7:00 AM.

Source: Saxelby Acoustics, 2021.

Construction Noise

During construction of the proposed project, noise from construction activities would temporarily add to the noise environment in the project vicinity. According to Section 18.82.040 of the City's Municipal Code, no construction activity shall exceed 65 dB outside of the normal business hours stated in the Significance Criteria discussion above.

Figure 5
Land Use Compatibility Chart (Pittsburg General Plan Table 12-3)



INTERPRETATION

Normally Acceptable:
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements

Conditionally Acceptable:
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design.

Normally Unacceptable:
New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable:
New construction or development clearly should not be undertaken.

Source: Office of Planning and Research, State of California General Plan Guidelines, Appendix A: Guidelines for the Preparation and Content of the Noise Element of the General Plan, 1998.

*Because hospitals are often designed and constructed with high noise insulation properties, it is possible for them to be satisfactorily located in noisier areas.

Figure 6
Noise Measurement Sites



As indicated in Table 6 below, activities involved in construction would generate maximum noise levels ranging from 76 to 90 dBA L_{max} at a distance of 50 feet. Heavy equipment would be used for grading, excavation, paving, and building construction, which would increase ambient noise levels when in use.

Table 6
Construction Equipment Noise

Type of Equipment	Maximum Level, dBA at 50 feet
Auger Drill Rig	84
Backhoe	78
Compactor	83
Compressor (air)	78
Concrete Saw	90
Dozer	82
Dump Truck	76
Excavator	81
Generator	81
Jackhammer	89
Pneumatic Tools	85
Source: Saxelby Acoustics, 2021.	

Noise levels would vary depending on the type of equipment used, how the equipment is operated, and how well the equipment is maintained. In addition, noise exposure at any single point outside the project site would vary depending on the proximity of construction activities to that point. Standard construction equipment, such as graders, backhoes, loaders, and trucks, would be used on-site.

As distance increases between equipment, or increases separation of areas with simultaneous construction activity, dispersion and distance attenuation reduce the effects of combining separate noise sources. Most of the building construction would occur at distances of 50 feet or greater from the nearest residences. Thus, noise levels experienced at the nearest residences would be reduced from the levels depicted in Table 6.

Construction activities would be temporary in nature and would be required to occur during normal daytime working hours. The City of Pittsburg General Plan Policy 12-P-9 limits generation of loud noises on construction sites adjacent to existing developments to normal business hours between 8:00 AM and 5:00 PM. Noise would also be generated during the construction phase by increased truck traffic on area roadways. A project-generated noise source would be truck traffic associated with transport of heavy materials and equipment to and from the construction site. Although construction activities are temporary in nature and would only occur during normal daytime working hours, construction-related noise could result in sleep interference at existing noise-sensitive land uses in the vicinity of the construction if construction activities were to occur outside the normal daytime hours. However, given the project's compliance with Section 18.82.040 of the City's Municipal Code, which restricts construction activities to daytime hours, impacts resulting from noise levels temporarily exceeding the threshold of significance due to construction would be less than significant.

Operational Noise

Given the residential nature of the proposed project, the primary source of operation noise is from traffic. To assess noise impacts due to project-related traffic increases on the local roadway network, traffic noise levels are predicted at sensitive receptors for existing and future, project and no-project conditions. Existing, Near-Term, and Cumulative noise levels due to traffic were calculated using the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA RD-77-108). Traffic noise levels were predicted at the sensitive receptors located at the closest typical setback distance along each project-area roadway segment. The FHWA model was developed to predict hourly L_{eq} values for free-flowing traffic conditions. To predict traffic noise levels in terms of L_{dn}, it is necessary to adjust the input volume to account for the day/night distribution of traffic.

As show in Table 7, the maximum increase in traffic noise resulting from the proposed project is predicted to be 1.8 dBA along Harbor Street near East 8th Street. The existing traffic noise level for the segment is 56.8 dBA L_{dn}. Based upon the FICON criteria, where traffic noise levels are less than 60 dBA L_{dn} at the outdoor activity areas of noise-sensitive uses, a traffic noise level increase of less than 5 dBA L_{dn} is not considered significant. Therefore, the 1.8 dBA increase along Harbor Street would be considered less than significant.

Where existing traffic noise levels are greater than 65 dBA L_{dn} at the outdoor activity areas of noise-sensitive uses, a 1.5 dBA L_{dn} increase in roadway noise levels would be considered significant. All other evaluated roadway segments are predicted to experience a less than 1.5 dBA L_{dn} increase in noise levels due to project-generated traffic. Therefore, impacts resulting from increased traffic noise would be considered less than significant.

Conclusion

Considering the above, the proposed project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance. Therefore, impacts resulting from noise levels temporarily or permanently exceeding thresholds of significance would be ***less than significant***.

b. Similar to noise, vibration involves a source, a transmission path, and a receiver. However, noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to the vibration depends on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration is measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration in terms of peak particle velocities (PPV) in inches per second (in/sec). Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of PPV.

Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Table 8, which was developed by Caltrans, shows the vibration levels that would normally be required to result in damage to structures.

Table 7
Predicted Traffic Noise Level and Project-Related Traffic Noise Level Increases

Roadway	Segment	Existing			Near Term			Cumulative		
		No Project	Plus Project	Change	No Project	Plus Project	Change	No Project	Plus Project	Change
Railroad Ave.	North of E. 8th St.	53.8	54.4	0.6	54.7	55.2	0.5	55.0	55.4	0.4
E. 8th St.	East of Railroad Ave.	40.7	42.1	1.4	41.1	42.4	1.3	42.9	43.8	0.9
Harbor St.	North of E. 8th St.	56.8	58.6	1.8	56.9	58.6	1.7	57.9	59.3	1.4
Railroad Ave.	North of E. 10th St.	48.4	48.8	0.4	49.2	49.5	0.3	49.6	49.9	0.3
E. 10th St.	East of Railroad Ave.	63.7	64.0	0.3	64.1	64.4	0.3	65.2	65.4	0.2
Harbor St.	South of E. 10th St.	60.6	61.5	0.9	60.7	61.5	0.8	61.1	61.9	0.8

Note: All noise levels are predicted at closest sensitive receptors in terms of dBA, L_{dn}.

Source: Saxelby Acoustics, 2021.

Table 8
Effects of Vibration on People and Buildings

PPV		Human Reaction	Effect on Buildings
in/sec	mm/sec		
0.15 to 0.30	0.006 to 0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type
2.0	0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
2.5	0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of "architectural" damage to normal buildings
5.0	0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations)	Threshold at which there is a risk of "architectural" damage to normal dwelling - houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize "architectural" damage
10 to 15	0.4 to 0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage

Source: Caltrans. Transportation Related Earthborne Vibrations. TAV-02-01-R9601. February 20, 2002.

As shown in the table, the threshold for architectural damage to structures is 0.20 in/sec PPV and continuous vibrations of 0.10 in/sec PPV, or greater, would likely cause annoyance to sensitive receptors.

The proposed project would only cause elevated vibration levels during construction, as the proposed project would not involve any uses or operations that would generate substantial groundborne vibration.

The primary vibration-generating activities associated with the proposed project would occur during grading, placement of utilities, and construction of foundations. Table 9 shows the typical vibration levels produced by construction equipment at various distances. The most substantial source of groundborne vibrations associated with project construction would be the use of vibratory compactors. The Table 9 data indicate that construction vibration levels anticipated for the project are less than the 0.2 in/sec threshold at distances of 26 feet. Sensitive receptors which could be impacted by construction related vibrations, especially vibratory compactors/rollers, are located approximately 26 feet, or further, from typical construction activities. At these distances, construction vibrations would not exceed acceptable levels. Additionally, construction activities would be temporary in nature and would only occur during normal daytime working hours. Therefore, the proposed project would not result in generation of excessive groundborne vibration or groundborne noise levels and a ***less-than-significant*** impact could occur.

Table 9
Vibration Levels for Various Construction Equipment

Type of Equipment	PPV at 25 feet (in/sec)	PPV at 50 feet (in/sec)	PPV at 100 feet (in/sec)
Large Bulldozer	0.089	0.031	0.011
Loaded Trucks	0.076	0.027	0.010
Small Bulldozer	0.003	0.001	0.000
Auger/drill Rigs	0.089	0.031	0.011
Jackhammer	0.035	0.012	0.004
Vibratory Hammer	0.070	0.025	0.009
Vibratory Compactor/roller	0.210	0.074	0.026

Source: Saxelby Acoustics, 2021.

c. The nearest airport to the proposed project site is the Buchanan Field Airport, located approximately 12 miles southwest of the site. The site is not included in an airport land use plan. Given that the project site is not located within two miles of a public airport or public use airport, the proposed project would not expose people residing or working in the project area to excessive noise levels associated with airports. Thus, ***no impact*** would occur.

XIV. POPULATION AND HOUSING. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)?	☐	☐	✖	☐
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	✖

Discussion

a. The proposed project would include the development of 227 residential units. The average household size for the City in 2021 was 3.33 persons per household.[45] Thus, the proposed project would accommodate an estimated 756 additional residents (3.33 persons/unit X 227 dwelling units) in the City. Considering that the total population of the City was estimated to be approximately 76,416 in April 2020,[46] a potential increase of 756 residents would be considered negligible. Furthermore, under the existing land use designations, which allows up to 17 du/ac in the majority of the site, the project site could be built out with up to 341 residential units, which would accommodate approximately 1,138 residents. Therefore, even though the project includes a Rezone, the proposed project would not generate population growth in excess of what is already allowed to occur on the project site.

Furthermore, population growth itself does not constitute an environmental impact; rather, increased demands on the physical environment resulting from increases in population are considered environmental impacts. For example, increased demands on City services could require system upgrades, the construction of which could have environmental impacts. Physical environmental effects associated with development of the proposed project are evaluated throughout this Initial Study. As discussed in Section XV, Public Services, of this Initial Study, the project site is located in an urban area and is surrounded by existing development. Therefore, construction of new or expanded public services facilities would not be necessary to serve the project. Per Section XIX, Utilities and Service Systems, the project would not include construction of substantial new off-site utility infrastructure or expansion of existing utilities.

In addition, the proposed project would be developed in an urban area, surrounded by existing residential and industrial uses. The project would not involve extension of major infrastructure. Due to the fact that the project site is already zoned for residential use, the project would not indirectly result in substantial unplanned population growth in the project area.

While the project would result in population growth, such growth could be accommodated by existing public services and infrastructure and would not result in significant adverse environmental effects. Thus, a ***less-than-significant*** impact would occur related to

[45] United States Census Bureau. *QuickFacts Pittsburg City, California.* Available at: https://www.census.gov/quickfacts/pittsburgcitycalifornia. Accessed February 4, 2022.
[46] *Ibid*.

inducing substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure).

b. The project site is currently vacant and does not include existing housing or other habitable structures. As such, implementation of the proposed project would not displace a substantial number of existing housing or people and would not necessitate the construction of replacement housing elsewhere. Therefore, ***no impact*** would occur.

XV. PUBLIC SERVICES. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Fire protection?	☐	☐	✖	☐
b. Police protection?	☐	☐	✖	☐
c. Schools?	☐	☐	✖	☐
d. Parks?	☐	☐	✖	☐
e. Other Public Facilities?	☐	☐	✖	☐

Discussion

a-c, e. The Contra Costa County Fire Protection District (CCCFPD) provides fire protection services to the City. The CCCFPD operates out of 26 fire stations located throughout the jurisdictional area.[47] The project site is located approximately 1.8 mile from the nearest fire station, located at 1903 Railroad Avenue. The proposed project would adhere to Chapter 15.20, the Fire Code, of the City's Municipal Code, which requires the proposed project to install a fire sprinkler system and adhere to all fire protection codes established by the CCCFPD. The foregoing features would reduce the risk of fire at the project site, and, thus, reduce potential for the project to increase demand for fire protection services. In addition, as prescribed in Section 17.32.090 of the City of Pittsburg Municipal Code, the proposed project would be required to dedicate land, pay fees, or both, for fire stations the project might necessitate. Payment of such impact fees would help avoid impacts related to increase in material or staffing needs resulting from buildout of the proposed project.

The proposed project would be serviced by the Pittsburg Police Department, located at 65 Civic Avenue. The General Plan includes a goal to maintain a ratio of 1.8 sworn officers per 1,000 residents.[48] As of 2019, the Pittsburg Police Department employed 85 sworn officers, meaning the City has a ratio of approximately 1.11 sworn officers per 1,000 residents.[49] Because the proposed project would result in a population increase of approximately 746 residents, the proposed project has the potential to reduce the City's existing ratio to 1.10 sworn officers per 1,000 residents. However, the change from 1.11 to 1.10 sworn officers per 1,000 residents is not considered substantial, and the proposed project would not warrant the construction of new police facilities. Furthermore, as stated above, compliance with Section 17.32.090 of the City's Code would require the proposed project to dedicate land, pay fees, or both, for public facilities, such as police stations, that the project may necessitate. Payment of such impact fees would help avoid impacts related to increase in material or staffing needs resulting from buildout of the proposed project.

The project site is located within the Pittsburg Unified School District. Development of the proposed project would generate additional students in the area. General Plan Policy 8-

[47] Contra Costa County Fire Protection District. *Station Address.* Available at: https://www.cccfpd.org/station-address. Accessed February 2022.
[48] City of Pittsburg. *General Plan Pittsburg 2020: A Vision for the 21st Century* [pg. 10-23]. November 16, 2001.
[49] Pittsburg Police Department. *Annual Report – Fiscal Year 2018-2019.* December 2019.

P-41 states "As part of development review for large residential subdivisions (greater than 100 units), evaluate the need for new school sites. If needed, encourage subdivision design to accommodate school facilities […]."[50] Although the proposed project would not include the development of school facilities, the City collects development impact fees to help pay for public services that include public schools. Thus, any increased demand for educational facilities resulting from the proposed project would be mitigated through payment of such fees. In addition, Proposition 1A/SB 50 prohibits local agencies from using the inadequacy of school facilities as a basis for denying or conditioning approvals of any "legislative or adjudicative act involving the planning, use, or development of real property." (Government Code 65996(b).) Satisfaction of the Proposition 1A/SB 50 statutory requirements by a developer is deemed to be "full and complete mitigation." Therefore, according to SB 50, the payment of the necessary school impact fees for the project would be full and satisfactory CEQA mitigation.

The City is served by the Contra Costa County Library, the Pittsburg branch of which is located at 80 Power Avenue, 1.5 miles southwest of the project site. Implementation of the proposed project would create an increased demand for public facilities, such as libraries. However, the small increase in demand resulting from buildout of the proposed project could be accommodated by the existing facilities.

Based on the above, the proposed project would have a ***less-than-significant*** impact related to the need for new or physically altered fire protection, police protection, school facilities, or other public facilities, the construction of which could cause significant environmental impacts.

d. Parks and recreation services within the City are provided by the City's Recreation Department. The Recreation Department plans and designs new parks; owns, operates, and maintains parks and community centers; manages rentals of community centers, picnic sites, and sports fields; and offers recreation programs. Further discussion of impacts upon parks and recreation services can be found in Section XVI, Recreation, of this Initial Study. As described therein, a ***less-than-significant*** impact would occur.

[50] City of Pittsburg. *General Plan Pittsburg 2020: A Vision for the 21st Century* [pg. 8-27]. November 16, 2001.

XVI. RECREATION. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	✖	☐
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	✖	☐

Discussion

a,b. The nearest park to the project site is Marina Walk Park, approximately 2,200 feet to the west. Marina Walk Park offers 1.7 acre of land and features picnic tables, a playground, and a half basketball court. The General Plan establishes a standard of five acres of community or neighborhood recreational or park facility per 1,000 residents to ensure adequate recreational open space for the enjoyment of the community. As such, the proposed project would be required to provide at least 3.4 acres of park land (756 residents x [1000/5]). The project itself would include on-site recreational amenities, in the form of a small park located near the southeastern driveway. Preliminarily, the determination can be made that the project would not provide sufficient park space to meet the City's requirements. Because the proposed project would not include park space sufficient to meet the total amount of park facilities required by the Municipal Code, the proposed project would be subject to fees in lieu of land dedication, consistent with the requirements set forth in Section 17.32.020 of the Municipal Code.

Revenues generated through impact fees on new development and in-lieu fees would pay for any new park and recreation facilities deemed necessary by the City. Park impact fees imposed by the City would generate revenue to acquire necessary land to develop new parks or rehabilitate existing neighborhood parks and recreation facilities reasonably related to serve the subdivision. Based on the above, a ***less-than-significant*** impact would occur with regard to recreational resources.

XVII.TRANSPORTATION. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	✖	☐	☐	☐
b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	✖	☐	☐	☐
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	✖	☐	☐	☐
d. Result in inadequate emergency access?	✖	☐	☐	☐

Discussion

a. The proposed project would include subdivision of the project site and subsequent development of 227 residential units, which would result in an increase in vehicle traffic on the street system surrounding the project area. In addition, the project has the potential to generate new bicycle and pedestrian traffic in the area. As noted below, determination of traffic impacts based solely on vehicle level of service (LOS) is no longer allowable based on CEQA Guidelines Section 15064.3. However, the potential remains for the proposed project to result in conflicts with General Plan policies related to transportation facilities, including transit, roadway, bicycle, and pedestrian facilities. Therefore, a ***potentially significant*** impact could occur.

Further analysis of the above impact will be discussed in the Transportation chapter of the Harbor View Project EIR.

b. Section 15064.3 of the CEQA Guidelines provides specific considerations for evaluating a project's transportation impacts. Pursuant to Section 15064.3, analysis of VMT attributable to a project is the most appropriate measure of transportation impacts. The City of Pittsburg has not yet established any standards or thresholds regarding VMT. However, pursuant to section 15064.3(3) of the CEQA Guidelines, a lead agency may analyze a project's VMT qualitatively based on the availability of transit, proximity to destinations, etc. While changes to driving conditions that increase intersection delay are an important consideration for traffic operations and management, the method of analysis does not fully describe environmental effects associated with fuel consumption, emissions, and public health. Section 15064.3(3) changes the focus of transportation impact analysis in CEQA from measuring impact to drivers to measuring the impact of driving.

Given that the proposed project would result in increased vehicle trip generation on local roadways, further analysis of VMT attributable to the project is required to ensure that the project would not conflict with Section 15064.3(b) of the CEQA Guidelines. Thus, a ***potentially significant*** impact could occur.

Further analysis of the above impact will be included in the Transportation chapter of the Harbor View Project EIR.

c,d. Site access would be provided by one new 27-foot driveway located off of East 3rd Street from the north, and one new approximately 26-foot driveway located off of Harbor Street

from the east. All internal lanes and drive aisles would meet the minimum width that can accommodate an emergency vehicle. Development of the proposed project would also include new curb, gutter, sidewalk, and landscaping along Harbor Street and East 3rd Street.

The City of Pittsburg approved an Emergency Operations Plan (EOP) in December 2018 designed to assist the City in responses to disasters, emergency incidents, and pre-planned events. The EOP provides an overview of the City's organization, policies, and approach to all phases of emergency preparedness. While the proposed access and circulation would be adequate for emergency services, the increase in development intensity could cause an increase in traffic related hazards or affect emergency access in the project area. Without further evaluation, the proposed project could result in a ***potentially significant*** impact related to an increase in hazards from design features or incompatible uses, or inadequate emergency access to the project.

Further analysis of the above impact will be included in the Transportation chapter of the Harbor View Project EIR.

XVIII. TRIBAL CULTURAL RESOURCES. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).	☐	✖	☐	☐
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	✖	☐	☐

Discussion

a,b. As discussed in Section V, Cultural Resources, of this Initial Study, the project site is currently vacant and undeveloped. The project site does not contain any structures which would be considered a historical resource by the City or State standards. A search of the NAHC Sacred Lands File did not yield any information regarding the presence of Tribal Cultural Resources within the project site or the immediate area.[51] Furthermore, a search of the CHRIS by the NWIC did not identify any known cultural resources or Native American resources within the project site.[52]

In compliance with AB 52 (PRC Section 21080.3.1), a project notification letter was distributed to tribes which submitted request for consultation to the City. The letter was distributed on April 15, 2022 and requests to consult were not been received within the 30-day consultation period.

Based on the location and lack of identified cultural resources at the site, known Tribal Cultural Resources do not exist within the proposed project site. Nevertheless, the possibility exists that construction of the proposed project could result in a substantial adverse change in the significance of a Tribal Cultural Resource if previously unknown cultural resources are uncovered during grading or other ground-disturbing activities. Thus, a ***potentially significant*** impact to tribal cultural resources could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

XVIII-1. Implement Mitigation Measures V-1 and V-2.

[51] Native American Heritage Commission. *RE: 420 E. 3rd Street Project, Contra Costa County*. February 14, 2022.
[52] Northwest Information Center. *Records Search Results for the Proposed 420 East 3rd Street Project*. December 6, 2021.

XIX. UTILITIES AND SERVICE SYSTEMS. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	✖	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	✖	☐
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	✖	☐
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	✖	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	✖	☐

Discussion

a-c. Brief discussions of water, sewer service, stormwater drainage, electrical, natural gas, and telecommunications that would serve the proposed project are included below.

Water

Water supply for the project site would be provided by the CCWD through the Central Valley Project (CVP). The CCWD obtains water from the Sacramento-San Joaquin Delta and provides treated and raw water to approximately 500,000 people in Contra Costa County. Other water supply sources used within the service area include the San Joaquin River, Mallard Slough, recycled water, a minor amount of groundwater, and water transfers. Additionally, the City supplements CCWD water supplies with two wells, which yield approximately 1,500-acre feet per year (afy). The City also operates its own water treatment plant and associated infrastructure facilities. According to the Pittsburg 2020 UWMP, the City's water use for 2020 was 9,232 afy, more than ten percent lower than projected water use from the 2015 UWMP.

Per CCWD's UWMP, water supplies will meet demand and will be able to accommodate buildout of the City under normal year, single year, and multiple-dry year demand scenarios.[53] Although the project would require a Rezone, because the proposed zoning designation would be substantively similar to the existing zoning designation, the proposed project has generally been anticipated within the UWMP. In addition, as detailed in Section XIV, Population and Housing, of this IS/MND, the proposed project would

[53] Contra Costa Water District. *2020 Urban Water Management* [pg. 7-8]. June 2021.

include fewer dwelling units than what is currently allowed to occur on the project site. As such, the proposed project would be expected to consume less water than was anticipated for the site in the UWMP. Due to the anticipated surplus, the CCWD's existing supplies would be adequate to meet increased demand for the proposed project. In addition, the project would comply with the Section 18.84.310 of the City's Municipal Code, which contains the City's water-efficient landscape standards. Compliance with Section 18.84.310 of the City's Municipal Code would ensure that landscaping water demand from project operations would be minimized.

Furthermore, landscaping included in the proposed project would be subject to the water efficiency landscape standards within Section 18.84.310 of the City's Municipal Code. Consequently, the proposed landscaping for the project site has been designed to reduce irrigation water demands from project operation. Consistent with Section 18.84.305 of the City's Municipal Code, landscaping plans for projects creating or rehabilitating 2,500 sf or more are subject to review and approval by the City to ensure that proposed landscaping complies with all water efficiency requirements imposed by Chapter 18.84.300 of the City's Municipal Code. Compliance with the code would minimize outdoor water use to the extent feasible.

Based on the above, the proposed project would not require or result in the relocation of new water infrastructure, or result in insufficient water supplies to serve the project or future development.

Sewer Service

Within the City of Pittsburg, sewer service is provided by Delta Diablo. The City maintains and owns the local sewage collection system. The Delta Diablo Wastewater Treatment Plant (WWTP) has the capacity to treat approximately 19.5 million gallons of sewage per day.[54]

Delta Diablo created a Sewer System Management Plan in 2009, and updated the Management Plan in 2018. The Management Plan accounts for the Delta Diablo service population to reach 269,000 by 2040 and provides a five-year Capital Improvement Program (CIP) which would include capacity enhancement projects for sewage systems in the County.[55]

Existing 15-inch and 18-inch sanitary sewer lines are located in Harbor Street and East 3rd Street respectively. The on-site sewer system would convey approximately 65 percent of the sewage generated from the site to the existing 18-inch sewer in East 3rd Street and approximately 35 percent of the sewer generated from the site to the existing 15-inch sewer line in Harbor Street. Wastewater would be directed through the City's existing conveyance infrastructure to the WWTP. Based on the generation rate from the City of Pittsburg General Plan of 220 gallons per day (gpd) per single-family dwelling unit (du), the proposed project is anticipated to generate approximately 49,940 gpd (227 units X 220 gpd/du = 49,940 gpd) of wastewater flows.[56] The addition of 49,940 gpd of influent to the WWTP would not exceed the permitted capacity of the WWTP of 19.5 million gallons per day (MGD).

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54 Delta Diablo Sanitation District. *Transforming Wastewater to Resources*. Available at: https:// https://www.deltadiablo.org/about-us. Accessed February 4, 2022.
55 Delta Diablo Sanitation District. *Sewer System Management Plan*. October 10, 2018.
56 City of Pittsburg. *General Plan Pittsburg 2020: A Vision for the 21st Century* [pg. 11-9]. November 16, 2001.

Based on the above, the proposed project would not require or result in the relocation or construction of new wastewater treatment infrastructure, and the wastewater treatment provider for the site would have adequate capacity to serve the proposed project.

Stormwater Systems

As discussed above in Section X, Hydrology and Water Quality, of this Initial Study, the proposed project would include an on-site storm drain system that would collect the stormwater from the lots, streets and open space areas and convey it to bioretention areas located adjacent to the western borders of the berm areas, where it would be treated prior to being discharged into the existing 16-inch water line located in Harbor Street and East 3rd Street. In addition, stormwater would infiltrate on-site soils and percolate into the groundwater table in areas that are not overlain with impervious surfaces. Implementation of Mitigation Measures X-1 through X-3 would ensure that on-site drainage systems comply with the City's SWPPP and erosion and sediment control plan, as well as the County C.3 standards. Furthermore, although the site was previously anticipated to be developed for commercial use, those uses would still include paved areas for parking pathways, or structures. As such, because the site has been anticipated for development by the City's General Plan, impacts to stormwater systems resulting from development of the site have been generally analyzed in the City's General Plan EIR.

Therefore, the proposed stormwater conveyance network and bioretention areas would be adequate to capture and treat the on-site runoff generated by the proposed project, and the project would not require or result in the relocation or construction of new or expanded storm water drainage facilities, the construction or relocation of which could cause significant environmental effects.

Other Utilities

Electricity, natural gas, and telecommunications utilities would be provided by way of connections to existing infrastructure located within the immediate project vicinity. PG&E would provide electricity and natural gas services to the project site. The proposed project would not require major upgrades to, or extension of, existing infrastructure. As part of the proposed project, the existing overhead utility lines on East 3rd Street would need to be placed underground. Thus, impacts to electricity, natural gas, and telecommunications infrastructure would be less than significant.

Conclusion

Given that the proposed project would include standard utility improvements, the existing utility infrastructure would meet increased demand associated with the proposed project. Therefore, the proposed project would result in a ***less-than-significant*** impact related to the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

d,e. Solid waste, recyclable materials, and compostable material collection within the City of Pittsburg is provided by Mt. Diablo Resource Recovery. Solid waste from the City is ultimately disposed of at the Potrero Hills Landfill, located in Solano County. The landfill has a maximum permitted throughput of 4,330 tons per day. According to the California Department of Resources Recycling and Recovery (CalRecycle), the Potrero Hills Landfill

has a remaining capacity of 13,872,000 CY out of a total permitted capacity of 83,100,000 CY, or 17 percent of the landfill's remaining capacity.[57]

Pittsburg currently participates in a voluntary recycling program operated by Mt. Diablo Resource Recovery. Recyclables are picked up once per week along with regular waste, and then processed at a facility owned by Mt. Diablo Resource Recovery. The City has been aggressive in implementing the programs outlined in the City's Source Reduction and Recycling Element to reach the mandated 50 percent diversion goal set by the California Integrated Waste Management Act of 1989.

Due to the substantial amount of available capacity remaining at Potrero Hills Landfill, sufficient capacity would be available to accommodate the project's solid waste disposal needs. Although the proposed project would require a Rezone, because the proposed zoning designation would be substantively similar to the existing zoning designation of the site, the site has generally been anticipated for residential development. As such, because the site has been anticipated for development by the City General Plan, impacts related to solid waste resulting from development of the site have been generally analyzed in the City's General Plan EIR. Therefore, a ***less-than-significant*** impact related to solid waste would occur as a result of the proposed project.

[57] California Department of Resources Recycling and Recovery (CalRecycle). *Facility/Site Summary: Potrero Hills Landfill (48-AA-0075)*. Available at: https://www2.calrecycle.ca.gov/SolidWaste/Site/Summary/3591. Accessed December 2021.

XX. WILDFIRE. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	✖	☐
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	✖	☐
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	✖	☐
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	✖	☐

Discussion

a-d. According to the California Department of Forestry and Fire Protection (CAL FIRE) Fire and Resource Assessment Program, the project site is not located within or near a Very High Fire Hazard Severity Zone.[58] It should be noted that according to the City's General Plan Update Existing Conditions Report, the project site is located in a "High Threat" area for wildfires.[59] However, the project site would remove the ruderal weeds and grasses from the site and be replaced with structures. Thus, the project would not exacerbate the existing level of risk and, rather, would reduce wildland fire risk by removing on-site vegetative fuel. Additionally, the predominantly urbanized nature of the surrounding area and proximity to the New York Slough would preclude the uncontrolled spread of wildfire. Therefore, the proposed project would not be subject to significant risks related to wildfires, and a ***less-than-significant*** impact would occur.

[58] California Department of Forestry and Fire Protection. *Contra Costa County, Very High Fire Hazard Severity Zones in LRA*. January 7, 2009.

[59] City of Pittsburg. *Existing Conditions Report, City of Pittsburg General Plan Update* [Figure 4.4-2]. November 2019.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE.	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	✖	☐	☐
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	✖	☐	☐	☐
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	✖	☐	☐

Discussion

a. As discussed in Section IV, Biological Resources, of this Initial Study, while the potential exists for burrowing owl and other migratory birds protected by the MBTA to occur on-site, compliance with ECCC HCP/NCCP requirements would ensure that impacts to special-status species would be less than significant. The project site is regularly maintained, has been previously disturbed, and does not contain any known historical resources. However, because unknown cultural resources have the potential to exist on-site, Mitigation Measures V-1 and V-2 would ensure that impacts to cultural resources would be less than significant.

Considering the above, the proposed project would not result in impacts associated with the following: 1) degrade the quality of the environment; 2) substantially reduce or impact the habitat of fish or wildlife species; 3) cause fish or wildlife populations to drop below self-sustaining levels; 4) threaten to eliminate a plant or animal community; 5) reduce the number or restrict the range of a rare or endangered plant or animal; or 6) eliminate important examples of the major periods of California history or prehistory. Therefore, with mitigation incorporated, a ***less-than-significant*** impact would occur.

b. The proposed project in conjunction with other development within the City of Pittsburg could incrementally contribute to cumulative impacts in the project area. However, as discussed in question “a,b” of Section III, Air Quality, of this Initial Study, impacts to Air Quality would not be cumulatively considerable. Similarly, cumulative impacts with regards to Noise are found to be less than significant. Nonetheless, cumulatively considerable impacts could occur with implementation of the proposed project related to GHG emissions and transportation. Thus, a ***potentially significant*** impact could occur.

Further analysis of the above impact will be included in the Greenhouse Gas Emissions and Transportation chapters of the Harbor View Project EIR.

c. As described in this Initial Study, the proposed project would comply with all applicable General Plan policies, Municipal Code standards, other applicable local and State regulations, in addition to the mitigation measures included herein. Additionally, as discussed in Section III, Air Quality, Section IX, Hazards and Hazardous Materials, and Section XIII, Noise, of this Initial Study, the proposed project would not cause substantial effects to human beings, including effects related to exposure to air pollutants, and hazardous materials. Therefore, with mitigation incorporated, the proposed project would result in a ***less-than-significant*** impact.

Appendix A
Air Quality Emissions – CalEEMod Results

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

420 E. 3rd Street

Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	8.40	1000sqft	0.00	8,400.00	0
Apartments Low Rise	20.00	Dwelling Unit	1.25	20,000.00	57
Single Family Housing	207.00	Dwelling Unit	19.25	372,600.00	592

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2027
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot acreage adjusted to be consistent with the total lot acreage shown on the site plan prepared for the proposed project. Commerical acreage zereoed out because it is part of the mixed-use residences, and included in the residential acreage.

Construction Phase - Construction phase timing based on applicant provided AQ Questionnaire

Trips and VMT - Based on applicant provided AQ Questionnaire.

Grading - Basedon applicant provided AQ questionnaire.

Vehicle Trips - Trip generation rates based on Transportation Impact Assessment prepared for the project by Fehr & Peers. Commerical trip generation zeroed out and represented in multi-family land use.

Area Mitigation - Based on AQ Questionnaire.

Water Mitigation - Compliant with MWELO.

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	30.00
tblConstructionPhase	NumDays	370.00	840.00
tblConstructionPhase	NumDays	35.00	200.00
tblConstructionPhase	NumDays	20.00	40.00
tblConstructionPhase	NumDays	20.00	840.00
tblGrading	MaterialExported	0.00	1,000.00
tblLandUse	LotAcreage	0.19	0.00
tblLandUse	LotAcreage	67.21	19.25
tblVehicleTrips	ST_TR	8.14	6.75
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	ST_TR	9.54	9.43
tblVehicleTrips	SU_TR	6.28	6.75
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	SU_TR	8.55	9.43
tblVehicleTrips	WD_TR	7.32	6.75
tblVehicleTrips	WD_TR	9.74	0.00
tblVehicleTrips	WD_TR	9.44	9.43

2.0 Emissions Summary

420 E. 3rd Street - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.2465	2.5294	2.0198	4.5000e-003	0.9932	0.1060	1.0993	0.3912	0.0975	0.4888	0.0000	395.7983	395.7983	0.1242	8.4000e-004	399.1551
2024	0.7345	2.6000	2.8691	5.9700e-003	0.6357	0.1105	0.7462	0.1857	0.1029	0.2887	0.0000	526.9125	526.9125	0.1244	6.7900e-003	532.0450
2025	1.1088	1.9474	2.6598	5.4700e-003	0.1357	0.0770	0.2127	0.0366	0.0728	0.1094	0.0000	485.3709	485.3709	0.0764	0.0117	490.7694
2026	1.1070	1.9447	2.6440	5.4300e-003	0.1357	0.0770	0.2127	0.0366	0.0728	0.1094	0.0000	482.2613	482.2613	0.0762	0.0114	487.5663
2027	0.7713	1.3006	1.7643	3.6100e-003	0.0912	0.0515	0.1427	0.0246	0.0488	0.0734	0.0000	321.2748	321.2748	0.0508	7.4200e-003	324.7564
Maximum	**1.1088**	**2.6000**	**2.8691**	**5.9700e-003**	**0.9932**	**0.1105**	**1.0993**	**0.3912**	**0.1029**	**0.4888**	**0.0000**	**526.9125**	**526.9125**	**0.1244**	**0.0117**	**532.0450**

420 E. 3rd Street - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.2465	2.5294	2.0198	4.5000e-003	0.9932	0.1060	1.0993	0.3912	0.0975	0.4888	0.0000	395.7979	395.7979	0.1242	8.4000e-004	399.1546
2024	0.7345	2.6000	2.8691	5.9700e-003	0.6357	0.1105	0.7462	0.1857	0.1029	0.2887	0.0000	526.9120	526.9120	0.1244	6.7900e-003	532.0445
2025	1.1088	1.9474	2.6598	5.4700e-003	0.1357	0.0770	0.2127	0.0366	0.0728	0.1094	0.0000	485.3705	485.3705	0.0764	0.0117	490.7690
2026	1.1070	1.9447	2.6440	5.4300e-003	0.1357	0.0770	0.2127	0.0366	0.0728	0.1094	0.0000	482.2609	482.2609	0.0762	0.0114	487.5659
2027	0.7713	1.3006	1.7643	3.6100e-003	0.0912	0.0515	0.1427	0.0246	0.0488	0.0734	0.0000	321.2745	321.2745	0.0508	7.4200e-003	324.7561
Maximum	**1.1088**	**2.6000**	**2.8691**	**5.9700e-003**	**0.9932**	**0.1105**	**1.0993**	**0.3912**	**0.1029**	**0.4888**	**0.0000**	**526.9120**	**526.9120**	**0.1244**	**0.0117**	**532.0445**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**6-1-2023**	**8-31-2023**	1.1394	1.1394
2	**9-1-2023**	**11-30-2023**	1.2327	1.2327
3	**12-1-2023**	**2-29-2024**	1.1846	1.1846
4	**3-1-2024**	**5-31-2024**	0.7778	0.7778
5	**6-1-2024**	**8-31-2024**	0.7066	0.7066
6	**9-1-2024**	**11-30-2024**	0.8010	0.8010
7	**12-1-2024**	**2-28-2025**	0.7680	0.7680

420 E. 3rd Street - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8	**3-1-2025**	**5-31-2025**	0.7692	0.7692
9	**6-1-2025**	**8-31-2025**	0.7680	0.7680
10	**9-1-2025**	**11-30-2025**	0.7620	0.7620
11	**12-1-2025**	**2-28-2026**	0.7539	0.7539
12	**3-1-2026**	**5-31-2026**	0.7680	0.7680
13	**6-1-2026**	**8-31-2026**	0.7669	0.7669
14	**9-1-2026**	**11-30-2026**	0.7608	0.7608
15	**12-1-2026**	**2-28-2027**	0.7528	0.7528
16	**3-1-2027**	**5-31-2027**	0.7670	0.7670
17	**6-1-2027**	**8-31-2027**	0.7659	0.7659
18	**9-1-2027**	**9-30-2027**	0.0486	0.0486
		Highest	1.2327	1.2327

420 E. 3rd Street - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.1636	0.0472	3.5216	3.8700e-003		0.2743	0.2743		0.2743	0.2743	27.2238	9.5883	36.8121	0.0538	1.5600e-003	38.6236
Energy	0.0315	0.2698	0.1176	1.7200e-003		0.0218	0.0218		0.0218	0.0218	0.0000	482.8360	482.8360	0.0336	9.0700e-003	486.3795
Mobile	0.7708	0.8409	7.2270	0.0152	1.7768	0.0109	1.7878	0.4747	0.0102	0.4849	0.0000	1,452.1753	1,452.1753	0.0913	0.0680	1,474.7277
Waste						0.0000	0.0000		0.0000	0.0000	53.9246	0.0000	53.9246	3.1869	0.0000	133.5958
Water						0.0000	0.0000		0.0000	0.0000	5.1658	11.4678	16.6336	0.5324	0.0128	33.7449
Total	**3.9659**	**1.1579**	**10.8661**	**0.0207**	**1.7768**	**0.3070**	**2.0838**	**0.4747**	**0.3062**	**0.7810**	**86.3141**	**1,956.0674**	**2,042.3815**	**3.8980**	**0.0914**	**2,167.0714**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.8993	0.0353	1.6907	1.9000e-004		0.0106	0.0106		0.0106	0.0106	0.0000	21.1247	21.1247	2.9900e-003	3.4000e-004	21.2998
Energy	0.0315	0.2698	0.1176	1.7200e-003		0.0218	0.0218		0.0218	0.0218	0.0000	482.8360	482.8360	0.0336	9.0700e-003	486.3795
Mobile	0.7708	0.8409	7.2270	0.0152	1.7768	0.0109	1.7878	0.4747	0.0102	0.4849	0.0000	1,452.1753	1,452.1753	0.0913	0.0680	1,474.7277
Waste						0.0000	0.0000		0.0000	0.0000	53.9246	0.0000	53.9246	3.1869	0.0000	133.5958
Water						0.0000	0.0000		0.0000	0.0000	5.1658	10.8046	15.9704	0.5323	0.0127	33.0751
Total	**2.7016**	**1.1460**	**9.0352**	**0.0171**	**1.7768**	**0.0433**	**1.8202**	**0.4747**	**0.0426**	**0.5173**	**59.0904**	**1,966.9406**	**2,026.0310**	**3.8471**	**0.0902**	**2,149.0780**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**31.88**	**1.03**	**16.85**	**17.74**	**0.00**	**85.88**	**12.65**	**0.00**	**86.09**	**33.76**	**31.54**	**-0.56**	**0.80**	**1.31**	**1.35**	**0.83**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2023	7/12/2023	5	30	
2	Building Construction	Building Construction	6/13/2024	9/1/2027	5	840	
3	Grading	Grading	7/13/2023	4/17/2024	5	200	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Paving	Paving	4/18/2024	6/12/2024	5	40	
5	Architectural Coating	Architectural Coating	6/27/2024	9/15/2027	5	840	

Acres of Grading (Site Preparation Phase): 45

Acres of Grading (Grading Phase): 600

Acres of Paving: 0

Residential Indoor: 795,015; Residential Outdoor: 265,005; Non-Residential Indoor: 12,600; Non-Residential Outdoor: 4,200; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	125.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	92.00	26.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2949	0.0000	0.2949	0.1516	0.0000	0.1516	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0399	0.4129	0.2737	5.7000e-004		0.0190	0.0190		0.0175	0.0175	0.0000	50.1760	50.1760	0.0162	0.0000	50.5817
Total	**0.0399**	**0.4129**	**0.2737**	**5.7000e-004**	**0.2949**	**0.0190**	**0.3139**	**0.1516**	**0.0175**	**0.1690**	**0.0000**	**50.1760**	**50.1760**	**0.0162**	**0.0000**	**50.5817**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.3000e-004	8.4800e-003	1.9900e-003	4.0000e-005	1.0600e-003	7.0000e-005	1.1300e-003	2.9000e-004	7.0000e-005	3.6000e-004	0.0000	3.7300	3.7300	1.2000e-004	5.9000e-004	3.9092
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	4.7000e-004	5.9900e-003	2.0000e-005	2.1300e-003	1.0000e-005	2.1400e-003	5.7000e-004	1.0000e-005	5.8000e-004	0.0000	1.6721	1.6721	5.0000e-005	5.0000e-005	1.6870
Total	**8.2000e-004**	**8.9500e-003**	**7.9800e-003**	**6.0000e-005**	**3.1900e-003**	**8.0000e-005**	**3.2700e-003**	**8.6000e-004**	**8.0000e-005**	**9.4000e-004**	**0.0000**	**5.4021**	**5.4021**	**1.7000e-004**	**6.4000e-004**	**5.5961**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2949	0.0000	0.2949	0.1516	0.0000	0.1516	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0399	0.4129	0.2737	5.7000e-004		0.0190	0.0190		0.0175	0.0175	0.0000	50.1760	50.1760	0.0162	0.0000	50.5817
Total	**0.0399**	**0.4129**	**0.2737**	**5.7000e-004**	**0.2949**	**0.0190**	**0.3139**	**0.1516**	**0.0175**	**0.1690**	**0.0000**	**50.1760**	**50.1760**	**0.0162**	**0.0000**	**50.5817**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.3000e-004	8.4800e-003	1.9900e-003	4.0000e-005	1.0600e-003	7.0000e-005	1.1300e-003	2.9000e-004	7.0000e-005	3.6000e-004	0.0000	3.7300	3.7300	1.2000e-004	5.9000e-004	3.9092
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	4.7000e-004	5.9900e-003	2.0000e-005	2.1300e-003	1.0000e-005	2.1400e-003	5.7000e-004	1.0000e-005	5.8000e-004	0.0000	1.6721	1.6721	5.0000e-005	5.0000e-005	1.6870
Total	**8.2000e-004**	**8.9500e-003**	**7.9800e-003**	**6.0000e-005**	**3.1900e-003**	**8.0000e-005**	**3.2700e-003**	**8.6000e-004**	**8.0000e-005**	**9.4000e-004**	**0.0000**	**5.4021**	**5.4021**	**1.7000e-004**	**6.4000e-004**	**5.5961**

3.3 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1060	0.9680	1.1640	1.9400e-003		0.0442	0.0442		0.0415	0.0415	0.0000	166.9314	166.9314	0.0395	0.0000	167.9182
Total	**0.1060**	**0.9680**	**1.1640**	**1.9400e-003**		**0.0442**	**0.0442**		**0.0415**	**0.0415**	**0.0000**	**166.9314**	**166.9314**	**0.0395**	**0.0000**	**167.9182**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9400e-003	0.0833	0.0255	3.7000e-004	0.0123	4.9000e-004	0.0128	3.5500e-003	4.7000e-004	4.0200e-003	0.0000	36.3766	36.3766	7.5000e-004	5.3800e-003	37.9987
Worker	0.0159	0.0104	0.1372	4.3000e-004	0.0523	2.6000e-004	0.0526	0.0139	2.4000e-004	0.0142	0.0000	40.0106	40.0106	1.0700e-003	1.0500e-003	40.3499
Total	**0.0178**	**0.0936**	**0.1627**	**8.0000e-004**	**0.0646**	**7.5000e-004**	**0.0654**	**0.0175**	**7.1000e-004**	**0.0182**	**0.0000**	**76.3872**	**76.3872**	**1.8200e-003**	**6.4300e-003**	**78.3486**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1060	0.9680	1.1640	1.9400e-003		0.0442	0.0442		0.0415	0.0415	0.0000	166.9312	166.9312	0.0395	0.0000	167.9180
Total	**0.1060**	**0.9680**	**1.1640**	**1.9400e-003**		**0.0442**	**0.0442**		**0.0415**	**0.0415**	**0.0000**	**166.9312**	**166.9312**	**0.0395**	**0.0000**	**167.9180**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9400e-003	0.0833	0.0255	3.7000e-004	0.0123	4.9000e-004	0.0128	3.5500e-003	4.7000e-004	4.0200e-003	0.0000	36.3766	36.3766	7.5000e-004	5.3800e-003	37.9987
Worker	0.0159	0.0104	0.1372	4.3000e-004	0.0523	2.6000e-004	0.0526	0.0139	2.4000e-004	0.0142	0.0000	40.0106	40.0106	1.0700e-003	1.0500e-003	40.3499
Total	**0.0178**	**0.0936**	**0.1627**	**8.0000e-004**	**0.0646**	**7.5000e-004**	**0.0654**	**0.0175**	**7.1000e-004**	**0.0182**	**0.0000**	**76.3872**	**76.3872**	**1.8200e-003**	**6.4300e-003**	**78.3486**

3.3 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.4200e-003	0.1504	0.0454	6.6000e-004	0.0223	8.9000e-004	0.0232	6.4400e-003	8.5000e-004	7.2900e-003	0.0000	64.7600	64.7600	1.3500e-003	9.5700e-003	67.6469
Worker	0.0271	0.0169	0.2336	7.5000e-004	0.0949	4.5000e-004	0.0953	0.0252	4.1000e-004	0.0257	0.0000	70.7865	70.7865	1.7600e-003	1.7800e-003	71.3616
Total	**0.0305**	**0.1673**	**0.2790**	**1.4100e-003**	**0.1171**	**1.3400e-003**	**0.1185**	**0.0317**	**1.2600e-003**	**0.0329**	**0.0000**	**135.5465**	**135.5465**	**3.1100e-003**	**0.0114**	**139.0085**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.4200e-003	0.1504	0.0454	6.6000e-004	0.0223	8.9000e-004	0.0232	6.4400e-003	8.5000e-004	7.2900e-003	0.0000	64.7600	64.7600	1.3500e-003	9.5700e-003	67.6469
Worker	0.0271	0.0169	0.2336	7.5000e-004	0.0949	4.5000e-004	0.0953	0.0252	4.1000e-004	0.0257	0.0000	70.7865	70.7865	1.7600e-003	1.7800e-003	71.3616
Total	**0.0305**	**0.1673**	**0.2790**	**1.4100e-003**	**0.1171**	**1.3400e-003**	**0.1185**	**0.0317**	**1.2600e-003**	**0.0329**	**0.0000**	**135.5465**	**135.5465**	**3.1100e-003**	**0.0114**	**139.0085**

3.3 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3500e-003	0.1495	0.0448	6.5000e-004	0.0223	8.8000e-004	0.0232	6.4400e-003	8.5000e-004	7.2900e-003	0.0000	63.5737	63.5737	1.3400e-003	9.3900e-003	66.4064
Worker	0.0256	0.0154	0.2209	7.3000e-004	0.0949	4.2000e-004	0.0953	0.0252	3.9000e-004	0.0256	0.0000	69.1779	69.1779	1.6100e-003	1.6800e-003	69.7201
Total	**0.0289**	**0.1649**	**0.2656**	**1.3800e-003**	**0.1171**	**1.3000e-003**	**0.1184**	**0.0317**	**1.2400e-003**	**0.0329**	**0.0000**	**132.7516**	**132.7516**	**2.9500e-003**	**0.0111**	**136.1265**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3500e-003	0.1495	0.0448	6.5000e-004	0.0223	8.8000e-004	0.0232	6.4400e-003	8.5000e-004	7.2900e-003	0.0000	63.5737	63.5737	1.3400e-003	9.3900e-003	66.4064
Worker	0.0256	0.0154	0.2209	7.3000e-004	0.0949	4.2000e-004	0.0953	0.0252	3.9000e-004	0.0256	0.0000	69.1779	69.1779	1.6100e-003	1.6800e-003	69.7201
Total	**0.0289**	**0.1649**	**0.2656**	**1.3800e-003**	**0.1171**	**1.3000e-003**	**0.1184**	**0.0317**	**1.2400e-003**	**0.0329**	**0.0000**	**132.7516**	**132.7516**	**2.9500e-003**	**0.0111**	**136.1265**

3.3 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1190	1.0849	1.3994	2.3500e-003		0.0459	0.0459		0.0432	0.0432	0.0000	201.7699	201.7699	0.0474	0.0000	202.9557
Total	**0.1190**	**1.0849**	**1.3994**	**2.3500e-003**		**0.0459**	**0.0459**		**0.0432**	**0.0432**	**0.0000**	**201.7699**	**201.7699**	**0.0474**	**0.0000**	**202.9557**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1900e-003	0.0990	0.0295	4.3000e-004	0.0148	5.9000e-004	0.0154	4.2900e-003	5.6000e-004	4.8500e-003	0.0000	41.5282	41.5282	8.9000e-004	6.1300e-003	43.3781
Worker	0.0162	9.4300e-003	0.1401	4.7000e-004	0.0633	2.7000e-004	0.0635	0.0168	2.5000e-004	0.0171	0.0000	45.1461	45.1461	9.9000e-004	1.0700e-003	45.4892
Total	**0.0184**	**0.1084**	**0.1695**	**9.0000e-004**	**0.0781**	**8.6000e-004**	**0.0789**	**0.0211**	**8.1000e-004**	**0.0219**	**0.0000**	**86.6743**	**86.6743**	**1.8800e-003**	**7.2000e-003**	**88.8672**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1190	1.0849	1.3994	2.3500e-003		0.0459	0.0459		0.0432	0.0432	0.0000	201.7697	201.7697	0.0474	0.0000	202.9554
Total	**0.1190**	**1.0849**	**1.3994**	**2.3500e-003**		**0.0459**	**0.0459**		**0.0432**	**0.0432**	**0.0000**	**201.7697**	**201.7697**	**0.0474**	**0.0000**	**202.9554**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1900e-003	0.0990	0.0295	4.3000e-004	0.0148	5.9000e-004	0.0154	4.2900e-003	5.6000e-004	4.8500e-003	0.0000	41.5282	41.5282	8.9000e-004	6.1300e-003	43.3781
Worker	0.0162	9.4300e-003	0.1401	4.7000e-004	0.0633	2.7000e-004	0.0635	0.0168	2.5000e-004	0.0171	0.0000	45.1461	45.1461	9.9000e-004	1.0700e-003	45.4892
Total	**0.0184**	**0.1084**	**0.1695**	**9.0000e-004**	**0.0781**	**8.6000e-004**	**0.0789**	**0.0211**	**8.1000e-004**	**0.0219**	**0.0000**	**86.6743**	**86.6743**	**1.8800e-003**	**7.2000e-003**	**88.8672**

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.6855	0.0000	0.6855	0.2363	0.0000	0.2363	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2026	2.1055	1.7111	3.7900e-003		0.0869	0.0869		0.0799	0.0799	0.0000	332.6648	332.6648	0.1076	0.0000	335.3545
Total	**0.2026**	**2.1055**	**1.7111**	**3.7900e-003**	**0.6855**	**0.0869**	**0.7724**	**0.2363**	**0.0799**	**0.3162**	**0.0000**	**332.6648**	**332.6648**	**0.1076**	**0.0000**	**335.3545**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1200e-003	2.1400e-003	0.0271	8.0000e-005	9.6400e-003	5.0000e-005	9.6900e-003	2.5600e-003	5.0000e-005	2.6100e-003	0.0000	7.5555	7.5555	2.2000e-004	2.1000e-004	7.6227
Total	**3.1200e-003**	**2.1400e-003**	**0.0271**	**8.0000e-005**	**9.6400e-003**	**5.0000e-005**	**9.6900e-003**	**2.5600e-003**	**5.0000e-005**	**2.6100e-003**	**0.0000**	**7.5555**	**7.5555**	**2.2000e-004**	**2.1000e-004**	**7.6227**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.6855	0.0000	0.6855	0.2363	0.0000	0.2363	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2026	2.1055	1.7111	3.7900e-003		0.0869	0.0869		0.0799	0.0799	0.0000	332.6644	332.6644	0.1076	0.0000	335.3541
Total	**0.2026**	**2.1055**	**1.7111**	**3.7900e-003**	**0.6855**	**0.0869**	**0.7724**	**0.2363**	**0.0799**	**0.3162**	**0.0000**	**332.6644**	**332.6644**	**0.1076**	**0.0000**	**335.3541**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1200e-003	2.1400e-003	0.0271	8.0000e-005	9.6400e-003	5.0000e-005	9.6900e-003	2.5600e-003	5.0000e-005	2.6100e-003	0.0000	7.5555	7.5555	2.2000e-004	2.1000e-004	7.6227
Total	**3.1200e-003**	**2.1400e-003**	**0.0271**	**8.0000e-005**	**9.6400e-003**	**5.0000e-005**	**9.6900e-003**	**2.5600e-003**	**5.0000e-005**	**2.6100e-003**	**0.0000**	**7.5555**	**7.5555**	**2.2000e-004**	**2.1000e-004**	**7.6227**

3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5530	0.0000	0.5530	0.1635	0.0000	0.1635	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1255	1.2627	1.0812	2.4200e-003		0.0521	0.0521		0.0479	0.0479	0.0000	212.6261	212.6261	0.0688	0.0000	214.3453
Total	**0.1255**	**1.2627**	**1.0812**	**2.4200e-003**	**0.5530**	**0.0521**	**0.6051**	**0.1635**	**0.0479**	**0.2114**	**0.0000**	**212.6261**	**212.6261**	**0.0688**	**0.0000**	**214.3453**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8700e-003	1.2200e-003	0.0162	5.0000e-005	6.1600e-003	3.0000e-005	6.1900e-003	1.6400e-003	3.0000e-005	1.6700e-003	0.0000	4.7114	4.7114	1.3000e-004	1.2000e-004	4.7513
Total	**1.8700e-003**	**1.2200e-003**	**0.0162**	**5.0000e-005**	**6.1600e-003**	**3.0000e-005**	**6.1900e-003**	**1.6400e-003**	**3.0000e-005**	**1.6700e-003**	**0.0000**	**4.7114**	**4.7114**	**1.3000e-004**	**1.2000e-004**	**4.7513**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5530	0.0000	0.5530	0.1635	0.0000	0.1635	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1255	1.2627	1.0812	2.4200e-003		0.0521	0.0521		0.0479	0.0479	0.0000	212.6259	212.6259	0.0688	0.0000	214.3451
Total	**0.1255**	**1.2627**	**1.0812**	**2.4200e-003**	**0.5530**	**0.0521**	**0.6051**	**0.1635**	**0.0479**	**0.2114**	**0.0000**	**212.6259**	**212.6259**	**0.0688**	**0.0000**	**214.3451**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8700e-003	1.2200e-003	0.0162	5.0000e-005	6.1600e-003	3.0000e-005	6.1900e-003	1.6400e-003	3.0000e-005	1.6700e-003	0.0000	4.7114	4.7114	1.3000e-004	1.2000e-004	4.7513
Total	**1.8700e-003**	**1.2200e-003**	**0.0162**	**5.0000e-005**	**6.1600e-003**	**3.0000e-005**	**6.1900e-003**	**1.6400e-003**	**3.0000e-005**	**1.6700e-003**	**0.0000**	**4.7114**	**4.7114**	**1.3000e-004**	**1.2000e-004**	**4.7513**

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0198	0.1905	0.2925	4.6000e-004		9.3700e-003	9.3700e-003		8.6200e-003	8.6200e-003	0.0000	40.0531	40.0531	0.0130	0.0000	40.3769
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0198**	**0.1905**	**0.2925**	**4.6000e-004**		**9.3700e-003**	**9.3700e-003**		**8.6200e-003**	**8.6200e-003**	**0.0000**	**40.0531**	**40.0531**	**0.0130**	**0.0000**	**40.3769**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e-004	4.7000e-004	6.2200e-003	2.0000e-005	2.3700e-003	1.0000e-005	2.3800e-003	6.3000e-004	1.0000e-005	6.4000e-004	0.0000	1.8121	1.8121	5.0000e-005	5.0000e-005	1.8274
Total	**7.2000e-004**	**4.7000e-004**	**6.2200e-003**	**2.0000e-005**	**2.3700e-003**	**1.0000e-005**	**2.3800e-003**	**6.3000e-004**	**1.0000e-005**	**6.4000e-004**	**0.0000**	**1.8121**	**1.8121**	**5.0000e-005**	**5.0000e-005**	**1.8274**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0198	0.1905	0.2925	4.6000e-004		9.3700e-003	9.3700e-003		8.6200e-003	8.6200e-003	0.0000	40.0530	40.0530	0.0130	0.0000	40.3769
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0198**	**0.1905**	**0.2925**	**4.6000e-004**		**9.3700e-003**	**9.3700e-003**		**8.6200e-003**	**8.6200e-003**	**0.0000**	**40.0530**	**40.0530**	**0.0130**	**0.0000**	**40.3769**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e-004	4.7000e-004	6.2200e-003	2.0000e-005	2.3700e-003	1.0000e-005	2.3800e-003	6.3000e-004	1.0000e-005	6.4000e-004	0.0000	1.8121	1.8121	5.0000e-005	5.0000e-005	1.8274
Total	**7.2000e-004**	**4.7000e-004**	**6.2200e-003**	**2.0000e-005**	**2.3700e-003**	**1.0000e-005**	**2.3800e-003**	**6.3000e-004**	**1.0000e-005**	**6.4000e-004**	**0.0000**	**1.8121**	**1.8121**	**5.0000e-005**	**5.0000e-005**	**1.8274**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4479					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0121	0.0817	0.1213	2.0000e-004		4.0800e-003	4.0800e-003		4.0800e-003	4.0800e-003	0.0000	17.1068	17.1068	9.6000e-004	0.0000	17.1309
Total	**0.4600**	**0.0817**	**0.1213**	**2.0000e-004**		**4.0800e-003**	**4.0800e-003**		**4.0800e-003**	**4.0800e-003**	**0.0000**	**17.1068**	**17.1068**	**9.6000e-004**	**0.0000**	**17.1309**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8900e-003	1.8900e-003	0.0250	8.0000e-005	9.5300e-003	5.0000e-005	9.5800e-003	2.5400e-003	4.0000e-005	2.5800e-003	0.0000	7.2845	7.2845	1.9000e-004	1.9000e-004	7.3463
Total	**2.8900e-003**	**1.8900e-003**	**0.0250**	**8.0000e-005**	**9.5300e-003**	**5.0000e-005**	**9.5800e-003**	**2.5400e-003**	**4.0000e-005**	**2.5800e-003**	**0.0000**	**7.2845**	**7.2845**	**1.9000e-004**	**1.9000e-004**	**7.3463**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4479					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0121	0.0817	0.1213	2.0000e-004		4.0800e-003	4.0800e-003		4.0800e-003	4.0800e-003	0.0000	17.1068	17.1068	9.6000e-004	0.0000	17.1309
Total	**0.4600**	**0.0817**	**0.1213**	**2.0000e-004**		**4.0800e-003**	**4.0800e-003**		**4.0800e-003**	**4.0800e-003**	**0.0000**	**17.1068**	**17.1068**	**9.6000e-004**	**0.0000**	**17.1309**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8900e-003	1.8900e-003	0.0250	8.0000e-005	9.5300e-003	5.0000e-005	9.5800e-003	2.5400e-003	4.0000e-005	2.5800e-003	0.0000	7.2845	7.2845	1.9000e-004	1.9000e-004	7.3463
Total	**2.8900e-003**	**1.8900e-003**	**0.0250**	**8.0000e-005**	**9.5300e-003**	**5.0000e-005**	**9.5800e-003**	**2.5400e-003**	**4.0000e-005**	**2.5800e-003**	**0.0000**	**7.2845**	**7.2845**	**1.9000e-004**	**1.9000e-004**	**7.3463**

3.6 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.8723					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0223	0.1495	0.2361	3.9000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	33.3200	33.3200	1.8200e-003	0.0000	33.3654
Total	**0.8946**	**0.1495**	**0.2361**	**3.9000e-004**		**6.7200e-003**	**6.7200e-003**		**6.7200e-003**	**6.7200e-003**	**0.0000**	**33.3200**	**33.3200**	**1.8200e-003**	**0.0000**	**33.3654**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2900e-003	3.3100e-003	0.0457	1.5000e-004	0.0186	9.0000e-005	0.0187	4.9400e-003	8.0000e-005	5.0200e-003	0.0000	13.8495	13.8495	3.4000e-004	3.5000e-004	13.9621
Total	**5.2900e-003**	**3.3100e-003**	**0.0457**	**1.5000e-004**	**0.0186**	**9.0000e-005**	**0.0187**	**4.9400e-003**	**8.0000e-005**	**5.0200e-003**	**0.0000**	**13.8495**	**13.8495**	**3.4000e-004**	**3.5000e-004**	**13.9621**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.8723					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0223	0.1495	0.2361	3.9000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	33.3199	33.3199	1.8200e-003	0.0000	33.3654
Total	**0.8946**	**0.1495**	**0.2361**	**3.9000e-004**		**6.7200e-003**	**6.7200e-003**		**6.7200e-003**	**6.7200e-003**	**0.0000**	**33.3199**	**33.3199**	**1.8200e-003**	**0.0000**	**33.3654**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2900e-003	3.3100e-003	0.0457	1.5000e-004	0.0186	9.0000e-005	0.0187	4.9400e-003	8.0000e-005	5.0200e-003	0.0000	13.8495	13.8495	3.4000e-004	3.5000e-004	13.9621
Total	**5.2900e-003**	**3.3100e-003**	**0.0457**	**1.5000e-004**	**0.0186**	**9.0000e-005**	**0.0187**	**4.9400e-003**	**8.0000e-005**	**5.0200e-003**	**0.0000**	**13.8495**	**13.8495**	**3.4000e-004**	**3.5000e-004**	**13.9621**

3.6 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.8723					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0223	0.1495	0.2361	3.9000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	33.3200	33.3200	1.8200e-003	0.0000	33.3654
Total	**0.8946**	**0.1495**	**0.2361**	**3.9000e-004**		**6.7200e-003**	**6.7200e-003**		**6.7200e-003**	**6.7200e-003**	**0.0000**	**33.3200**	**33.3200**	**1.8200e-003**	**0.0000**	**33.3654**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0100e-003	3.0100e-003	0.0432	1.4000e-004	0.0186	8.0000e-005	0.0186	4.9400e-003	8.0000e-005	5.0100e-003	0.0000	13.5348	13.5348	3.1000e-004	3.3000e-004	13.6409
Total	**5.0100e-003**	**3.0100e-003**	**0.0432**	**1.4000e-004**	**0.0186**	**8.0000e-005**	**0.0186**	**4.9400e-003**	**8.0000e-005**	**5.0100e-003**	**0.0000**	**13.5348**	**13.5348**	**3.1000e-004**	**3.3000e-004**	**13.6409**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.8723					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0223	0.1495	0.2361	3.9000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	33.3199	33.3199	1.8200e-003	0.0000	33.3654
Total	**0.8946**	**0.1495**	**0.2361**	**3.9000e-004**		**6.7200e-003**	**6.7200e-003**		**6.7200e-003**	**6.7200e-003**	**0.0000**	**33.3199**	**33.3199**	**1.8200e-003**	**0.0000**	**33.3654**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0100e-003	3.0100e-003	0.0432	1.4000e-004	0.0186	8.0000e-005	0.0186	4.9400e-003	8.0000e-005	5.0100e-003	0.0000	13.5348	13.5348	3.1000e-004	3.3000e-004	13.6409
Total	**5.0100e-003**	**3.0100e-003**	**0.0432**	**1.4000e-004**	**0.0186**	**8.0000e-005**	**0.0186**	**4.9400e-003**	**8.0000e-005**	**5.0100e-003**	**0.0000**	**13.5348**	**13.5348**	**3.1000e-004**	**3.3000e-004**	**13.6409**

3.6 Architectural Coating - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6150					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0157	0.1054	0.1664	2.7000e-004		4.7400e-003	4.7400e-003		4.7400e-003	4.7400e-003	0.0000	23.4899	23.4899	1.2800e-003	0.0000	23.5220
Total	**0.6307**	**0.1054**	**0.1664**	**2.7000e-004**		**4.7400e-003**	**4.7400e-003**		**4.7400e-003**	**4.7400e-003**	**0.0000**	**23.4899**	**23.4899**	**1.2800e-003**	**0.0000**	**23.5220**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3400e-003	1.9500e-003	0.0290	1.0000e-004	0.0131	6.0000e-005	0.0131	3.4800e-003	5.0000e-005	3.5300e-003	0.0000	9.3406	9.3406	2.0000e-004	2.2000e-004	9.4116
Total	**3.3400e-003**	**1.9500e-003**	**0.0290**	**1.0000e-004**	**0.0131**	**6.0000e-005**	**0.0131**	**3.4800e-003**	**5.0000e-005**	**3.5300e-003**	**0.0000**	**9.3406**	**9.3406**	**2.0000e-004**	**2.2000e-004**	**9.4116**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6150					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0157	0.1054	0.1664	2.7000e-004		4.7400e-003	4.7400e-003		4.7400e-003	4.7400e-003	0.0000	23.4899	23.4899	1.2800e-003	0.0000	23.5219
Total	**0.6307**	**0.1054**	**0.1664**	**2.7000e-004**		**4.7400e-003**	**4.7400e-003**		**4.7400e-003**	**4.7400e-003**	**0.0000**	**23.4899**	**23.4899**	**1.2800e-003**	**0.0000**	**23.5219**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3400e-003	1.9500e-003	0.0290	1.0000e-004	0.0131	6.0000e-005	0.0131	3.4800e-003	5.0000e-005	3.5300e-003	0.0000	9.3406	9.3406	2.0000e-004	2.2000e-004	9.4116
Total	**3.3400e-003**	**1.9500e-003**	**0.0290**	**1.0000e-004**	**0.0131**	**6.0000e-005**	**0.0131**	**3.4800e-003**	**5.0000e-005**	**3.5300e-003**	**0.0000**	**9.3406**	**9.3406**	**2.0000e-004**	**2.2000e-004**	**9.4116**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7708	0.8409	7.2270	0.0152	1.7768	0.0109	1.7878	0.4747	0.0102	0.4849	0.0000	1,452.1753	1,452.1753	0.0913	0.0680	1,474.7277
Unmitigated	0.7708	0.8409	7.2270	0.0152	1.7768	0.0109	1.7878	0.4747	0.0102	0.4849	0.0000	1,452.1753	1,452.1753	0.0913	0.0680	1,474.7277

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	135.00	135.00	135.00	311,797	311,797
General Office Building	0.00	0.00	0.00		
Single Family Housing	1,952.01	1,952.01	1952.01	4,508,377	4,508,377
Total	2,087.01	2,087.01	2,087.01	4,820,174	4,820,174

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.554639	0.059030	0.188043	0.120453	0.022437	0.005729	0.010970	0.007473	0.000973	0.000534	0.026133	0.000855	0.002730
General Office Building	0.554639	0.059030	0.188043	0.120453	0.022437	0.005729	0.010970	0.007473	0.000973	0.000534	0.026133	0.000855	0.002730

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Single Family Housing	0.554639	0.059030	0.188043	0.120453	0.022437	0.005729	0.010970	0.007473	0.000973	0.000534	0.026133	0.000855	0.002730

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	170.8844	170.8844	0.0277	3.3500e-003	172.5742
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	170.8844	170.8844	0.0277	3.3500e-003	172.5742
NaturalGas Mitigated	0.0315	0.2698	0.1176	1.7200e-003		0.0218	0.0218		0.0218	0.0218	0.0000	311.9515	311.9515	5.9800e-003	5.7200e-003	313.8053
NaturalGas Unmitigated	0.0315	0.2698	0.1176	1.7200e-003		0.0218	0.0218		0.0218	0.0218	0.0000	311.9515	311.9515	5.9800e-003	5.7200e-003	313.8053

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	197356	1.0600e-003	9.0900e-003	3.8700e-003	6.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	10.5317	10.5317	2.0000e-004	1.9000e-004	10.5942
General Office Building	136080	7.3000e-004	6.6700e-003	5.6000e-003	4.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004	0.0000	7.2618	7.2618	1.4000e-004	1.3000e-004	7.3049
Single Family Housing	5.51231e+006	0.0297	0.2540	0.1081	1.6200e-003		0.0205	0.0205		0.0205	0.0205	0.0000	294.1581	294.1581	5.6400e-003	5.3900e-003	295.9061
Total		**0.0315**	**0.2698**	**0.1176**	**1.7200e-003**		**0.0218**	**0.0218**		**0.0218**	**0.0218**	**0.0000**	**311.9515**	**311.9515**	**5.9800e-003**	**5.7100e-003**	**313.8053**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	197356	1.0600e-003	9.0900e-003	3.8700e-003	6.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	10.5317	10.5317	2.0000e-004	1.9000e-004	10.5942
General Office Building	136080	7.3000e-004	6.6700e-003	5.6000e-003	4.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004	0.0000	7.2618	7.2618	1.4000e-004	1.3000e-004	7.3049
Single Family Housing	5.51231e+006	0.0297	0.2540	0.1081	1.6200e-003		0.0205	0.0205		0.0205	0.0205	0.0000	294.1581	294.1581	5.6400e-003	5.3900e-003	295.9061
Total		**0.0315**	**0.2698**	**0.1176**	**1.7200e-003**		**0.0218**	**0.0218**		**0.0218**	**0.0218**	**0.0000**	**311.9515**	**311.9515**	**5.9800e-003**	**5.7100e-003**	**313.8053**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	81220.2	7.5148	1.2200e-003	1.5000e-004	7.5891
General Office Building	144228	13.3445	2.1600e-003	2.6000e-004	13.4765
Single Family Housing	1.62148e+006	150.0251	0.0243	2.9400e-003	151.5086
Total		**170.8845**	**0.0277**	**3.3500e-003**	**172.5742**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	81220.2	7.5148	1.2200e-003	1.5000e-004	7.5891
General Office Building	144228	13.3445	2.1600e-003	2.6000e-004	13.4765
Single Family Housing	1.62148e+006	150.0251	0.0243	2.9400e-003	151.5086
Total		**170.8845**	**0.0277**	**3.3500e-003**	**172.5742**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.8993	0.0353	1.6907	1.9000e-004		0.0106	0.0106		0.0106	0.0106	0.0000	21.1247	21.1247	2.9900e-003	3.4000e-004	21.2998
Unmitigated	3.1636	0.0472	3.5216	3.8700e-003		0.2743	0.2743		0.2743	0.2743	27.2238	9.5883	36.8121	0.0538	1.5600e-003	38.6236

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2808					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.5661					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.2662	0.0278	1.8376	3.7800e-003		0.2649	0.2649		0.2649	0.2649	27.2238	6.8350	34.0587	0.0512	1.5600e-003	35.8042
Landscaping	0.0506	0.0194	1.6840	9.0000e-005		9.3400e-003	9.3400e-003		9.3400e-003	9.3400e-003	0.0000	2.7534	2.7534	2.6400e-003	0.0000	2.8193
Total	**3.1636**	**0.0472**	**3.5216**	**3.8700e-003**		**0.2743**	**0.2743**		**0.2743**	**0.2743**	**27.2238**	**9.5883**	**36.8121**	**0.0538**	**1.5600e-003**	**38.6236**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2808					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.5661					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.8600e-003	0.0159	6.7500e-003	1.0000e-004		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003	0.0000	18.3714	18.3714	3.5000e-004	3.4000e-004	18.4805
Landscaping	0.0506	0.0194	1.6840	9.0000e-005		9.3400e-003	9.3400e-003		9.3400e-003	9.3400e-003	0.0000	2.7534	2.7534	2.6400e-003	0.0000	2.8193
Total	**1.8993**	**0.0353**	**1.6907**	**1.9000e-004**		**0.0106**	**0.0106**		**0.0106**	**0.0106**	**0.0000**	**21.1247**	**21.1247**	**2.9900e-003**	**3.4000e-004**	**21.2998**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	15.9704	0.5323	0.0127	33.0751
Unmitigated	16.6336	0.5324	0.0128	33.7449

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1.30308 / 0.821507	1.3318	0.0426	1.0200e-003	2.7012
General Office Building	1.49296 / 0.915042	1.5174	0.0488	1.1700e-003	3.0863
Single Family Housing	13.4869 / 8.5026	13.7844	0.4410	0.0106	27.9574
Total		**16.6336**	**0.5324**	**0.0128**	**33.7449**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1.30308 / 0.657206	1.2786	0.0426	1.0200e-003	2.6475
General Office Building	1.49296 / 0.732034	1.4582	0.0488	1.1700e-003	3.0264
Single Family Housing	13.4869 / 6.80208	13.2337	0.4409	0.0106	27.4013
Total		**15.9704**	**0.5323**	**0.0127**	**33.0751**

8.0 Waste Detail

8.1 Mitigation Measures Waste

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	53.9246	3.1869	0.0000	133.5958
Unmitigated	53.9246	3.1869	0.0000	133.5958

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	9.2	1.8675	0.1104	0.0000	4.6267
General Office Building	7.81	1.5854	0.0937	0.0000	3.9277
Single Family Housing	248.64	50.4717	2.9828	0.0000	125.0414
Total		**53.9246**	**3.1869**	**0.0000**	**133.5958**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	9.2	1.8675	0.1104	0.0000	4.6267
General Office Building	7.81	1.5854	0.0937	0.0000	3.9277
Single Family Housing	248.64	50.4717	2.9828	0.0000	125.0414
Total		**53.9246**	**3.1869**	**0.0000**	**133.5958**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

420 E. 3rd Street

Bay Area AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	8.40	1000sqft	0.00	8,400.00	0
Apartments Low Rise	20.00	Dwelling Unit	1.25	20,000.00	57
Single Family Housing	207.00	Dwelling Unit	19.25	372,600.00	592

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2027
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot acreage adjusted to be consistent with the total lot acreage shown on the site plan prepared for the proposed project. Commerical acreage zereoed out because it is part of the mixed-use residences, and included in the residential acreage.

Construction Phase - Construction phase timing based on applicant provided AQ Questionnaire

Trips and VMT - Based on applicant provided AQ Questionnaire.

Grading - Basedon applicant provided AQ questionnaire.

Vehicle Trips - Trip generation rates based on Transportation Impact Assessment prepared for the project by Fehr & Peers. Commerical trip generation zeroed out and represented in multi-family land use.

Area Mitigation - Based on AQ Questionnaire.

Water Mitigation - Compliant with MWELO.

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	30.00
tblConstructionPhase	NumDays	370.00	840.00
tblConstructionPhase	NumDays	35.00	200.00
tblConstructionPhase	NumDays	20.00	40.00
tblConstructionPhase	NumDays	20.00	840.00
tblGrading	MaterialExported	0.00	1,000.00
tblLandUse	LotAcreage	0.19	0.00
tblLandUse	LotAcreage	67.21	19.25
tblVehicleTrips	ST_TR	8.14	6.75
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	ST_TR	9.54	9.43
tblVehicleTrips	SU_TR	6.28	6.75
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	SU_TR	8.55	9.43
tblVehicleTrips	WD_TR	7.32	6.75
tblVehicleTrips	WD_TR	9.74	0.00
tblVehicleTrips	WD_TR	9.44	9.43

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	3.3758	34.5467	28.5293	0.0635	19.8815	1.4253	21.1528	10.1622	1.3113	11.3320	0.0000	6,157.2467	6,157.2467	1.9479	0.0465	6,206.9750
2024	8.6422	32.4047	28.1684	0.0635	9.3679	1.3362	10.7041	3.6973	1.2293	4.9266	0.0000	6,151.9009	6,151.9009	1.9470	0.1000	6,201.5365
2025	8.5106	14.8642	20.5331	0.0424	1.0797	0.5900	1.6697	0.2904	0.5580	0.8484	0.0000	4,147.6548	4,147.6548	0.6443	0.0974	4,192.7868
2026	8.4955	14.8454	20.4004	0.0420	1.0797	0.5897	1.6695	0.2904	0.5578	0.8482	0.0000	4,120.2230	4,120.2230	0.6428	0.0950	4,164.5913
2027	8.4818	14.8274	20.2882	0.0417	1.0797	0.5895	1.6692	0.2904	0.5576	0.8480	0.0000	4,093.6304	4,093.6304	0.6415	0.0926	4,137.2529
Maximum	**8.6422**	**34.5467**	**28.5293**	**0.0635**	**19.8815**	**1.4253**	**21.1528**	**10.1622**	**1.3113**	**11.3320**	**0.0000**	**6,157.2467**	**6,157.2467**	**1.9479**	**0.1000**	**6,206.9750**

420 E. 3rd Street - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	3.3758	34.5467	28.5293	0.0635	19.8815	1.4253	21.1528	10.1622	1.3113	11.3320	0.0000	6,157.2467	6,157.2467	1.9479	0.0465	6,206.9750
2024	8.6422	32.4047	28.1684	0.0635	9.3679	1.3362	10.7041	3.6973	1.2293	4.9266	0.0000	6,151.9009	6,151.9009	1.9470	0.1000	6,201.5365
2025	8.5106	14.8642	20.5331	0.0424	1.0797	0.5900	1.6697	0.2904	0.5580	0.8484	0.0000	4,147.6548	4,147.6548	0.6443	0.0974	4,192.7868
2026	8.4955	14.8454	20.4004	0.0420	1.0797	0.5897	1.6695	0.2904	0.5578	0.8482	0.0000	4,120.2230	4,120.2230	0.6428	0.0950	4,164.5913
2027	8.4818	14.8274	20.2882	0.0417	1.0797	0.5895	1.6692	0.2904	0.5576	0.8480	0.0000	4,093.6304	4,093.6304	0.6415	0.0926	4,137.2529
Maximum	**8.6422**	**34.5467**	**28.5293**	**0.0635**	**19.8815**	**1.4253**	**21.1528**	**10.1622**	**1.3113**	**11.3320**	**0.0000**	**6,157.2467**	**6,157.2467**	**1.9479**	**0.1000**	**6,206.9750**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	233.4245	4.5278	307.0178	0.5444		40.8779	40.8779		40.8779	40.8779	4,385.7330	1,386.3703	5,772.1033	5.4772	0.3095	6,001.2615
Energy	0.1727	1.4782	0.6442	9.4200e-003		0.1193	0.1193		0.1193	0.1193		1,884.2065	1,884.2065	0.0361	0.0345	1,895.4034
Mobile	4.7359	4.2566	39.3730	0.0877	10.1465	0.0601	10.2066	2.7026	0.0560	2.7586		9,266.7275	9,266.7275	0.5184	0.3916	9,396.3754
Total	**238.3332**	**10.2625**	**347.0349**	**0.6415**	**10.1465**	**41.0574**	**51.2039**	**2.7026**	**41.0533**	**43.7558**	**4,385.7330**	**12,537.3043**	**16,923.0373**	**6.0317**	**0.7356**	**17,293.0403**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	11.0149	3.0635	19.9228	0.0192		0.3341	0.3341		0.3341	0.3341	0.0000	3,669.4409	3,669.4409	0.1020	0.0667	3,691.8535
Energy	0.1727	1.4782	0.6442	9.4200e-003		0.1193	0.1193		0.1193	0.1193		1,884.2065	1,884.2065	0.0361	0.0345	1,895.4034
Mobile	4.7359	4.2566	39.3730	0.0877	10.1465	0.0601	10.2066	2.7026	0.0560	2.7586		9,266.7275	9,266.7275	0.5184	0.3916	9,396.3754
Total	**15.9235**	**8.7982**	**59.9399**	**0.1163**	**10.1465**	**0.5135**	**10.6600**	**2.7026**	**0.5094**	**3.2120**	**0.0000**	**14,820.3749**	**14,820.3749**	**0.6565**	**0.4928**	**14,983.6323**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**93.32**	**14.27**	**82.73**	**81.87**	**0.00**	**98.75**	**79.18**	**0.00**	**98.76**	**92.66**	**100.00**	**-18.21**	**12.42**	**89.12**	**33.01**	**13.35**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2023	7/12/2023	5	30	
2	Building Construction	Building Construction	6/13/2024	9/1/2027	5	840	
3	Grading	Grading	7/13/2023	4/17/2024	5	200	
4	Paving	Paving	4/18/2024	6/12/2024	5	40	
5	Architectural Coating	Architectural Coating	6/27/2024	9/15/2027	5	840	

Acres of Grading (Site Preparation Phase): 45

Acres of Grading (Grading Phase): 600

Acres of Paving: 0

Residential Indoor: 795,015; Residential Outdoor: 265,005; Non-Residential Indoor: 12,600; Non-Residential Outdoor: 4,200; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Welders	1	8.00	46	0.45
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	125.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	92.00	26.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6608	0.0000	19.6608	10.1030	0.0000	10.1030			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6608**	**1.2660**	**20.9268**	**10.1030**	**1.1647**	**11.2678**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.9200e-003	0.5445	0.1322	2.5100e-003	0.0729	4.5700e-003	0.0774	0.0200	4.3700e-003	0.0243		273.9966	273.9966	9.0300e-003	0.0434	287.1608
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0487	0.0280	0.4303	1.2800e-003	0.1479	7.3000e-004	0.1486	0.0392	6.8000e-004	0.0399		131.1921	131.1921	3.3100e-003	3.1100e-003	132.2023
Total	**0.0576**	**0.5725**	**0.5625**	**3.7900e-003**	**0.2208**	**5.3000e-003**	**0.2260**	**0.0592**	**5.0500e-003**	**0.0642**		**405.1887**	**405.1887**	**0.0123**	**0.0465**	**419.3631**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6608	0.0000	19.6608	10.1030	0.0000	10.1030			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6608**	**1.2660**	**20.9268**	**10.1030**	**1.1647**	**11.2678**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.9200e-003	0.5445	0.1322	2.5100e-003	0.0729	4.5700e-003	0.0774	0.0200	4.3700e-003	0.0243		273.9966	273.9966	9.0300e-003	0.0434	287.1608
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0487	0.0280	0.4303	1.2800e-003	0.1479	7.3000e-004	0.1486	0.0392	6.8000e-004	0.0399		131.1921	131.1921	3.3100e-003	3.1100e-003	132.2023
Total	**0.0576**	**0.5725**	**0.5625**	**3.7900e-003**	**0.2208**	**5.3000e-003**	**0.2260**	**0.0592**	**5.0500e-003**	**0.0642**		**405.1887**	**405.1887**	**0.0123**	**0.0465**	**419.3631**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0275	1.1157	0.3485	5.1900e-003	0.1761	6.8100e-003	0.1829	0.0507	6.5100e-003	0.0572		556.5804	556.5804	0.0115	0.0823	581.3846
Worker	0.2325	0.1276	2.0498	6.3400e-003	0.7558	3.5700e-003	0.7593	0.2005	3.2900e-003	0.2038		653.9003	653.9003	0.0153	0.0148	658.7016
Total	**0.2600**	**1.2433**	**2.3983**	**0.0115**	**0.9319**	**0.0104**	**0.9422**	**0.2512**	**9.8000e-003**	**0.2610**		**1,210.4807**	**1,210.4807**	**0.0268**	**0.0971**	**1,240.0862**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0275	1.1157	0.3485	5.1900e-003	0.1761	6.8100e-003	0.1829	0.0507	6.5100e-003	0.0572		556.5804	556.5804	0.0115	0.0823	581.3846
Worker	0.2325	0.1276	2.0498	6.3400e-003	0.7558	3.5700e-003	0.7593	0.2005	3.2900e-003	0.2038		653.9003	653.9003	0.0153	0.0148	658.7016
Total	**0.2600**	**1.2433**	**2.3983**	**0.0115**	**0.9319**	**0.0104**	**0.9422**	**0.2512**	**9.8000e-003**	**0.2610**		**1,210.4807**	**1,210.4807**	**0.0268**	**0.0971**	**1,240.0862**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0268	1.1115	0.3424	5.0900e-003	0.1761	6.8100e-003	0.1829	0.0507	6.5100e-003	0.0572		546.6751	546.6751	0.0114	0.0808	571.0315
Worker	0.2184	0.1150	1.9211	6.1300e-003	0.7558	3.4200e-003	0.7592	0.2005	3.1400e-003	0.2036		638.1933	638.1933	0.0139	0.0139	642.6831
Total	**0.2452**	**1.2265**	**2.2634**	**0.0112**	**0.9319**	**0.0102**	**0.9421**	**0.2512**	**9.6500e-003**	**0.2608**		**1,184.8685**	**1,184.8685**	**0.0253**	**0.0947**	**1,213.7146**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0268	1.1115	0.3424	5.0900e-003	0.1761	6.8100e-003	0.1829	0.0507	6.5100e-003	0.0572		546.6751	546.6751	0.0114	0.0808	571.0315
Worker	0.2184	0.1150	1.9211	6.1300e-003	0.7558	3.4200e-003	0.7592	0.2005	3.1400e-003	0.2036		638.1933	638.1933	0.0139	0.0139	642.6831
Total	**0.2452**	**1.2265**	**2.2634**	**0.0112**	**0.9319**	**0.0102**	**0.9421**	**0.2512**	**9.6500e-003**	**0.2608**		**1,184.8685**	**1,184.8685**	**0.0253**	**0.0947**	**1,213.7146**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0262	1.1050	0.3374	5.0000e-003	0.1761	6.7700e-003	0.1829	0.0507	6.4800e-003	0.0572		536.6551	536.6551	0.0114	0.0793	560.5551
Worker	0.2062	0.1047	1.8142	5.9400e-003	0.7558	3.2600e-003	0.7590	0.2005	3.0000e-003	0.2035		623.6308	623.6308	0.0127	0.0131	627.8635
Total	**0.2324**	**1.2098**	**2.1517**	**0.0109**	**0.9319**	**0.0100**	**0.9419**	**0.2512**	**9.4800e-003**	**0.2606**		**1,160.2858**	**1,160.2858**	**0.0240**	**0.0924**	**1,188.4185**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0262	1.1050	0.3374	5.0000e-003	0.1761	6.7700e-003	0.1829	0.0507	6.4800e-003	0.0572		536.6551	536.6551	0.0114	0.0793	560.5551
Worker	0.2062	0.1047	1.8142	5.9400e-003	0.7558	3.2600e-003	0.7590	0.2005	3.0000e-003	0.2035		623.6308	623.6308	0.0127	0.0131	627.8635
Total	**0.2324**	**1.2098**	**2.1517**	**0.0109**	**0.9319**	**0.0100**	**0.9419**	**0.2512**	**9.4800e-003**	**0.2606**		**1,160.2858**	**1,160.2858**	**0.0240**	**0.0924**	**1,188.4185**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0257	1.0972	0.3331	4.9000e-003	0.1761	6.7200e-003	0.1828	0.0507	6.4300e-003	0.0571		525.8324	525.8324	0.0113	0.0776	549.2442
Worker	0.1951	0.0961	1.7240	5.7700e-003	0.7558	3.0700e-003	0.7588	0.2005	2.8300e-003	0.2033		610.4414	610.4414	0.0116	0.0125	614.4586
Total	**0.2209**	**1.1934**	**2.0571**	**0.0107**	**0.9319**	**9.7900e-003**	**0.9417**	**0.2512**	**9.2600e-003**	**0.2604**		**1,136.2738**	**1,136.2738**	**0.0229**	**0.0901**	**1,163.7028**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0257	1.0972	0.3331	4.9000e-003	0.1761	6.7200e-003	0.1828	0.0507	6.4300e-003	0.0571		525.8324	525.8324	0.0113	0.0776	549.2442
Worker	0.1951	0.0961	1.7240	5.7700e-003	0.7558	3.0700e-003	0.7588	0.2005	2.8300e-003	0.2033		610.4414	610.4414	0.0116	0.0125	614.4586
Total	**0.2209**	**1.1934**	**2.0571**	**0.0107**	**0.9319**	**9.7900e-003**	**0.9417**	**0.2512**	**9.2600e-003**	**0.2604**		**1,136.2738**	**1,136.2738**	**0.0229**	**0.0901**	**1,163.7028**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0541	0.0311	0.4781	1.4200e-003	0.1643	8.1000e-004	0.1651	0.0436	7.5000e-004	0.0443		145.7690	145.7690	3.6800e-003	3.4600e-003	146.8915
Total	**0.0541**	**0.0311**	**0.4781**	**1.4200e-003**	**0.1643**	**8.1000e-004**	**0.1651**	**0.0436**	**7.5000e-004**	**0.0443**		**145.7690**	**145.7690**	**3.6800e-003**	**3.4600e-003**	**146.8915**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0541	0.0311	0.4781	1.4200e-003	0.1643	8.1000e-004	0.1651	0.0436	7.5000e-004	0.0443		145.7690	145.7690	3.6800e-003	3.4600e-003	146.8915
Total	**0.0541**	**0.0311**	**0.4781**	**1.4200e-003**	**0.1643**	**8.1000e-004**	**0.1651**	**0.0436**	**7.5000e-004**	**0.0443**		**145.7690**	**145.7690**	**3.6800e-003**	**3.4600e-003**	**146.8915**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286		6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**9.2036**	**1.3354**	**10.5390**	**3.6538**	**1.2286**	**4.8823**		**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0505	0.0278	0.4456	1.3800e-003	0.1643	7.8000e-004	0.1651	0.0436	7.1000e-004	0.0443		142.1522	142.1522	3.3200e-003	3.2200e-003	143.1960
Total	**0.0505**	**0.0278**	**0.4456**	**1.3800e-003**	**0.1643**	**7.8000e-004**	**0.1651**	**0.0436**	**7.1000e-004**	**0.0443**		**142.1522**	**142.1522**	**3.3200e-003**	**3.2200e-003**	**143.1960**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286	0.0000	6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**9.2036**	**1.3354**	**10.5390**	**3.6538**	**1.2286**	**4.8823**	**0.0000**	**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0505	0.0278	0.4456	1.3800e-003	0.1643	7.8000e-004	0.1651	0.0436	7.1000e-004	0.0443		142.1522	142.1522	3.3200e-003	3.2200e-003	143.1960
Total	**0.0505**	**0.0278**	**0.4456**	**1.3800e-003**	**0.1643**	**7.8000e-004**	**0.1651**	**0.0436**	**7.1000e-004**	**0.0443**		**142.1522**	**142.1522**	**3.3200e-003**	**3.2200e-003**	**143.1960**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0379	0.0208	0.3342	1.0300e-003	0.1232	5.8000e-004	0.1238	0.0327	5.4000e-004	0.0332		106.6142	106.6142	2.4900e-003	2.4200e-003	107.3970
Total	**0.0379**	**0.0208**	**0.3342**	**1.0300e-003**	**0.1232**	**5.8000e-004**	**0.1238**	**0.0327**	**5.4000e-004**	**0.0332**		**106.6142**	**106.6142**	**2.4900e-003**	**2.4200e-003**	**107.3970**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0379	0.0208	0.3342	1.0300e-003	0.1232	5.8000e-004	0.1238	0.0327	5.4000e-004	0.0332		106.6142	106.6142	2.4900e-003	2.4200e-003	107.3970
Total	**0.0379**	**0.0208**	**0.3342**	**1.0300e-003**	**0.1232**	**5.8000e-004**	**0.1238**	**0.0327**	**5.4000e-004**	**0.0332**		**106.6142**	**106.6142**	**2.4900e-003**	**2.4200e-003**	**107.3970**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.6845					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**6.8652**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0455	0.0250	0.4010	1.2400e-003	0.1479	7.0000e-004	0.1486	0.0392	6.4000e-004	0.0399		127.9370	127.9370	2.9900e-003	2.9000e-003	128.8764
Total	**0.0455**	**0.0250**	**0.4010**	**1.2400e-003**	**0.1479**	**7.0000e-004**	**0.1486**	**0.0392**	**6.4000e-004**	**0.0399**		**127.9370**	**127.9370**	**2.9900e-003**	**2.9000e-003**	**128.8764**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.6845					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**6.8652**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0455	0.0250	0.4010	1.2400e-003	0.1479	7.0000e-004	0.1486	0.0392	6.4000e-004	0.0399		127.9370	127.9370	2.9900e-003	2.9000e-003	128.8764
Total	**0.0455**	**0.0250**	**0.4010**	**1.2400e-003**	**0.1479**	**7.0000e-004**	**0.1486**	**0.0392**	**6.4000e-004**	**0.0399**		**127.9370**	**127.9370**	**2.9900e-003**	**2.9000e-003**	**128.8764**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.6845					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**6.8553**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0427	0.0225	0.3759	1.2000e-003	0.1479	6.7000e-004	0.1485	0.0392	6.2000e-004	0.0398		124.8639	124.8639	2.7100e-003	2.7200e-003	125.7423
Total	**0.0427**	**0.0225**	**0.3759**	**1.2000e-003**	**0.1479**	**6.7000e-004**	**0.1485**	**0.0392**	**6.2000e-004**	**0.0398**		**124.8639**	**124.8639**	**2.7100e-003**	**2.7200e-003**	**125.7423**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.6845					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**6.8553**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0427	0.0225	0.3759	1.2000e-003	0.1479	6.7000e-004	0.1485	0.0392	6.2000e-004	0.0398		124.8639	124.8639	2.7100e-003	2.7200e-003	125.7423
Total	**0.0427**	**0.0225**	**0.3759**	**1.2000e-003**	**0.1479**	**6.7000e-004**	**0.1485**	**0.0392**	**6.2000e-004**	**0.0398**		**124.8639**	**124.8639**	**2.7100e-003**	**2.7200e-003**	**125.7423**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.6845					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**6.8553**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0403	0.0205	0.3550	1.1600e-003	0.1479	6.4000e-004	0.1485	0.0392	5.9000e-004	0.0398		122.0147	122.0147	2.4700e-003	2.5700e-003	122.8429
Total	**0.0403**	**0.0205**	**0.3550**	**1.1600e-003**	**0.1479**	**6.4000e-004**	**0.1485**	**0.0392**	**5.9000e-004**	**0.0398**		**122.0147**	**122.0147**	**2.4700e-003**	**2.5700e-003**	**122.8429**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.6845					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**6.8553**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0403	0.0205	0.3550	1.1600e-003	0.1479	6.4000e-004	0.1485	0.0392	5.9000e-004	0.0398		122.0147	122.0147	2.4700e-003	2.5700e-003	122.8429
Total	**0.0403**	**0.0205**	**0.3550**	**1.1600e-003**	**0.1479**	**6.4000e-004**	**0.1485**	**0.0392**	**5.9000e-004**	**0.0398**		**122.0147**	**122.0147**	**2.4700e-003**	**2.5700e-003**	**122.8429**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.6845					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**6.8553**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0382	0.0188	0.3373	1.1300e-003	0.1479	6.0000e-004	0.1485	0.0392	5.5000e-004	0.0398		119.4342	119.4342	2.2700e-003	2.4500e-003	120.2202
Total	**0.0382**	**0.0188**	**0.3373**	**1.1300e-003**	**0.1479**	**6.0000e-004**	**0.1485**	**0.0392**	**5.5000e-004**	**0.0398**		**119.4342**	**119.4342**	**2.2700e-003**	**2.4500e-003**	**120.2202**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.6845					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**6.8553**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0382	0.0188	0.3373	1.1300e-003	0.1479	6.0000e-004	0.1485	0.0392	5.5000e-004	0.0398		119.4342	119.4342	2.2700e-003	2.4500e-003	120.2202
Total	**0.0382**	**0.0188**	**0.3373**	**1.1300e-003**	**0.1479**	**6.0000e-004**	**0.1485**	**0.0392**	**5.5000e-004**	**0.0398**		**119.4342**	**119.4342**	**2.2700e-003**	**2.4500e-003**	**120.2202**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.7359	4.2566	39.3730	0.0877	10.1465	0.0601	10.2066	2.7026	0.0560	2.7586		9,266.7275	9,266.7275	0.5184	0.3916	9,396.3754
Unmitigated	4.7359	4.2566	39.3730	0.0877	10.1465	0.0601	10.2066	2.7026	0.0560	2.7586		9,266.7275	9,266.7275	0.5184	0.3916	9,396.3754

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	135.00	135.00	135.00	311,797	311,797
General Office Building	0.00	0.00	0.00		
Single Family Housing	1,952.01	1,952.01	1952.01	4,508,377	4,508,377
Total	2,087.01	2,087.01	2,087.01	4,820,174	4,820,174

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.554639	0.059030	0.188043	0.120453	0.022437	0.005729	0.010970	0.007473	0.000973	0.000534	0.026133	0.000855	0.002730
General Office Building	0.554639	0.059030	0.188043	0.120453	0.022437	0.005729	0.010970	0.007473	0.000973	0.000534	0.026133	0.000855	0.002730
Single Family Housing	0.554639	0.059030	0.188043	0.120453	0.022437	0.005729	0.010970	0.007473	0.000973	0.000534	0.026133	0.000855	0.002730

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1727	1.4782	0.6442	9.4200e-003		0.1193	0.1193		0.1193	0.1193		1,884.2065	1,884.2065	0.0361	0.0345	1,895.4034
NaturalGas Unmitigated	0.1727	1.4782	0.6442	9.4200e-003		0.1193	0.1193		0.1193	0.1193		1,884.2065	1,884.2065	0.0361	0.0345	1,895.4034

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	540.701	5.8300e-003	0.0498	0.0212	3.2000e-004		4.0300e-003	4.0300e-003		4.0300e-003	4.0300e-003		63.6119	63.6119	1.2200e-003	1.1700e-003	63.9899
General Office Building	372.822	4.0200e-003	0.0366	0.0307	2.2000e-004		2.7800e-003	2.7800e-003		2.7800e-003	2.7800e-003		43.8614	43.8614	8.4000e-004	8.0000e-004	44.1221
Single Family Housing	15102.2	0.1629	1.3918	0.5922	8.8800e-003		0.1125	0.1125		0.1125	0.1125		1,776.7332	1,776.7332	0.0341	0.0326	1,787.2915
Total		**0.1727**	**1.4782**	**0.6441**	**9.4200e-003**		**0.1193**	**0.1193**		**0.1193**	**0.1193**		**1,884.2065**	**1,884.2065**	**0.0361**	**0.0345**	**1,895.4034**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	0.540701	5.8300e-003	0.0498	0.0212	3.2000e-004		4.0300e-003	4.0300e-003		4.0300e-003	4.0300e-003		63.6119	63.6119	1.2200e-003	1.1700e-003	63.9899
General Office Building	0.372822	4.0200e-003	0.0366	0.0307	2.2000e-004		2.7800e-003	2.7800e-003		2.7800e-003	2.7800e-003		43.8614	43.8614	8.4000e-004	8.0000e-004	44.1221
Single Family Housing	15.1022	0.1629	1.3918	0.5922	8.8800e-003		0.1125	0.1125		0.1125	0.1125		1,776.7332	1,776.7332	0.0341	0.0326	1,787.2915
Total		**0.1727**	**1.4782**	**0.6441**	**9.4200e-003**		**0.1193**	**0.1193**		**0.1193**	**0.1193**		**1,884.2065**	**1,884.2065**	**0.0361**	**0.0345**	**1,895.4034**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	11.0149	3.0635	19.9228	0.0192		0.3341	0.3341		0.3341	0.3341	0.0000	3,669.4409	3,669.4409	0.1020	0.0667	3,691.8535
Unmitigated	233.4245	4.5278	307.0178	0.5444		40.8779	40.8779		40.8779	40.8779	4,385.7330	1,386.3703	5,772.1033	5.4772	0.3095	6,001.2615

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.5383					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.5814					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	222.7429	4.3123	288.3069	0.5434		40.7741	40.7741		40.7741	40.7741	4,385.7330	1,352.6471	5,738.3801	5.4449	0.3095	5,966.7309
Landscaping	0.5618	0.2155	18.7109	9.9000e-004		0.1038	0.1038		0.1038	0.1038		33.7232	33.7232	0.0323		34.5306
Total	**233.4245**	**4.5278**	**307.0178**	**0.5444**		**40.8779**	**40.8779**		**40.8779**	**40.8779**	**4,385.7330**	**1,386.3703**	**5,772.1033**	**5.4772**	**0.3095**	**6,001.2615**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.5383					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.5814					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3333	2.8480	1.2119	0.0182		0.2303	0.2303		0.2303	0.2303	0.0000	3,635.7177	3,635.7177	0.0697	0.0667	3,657.3229
Landscaping	0.5618	0.2155	18.7109	9.9000e-004		0.1038	0.1038		0.1038	0.1038		33.7232	33.7232	0.0323		34.5306
Total	**11.0149**	**3.0635**	**19.9228**	**0.0192**		**0.3341**	**0.3341**		**0.3341**	**0.3341**	**0.0000**	**3,669.4409**	**3,669.4409**	**0.1020**	**0.0667**	**3,691.8535**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

420 E. 3rd Street - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

420 E. 3rd Street

Bay Area AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	8.40	1000sqft	0.00	8,400.00	0
Apartments Low Rise	20.00	Dwelling Unit	1.25	20,000.00	57
Single Family Housing	207.00	Dwelling Unit	19.25	372,600.00	592

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2027
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot acreage adjusted to be consistent with the total lot acreage shown on the site plan prepared for the proposed project. Commerical acreage zereoed out because it is part of the mixed-use residences, and included in the residential acreage.

Construction Phase - Construction phase timing based on applicant provided AQ Questionnaire

Trips and VMT - Based on applicant provided AQ Questionnaire.

Grading - Basedon applicant provided AQ questionnaire.

Vehicle Trips - Trip generation rates based on Transportation Impact Assessment prepared for the project by Fehr & Peers. Commerical trip generation zeroed out and represented in multi-family land use.

Area Mitigation - Based on AQ Questionnaire.

Water Mitigation - Compliant with MWELO.

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	30.00
tblConstructionPhase	NumDays	370.00	840.00
tblConstructionPhase	NumDays	35.00	200.00
tblConstructionPhase	NumDays	20.00	40.00
tblConstructionPhase	NumDays	20.00	840.00
tblGrading	MaterialExported	0.00	1,000.00
tblLandUse	LotAcreage	0.19	0.00
tblLandUse	LotAcreage	67.21	19.25
tblVehicleTrips	ST_TR	8.14	6.75
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	ST_TR	9.54	9.43
tblVehicleTrips	SU_TR	6.28	6.75
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	SU_TR	8.55	9.43
tblVehicleTrips	WD_TR	7.32	6.75
tblVehicleTrips	WD_TR	9.74	0.00
tblVehicleTrips	WD_TR	9.44	9.43

2.0 Emissions Summary

420 E. 3rd Street - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	3.3772	34.5539	28.5091	0.0634	19.8815	1.4253	21.1529	10.1622	1.3113	11.3320	0.0000	6,146.9143	6,146.9143	1.9484	0.0470	6,196.8109
2024	8.6495	32.4112	28.1511	0.0634	9.3679	1.3362	10.7041	3.6973	1.2293	4.9266	0.0000	6,141.8461	6,141.8461	1.9475	0.1029	6,191.6381
2025	8.5183	14.9609	20.4619	0.0418	1.0797	0.5900	1.6697	0.2904	0.5581	0.8485	0.0000	4,094.5969	4,094.5969	0.6466	0.1001	4,140.5896
2026	8.5036	14.9389	20.3382	0.0415	1.0797	0.5898	1.6695	0.2904	0.5578	0.8482	0.0000	4,068.4630	4,068.4630	0.6450	0.0975	4,113.6438
2027	8.4901	14.9180	20.2330	0.0412	1.0797	0.5895	1.6692	0.2904	0.5576	0.8480	0.0000	4,043.0239	4,043.0239	0.6435	0.0950	4,087.4184
Maximum	**8.6495**	**34.5539**	**28.5091**	**0.0634**	**19.8815**	**1.4253**	**21.1529**	**10.1622**	**1.3113**	**11.3320**	**0.0000**	**6,146.9143**	**6,146.9143**	**1.9484**	**0.1029**	**6,196.8109**

420 E. 3rd Street - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	3.3772	34.5539	28.5091	0.0634	19.8815	1.4253	21.1529	10.1622	1.3113	11.3320	0.0000	6,146.9143	6,146.9143	1.9484	0.0470	6,196.8109
2024	8.6495	32.4112	28.1511	0.0634	9.3679	1.3362	10.7041	3.6973	1.2293	4.9266	0.0000	6,141.8461	6,141.8461	1.9475	0.1029	6,191.6380
2025	8.5183	14.9609	20.4619	0.0418	1.0797	0.5900	1.6697	0.2904	0.5581	0.8485	0.0000	4,094.5969	4,094.5969	0.6466	0.1001	4,140.5896
2026	8.5036	14.9389	20.3382	0.0415	1.0797	0.5898	1.6695	0.2904	0.5578	0.8482	0.0000	4,068.4630	4,068.4630	0.6450	0.0975	4,113.6438
2027	8.4901	14.9180	20.2330	0.0412	1.0797	0.5895	1.6692	0.2904	0.5576	0.8480	0.0000	4,043.0239	4,043.0239	0.6435	0.0950	4,087.4184
Maximum	**8.6495**	**34.5539**	**28.5091**	**0.0634**	**19.8815**	**1.4253**	**21.1529**	**10.1622**	**1.3113**	**11.3320**	**0.0000**	**6,146.9143**	**6,146.9143**	**1.9484**	**0.1029**	**6,196.8109**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

420 E. 3rd Street - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	233.4245	4.5278	307.0178	0.5444		40.8779	40.8779		40.8779	40.8779	4,385.7330	1,386.3703	5,772.1033	5.4772	0.3095	6,001.2615
Energy	0.1727	1.4782	0.6442	9.4200e-003		0.1193	0.1193		0.1193	0.1193		1,884.2065	1,884.2065	0.0361	0.0345	1,895.4034
Mobile	4.2285	4.8804	42.4233	0.0829	10.1465	0.0601	10.2066	2.7026	0.0560	2.7586		8,754.4136	8,754.4136	0.5844	0.4279	8,896.5331
Total	**237.8258**	**10.8864**	**350.0852**	**0.6367**	**10.1465**	**41.0574**	**51.2039**	**2.7026**	**41.0533**	**43.7559**	**4,385.7330**	**12,024.9904**	**16,410.7234**	**6.0976**	**0.7719**	**16,793.1980**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	11.0149	3.0635	19.9228	0.0192		0.3341	0.3341		0.3341	0.3341	0.0000	3,669.4409	3,669.4409	0.1020	0.0667	3,691.8535
Energy	0.1727	1.4782	0.6442	9.4200e-003		0.1193	0.1193		0.1193	0.1193		1,884.2065	1,884.2065	0.0361	0.0345	1,895.4034
Mobile	4.2285	4.8804	42.4233	0.0829	10.1465	0.0601	10.2066	2.7026	0.0560	2.7586		8,754.4136	8,754.4136	0.5844	0.4279	8,896.5331
Total	**15.4161**	**9.4221**	**62.9902**	**0.1115**	**10.1465**	**0.5136**	**10.6601**	**2.7026**	**0.5094**	**3.2120**	**0.0000**	**14,308.0610**	**14,308.0610**	**0.7225**	**0.5291**	**14,483.7900**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**93.52**	**13.45**	**82.01**	**82.49**	**0.00**	**98.75**	**79.18**	**0.00**	**98.76**	**92.66**	**100.00**	**-18.99**	**12.81**	**88.15**	**31.46**	**13.75**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2023	7/12/2023	5	30	
2	Building Construction	Building Construction	6/13/2024	9/1/2027	5	840	
3	Grading	Grading	7/13/2023	4/17/2024	5	200	
4	Paving	Paving	4/18/2024	6/12/2024	5	40	
5	Architectural Coating	Architectural Coating	6/27/2024	9/15/2027	5	840	

Acres of Grading (Site Preparation Phase): 45

Acres of Grading (Grading Phase): 600

Acres of Paving: 0

Residential Indoor: 795,015; Residential Outdoor: 265,005; Non-Residential Indoor: 12,600; Non-Residential Outdoor: 4,200; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Welders	1	8.00	46	0.45
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	125.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	92.00	26.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6608	0.0000	19.6608	10.1030	0.0000	10.1030			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6608**	**1.2660**	**20.9268**	**10.1030**	**1.1647**	**11.2678**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.3800e-003	0.5759	0.1340	2.5100e-003	0.0729	4.5700e-003	0.0775	0.0200	4.3800e-003	0.0244		274.2547	274.2547	9.0000e-003	0.0435	287.4309
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0499	0.0345	0.4121	1.1900e-003	0.1479	7.3000e-004	0.1486	0.0392	6.8000e-004	0.0399		121.8929	121.8929	3.7600e-003	3.5800e-003	123.0546
Total	**0.0583**	**0.6104**	**0.5461**	**3.7000e-003**	**0.2208**	**5.3000e-003**	**0.2261**	**0.0592**	**5.0600e-003**	**0.0643**		**396.1476**	**396.1476**	**0.0128**	**0.0470**	**410.4855**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6608	0.0000	19.6608	10.1030	0.0000	10.1030			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6608**	**1.2660**	**20.9268**	**10.1030**	**1.1647**	**11.2678**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.3800e-003	0.5759	0.1340	2.5100e-003	0.0729	4.5700e-003	0.0775	0.0200	4.3800e-003	0.0244		274.2547	274.2547	9.0000e-003	0.0435	287.4309
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0499	0.0345	0.4121	1.1900e-003	0.1479	7.3000e-004	0.1486	0.0392	6.8000e-004	0.0399		121.8929	121.8929	3.7600e-003	3.5800e-003	123.0546
Total	**0.0583**	**0.6104**	**0.5461**	**3.7000e-003**	**0.2208**	**5.3000e-003**	**0.2261**	**0.0592**	**5.0600e-003**	**0.0643**		**396.1476**	**396.1476**	**0.0128**	**0.0470**	**410.4855**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0265	1.1806	0.3606	5.1900e-003	0.1761	6.8400e-003	0.1829	0.0507	6.5400e-003	0.0572		557.3952	557.3952	0.0114	0.0825	582.2587
Worker	0.2394	0.1574	1.9701	5.8900e-003	0.7558	3.5700e-003	0.7593	0.2005	3.2900e-003	0.2038		607.6483	607.6483	0.0174	0.0171	613.1686
Total	**0.2659**	**1.3380**	**2.3307**	**0.0111**	**0.9319**	**0.0104**	**0.9423**	**0.2512**	**9.8300e-003**	**0.2610**		**1,165.0435**	**1,165.0435**	**0.0289**	**0.0995**	**1,195.4273**

420 E. 3rd Street - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0265	1.1806	0.3606	5.1900e-003	0.1761	6.8400e-003	0.1829	0.0507	6.5400e-003	0.0572		557.3952	557.3952	0.0114	0.0825	582.2587
Worker	0.2394	0.1574	1.9701	5.8900e-003	0.7558	3.5700e-003	0.7593	0.2005	3.2900e-003	0.2038		607.6483	607.6483	0.0174	0.0171	613.1686
Total	**0.2659**	**1.3380**	**2.3307**	**0.0111**	**0.9319**	**0.0104**	**0.9423**	**0.2512**	**9.8300e-003**	**0.2610**		**1,165.0435**	**1,165.0435**	**0.0289**	**0.0995**	**1,195.4273**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0258	1.1762	0.3543	5.1000e-003	0.1761	6.8300e-003	0.1829	0.0507	6.5300e-003	0.0572		547.4911	547.4911	0.0114	0.0810	571.9050
Worker	0.2256	0.1418	1.8515	5.6900e-003	0.7558	3.4200e-003	0.7592	0.2005	3.1400e-003	0.2036		593.1352	593.1352	0.0159	0.0160	598.2966
Total	**0.2514**	**1.3180**	**2.2059**	**0.0108**	**0.9319**	**0.0103**	**0.9421**	**0.2512**	**9.6700e-003**	**0.2608**		**1,140.6263**	**1,140.6263**	**0.0272**	**0.0970**	**1,170.2016**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0258	1.1762	0.3543	5.1000e-003	0.1761	6.8300e-003	0.1829	0.0507	6.5300e-003	0.0572		547.4911	547.4911	0.0114	0.0810	571.9050
Worker	0.2256	0.1418	1.8515	5.6900e-003	0.7558	3.4200e-003	0.7592	0.2005	3.1400e-003	0.2036		593.1352	593.1352	0.0159	0.0160	598.2966
Total	**0.2514**	**1.3180**	**2.2059**	**0.0108**	**0.9319**	**0.0103**	**0.9421**	**0.2512**	**9.6700e-003**	**0.2608**		**1,140.6263**	**1,140.6263**	**0.0272**	**0.0970**	**1,170.2016**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0252	1.1693	0.3493	5.0100e-003	0.1761	6.7900e-003	0.1829	0.0507	6.5000e-003	0.0572		537.4696	537.4696	0.0113	0.0794	561.4256
Worker	0.2138	0.1291	1.7523	5.5200e-003	0.7558	3.2600e-003	0.7590	0.2005	3.0000e-003	0.2035		579.6593	579.6593	0.0145	0.0151	584.5247
Total	**0.2390**	**1.2985**	**2.1016**	**0.0105**	**0.9319**	**0.0101**	**0.9419**	**0.2512**	**9.5000e-003**	**0.2607**		**1,117.1290**	**1,117.1290**	**0.0258**	**0.0946**	**1,145.9503**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0252	1.1693	0.3493	5.0100e-003	0.1761	6.7900e-003	0.1829	0.0507	6.5000e-003	0.0572		537.4696	537.4696	0.0113	0.0794	561.4256
Worker	0.2138	0.1291	1.7523	5.5200e-003	0.7558	3.2600e-003	0.7590	0.2005	3.0000e-003	0.2035		579.6593	579.6593	0.0145	0.0151	584.5247
Total	**0.2390**	**1.2985**	**2.1016**	**0.0105**	**0.9319**	**0.0101**	**0.9419**	**0.2512**	**9.5000e-003**	**0.2607**		**1,117.1290**	**1,117.1290**	**0.0258**	**0.0946**	**1,145.9503**

420 E. 3rd Street - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0246	1.1612	0.3449	4.9000e-003	0.1761	6.7400e-003	0.1829	0.0507	6.4500e-003	0.0572		526.6440	526.6440	0.0112	0.0778	550.1104
Worker	0.2030	0.1185	1.6679	5.3600e-003	0.7558	3.0700e-003	0.7588	0.2005	2.8300e-003	0.2033		567.4372	567.4372	0.0133	0.0144	572.0544
Total	**0.2277**	**1.2797**	**2.0128**	**0.0103**	**0.9319**	**9.8100e-003**	**0.9417**	**0.2512**	**9.2800e-003**	**0.2604**		**1,094.0812**	**1,094.0812**	**0.0245**	**0.0922**	**1,122.1648**

420 E. 3rd Street - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Building Construction - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0246	1.1612	0.3449	4.9000e-003	0.1761	6.7400e-003	0.1829	0.0507	6.4500e-003	0.0572		526.6440	526.6440	0.0112	0.0778	550.1104
Worker	0.2030	0.1185	1.6679	5.3600e-003	0.7558	3.0700e-003	0.7588	0.2005	2.8300e-003	0.2033		567.4372	567.4372	0.0133	0.0144	572.0544
Total	**0.2277**	**1.2797**	**2.0128**	**0.0103**	**0.9319**	**9.8100e-003**	**0.9417**	**0.2512**	**9.2800e-003**	**0.2604**		**1,094.0812**	**1,094.0812**	**0.0245**	**0.0922**	**1,122.1648**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0555	0.0383	0.4579	1.3200e-003	0.1643	8.1000e-004	0.1651	0.0436	7.5000e-004	0.0443		135.4366	135.4366	4.1800e-003	3.9800e-003	136.7273
Total	**0.0555**	**0.0383**	**0.4579**	**1.3200e-003**	**0.1643**	**8.1000e-004**	**0.1651**	**0.0436**	**7.5000e-004**	**0.0443**		**135.4366**	**135.4366**	**4.1800e-003**	**3.9800e-003**	**136.7273**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0555	0.0383	0.4579	1.3200e-003	0.1643	8.1000e-004	0.1651	0.0436	7.5000e-004	0.0443		135.4366	135.4366	4.1800e-003	3.9800e-003	136.7273
Total	**0.0555**	**0.0383**	**0.4579**	**1.3200e-003**	**0.1643**	**8.1000e-004**	**0.1651**	**0.0436**	**7.5000e-004**	**0.0443**		**135.4366**	**135.4366**	**4.1800e-003**	**3.9800e-003**	**136.7273**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286		6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**9.2036**	**1.3354**	**10.5390**	**3.6538**	**1.2286**	**4.8823**		**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0520	0.0342	0.4283	1.2800e-003	0.1643	7.8000e-004	0.1651	0.0436	7.1000e-004	0.0443		132.0975	132.0975	3.7900e-003	3.7100e-003	133.2975
Total	**0.0520**	**0.0342**	**0.4283**	**1.2800e-003**	**0.1643**	**7.8000e-004**	**0.1651**	**0.0436**	**7.1000e-004**	**0.0443**		**132.0975**	**132.0975**	**3.7900e-003**	**3.7100e-003**	**133.2975**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286	0.0000	6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**9.2036**	**1.3354**	**10.5390**	**3.6538**	**1.2286**	**4.8823**	**0.0000**	**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0520	0.0342	0.4283	1.2800e-003	0.1643	7.8000e-004	0.1651	0.0436	7.1000e-004	0.0443		132.0975	132.0975	3.7900e-003	3.7100e-003	133.2975
Total	**0.0520**	**0.0342**	**0.4283**	**1.2800e-003**	**0.1643**	**7.8000e-004**	**0.1651**	**0.0436**	**7.1000e-004**	**0.0443**		**132.0975**	**132.0975**	**3.7900e-003**	**3.7100e-003**	**133.2975**

420 E. 3rd Street - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0390	0.0257	0.3212	9.6000e-004	0.1232	5.8000e-004	0.1238	0.0327	5.4000e-004	0.0332		99.0731	99.0731	2.8400e-003	2.7800e-003	99.9731
Total	**0.0390**	**0.0257**	**0.3212**	**9.6000e-004**	**0.1232**	**5.8000e-004**	**0.1238**	**0.0327**	**5.4000e-004**	**0.0332**		**99.0731**	**99.0731**	**2.8400e-003**	**2.7800e-003**	**99.9731**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0390	0.0257	0.3212	9.6000e-004	0.1232	5.8000e-004	0.1238	0.0327	5.4000e-004	0.0332		99.0731	99.0731	2.8400e-003	2.7800e-003	99.9731
Total	**0.0390**	**0.0257**	**0.3212**	**9.6000e-004**	**0.1232**	**5.8000e-004**	**0.1238**	**0.0327**	**5.4000e-004**	**0.0332**		**99.0731**	**99.0731**	**2.8400e-003**	**2.7800e-003**	**99.9731**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.6845					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**6.8652**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0468	0.0308	0.3855	1.1500e-003	0.1479	7.0000e-004	0.1486	0.0392	6.4000e-004	0.0399		118.8877	118.8877	3.4100e-003	3.3400e-003	119.9678
Total	**0.0468**	**0.0308**	**0.3855**	**1.1500e-003**	**0.1479**	**7.0000e-004**	**0.1486**	**0.0392**	**6.4000e-004**	**0.0399**		**118.8877**	**118.8877**	**3.4100e-003**	**3.3400e-003**	**119.9678**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.6845					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**6.8652**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0468	0.0308	0.3855	1.1500e-003	0.1479	7.0000e-004	0.1486	0.0392	6.4000e-004	0.0399		118.8877	118.8877	3.4100e-003	3.3400e-003	119.9678
Total	**0.0468**	**0.0308**	**0.3855**	**1.1500e-003**	**0.1479**	**7.0000e-004**	**0.1486**	**0.0392**	**6.4000e-004**	**0.0399**		**118.8877**	**118.8877**	**3.4100e-003**	**3.3400e-003**	**119.9678**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.6845					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**6.8553**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0441	0.0278	0.3623	1.1100e-003	0.1479	6.7000e-004	0.1485	0.0392	6.2000e-004	0.0398		116.0482	116.0482	3.1000e-003	3.1300e-003	117.0580
Total	**0.0441**	**0.0278**	**0.3623**	**1.1100e-003**	**0.1479**	**6.7000e-004**	**0.1485**	**0.0392**	**6.2000e-004**	**0.0398**		**116.0482**	**116.0482**	**3.1000e-003**	**3.1300e-003**	**117.0580**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.6845					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**6.8553**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0441	0.0278	0.3623	1.1100e-003	0.1479	6.7000e-004	0.1485	0.0392	6.2000e-004	0.0398		116.0482	116.0482	3.1000e-003	3.1300e-003	117.0580
Total	**0.0441**	**0.0278**	**0.3623**	**1.1100e-003**	**0.1479**	**6.7000e-004**	**0.1485**	**0.0392**	**6.2000e-004**	**0.0398**		**116.0482**	**116.0482**	**3.1000e-003**	**3.1300e-003**	**117.0580**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.6845					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**6.8553**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0418	0.0253	0.3428	1.0800e-003	0.1479	6.4000e-004	0.1485	0.0392	5.9000e-004	0.0398		113.4116	113.4116	2.8400e-003	2.9600e-003	114.3635
Total	**0.0418**	**0.0253**	**0.3428**	**1.0800e-003**	**0.1479**	**6.4000e-004**	**0.1485**	**0.0392**	**5.9000e-004**	**0.0398**		**113.4116**	**113.4116**	**2.8400e-003**	**2.9600e-003**	**114.3635**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.6845					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**6.8553**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0418	0.0253	0.3428	1.0800e-003	0.1479	6.4000e-004	0.1485	0.0392	5.9000e-004	0.0398		113.4116	113.4116	2.8400e-003	2.9600e-003	114.3635
Total	**0.0418**	**0.0253**	**0.3428**	**1.0800e-003**	**0.1479**	**6.4000e-004**	**0.1485**	**0.0392**	**5.9000e-004**	**0.0398**		**113.4116**	**113.4116**	**2.8400e-003**	**2.9600e-003**	**114.3635**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.6845					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**6.8553**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0397	0.0232	0.3263	1.0500e-003	0.1479	6.0000e-004	0.1485	0.0392	5.5000e-004	0.0398		111.0203	111.0203	2.6100e-003	2.8100e-003	111.9237
Total	**0.0397**	**0.0232**	**0.3263**	**1.0500e-003**	**0.1479**	**6.0000e-004**	**0.1485**	**0.0392**	**5.5000e-004**	**0.0398**		**111.0203**	**111.0203**	**2.6100e-003**	**2.8100e-003**	**111.9237**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.6845					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**6.8553**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0397	0.0232	0.3263	1.0500e-003	0.1479	6.0000e-004	0.1485	0.0392	5.5000e-004	0.0398		111.0203	111.0203	2.6100e-003	2.8100e-003	111.9237
Total	**0.0397**	**0.0232**	**0.3263**	**1.0500e-003**	**0.1479**	**6.0000e-004**	**0.1485**	**0.0392**	**5.5000e-004**	**0.0398**		**111.0203**	**111.0203**	**2.6100e-003**	**2.8100e-003**	**111.9237**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.2285	4.8804	42.4233	0.0829	10.1465	0.0601	10.2066	2.7026	0.0560	2.7586		8,754.4136	8,754.4136	0.5844	0.4279	8,896.5331
Unmitigated	4.2285	4.8804	42.4233	0.0829	10.1465	0.0601	10.2066	2.7026	0.0560	2.7586		8,754.4136	8,754.4136	0.5844	0.4279	8,896.5331

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	135.00	135.00	135.00	311,797	311,797
General Office Building	0.00	0.00	0.00		
Single Family Housing	1,952.01	1,952.01	1952.01	4,508,377	4,508,377
Total	2,087.01	2,087.01	2,087.01	4,820,174	4,820,174

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.554639	0.059030	0.188043	0.120453	0.022437	0.005729	0.010970	0.007473	0.000973	0.000534	0.026133	0.000855	0.002730
General Office Building	0.554639	0.059030	0.188043	0.120453	0.022437	0.005729	0.010970	0.007473	0.000973	0.000534	0.026133	0.000855	0.002730
Single Family Housing	0.554639	0.059030	0.188043	0.120453	0.022437	0.005729	0.010970	0.007473	0.000973	0.000534	0.026133	0.000855	0.002730

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1727	1.4782	0.6442	9.4200e-003		0.1193	0.1193		0.1193	0.1193		1,884.2065	1,884.2065	0.0361	0.0345	1,895.4034
NaturalGas Unmitigated	0.1727	1.4782	0.6442	9.4200e-003		0.1193	0.1193		0.1193	0.1193		1,884.2065	1,884.2065	0.0361	0.0345	1,895.4034

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	540.701	5.8300e-003	0.0498	0.0212	3.2000e-004		4.0300e-003	4.0300e-003		4.0300e-003	4.0300e-003		63.6119	63.6119	1.2200e-003	1.1700e-003	63.9899
General Office Building	372.822	4.0200e-003	0.0366	0.0307	2.2000e-004		2.7800e-003	2.7800e-003		2.7800e-003	2.7800e-003		43.8614	43.8614	8.4000e-004	8.0000e-004	44.1221
Single Family Housing	15102.2	0.1629	1.3918	0.5922	8.8800e-003		0.1125	0.1125		0.1125	0.1125		1,776.7332	1,776.7332	0.0341	0.0326	1,787.2915
Total		**0.1727**	**1.4782**	**0.6441**	**9.4200e-003**		**0.1193**	**0.1193**		**0.1193**	**0.1193**		**1,884.2065**	**1,884.2065**	**0.0361**	**0.0345**	**1,895.4034**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	0.540701	5.8300e-003	0.0498	0.0212	3.2000e-004		4.0300e-003	4.0300e-003		4.0300e-003	4.0300e-003		63.6119	63.6119	1.2200e-003	1.1700e-003	63.9899
General Office Building	0.372822	4.0200e-003	0.0366	0.0307	2.2000e-004		2.7800e-003	2.7800e-003		2.7800e-003	2.7800e-003		43.8614	43.8614	8.4000e-004	8.0000e-004	44.1221
Single Family Housing	15.1022	0.1629	1.3918	0.5922	8.8800e-003		0.1125	0.1125		0.1125	0.1125		1,776.7332	1,776.7332	0.0341	0.0326	1,787.2915
Total		**0.1727**	**1.4782**	**0.6441**	**9.4200e-003**		**0.1193**	**0.1193**		**0.1193**	**0.1193**		**1,884.2065**	**1,884.2065**	**0.0361**	**0.0345**	**1,895.4034**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	11.0149	3.0635	19.9228	0.0192		0.3341	0.3341		0.3341	0.3341	0.0000	3,669.4409	3,669.4409	0.1020	0.0667	3,691.8535
Unmitigated	233.4245	4.5278	307.0178	0.5444		40.8779	40.8779		40.8779	40.8779	4,385.7330	1,386.3703	5,772.1033	5.4772	0.3095	6,001.2615

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.5383					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.5814					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	222.7429	4.3123	288.3069	0.5434		40.7741	40.7741		40.7741	40.7741	4,385.7330	1,352.6471	5,738.3801	5.4449	0.3095	5,966.7309
Landscaping	0.5618	0.2155	18.7109	9.9000e-004		0.1038	0.1038		0.1038	0.1038		33.7232	33.7232	0.0323		34.5306
Total	**233.4245**	**4.5278**	**307.0178**	**0.5444**		**40.8779**	**40.8779**		**40.8779**	**40.8779**	**4,385.7330**	**1,386.3703**	**5,772.1033**	**5.4772**	**0.3095**	**6,001.2615**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.5383					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.5814					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3333	2.8480	1.2119	0.0182		0.2303	0.2303		0.2303	0.2303	0.0000	3,635.7177	3,635.7177	0.0697	0.0667	3,657.3229
Landscaping	0.5618	0.2155	18.7109	9.9000e-004		0.1038	0.1038		0.1038	0.1038		33.7232	33.7232	0.0323		34.5306
Total	**11.0149**	**3.0635**	**19.9228**	**0.0192**		**0.3341**	**0.3341**		**0.3341**	**0.3341**	**0.0000**	**3,669.4409**	**3,669.4409**	**0.1020**	**0.0667**	**3,691.8535**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

420 E. 3rd Street

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Bay Area AQMD Air District, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

420 E. 3rd Street

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	No Change	0	1	No Change	0.00
Cranes	Diesel	No Change	0	1	No Change	0.00
Excavators	Diesel	No Change	0	2	No Change	0.00
Forklifts	Diesel	No Change	0	3	No Change	0.00
Generator Sets	Diesel	No Change	0	1	No Change	0.00
Graders	Diesel	No Change	0	1	No Change	0.00
Pavers	Diesel	No Change	0	2	No Change	0.00
Paving Equipment	Diesel	No Change	0	2	No Change	0.00
Rollers	Diesel	No Change	0	2	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	4	No Change	0.00
Scrapers	Diesel	No Change	0	2	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	9	No Change	0.00
Welders	Diesel	No Change	0	1	No Change	0.00

420 E. 3rd Street

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	7.24200E-002	4.86020E-001	7.59900E-001	1.25000E-003	2.22600E-002	2.22600E-002	0.00000E+000	1.07237E+002	1.07237E+002	5.88000E-003	0.00000E+000	1.07384E+002
Cranes	1.16150E-001	1.18541E+000	6.40560E-001	2.12000E-003	5.01900E-002	4.61700E-002	0.00000E+000	1.86306E+002	1.86306E+002	6.02600E-002	0.00000E+000	1.87813E+002
Excavators	3.70800E-002	2.98350E-001	6.52120E-001	1.03000E-003	1.46400E-002	1.34700E-002	0.00000E+000	9.07489E+001	9.07489E+001	2.93500E-002	0.00000E+000	9.14827E+001
Forklifts	1.11060E-001	1.04540E+000	1.42973E+000	1.93000E-003	5.67700E-002	5.22300E-002	0.00000E+000	1.69207E+002	1.69207E+002	5.47200E-002	0.00000E+000	1.70575E+002
Generator Sets	1.13230E-001	1.01682E+000	1.53731E+000	2.76000E-003	4.11600E-002	4.11600E-002	0.00000E+000	2.37387E+002	2.37387E+002	8.92000E-003	0.00000E+000	2.37610E+002
Graders	3.72200E-002	4.45910E-001	1.67850E-001	6.60000E-004	1.44500E-002	1.33000E-002	0.00000E+000	5.81251E+001	5.81251E+001	1.88000E-002	0.00000E+000	5.85951E+001
Pavers	7.34000E-003	6.96700E-002	1.15720E-001	1.90000E-004	3.25000E-003	2.99000E-003	0.00000E+000	1.65167E+001	1.65167E+001	5.34000E-003	0.00000E+000	1.66502E+001
Paving Equipment	6.59000E-003	5.98400E-002	1.02790E-001	1.60000E-004	2.89000E-003	2.66000E-003	0.00000E+000	1.43141E+001	1.43141E+001	4.63000E-003	0.00000E+000	1.44299E+001
Rollers	5.83000E-003	6.09700E-002	7.40000E-002	1.00000E-004	3.23000E-003	2.97000E-003	0.00000E+000	9.22228E+000	9.22228E+000	2.98000E-003	0.00000E+000	9.29685E+000
Rubber Tired Dozers	9.96800E-002	1.03346E+000	4.51380E-001	1.24000E-003	4.65400E-002	4.28200E-002	0.00000E+000	1.08784E+002	1.08784E+002	3.51800E-002	0.00000E+000	1.09664E+002
Scrapers	1.55270E-001	1.61084E+000	1.21414E+000	3.04000E-003	6.33500E-002	5.82800E-002	0.00000E+000	2.66663E+002	2.66663E+002	8.62400E-002	0.00000E+000	2.68819E+002
Tractors/Loaders/ Backhoes	1.86670E-001	1.88578E+000	3.03980E+000	4.25000E-003	8.09600E-002	7.44800E-002	0.00000E+000	3.73204E+002	3.73204E+002	1.20700E-001	0.00000E+000	3.76221E+002
Welders	9.34600E-002	5.66450E-001	6.94560E-001	1.07000E-003	1.76500E-002	1.76500E-002	0.00000E+000	7.90527E+001	7.90527E+001	7.61000E-003	0.00000E+000	7.92428E+001

420 E. 3rd Street

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	7.24200E-002	4.86020E-001	7.59900E-001	1.25000E-003	2.22600E-002	2.22600E-002	0.00000E+000	1.07237E+002	1.07237E+002	5.88000E-003	0.00000E+000	1.07384E+002
Cranes	1.16150E-001	1.18541E+000	6.40560E-001	2.12000E-003	5.01900E-002	4.61700E-002	0.00000E+000	1.86306E+002	1.86306E+002	6.02600E-002	0.00000E+000	1.87812E+002
Excavators	3.70800E-002	2.98350E-001	6.52120E-001	1.03000E-003	1.46400E-002	1.34700E-002	0.00000E+000	9.07488E+001	9.07488E+001	2.93500E-002	0.00000E+000	9.14826E+001
Forklifts	1.11060E-001	1.04539E+000	1.42972E+000	1.93000E-003	5.67700E-002	5.22300E-002	0.00000E+000	1.69207E+002	1.69207E+002	5.47200E-002	0.00000E+000	1.70575E+002
Generator Sets	1.13230E-001	1.01682E+000	1.53730E+000	2.76000E-003	4.11600E-002	4.11600E-002	0.00000E+000	2.37387E+002	2.37387E+002	8.92000E-003	0.00000E+000	2.37610E+002
Graders	3.72200E-002	4.45910E-001	1.67850E-001	6.60000E-004	1.44500E-002	1.33000E-002	0.00000E+000	5.81250E+001	5.81250E+001	1.88000E-002	0.00000E+000	5.85950E+001
Pavers	7.34000E-003	6.96700E-002	1.15720E-001	1.90000E-004	3.25000E-003	2.99000E-003	0.00000E+000	1.65166E+001	1.65166E+001	5.34000E-003	0.00000E+000	1.66502E+001
Paving Equipment	6.59000E-003	5.98400E-002	1.02790E-001	1.60000E-004	2.89000E-003	2.66000E-003	0.00000E+000	1.43141E+001	1.43141E+001	4.63000E-003	0.00000E+000	1.44299E+001
Rollers	5.83000E-003	6.09700E-002	7.40000E-002	1.00000E-004	3.23000E-003	2.97000E-003	0.00000E+000	9.22227E+000	9.22227E+000	2.98000E-003	0.00000E+000	9.29684E+000
Rubber Tired Dozers	9.96800E-002	1.03346E+000	4.51380E-001	1.24000E-003	4.65400E-002	4.28200E-002	0.00000E+000	1.08784E+002	1.08784E+002	3.51800E-002	0.00000E+000	1.09664E+002
Scrapers	1.55270E-001	1.61084E+000	1.21414E+000	3.04000E-003	6.33500E-002	5.82800E-002	0.00000E+000	2.66662E+002	2.66662E+002	8.62400E-002	0.00000E+000	2.68819E+002
Tractors/Loaders/Backhoes	1.86670E-001	1.88578E+000	3.03980E+000	4.25000E-003	8.09600E-002	7.44800E-002	0.00000E+000	3.73203E+002	3.73203E+002	1.20700E-001	0.00000E+000	3.76221E+002
Welders	9.34600E-002	5.66450E-001	6.94560E-001	1.07000E-003	1.76500E-002	1.76500E-002	0.00000E+000	7.90526E+001	7.90526E+001	7.61000E-003	0.00000E+000	7.92427E+001

420 E. 3rd Street

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.21227E-006	1.21227E-006	0.00000E+000	0.00000E+000	1.21061E-006
Cranes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.18085E-006	1.18085E-006	0.00000E+000	0.00000E+000	1.22462E-006
Excavators	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.10194E-006	1.10194E-006	0.00000E+000	0.00000E+000	1.09310E-006
Forklifts	0.00000E+000	9.56572E-006	6.99433E-006	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.18198E-006	1.18198E-006	0.00000E+000	0.00000E+000	1.23113E-006
Generator Sets	0.00000E+000	0.00000E+000	6.50487E-006	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.17951E-006	1.17951E-006	0.00000E+000	0.00000E+000	1.17840E-006
Graders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.20430E-006	1.20430E-006	0.00000E+000	0.00000E+000	1.19464E-006
Pavers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.21090E-006	1.21090E-006	0.00000E+000	0.00000E+000	1.20119E-006
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.39722E-006	1.39722E-006	0.00000E+000	0.00000E+000	1.38601E-006
Rollers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.08433E-006	1.08433E-006	0.00000E+000	0.00000E+000	1.07563E-006
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.19502E-006	1.19502E-006	0.00000E+000	0.00000E+000	1.18544E-006
Scrapers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.20002E-006	1.20002E-006	0.00000E+000	0.00000E+000	1.19039E-006
Tractors/Loaders/Backhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.17898E-006	1.17898E-006	0.00000E+000	0.00000E+000	1.16952E-006
Welders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.13848E-006	1.13848E-006	0.00000E+000	0.00000E+000	1.26194E-006

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction		PM2.5 Reduction			

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

No	Replace Ground Cover of Area Disturbed	PM10 Reduction		PM2.5 Reduction			
No	Water Exposed Area	PM10 Reduction		PM2.5 Reduction		Frequency (per day)	
No	Unpaved Road Mitigation	Moisture Content %		Vehicle Speed (mph)	0.00		
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.06	0.02	0.06	0.02	0.00	0.00
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.38	0.10	0.38	0.10	0.00	0.00
Grading	Fugitive Dust	1.24	0.40	1.24	0.40	0.00	0.00
Grading	Roads	0.02	0.00	0.02	0.00	0.00	0.00
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	Fugitive Dust	0.29	0.15	0.29	0.15	0.00	0.00
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Operational Percent Reduction Summary

420 E. 3rd Street

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	99.85	42.95	99.63	97.35	99.52	99.52	100.00	-168.79	46.06	99.32	78.21	48.38
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.78	3.99	0.02	0.08	1.98
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value 3
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.06	0.24		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			

420 E. 3rd Street

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			
No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"				
No	Commute	Workplace Parking Charge				
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	

420 E. 3rd Street

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

No	Commute	Provide Ride Sharing Program				
	Commute	Commute Subtotal	0.00			
No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
Yes	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	100.00
No	Use Low VOC Paint (Residential Exterior)	150.00
No	Use Low VOC Paint (Non-residential Interior)	100.00
No	Use Low VOC Paint (Non-residential Exterior)	150.00
No	Use Low VOC Paint (Parking)	150.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Exceed Title 24		

420 E. 3rd Street

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

No	Install High Efficiency Lighting		
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Apply Water Conservation on Strategy	0.00	20.00
No	Use Reclaimed Water	0.00	0.00
No	Use Grey Water	0.00	
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction	0.00	
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape	0.00	0.00

Solid Waste Mitigation

420 E. 3rd Street

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

Appendix B
Biological Resources Assessment

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March 12, 2021 Project # IPQ-43

Kevin Fryer
Integral Partners Funding, LLC
500 La Gonda Way, #102
Danville, CA 94526

Subject: Biological and Wetland Constraints Letter Report for the Harbor View Project, City of Pittsburg, Contra Costa County, CA

Dear Mr. Fryer:

HELIX Environmental Planning, Inc. (HELIX) has prepared this biological and wetland constraints letter report for the proposed Harbor View Project. The purpose of our biological and wetland constraints study was to evaluate the potential for regionally-occurring special-status plant and animal species, wetlands or other waters of the U.S. or waters of the State, and/or other sensitive biological resources such as protected trees to occur in the project site and/or be impacted by site development. This memorandum describes the methods and results of our biological and wetland constraints analysis.

Project Location and Description

The approximately 20.5-acre proposed Harbor View Project (Project) is located at 420 East 3rd Street in the City of Pittsburg (City), Contra Costa County (County), California. The subject property consists of a single parcel, APN 073-050-001 (see Attachment A). The site is being considered for potential residential development.

Methods

Studies conducted in support of this report included a desktop special-status species evaluation, a desktop aquatic resources evaluation, and a biological and wetland reconnaissance survey.

Special-Status Species Evaluation

Regulations pertaining to the protection of biological resources at the project site are summarized in Attachment B. For the purposes of this report, special-status species are those that fall into one or more of the following categories, including those:

- listed as endangered or threatened under the Federal Endangered Species Act (FESA; including candidates and species proposed for listing);

- listed as endangered or threatened under the California Endangered Species Act (CESA; including candidates and species proposed for listing);
- designated as rare, protected, or fully protected pursuant to California Fish and Game Code;
- designated a Species of Special Concern (SSC) by the California Department of Fish and Wildlife (CDFW);
- considered by CDFW to be a Watch List species with potential to become an SSC;
- defined as rare or endangered under Section 15380 of the California Environmental Quality Act (CEQA); or
- Having a California Rare Plant Rank (CRPR) of 1A, 1B, 2A, 2B, or 3.

In order to evaluate special-status species and/or their habitats with the potential to occur in the project site and/or be impacted by proposed site development, HELIX obtained lists of special-status species known to occur and/or having the potential to occur in the proposed project site and vicinity from the U.S. Fish and Wildlife Service (USFWS; USFWS 2021), the California Native Plant Society (CNPS; CNPS 2021), and the California Natural Diversity Database (CNDDB; CDFW 2021). Attachment C includes these lists of special-status plant and animal species occurring in the project region.

Aquatic Resources Evaluation

The U.S. Fish and Wildlife Service's National Wetlands Inventory (NWI) online database[1] was reviewed to determine if there are any wetlands or other waters of the U.S. mapped by the USFWS on the property. The NWI provides reconnaissance level information on wetlands and deepwater habitats from analysis of high-altitude aerial imagery.

Historic aerial imagery from National Environmental Title Research (NETR)[2] was reviewed for information on past land uses and presence of aquatic features visible on aerial imagery. NETR provides aerial imagery covering the property at irregular intervals from 1959 to 2016, and USGS topographic maps at irregular intervals from 1908 to 2018.

Reconnaissance Survey

A biological and wetland reconnaissance survey was conducted on March 5, 2021 by HELIX Principal Biologist Stephen Stringer between 1200 and 1530 hours. The project site was assessed to identify the habitat type(s) present on-site and the potential to support special-status plant and wildlife species. The survey consisted of a pedestrian survey of the project site and the surrounding area. Meandering transects of the site were performed to obtain visual coverage of the site. An assessment of the site for the presence/absence of potential wetlands was also conducted by assessing the site for any areas with indicators of hydrophytic vegetation, hydric soils, and wetland hydrology according to the *Corps of*

[1] https://www.fws.gov/wetlands/Data/Mapper.html
[2] https://www.historicaerials.com

Engineers Wetlands Delineation Manual (USACE 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0; USACE 2008).

Results

Environmental Setting

The site is located within an industrial and residential area in the northern portion of the City of Pittsburg and is surrounded by industrial, commercial, and residential development. A currently vacant parcel that contained an industrial facility and boat dock until 2019 separates the project site from New York Slough, which lies along the southern side of Suisun Bay. The project site is approximately 800 feet south of the edge of New York Slough/Suisun Bay.

Site Conditions

The project site is the location of a former industrial asbestos facility, which occupied the site until early 2006 at which time demolition and removal of the facility and site remediation occurred based on aerial imagery. Currently, the interior of the site has been graded and leveled and is relatively flat. Soil mounds occur along the eastern boundary of the site adjacent to Harbor Street. The entire site is vegetated with ruderal herbaceous species with a variety of horticultural trees growing around the perimeter, primarily on the southern and western sides.

Habitat Types/Vegetation Communities

The only habitat type/vegetation community on the site is ruderal/disturbed habitat. Representative site photographs are included as Attachment D.

Ruderal/Disturbed

Ruderal/disturbed habitat occurs in areas that are heavily disturbed by past or ongoing human activities but retain a soil substrate. Ruderal/disturbed areas may be sparsely to densely vegetated, but do not support a recognizable community or species assemblage. Vegetative cover is usually herbaceous and dominated by a wide variety of weedy non-native species or a few ruderal native species.

Ruderal/disturbed habitat comprises the entire site. This habitat in the project site is vegetated with a low cover of non-native annual grasses and forbs as well as a variety of horticultural trees around the perimeter. Nearly all plant species observed during the site reconnaissance are non-natives associated with disturbance.

Special-Status Species Evaluation

Special-Status Plant Species

Numerous regionally-occurring special-status plant species were identified during the database searches and desktop review. Special-status plant species in the region occur in a variety of native habitats including chaparral, dunes, native grasslands, and freshwater and brackish wetlands. There is one reported occurrence of a CNPS Rank 1B.1 special-status plant (big tarplant; *Blepharizonia plumosa*) that overlaps the site. The reported occurrence is of a sighting of this species in 1937 somewhere in the

Pittsburg area (CDFW 2021). There are no other reported occurrences of special-status plants on or adjacent to the site but several records within a five mile radius.

Although the reconnaissance survey was conducted outside of the blooming season for many special-status plants, it is worth noting that no special-status plants were observed on the site during the reconnaissance survey. In addition, the site does not provide suitable habitat for special-status plants. Due to the history of site disturbance and lack of suitable habitat present on the site currently, no special-status plant species are expected to occur on the site or be impacted by any future site development.

Special-Status Wildlife Species

Numerous regionally-occurring special-status wildlife species were identified during the database searches and desktop review and there are numerous reported occurrences of special-status wildlife species in the region. There is one reported occurrence of a special-status animal species (Suisun song sparrow; *Melospiza melodia maxillaris*) that overlaps the site. The reported occurrence is of a sighting of this species in 1924 somewhere in the Pittsburg area (CDFW 2021) and is a non-specific polygon. Suisun song sparrow is a CDFW Species of Special Concern and a USFWS Bird Species of Conservation Concern. Suisun song sparrow occurs in brackish water marshes; therefore, there is no habitat for this species on or adjacent to the project site. There are two reported occurrences of special-status wildlife species adjacent to the site including one for Lange's metalmark butterfly (*Apodemia mormo langei*) and one for longfin smelt (*Spirinchus thaleichthys*). There is no habitat for either of these species on the project site. Lange's metalmark butterfly occurs in stabilized interior dunes such as are present in the Antioch Dunes and longfin smelt occurs in Suisun Bay. There are no other reported occurrences in CNDDB of special-status wildlife species on or adjacent to the site.

The majority of the regionally-occurring wildlife species in the region occur in fresh and saltwater wetlands and marshes, waters of the San Francisco Bay and its associated waterways, chaparral/woodland habitats, the Antioch Dunes, or other large open tracts of native or naturalized habitats. The only regionally-occurring special-status species that was identified as having potential habitat or the potential to occur on the site is burrowing owl. In addition, the site provides suitable habitat for other nesting migratory birds. These species are discussed briefly below. Species determined to have no potential to occur on the project site or be impacted by the proposed project are not discussed further in this report.

Burrowing Owl

Burrowing owls are year-round residents of most parts of California, though local seasonal movements are common and populations in northeastern California and high elevations may migrate to lower elevations during the winter. Burrowing owls inhabit underground burrows, especially those of California ground squirrels (*Otospermophilus beecheyi*), and artificial holes such as pipes, culverts, and crevices in debris piles. Suitable habitat is open and relatively flat, with short vegetation, low perches or mounds, and abundant rodent and insect prey. Common examples of suitable habitat include agricultural fields, pastures, grasslands, deserts, and disturbed places. The typical breeding season for burrowing owl is February through August (CDFW 2012).

No burrowing owls or sign were observed during the biological reconnaissance, which included a thorough search for this species. The nearest reported occurrence of burrowing owl in the CNDDB (CDFW 2021) is approximately 2.5 miles southeast in the City of Antioch. This reported occurrence is from 2008 and is listed as possibly extirpated. There are a few other reported occurrences of burrowing owl within a five-mile radius of the project site including records approximately 4.5 miles southwest of the site.

Ruderal/disturbed habitat in the project site, which consists largely of short annual grasses and forbs, provides suitable foraging habitat for burrowing owl and numerous ground squirrel burrows around the perimeter of the site provide suitable nesting habitat. One fairly large subterranean burrow was observed in the berm along the western boundary of the project site during the biological reconnaissance survey (see Attachment A). There was no sign of burrowing owl, but the burrow was of a suitable size and depth to provide good habitat for the burrowing owl. Poison bait stations (to eradicate ground squirrels) were observed along the soil mounds along the eastern boundary of the site, which renders the site less suitable by removing the animals that create suitable burrowing owl nesting habitat; however, numerous ground squirrel burrows were still present. Although the site is too small in size to support significant burrowing owl foraging and is surrounded by disturbed industrial and residential parcels, this species could potentially occupy the site.

If burrowing owls were residing in the project site or on adjacent properties at the time of proposed development, the project would have the potential for adverse effects to burrowing owl through injury or mortality, displacement, and loss of habitat. Injury or mortality to individual adults and young, or mortality of eggs and chicks due to forced nest abandonment by adults, would be a violation of the Fish and Game Code and a significant impact. Loss of occupied habitat including nesting burrows, satellite burrows, foraging habitat, dispersal habitat, wintering habitat, and linkages is considered a potentially significant impact to the local and regional populations of burrowing owl (CDFW 2012).

Migratory Birds and Raptors

As noted in Attachment B, migratory and non-game birds are protected during the nesting season by California Fish and Game Code. The project site and immediate vicinity provides nesting and foraging habitat for a variety of native birds common to urbanized areas, such as mourning dove (*Zenaida macroura*), black phoebe (*Sayornis nigricans*), and killdeer (*Charadrius vociferus*). Nests were not observed during surveys; however, a variety of migratory birds have the potential to nest in and adjacent to the site, in trees, shrubs and on the ground in vegetation.

Project activities such as clearing and grubbing during the avian breeding season (February 1 through August 31) could result in injury or mortality of eggs and chicks directly through destruction or indirectly through forced nest abandonment due to noise and other disturbance. Needless destruction of nests, eggs, and chicks would be a violation of the Fish and Game Code and a significant impact.

Aquatic Resources Evaluation

NWI mapping shows no aquatic features on the property. Historic aerial imagery shows a constructed basin in the southeast portion of the site that is present in 1939 (earliest date of the available imagery; Google Earth); industrial buildings are present in the northern half of the property at that time. The constructed basin had been replaced with structures by 1966 and no aquatic features are apparent in

1966 aerial imagery. In subsequent imagery, the site appears completely developed with either structures or paved/graveled parking areas through 2005, with no aquatic features present[3]. For a brief period in 2007, several basins likely associated with site remediation are present (Google Earth). By 2008 the basins are no longer present on aerial imagery, and no other aquatic features are evident on the site up to the present.

No wetlands were observed on the site during the reconnaissance survey and the site was completely dry with no surface water present. There is evidence that water ponds in some small areas on the site either in topographic depressions within low spots on the dirt access road around the perimeter and in some other small depressions on the pad left over from the remediation activities. Two small areas roughly 300 to 500 square feet in size each were noted where there was evidence of prior ponding in the form of surface soil cracks and biotic crust (see Attachment A). Neither of these areas appeared to exhibit a predominance of wetland vegetation and no hydric soil was observed in these two areas or elsewhere on the site in soil examinations using a small spade to turn over the surface soil layers.

The reconnaissance survey was conducted during a dry spell in an unseasonably dry year with very low rainfall in the project region. It is likely that water ponds in small areas throughout the site during wetter conditions. Due to the lack of observed hydric soil conditions, the lack of evidence of any natural wetlands occurring on the site for many decades, and the past soil disturbances at the site, areas meeting the USACE three-parameter test for wetlands are not expected to be present (due to a lack of hydric soil).

Even if wetlands are present that could not be detected due to the drought conditions and the lack of a formal wetland delineation being conducted, they would not likely qualify as waters of the U.S. per the Navigable Waters Protection Rule: Definition of "Waters of the United States" (NWPR) published by the Environmental Protection Agency (EPA) and USACE on April 21, 2020. Any such wetlands on the site would likely be considered isolated and lack connectivity to jurisdictional waters as there are no jurisdictional waters that have a surface hydrologic connection to the site or are adjacent to the site. Any such wetlands would also likely qualify as water-filled depressions incidental to mining or construction activity and be exempt from regulation per the NWPR. An argument could also be made that any small wetland areas on the site, if present, are not waters of the State because they resulted from historic human activity, are subject to ongoing operation and maintenance, and have not become a relatively permanent part of the natural landscape per the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures) (SWRCB 2019).

Protected Trees

A tree inventory was outside of the scope of this report and was not conducted. However, the total number of trees on the site was estimated to be approximately 50 to 60 trees, all of which were non-native. Many of the trees are too small to meet the criteria to be a protected tree, however, several trees on the site are large enough to be considered protected trees include a line of Peruvian pepper trees (*Schinus molle*) along the southern and western boundaries.

[3] https://www.historicaerials.com

Summary of Potential Biological Site Constraints

Special-Status Species

The site provides potential habitat for burrowing owl. No burrowing owls or sign were observed on the site, but mammal burrows that provide potential nesting habitat for burrowing owls are present on the site and the site provides suitable foraging habitat. Prior to site development, surveys would need to be conducted according to CDFW guidelines (CDFW 2012) to determine presence/absence of burrowing owl on the site. If burrowing owl were present on the site, coordination with the City and CDFW would need to be conducted to determine the appropriate methods for avoidance or relocation of the owls. Typically, active burrowing owl burrows must be avoided during the non-nesting season (September 1 through January 31) by a 50-meter buffer and active burrows must be avoided during the nesting season (February 1 through August 31) by a 200-meter buffer. As an alternative to avoidance, burrowing owls may be passively excluded if approved by CDFW. Passive exclusion typically requires providing 6.5 acres of mitigation per pair or single owl relocated; this can vary based on the requirements of the CEQA lead agency.

Migratory Birds and Raptors

The project site provides suitable nesting habitat for native birds and large trees on and adjacent to the site provide potential nesting habitat for raptors. Pre-construction surveys should be conducted prior to project implementation during the typical bird nesting season (February to August) to determine if nesting birds are present on or adjacent to the site, so that measures could be implemented if needed to avoid harming nesting birds. Measures typically consist of establishment of a suitable buffer (e.g., 500 feet for raptors; 100 feet for passerines) around active nests and avoidance of construction activities within the buffer until a qualified biologist has determined that the nest is no longer active (i.e., the nestlings have fledged and are no longer reliant on the nest, or the nest has failed).

Aquatic Resources

No wetlands or other waters of the U.S. or waters of the State are believed to occur on the project site. However, the City may require a formal delineation of aquatic resources be conducted to verify that the site lacks potential waters of the U.S. and waters of the State. If so, a formal delineation of aquatic resources would need to be conducted and submitted to the USACE and the RWQCB for verification.

Protected Trees

Prior to site development, an arborist inventory would need to be conducted at the project site to identify protected trees present on the site. A permit would be required from the City for removal or destruction of any protected trees, along with mitigation for removal of protected trees according to the ratio below:

1. Replacement of the removed tree(s) at a four-to-one ratio with 24-inch box trees;

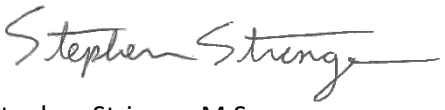
2. Replacement of the tree(s) at a 12-to-one ratio with 15-gallon trees;

3. Payment of in-lieu fees equal to the replacement trees' value, installation costs and one year of maintenance costs, as calculated with a 12-to-one ratio of 15-gallon trees; or

4. A combination of replacement and payment of in-lieu fees.

I appreciate the opportunity to assist you on this project. Feel free to contact me with any questions at (916) 365-8712.

Sincerely,



Stephen Stringer, M.S.
Principal Biologist/Biology Group Manager

Attachments:

A – Reconnaissance Survey Results
B – Regulatory Context
C – Database Query Results
D – Representative Site Photos

REFERENCES

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State Water Resources Control Board (SWRCB). 2019. State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State [For inclusion in the Water Quality Control Plans for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California]. Adopted April 2. Available online at: https://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/procedures_conformed.pdf.

U.S. Army Corps of Engineers (USACE). 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.

2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). J.S. Wakeley, R.W. Lichvar, and C.V. Noble, eds., Technical Report prepared for the U.S. Army Engineer Research and Development Center, Vicksburg, MS.

U.S. Fish and Wildlife Service (USFWS). 2021. Information for Planning and Consultation (IPaC). List of threatened and endangered species that may occur in your proposed project location and/or be affected by your proposed project.

Attachment A

Reconnaissance Survey Results



T:\PROJECTS\I\IPQ-ALL\IPQ-43\Map\IPQ43_recon\20210311.mxd 3/12/2021

0 200 Feet

Source: Aerial (DigitalGlobe, 11/4/2019)

HELIX Environmental Planning

Reconnaissance Survey Results

Attachment A

Attachment B

Regulatory Context

Attachment B
Regulatory Setting

Policies, regulations, and plans pertaining to the protection of biological resources on the project site are summarized in the following sections.

Federal Regulations

Federal Endangered Species Act

The U.S. Fish and Wildlife Service (USFWS) enforces the provisions stipulated within the Federal Endangered Species Act of 1973 (FESA; 16 USC 1531 et seq.). Species identified as federally threatened or endangered (50 CFR 17.11, and 17.12) are protected from take, defined as direct or indirect harm, unless a Section 10 permit is granted to an entity other than a federal agency or a Biological Opinion with incidental take provisions is rendered to a federal lead agency via a Section 7 consultation. Pursuant to the requirements of FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally-listed species may be present in the study area and determine whether the proposed project will jeopardize the continued existence of or result in the destruction or adverse modification of critical habitat of such species (16 USC 1536 (a)[3], [4]). Other federal agencies designate species of concern (species that have the potential to become listed), which are evaluated during environmental review under the National Environmental Protection Act (NEPA) or California Environmental Quality Act (CEQA) although they are not otherwise protected under FESA.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 established federal responsibilities for the protection of nearly all species of birds, their eggs, and nests. The Migratory Bird Treaty Reform Act of 2004 further defined species protected under the act and excluded all non-native species. Section 16 U.S.C. 703–712 of the Act states “unless and except as permitted by regulations, it shall be unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill” a migratory bird. A migratory bird is any species or family of birds that live, reproduce, or migrate within or across international borders at some point during their annual life cycle. Currently, there are 836 migratory birds protected nationwide by the Migratory Bird Treaty Act, of which 58 are legal to hunt. The U.S. Court of Appeals for the 9th Circuit (with jurisdiction over California) has ruled that the MBTA does not prohibit incidental take (952 F 2d 297 – Court of Appeals, 9th Circuit 1991).

State Jurisdiction

California Endangered Species Act

The California Endangered Species Act (CESA) (California Fish and Game Code Sections 2050 to 2097) is similar to the FESA. The California Fish and Wildlife Commission is responsible for maintaining lists of threatened and endangered species under CESA. CESA prohibits the take of listed and candidate (petitioned to be listed) species. “Take” under California law means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch capture, or kill (California Fish and Game Code, Section 86). The California Department of Fish and Wildlife (CDFW) can authorize take of a state-listed species under

Attachment B (cont.)
Regulatory Setting

Section 2081 of the California Fish and Game Code if the take is incidental to an otherwise lawful activity, the impacts are minimized and fully mitigated, funding is ensured to implement and monitor mitigation measures, and CDFW determines that issuance would not jeopardize the continued existence of the species. A CESA permit must be obtained if a project will result in the "take" of listed species, either during construction or over the life of the project. For species listed under both FESA and CESA requiring a Biological Opinion under Section 7 of the FESA, CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the Fish and Game Code.

California Code of Regulations Title 14 and California Fish and Game Code

The official listing of endangered and threatened animals and plants is contained in the California Code of Regulations Title 14 §670.5. A state candidate species is one that the California Fish and Game Code has formally noticed as being under review by CDFW to include in the state list pursuant to Sections 2074.2 and 2075.5 of the California Fish and Game Code.

Legal protection is also provided for wildlife species in California that are identified as "fully protected animals." These species are protected under Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish) of the California Fish and Game Code. These statutes prohibit take or possession of fully protected species at any time. CDFW is unable to authorize incidental take of fully protected species unless any such take authorization is issued in conjunction with the approval of a Natural Community Conservation Plan that covers the fully protected species (California Fish and Game Code Section 2835).

California Environmental Quality Act

Under the California Environmental Quality Act of 1970 (CEQA; Public Resources Code Section 21000 et seq.), lead agencies analyze whether projects would have a substantial adverse effect on a candidate, sensitive, or special-status species (Public Resources Code Section 21001(c)). These "special-status" species generally include those listed under FESA and CESA, and species that are not currently protected by statute or regulation, but would be considered rare, threatened, or endangered under the criteria included CEQA Guidelines Section 15380. Therefore, species that are considered rare are addressed under CEQA regardless of whether they are afforded protection through any other statute or regulation. The California Native Plant Society (CNPS) inventories the native flora of California and ranks species according to rarity; plants ranked as 1A, 1B, 2A, 2B, and 3 are generally considered special-status species under CEQA.[1]

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines Section 15380(d) provides that a species not listed on the federal or state list of protected species may be considered rare if it can be shown to meet certain specified criteria. These criteria have been modeled after the definition in FESA and the section of the California Fish and Game Code dealing with rare or endangered plants and animals. Section 15380(d) allows a public agency to undertake a review to determine if a significant effect on species that have not yet been listed by either the USFWS or CDFW (i.e., candidate species) would occur.

[1] The California Rare Plant Rank system can be found online at < http://www.cnps.org/cnps/rareplants/ranking.php>

Attachment B (cont.)
Regulatory Setting

Native Plant Protection Act

The California Native Plant Protection Act of 1977 (California Fish and Game Code Sections 1900-1913) empowers the Fish and Game Commission to list native plant species, subspecies, or varieties as endangered or rare following a public hearing. To the extent that the location of such plants is known, CDFW must notify property owners that a listed plant is known to occur on their property. Where a property owner has been so notified by CDFW, the owner must notify CDFW at least 10 days in advance of any change in land use (other than changing from one agricultural use to another), in order that CDFW may salvage listed plants that would otherwise be destroyed. Currently, 64 taxa of native plants have been listed as rare under the act.

Nesting Birds

California Fish and Game Code Subsections 3503 and 3800 prohibit the possession, take, or needless destruction of birds, their nests, and eggs, and the salvage of dead nongame birds. California Fish and Game Code Subsection 3503.5 protects all birds in the orders of Falconiformes and Strigiformes (birds of prey). Fish and Game Code Subsection 3513 states that it is unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Bird Treaty Act. The Attorney General of California has released an opinion that the Fish and Game Code prohibits incidental take.

Jurisdictional Waters

Federal Jurisdiction

Any person, firm, or agency planning to alter or work in "waters of the U.S.," including the discharge of dredged or fill material, must first obtain authorization from the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA; 33 USC 1344). Permits, licenses, variances, or similar authorization may also be required by other federal, state, and local statutes. Section 10 of the Rivers and Harbors Act prohibits the obstruction or alteration of navigable waters of the U.S. without a permit from USACE (33 USC 403).

On April 21, 2020, the Environmental Protection Agency (EPA) and USACE published the Navigable Waters Protection Rule to define "Waters of the United States" in the Federal Register. On June 22, 2020, the Navigable Waters Protection Rule: Definition of "Waters of the United States" (NWPR) became effective in 49 states, including California, and in all US territories.

The NWPR regulates traditional navigable waters and perennial or intermittent tributary systems, and defines four categories of regulated waters including:

- The territorial seas and traditional navigable waters;
- Perennial and intermittent tributaries to those waters;
- Certain lakes, ponds, and impoundments; and
- Wetlands adjacent to jurisdictional waters.

Attachment B (cont.)
Regulatory Setting

The NWPR also defines 12 categories of exempted aquatic resources:

- Waters not listed as WOTUS
- Groundwater
- Ephemeral features
- Diffuse stormwater run-off
- Ditches not identified as WOTUS
- Prior converted cropland (PCC)
- Artificially irrigated areas
- Artificial lakes and ponds
- Water-filled depressions incidental to mining or construction activity
- Stormwater control features
- Groundwater recharge, water reuse, and wastewater recycling structures
- Waste treatment systems

With non-tidal waters, in the absence of adjacent wetlands, the extent of USACE jurisdiction extends to the ordinary high water mark (OHWM) – the line on the shore established by fluctuations of water and indicated by a clear, natural line impressed on the bank, shelving, changes in soil character, destruction of terrestrial vegetation, or the presence of litter and debris. Wetlands are defined in 33 CFR Part 328 as:

> *"those areas that are inundated or saturated by surface or ground water at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."*

Federal and state regulations pertaining to waters of the U.S., including wetlands, are discussed below.

Clean Water Act (33 USC 1251-1376). The CWA provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters.

Section 401 requires that an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the U.S. must obtain a state certification that the discharge complies with other provisions of CWA. The Regional Water Quality Control Board (RWQCB) administers the certification program in California and may require State Water Quality Certification before other permits are issued.

Section 402 establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the U.S.

Section 404 establishes a permit program administered by USACE that regulates the discharge of dredged or fill material into waters of the U.S. (including wetlands). Implementing regulations by USACE are found at 33 CFR Parts 320-332. The Section 404 (b)(1) Guidelines were developed by the USEPA in conjunction with USACE (40 CFR Part 230), allowing the discharge of dredged or fill material for non-water dependent uses into special aquatic sites only if there is no practicable alternative that would have less adverse impacts.

Attachment B (cont.)
Regulatory Setting

State Jurisdiction

Regional Water Quality Control Board

Any action requiring a CWA Section 404 permit, or a Rivers and Harbors Act Section 10 permit, must also obtain a CWA Section 401 Water Quality Certification. The State of California Water Quality Certification (WQC) Program was formally initiated by the State Water Resources Control Board (SWRCB) in 1990 under the requirements stipulated by Section 401 of the Federal CWA. Although the Clean Water Act is a Federal law, Section 401 of the CWA recognizes that states have the primary authority and responsibility for setting water quality standards. In California, under Section 401, the State and Regional Water Boards are the authorities that certify that issuance of a federal license or permit does not violate California's water quality standards (i.e., that they do not violate Porter-Cologne and the Water Code). The WQC Program currently issues the WQC for discharges requiring USACE's permits for fill and dredge discharges within Waters of the United States, and now also implements the State's wetland protection and hydromodification regulation program under the Porter Cologne Water Quality Control Act.

On April 2, 2019, the SWRCB adopted a State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures), for inclusion in the forthcoming Water Quality Control Plan for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California. The Procedures consist of four major elements: 1) a wetland definition; 2) a framework for determining if a feature that meets the wetland definition is a water of the state; 3) wetland delineation procedures; and 4) procedures for the submittal, review, and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities. The Office of Administrative Law approved the Procedures on August 28, 2019, and the Procedures became effective May 28, 2020.

Under the Procedures and the State Water Code (Water Code §13050(e)), "Waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state." Unless excluded by the Procedures, any activity that could result in discharge of dredged or fill material to Waters of the State, which includes Waters of the U.S. and non-federal Waters of the State, requires filing of an application under the Procedures.

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act, Water Code Section 13000 et seq.) is California's statutory authority for the protection of water quality in conjunction with the federal CWA. The Porter-Cologne Act requires the SWRCB and RWQCBs under the CWA to adopt and periodically update water quality control plans, or basin plans. Basin plans are plans in which beneficial uses, water quality objectives, and implementation programs are established for each of the nine regions in California. The Porter-Cologne Act also requires dischargers of pollutants or dredged or fill material to notify the RWQCBs of such activities by filing Reports of Waste Discharge and authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements, National Pollution Discharge Elimination System (NPDES) permits, Section 401 water quality certifications, or other approvals.

Attachment B (cont.)
Regulatory Setting

California Department of Fish and Wildlife

The CDFW is a trustee agency that has jurisdiction under Section 1600 et seq. of the California Fish and Game Code. Under Sections 1602 and 1603, a private party must notify CDFW if a proposed project will "substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of streambeds…except when the department has been notified pursuant to Section 1601." Additionally, CDFW asserts jurisdiction over native riparian habitat adjacent to aquatic features, including native trees over four inches in diameter at breast height (DBH). If an existing fish or wildlife resource may be substantially adversely affected by the activity, CDFW may propose reasonable measures that will allow protection of those resources. If these measures are agreeable to the parties involved, they may enter into an agreement with CDFW identifying the approved activities and associated mitigation measures. Generally, CDFW recommends submitting an application for a Streambed Alteration Agreement (SAA) for any work done within the lateral limit of water flow or the edge of riparian vegetation, whichever is greater.

Local Requirements

Protected Trees

Pittsburg Municipal Code Chapter 18.84, Article XIX, referred to as the Tree Preservation and Protection Ordinance, applies to the removal or relocation of any protected tree in all zoning districts on property other than city-owned property in the city of Pittsburg. This includes tree removal or relocation on undeveloped property in order to facilitate development, and removal or relocation on developed property to facilitate building construction, expansion, renovation, or other property improvements. The Ordinance defines "Protected tree" as any of the following:

1. A California native tree, as identified in the Calflora online database of wild California plants, that measures at least 50 inches in circumference (15.6 inches diameter) at four and one-half feet above grade, regardless of location or health; or

2. A tree of a species other than a California native that measures at least 50 inches in circumference at four and one-half feet above grade and is either on an undeveloped property, located on public property or within the right-of-way, or located on private property and is found to provide benefits to the subject property as well as neighboring properties, subject to determination by the city planner; or

3. A tree required to be planted, relocated, or preserved as a condition of approval of a tree removal permit or other discretionary permit, and/or as environmental mitigation for a discretionary permit.

Attachment B (cont.)
Regulatory Setting

A permit is required to remove any protected tree and any person desiring to remove a protected tree must file an application with the City Planner that includes, but is not limited to, an arborist report that identifies all protected trees on the site and rationale for removal. Removal of protected trees generally requires mitigation unless the tree is determined to be a hazard. Mitigation consists of the following:

1. Replacement of the removed tree(s) at a four-to-one ratio with 24-inch box trees;

2. Replacement of the tree(s) at a 12-to-one ratio with 15-gallon trees;

3. Payment of in-lieu fees equal to the replacement trees' value, installation costs and one year of maintenance costs, as calculated with a 12-to-one ratio of 15-gallon trees; or

4. A combination of replacement and payment of in-lieu fees.

East Contra Costa County HCP/NCCP

The East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP or Plan) is intended to provide regional conservation and development guidelines to protect natural resources while improving and streamlining the permit process for endangered species and wetland regulations. Under the HCP/NCCP, the U.S. Fish and Wildlife Service and the California Department of Fish and Game have provided regional permits to the Cities of Brentwood, Clayton, Oakley, and Pittsburg and Contra Costa County. These land use agencies may extend permit coverage to project applicants within their jurisdictions. Instead of seeking endangered species permits from the state and federal agencies, project proponents can acquire their endangered species approvals from their local land use planning agency.

The HCP/NCCP does not apply to projects located on land mapped entirely as "urban" habitat. Because the Harbor View project is located entirely on land mapped as "urban" by the HCP/NCCP, the HCP/NCCP does not apply.

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Attachment C

Database Query Results

CNPS California Native Plant Society

*The database used to provide updates to the Online Inventory is under construction. View updates and changes made since May 2019 here.

Plant List

63 matches found. *Click on scientific name for details*

Search Criteria

Found in Quads 3812118, 3812117 3712188 and 3712187;

Modify Search Criteria | Export to Excel | Modify Columns | Modify Sort | Display Photos

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Amsinckia grandiflora	large-flowered fiddleneck	Boraginaceae	annual herb	(Mar)Apr-May	1B.1	S1	G1
Androsace elongata ssp. acuta	California androsace	Primulaceae	annual herb	Mar-Jun	4.2	S3S4	G5? T3T4
Anomobryum julaceum	slender silver moss	Bryaceae	moss		4.2	S2	G5?
Arabis blepharophylla	coast rockcress	Brassicaceae	perennial herb	Feb-May	4.3	S4	G4
Arctostaphylos auriculata	Mt. Diablo manzanita	Ericaceae	perennial evergreen shrub	Jan-Mar	1B.3	S2	G2
Arctostaphylos manzanita ssp. laevigata	Contra Costa manzanita	Ericaceae	perennial evergreen shrub	Jan-Mar(Apr)	1B.2	S2	G5T2
Astragalus tener var. tener	alkali milk-vetch	Fabaceae	annual herb	Mar-Jun	1B.2	S1	G2T1
Atriplex cordulata var. cordulata	heartscale	Chenopodiaceae	annual herb	Apr-Oct	1B.2	S2	G3T2
Atriplex coronata var. coronata	crownscale	Chenopodiaceae	annual herb	Mar-Oct	4.2	S3	G4T3
Atriplex depressa	brittlescale	Chenopodiaceae	annual herb	Apr-Oct	1B.2	S2	G2
Blepharizonia plumosa	big tarplant	Asteraceae	annual herb	Jul-Oct	1B.1	S1S2	G1G2
Calandrinia breweri	Brewer's calandrinia	Montiaceae	annual herb	(Jan)Mar-Jun	4.2	S4	G4
Calochortus pulchellus	Mt. Diablo fairy-lantern	Liliaceae	perennial bulbiferous herb	Apr-Jun	1B.2	S2	G2
Campanula exigua	chaparral harebell	Campanulaceae	annual herb	May-Jun	1B.2	S2	G2
Chloropyron molle ssp. molle	soft bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Nov	1B.2	S1	G2T1
Cicuta maculata var. bolanderi	Bolander's water-hemlock	Apiaceae	perennial herb	Jul-Sep	2B.1	S2?	G5T4T5
Collomia diversifolia	serpentine collomia	Polemoniaceae	annual herb	May-Jun	4.3	S4	G4

Convolvulus simulans	small-flowered morning-glory	Convolvulaceae	annual herb	Mar-Jul	4.2	S4	G4
Cordylanthus nidularius	Mt. Diablo bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Aug	1B.1	S1	G1
Cryptantha hooveri	Hoover's cryptantha	Boraginaceae	annual herb	Apr-May	1A	SH	GH
Delphinium californicum ssp. interius	Hospital Canyon larkspur	Ranunculaceae	perennial herb	Apr-Jun	1B.2	S3	G3T3
Downingia pusilla	dwarf downingia	Campanulaceae	annual herb	Mar-May	2B.2	S2	GU
Eriastrum ertterae	Lime Ridge eriastrum	Polemoniaceae	annual herb	Jun-Jul	1B.1	S1	G1
Eriogonum nudum var. psychicola	Antioch Dunes buckwheat	Polygonaceae	perennial herb	Jul-Oct	1B.1	S1	G5T1
Eriogonum truncatum	Mt. Diablo buckwheat	Polygonaceae	annual herb	Apr-Sep(Nov-Dec)	1B.1	S1	G1
Eriophyllum jepsonii	Jepson's woolly sunflower	Asteraceae	perennial herb	Apr-Jun	4.3	S3	G3
Eryngium jepsonii	Jepson's coyote thistle	Apiaceae	perennial herb	Apr-Aug	1B.2	S2?	G2?
Erysimum capitatum var. angustatum	Contra Costa wallflower	Brassicaceae	perennial herb	Mar-Jul	1B.1	S1	G5T1
Eschscholzia rhombipetala	diamond-petaled California poppy	Papaveraceae	annual herb	Mar-Apr	1B.1	S1	G1
Extriplex joaquinana	San Joaquin spearscale	Chenopodiaceae	annual herb	Apr-Oct	1B.2	S2	G2
Fritillaria agrestis	stinkbells	Liliaceae	perennial bulbiferous herb	Mar-Jun	4.2	S3	G3
Fritillaria liliacea	fragrant fritillary	Liliaceae	perennial bulbiferous herb	Feb-Apr	1B.2	S2	G2
Galium andrewsii ssp. gatense	phlox-leaf serpentine bedstraw	Rubiaceae	perennial herb	Apr-Jul	4.2	S3	G5T3
Grimmia torenii	Toren's grimmia	Grimmiaceae	moss		1B.3	S2	G2
Helianthella castanea	Diablo helianthella	Asteraceae	perennial herb	Mar-Jun	1B.2	S2	G2
Hesperolinon breweri	Brewer's western flax	Linaceae	annual herb	May-Jul	1B.2	S2	G2
Isocoma arguta	Carquinez goldenbush	Asteraceae	perennial shrub	Aug-Dec	1B.1	S1	G1
Lasthenia conjugens	Contra Costa goldfields	Asteraceae	annual herb	Mar-Jun	1B.1	S1	G1
Lathyrus jepsonii var. jepsonii	Delta tule pea	Fabaceae	perennial herb	May-Jul(Aug-Sep)	1B.2	S2	G5T2
Lilaeopsis masonii	Mason's lilaeopsis	Apiaceae	perennial rhizomatous herb	Apr-Nov	1B.1	S2	G2
Limosella australis	Delta mudwort	Scrophulariaceae	perennial stoloniferous herb	May-Aug	2B.1	S2	G4G5
Madia radiata	showy golden madia	Asteraceae	annual herb	Mar-May	1B.1	S3	G3
Malacothamnus hallii	Hall's bush-mallow	Malvaceae	perennial evergreen shrub	(Apr)May-Sep(Oct)	1B.2	S2	G2
Monolopia gracilens	woodland woolythreads	Asteraceae	annual herb	(Feb)Mar-Jul	1B.2	S3	G3
Navarretia gowenii	Lime Ridge navarretia	Polemoniaceae	annual herb	May-Jun	1B.1	S1	G1

Navarretia heterandra	Tehama navarretia	Polemoniaceae	annual herb	Apr-Jun	4.3	S4	G4
Navarretia nigelliformis ssp. nigelliformis	adobe navarretia	Polemoniaceae	annual herb	Apr-Jun	4.2	S3	G4T3
Navarretia nigelliformis ssp. radians	shining navarretia	Polemoniaceae	annual herb	(Mar)Apr-Jul	1B.2	S2	G4T2
Neostapfia colusana	Colusa grass	Poaceae	annual herb	May-Aug	1B.1	S1	G1
Oenothera deltoides ssp. howellii	Antioch Dunes evening-primrose	Onagraceae	perennial herb	Mar-Sep	1B.1	S1	G5T1
Phacelia phacelioides	Mt. Diablo phacelia	Hydrophyllaceae	annual herb	Apr-May	1B.2	S2	G2
Plagiobothrys hystriculus	bearded popcornflower	Boraginaceae	annual herb	Apr-May	1B.1	S2	G2
Ranunculus lobbii	Lobb's aquatic buttercup	Ranunculaceae	annual herb (aquatic)	Feb-May	4.2	S3	G4
Sanicula saxatilis	rock sanicle	Apiaceae	perennial herb	Apr-May	1B.2	S2	G2
Senecio aphanactis	chaparral ragwort	Asteraceae	annual herb	Jan-Apr(May)	2B.2	S2	G3
Senecio hydrophiloides	sweet marsh ragwort	Asteraceae	perennial herb	May-Aug	4.2	S3	G5
Streptanthus albidus ssp. peramoenus	most beautiful jewelflower	Brassicaceae	annual herb	(Mar)Apr-Sep(Oct)	1B.2	S2	G2T2
Streptanthus hispidus	Mt. Diablo jewelflower	Brassicaceae	annual herb	Mar-Jun	1B.3	S2	G2
Stuckenia filiformis ssp. alpina	slender-leaved pondweed	Potamogetonaceae	perennial rhizomatous herb (aquatic)	May-Jul	2B.2	S2S3	G5T5
Symphyotrichum lentum	Suisun Marsh aster	Asteraceae	perennial rhizomatous herb	(Apr)May-Nov	1B.2	S2	G2
Triquetrella californica	coastal triquetrella	Pottiaceae	moss		1B.2	S2	G2
Tropidocarpum capparideum	caper-fruited tropidocarpum	Brassicaceae	annual herb	Mar-Apr	1B.1	S1	G1
Viburnum ellipticum	oval-leaved viburnum	Adoxaceae	perennial deciduous shrub	May-Jun	2B.3	S3?	G4G5

Suggested Citation

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Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Honker Bay (3812118) OR Antioch North (3812117) OR Antioch South (3712187) OR Clayton (3712188))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Alameda whipsnake *Masticophis lateralis euryxanthus*	ARADB21031	Threatened	Threatened	G4T2	S2	
alkali milk-vetch *Astragalus tener var. tener*	PDFAB0F8R1	None	None	G2T1	S1	1B.2
American badger *Taxidea taxus*	AMAJF04010	None	None	G5	S3	SSC
Antioch andrenid bee *Perdita scitula antiochensis*	IIHYM01031	None	None	G1T1	S1	
Antioch Dunes anthicid beetle *Anthicus antiochensis*	IICOL49020	None	None	G1	S1	
Antioch Dunes buckwheat *Eriogonum nudum var. psychicola*	PDPGN0849Q	None	None	G5T1	S1	1B.1
Antioch Dunes evening-primrose *Oenothera deltoides ssp. howellii*	PDONA0C0B4	Endangered	Endangered	G5T1	S1	1B.1
Antioch Dunes halcitid bee *Sphecodogastra antiochensis*	IIHYM78010	None	None	G1	S1	
Antioch efferian robberfly *Efferia antiochi*	IIDIP07010	None	None	G1G2	S1S2	
Antioch multilid wasp *Myrmosula pacifica*	IIHYM15010	None	None	GH	SH	
Antioch specid wasp *Philanthus nasalis*	IIHYM20010	None	None	G1	S1	
bearded popcornflower *Plagiobothrys hystriculus*	PDBOR0V0H0	None	None	G2	S2	1B.1
Berkeley kangaroo rat *Dipodomys heermanni berkeleyensis*	AMAFD03061	None	None	G4T1	S1	
big tarplant *Blepharizonia plumosa*	PDAST1C011	None	None	G1G2	S1S2	1B.1
Blennosperma vernal pool andrenid bee *Andrena blennospermatis*	IIHYM35030	None	None	G2	S2	
Bolander's water-hemlock *Cicuta maculata var. bolanderi*	PDAPI0M051	None	None	G5T4T5	S2?	2B.1
Brewer's western flax *Hesperolinon breweri*	PDLIN01030	None	None	G2	S2	1B.2
Bridges' coast range shoulderband *Helminthoglypta nickliniana bridgesi*	IMGASC2362	None	None	G3T1	S1S2	
brittlescale *Atriplex depressa*	PDCHE042L0	None	None	G2	S2	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
burrowing owl *Athene cunicularia*	ABNSB10010	None	None	G4	S3	SSC
California black rail *Laterallus jamaicensis coturniculus*	ABNME03041	None	Threatened	G3G4T1	S1	FP
California glossy snake *Arizona elegans occidentalis*	ARADB01017	None	None	G5T2	S2	SSC
California least tern *Sternula antillarum browni*	ABNNM08103	Endangered	Endangered	G4T2T3Q	S2	FP
California linderiella *Linderiella occidentalis*	ICBRA06010	None	None	G2G3	S2S3	
California red-legged frog *Rana draytonii*	AAABH01022	Threatened	None	G2G3	S2S3	SSC
California Ridgway's rail *Rallus obsoletus obsoletus*	ABNME05011	Endangered	Endangered	G3T1	S1	FP
California tiger salamander *Ambystoma californiense*	AAAAA01180	Threatened	Threatened	G2G3	S2S3	WL
caper-fruited tropidocarpum *Tropidocarpum capparideum*	PDBRA2R010	None	None	G1	S1	1B.1
chaparral harebell *Campanula exigua*	PDCAM020A0	None	None	G2	S2	1B.2
chaparral ragwort *Senecio aphanactis*	PDAST8H060	None	None	G3	S2	2B.2
coast horned lizard *Phrynosoma blainvillii*	ARACF12100	None	None	G3G4	S3S4	SSC
Coastal Brackish Marsh *Coastal Brackish Marsh*	CTT52200CA	None	None	G2	S2.1	
coastal triquetrella *Triquetrella californica*	NBMUS7S010	None	None	G2	S2	1B.2
Conservancy fairy shrimp *Branchinecta conservatio*	ICBRA03010	Endangered	None	G2	S2	
Contra Costa goldfields *Lasthenia conjugens*	PDAST5L040	Endangered	None	G1	S1	1B.1
Contra Costa manzanita *Arctostaphylos manzanita ssp. laevigata*	PDERI04273	None	None	G5T2	S2	1B.2
Contra Costa wallflower *Erysimum capitatum var. angustatum*	PDBRA16052	Endangered	Endangered	G5T1	S1	1B.1
Crotch bumble bee *Bombus crotchii*	IIHYM24480	None	Candidate Endangered	G3G4	S1S2	
Delta mudwort *Limosella australis*	PDSCR10030	None	None	G4G5	S2	2B.1
Delta smelt *Hypomesus transpacificus*	AFCHB01040	Threatened	Endangered	G1	S1	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Delta tule pea *Lathyrus jepsonii var. jepsonii*	PDFAB250D2	None	None	G5T2	S2	1B.2
Diablo helianthella *Helianthella castanea*	PDAST4M020	None	None	G2	S2	1B.2
diamond-petaled California poppy *Eschscholzia rhombipetala*	PDPAP0A0D0	None	None	G1	S1	1B.1
double-crested cormorant *Phalacrocorax auritus*	ABNFD01020	None	None	G5	S4	WL
dwarf downingia *Downingia pusilla*	PDCAM060C0	None	None	GU	S2	2B.2
ferruginous hawk *Buteo regalis*	ABNKC19120	None	None	G4	S3S4	WL
foothill yellow-legged frog *Rana boylii*	AAABH01050	None	Endangered	G3	S3	SSC
fragrant fritillary *Fritillaria liliacea*	PMLIL0V0C0	None	None	G2	S2	1B.2
giant gartersnake *Thamnophis gigas*	ARADB36150	Threatened	Threatened	G2	S2	
golden eagle *Aquila chrysaetos*	ABNKC22010	None	None	G5	S3	FP
Hall's bush-mallow *Malacothamnus hallii*	PDMAL0Q0F0	None	None	G2	S2	1B.2
Hoover's cryptantha *Cryptantha hooveri*	PDBOR0A190	None	None	GH	SH	1A
Hospital Canyon larkspur *Delphinium californicum ssp. interius*	PDRAN0B0A2	None	None	G3T3	S3	1B.2
Hurd's metapogon robberfly *Metapogon hurdi*	IIDIP08010	None	None	G1G2	S1S2	
Jepson's coyote-thistle *Eryngium jepsonii*	PDAPI0Z130	None	None	G2	S2	1B.2
Keck's checkerbloom *Sidalcea keckii*	PDMAL110D0	Endangered	None	G2	S2	1B.1
Lange's metalmark butterfly *Apodemia mormo langei*	IILEPH7012	Endangered	None	G5T1	S1	
large-flowered fiddleneck *Amsinckia grandiflora*	PDBOR01050	Endangered	Endangered	G1	S1	1B.1
Lime Ridge eriastrum *Eriastrum ertterae*	PDPLM030F0	None	None	G1	S1	1B.1
Lime Ridge navarretia *Navarretia gowenii*	PDPLM0C120	None	None	G1	S1	1B.1
longfin smelt *Spirinchus thaleichthys*	AFCHB03010	Candidate	Threatened	G5	S1	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Mason's lilaeopsis *Lilaeopsis masonii*	PDAPI19030	None	Rare	G2	S2	1B.1
Middlekauff's shieldback katydid *Idiostatus middlekauffi*	IIORT31010	None	None	G1G2	S1	
molestan blister beetle *Lytta molesta*	IICOL4C030	None	None	G2	S2	
most beautiful jewelflower *Streptanthus albidus ssp. peramoenus*	PDBRA2G012	None	None	G2T2	S2	1B.2
Mt. Diablo bird's-beak *Cordylanthus nidularius*	PDSCR0J0F0	None	Rare	G1	S1	1B.1
Mt. Diablo buckwheat *Eriogonum truncatum*	PDPGN085Z0	None	None	G1	S1	1B.1
Mt. Diablo fairy-lantern *Calochortus pulchellus*	PMLIL0D160	None	None	G2	S2	1B.2
Mt. Diablo jewelflower *Streptanthus hispidus*	PDBRA2G0M0	None	None	G2	S2	1B.3
Mt. Diablo manzanita *Arctostaphylos auriculata*	PDERI04040	None	None	G2	S2	1B.3
Mt. Diablo phacelia *Phacelia phacelioides*	PDHYD0C3Q0	None	None	G2	S2	1B.2
Northern California legless lizard *Anniella pulchra*	ARACC01020	None	None	G3	S3	SSC
obscure bumble bee *Bombus caliginosus*	IIHYM24380	None	None	G4?	S1S2	
oval-leaved viburnum *Viburnum ellipticum*	PDCPR07080	None	None	G4G5	S3?	2B.3
pallid bat *Antrozous pallidus*	AMACC10010	None	None	G4	S3	SSC
redheaded sphecid wasp *Eucerceris ruficeps*	IIHYM18010	None	None	G1G3	S1S2	
rock sanicle *Sanicula saxatilis*	PDAPI1Z0H0	None	Rare	G2	S2	1B.2
Sacramento perch *Archoplites interruptus*	AFCQB07010	None	None	G2G3	S1	SSC
saltmarsh common yellowthroat *Geothlypis trichas sinuosa*	ABPBX1201A	None	None	G5T3	S3	SSC
salt-marsh harvest mouse *Reithrodontomys raviventris*	AMAFF02040	Endangered	Endangered	G1G2	S1S2	FP
San Francisco dusky-footed woodrat *Neotoma fuscipes annectens*	AMAFF08082	None	None	G5T2T3	S2S3	SSC
San Joaquin dune beetle *Coelus gracilis*	IICOL4A020	None	None	G1	S1	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
San Joaquin kit fox *Vulpes macrotis mutica*	AMAJA03041	Endangered	Threatened	G4T2	S2	
San Joaquin pocket mouse *Perognathus inornatus*	AMAFD01060	None	None	G2G3	S2S3	
San Joaquin spearscale *Extriplex joaquinana*	PDCHE041F3	None	None	G2	S2	1B.2
Serpentine Bunchgrass *Serpentine Bunchgrass*	CTT42130CA	None	None	G2	S2.2	
shining navarretia *Navarretia nigelliformis ssp. radians*	PDPLM0C0J2	None	None	G4T2	S2	1B.2
short-eared owl *Asio flammeus*	ABNSB13040	None	None	G5	S3	SSC
showy golden madia *Madia radiata*	PDAST650E0	None	None	G3	S3	1B.1
slender silver moss *Anomobryum julaceum*	NBMUS80010	None	None	G5?	S2	4.2
slender-leaved pondweed *Stuckenia filiformis ssp. alpina*	PMPOT03091	None	None	G5T5	S2S3	2B.2
soft salty bird's-beak *Chloropyron molle ssp. molle*	PDSCR0J0D2	Endangered	Rare	G2T1	S1	1B.2
song sparrow ("Modesto" population) *Melospiza melodia*	ABPBXA3010	None	None	G5	S3?	SSC
Stabilized Interior Dunes *Stabilized Interior Dunes*	CTT23100CA	None	None	G1	S1.1	
steelhead - Central Valley DPS *Oncorhynchus mykiss irideus pop. 11*	AFCHA0209K	Threatened	None	G5T2Q	S2	
Suisun Marsh aster *Symphyotrichum lentum*	PDASTE8470	None	None	G2	S2	1B.2
Suisun song sparrow *Melospiza melodia maxillaris*	ABPBXA301K	None	None	G5T3	S3	SSC
Swainson's hawk *Buteo swainsoni*	ABNKC19070	None	Threatened	G5	S3	
Toren's grimmia *Grimmia torenii*	NBMUS32330	None	None	G2	S2	1B.3
Townsend's big-eared bat *Corynorhinus townsendii*	AMACC08010	None	None	G4	S2	SSC
tricolored blackbird *Agelaius tricolor*	ABPBXB0020	None	Threatened	G1G2	S1S2	SSC
vernal pool fairy shrimp *Branchinecta lynchi*	ICBRA03030	Threatened	None	G3	S3	
vernal pool tadpole shrimp *Lepidurus packardi*	ICBRA10010	Endangered	None	G4	S3S4	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
western bumble bee *Bombus occidentalis*	IIHYM24250	None	Candidate Endangered	G2G3	S1	
western pond turtle *Emys marmorata*	ARAAD02030	None	None	G3G4	S3	SSC
western red bat *Lasiurus blossevillii*	AMACC05060	None	None	G4	S3	SSC
western ridged mussel *Gonidea angulata*	IMBIV19010	None	None	G3	S1S2	
white-tailed kite *Elanus leucurus*	ABNKC06010	None	None	G5	S3S4	FP
woodland woollythreads *Monolopia gracilens*	PDAST6G010	None	None	G3	S3	1B.2
yellow rail *Coturnicops noveboracensis*	ABNME01010	None	None	G4	S1S2	SSC

Record Count: 110

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

NOT FOR CONSULTATION

Location

Contra Costa County, California



Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

NOT FOR CONSULTATION

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS

Salt Marsh Harvest Mouse Reithrodontomys raviventris — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/613

Birds

NAME	STATUS

California Clapper Rail Rallus longirostris obsoletus — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4240

California Least Tern Sterna antillarum browni — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/8104

Reptiles

NAME	STATUS

Alameda Whipsnake (=striped Racer) Masticophis lateralis euryxanthus — Threatened
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/5524

Giant Garter Snake Thamnophis gigas — Threatened
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4482

Amphibians

NAME	STATUS

California Red-legged Frog Rana draytonii — Threatened
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/2891

California Tiger Salamander Ambystoma californiense — Threatened
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/2076

NOT FOR CONSULTATION

Fishes

NAME	STATUS
Delta Smelt Hypomesus transpacificus Wherever found There is **final** critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
Delta Green Ground Beetle Elaphrus viridis Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/2319	Threatened
San Bruno Elfin Butterfly Callophrys mossii bayensis Wherever found There is **proposed** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/3394	Endangered
Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/7850	Threatened

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp Branchinecta lynchi Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp Lepidurus packardi Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/2246	Endangered

Flowering Plants

NOT FOR CONSULTATION

NAME	STATUS
Antioch Dunes Evening-primrose Oenothera deltoides ssp. howellii Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/5970	Endangered
Soft Bird's-beak Cordylanthus mollis ssp. mollis Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/8541	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
Delta Smelt Hypomesus transpacificus https://ecos.fws.gov/ecp/species/321#crithab	Final

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Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

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NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Allen's Hummingbird Selasphorus sasin This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
California Thrasher Toxostoma redivivum This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Jul 31
Costa's Hummingbird Calypte costae This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9470	Breeds Jan 15 to Jun 10

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Lewis's Woodpecker Melanerpes lewis — Breeds Apr 20 to Sep 30
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9408

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Rufous Hummingbird selasphorus rufus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8002

Song Sparrow Melospiza melodia — Breeds Feb 20 to Sep 5
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Spotted Towhee Pipilo maculatus clementae — Breeds Apr 15 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/4243

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

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Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

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Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

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1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

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National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

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Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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Attachment D

Representative Site Photos



Photo 1. View of the northern portion of the project site showing the ruderal/disturbed habitat.



Photo 2. View of the southern portion of the project site showing the ruderal/disturbed habitat.



Photo 3. View of the berm along the western boundary of the project site with a line of Peruvian pepper trees.



Photo 4. View of the mammal burrow in the berm in the southwestern boundary of the site.



Photo 5. View of the southern boundary of the project site with a line of Peruvian pepper trees.

Appendix C
Geotechnical Feasibility Evaluation



420 EAST 3RD STREET DEVELOPMENT
PITTSBURG, CALIFORNIA

GEOTECHNICAL FEASIBILITY EVALUATION

SUBMITTED TO
Mr. Kevin Fryer
IL Housing Solutions, LLC
888 San Clemente Drive, Suite 100
Newport Beach, CA 92660

PREPARED BY
ENGEO Incorporated

April 1, 2021

PROJECT NO.
18562.000.001

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ENGEO
Expect Excellence

Project No.
18562.000.001

April 1, 2020

Mr. Kevin Fryer
IL Housing Solutions, LLC
888 San Clemente Drive, Suite 100
Newport Beach, CA 92660

Subject: 420 East 3rd Street Development
Pittsburg, California

GEOTECHNICAL FEASIBILITY EVALUATION

Dear Mr. Fryer:

We are pleased to present this geotechnical feasibility evaluation of the 420 East 3rd Street site in Pittsburg, California. The accompanying report presents our findings and preliminary recommendations regarding the proposed development.

Based on the findings of our feasibility evaluation, we opine that the proposed development is feasible from a geotechnical standpoint, provided the preliminary recommendations provided in this report are implemented during project planning. The scope of this report was limited to an initial study. A design-level exploration including laboratory testing and detailed engineering analyses should be conducted to develop design recommendations once building types and loading conditions are available.

We are pleased to have been of service on this project and are prepared to consult further with you and your design team as the project progresses. If you have any questions or comments regarding this preliminary report, please call and we will be glad to discuss them with you.

Sincerely,

ENGEO Incorporated

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1.0 INTRODUCTION

1.1 PURPOSE AND SCOPE

We prepared this report to evaluate the geotechnical feasibility of the proposed residential project at the site in Pittsburg, California. We were authorized to perform the following scope of services.

- Evaluation of suitability of the site for the proposed development.
- Preliminary assessment of geological hazards at the site and in the general project area.
- Discussion of potential geotechnical constraints such as loose/soft surface soil, existing fill, compressible soil, expansive soil, liquefiable soil, and lateral spreading, as necessary.
- Presentation of conceptual measures to mitigate hazards, geotechnical constraints, as appropriate.
- Discussion of anticipated foundation types and California Building Code (CBC) seismic design criteria.
- Preliminary pavement recommendations for hot mix asphalt and Portland cement concrete.

We were engaged to perform this evaluation based on existing data. No project-specific subsurface exploration was performed in support of this evaluation.

For our use in preparation of this report, we received the following:

1. Treadwell and Rollo; Preliminary Geotechnical Investigation, Proposed Harbor Bay Development, Pittsburg, California; October 17, 2005; Project No. 4245.01.
2. Treadwell & Rollo; Geotechnical Investigation, Proposed Harbor Park Development, Pittsburg, California; June 13, 2006; Project No. 4245.02.
3. Treadwell & Rollo; Geotechnical Consultation, Selected Approach for Remedial Mass Grading and Revised Earthen Embankment Construction, Harbor Park Development, Pittsburg, California; July 31, 2007; Project No. 4245.02.
4. Treadwell & Rollo; Final Report, Geotechnical Services during Remedial Mass Grading, The Proposed Hardbor Park Development, Pittsburg, California; July 17, 2008; Project No. 4245.02.
5. Sandis; Topographic Survey, 415 & 420 East 3rd Street, Pittsburg, California; March 13, 2017; Project No. 617005.
6. Rockridge Geotechnical; Geotechnical Investigation, Proposed New Campus & Sports Complex, Making Waves Academy, 959 E 3rd Street, Pittsburg, California; May 11, 2018, Project No. 18-1477.
7. Urban Arena; 420 E 3rd Street, Pittsburg, California; February 18, 2021; Project No. 20-067.

We prepared this report for the exclusive use of IL Housing Solutions, LLC and its consultants for the project. This document may not be reproduced in whole or in part by any means whatsoever, nor may it be quoted or excerpted without our express written consent.

1.2 SITE LOCATION AND PROPOSED DEVELOPMENT

The property at 420 East 3rd Street encompasses approximately 20.5 acres, identified as Assessor's Parcel Number (APN) 073-050-001-4. The site is located on the southwest side of the intersection of Harbor Street and East 3rd Street. Harbor Street and East 3rd Street border the north and east edges of the site, respectively, while the south side of the site is bordered by a landscaped area and an existing residential development borders the site to the west. The project site area lies downslope of the adjacent residential and landscaped areas; the slope appears to reach a maximum height of approximately 20 feet with a gradient of approximately 1½:1 (horizontal:vertical). The developable site envelope is relatively level, with an approximately 10-to-14-foot-high soil berm along the eastern boundary of the site adjacent to Harbor Street.

Based on the preliminary site plan, we understand that the future development will include approximately 236 lots for residential use. We anticipate that the development will additionally incorporate paved drive aisles and parking, underground utilities, secondary slabs on grade such as sidewalks, ancillary structures, landscaping, and stormwater basins.

Structural loads and grading are yet to be determined; however, we assume that structural loads will be consistent with similar construction.

2.0 FINDINGS

2.1 AERIAL PHOTOGRAPH INTERPRETATION

We reviewed historic aerial photographs and topographic maps available on www.historicaerials.com. We understand that the site was developed for industrial use in the 1920s. Based on our review of historic photographs, structures and railway lines associated with this work occupy the majority of the site and remained relatively unchanged between 1959 and 2005. By 2009, the existing structures and railways appear to have been demolished and the berm has been constructed in the eastern portion of the site. Conditions appear relatively unchanged since then.

2.2 EXISTING SITE CONDITIONS

We performed a reconnaissance of the site on March 29, 2021, to observe current site conditions. The site is currently vacant and is secured by a perimeter fence on all sides. The site consists of relatively level, vegetated open space.

PHOTO 2.2-1: Northern Area of Site (facing South)



PHOTO 2.2-2: Southern Area of Site (facing North)



2.3 REGIONAL GEOLOGY AND SEISMIC SETTING

The site is situated in the Coast Ranges geomorphic province of California, which is characterized by a series of parallel, northwesterly trending, folded and faulted mountain ranges and valleys. The site was originally tidal marshland prior to the current development. According to published geologic maps, the majority of the site is covered by existing fill deposits of variable thickness placed over alluvial deposits (Bibblee, 2006).

The site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone and no known surface expression of active faults is believed to exist within the site. An active fault is defined by the State Mining and Geology Board as one that has had surface displacement within Holocene time (about the last 11,000 years) (Bryant and Hart, 2007).

Because of the presence of nearby active faults, the Bay Area Region is considered seismically active. Numerous small earthquakes occur every year in the region, and large (greater than Moment Magnitude 7) earthquakes have been recorded and can be expected to occur in the future. Based on the United States Geological Survey's (USGS) 2008 National Seismic Hazard Maps, the closest active faults in the area are the Great Valley fault and Green Valley fault, which are approximately 1.3 miles northwest and 9.5 miles west of the site, respectively.

2.4 PREVIOUS FIELD EXPLORATIONS

The site was explored in 2005 and again in 2006 by Treadwell and Rollo (T&R) with a total of 61 cone penetration tests (CPTs) and 13 drilled borings throughout the site. Locations of the borings and CPTs locations are presented in Figure 2.

The previous borings ranged in depth between 19 and 51½ feet and the CPTs ranged in depth between 30 and 50 feet. The exploration logs and associated laboratory testing results from the 2005 and 2006 exploration are included in Appendix A.

2.5 SUBSURFACE CONDITIONS

The 2006 geotechnical investigation encountered approximately 2 to 15 feet of man-made fill consisting of loose to medium dense sand and gravel with variable silt and clay throughout the site. In the southeastern portion of the site, an approximately 3 to 43-foot-thick layer of soft to medium stiff compressible clay was encountered below the fill. The approximate lateral extent of the compressible material is shown on Figure 2. Below the compressible soil (where encountered), the previous exploration penetrated medium stiff to stiff sandy silt and clay, medium dense to very dense sand, and dense to very dense sand and gravelly sand.

2.6 GROUNDWATER CONDITIONS

Groundwater measurements during previous explorations at the site generally encountered groundwater 4½ to 15½ feet below ground surface (bgs).

The Seismic Hazard Zone Report for the Honker Bay Point 7.5 Minute Quadrangle (CGS, 2019) does not provide a map of historical high groundwater; the document states that depths to groundwater are typically between 0 to 10 feet. Fluctuations in the level of groundwater are expected to occur due to the proximity of the site to the New York Slough, as well as variations in rainfall, irrigation practice, and other factors not in evidence at the time of the subsurface exploration.

2.7 PREVIOUS GEOTECHNICAL WORK

In addition to the site investigations performed in 2005 and 2006, we understand that T&R provided supplemental recommendations regarding to remedial site grading, earthen embankment construction and repair, surcharging, and wick drain installation.

The 2008 T&R report summarizes geotechnical testing and observation of select fill locations within the site. This work appears to have been completed in November and December of 2007. The report indicates elevation and relative compaction of engineered backfill placed within local “pond” excavations within the southeastern and northern portions of the site. Based on the topographic survey included with this report, it appears the site has been further graded sometime between 2008 and 2021 to level the site and remove stockpiles within the site.

The 2008 report indicates that utilities located within the site were removed and backfilled with engineered fill under the observation of T&R in 2006. Observations performed by T&R during wick drain installation are contained in a separate 2008 letter. These reports were not available for our review.

3.0 GEOLOGIC AND GEOTECHNICAL HAZARDS

3.1 SEISMIC HAZARDS

Potential seismic hazards resulting from a nearby moderate to major earthquake can generally be classified as primary and secondary. The primary effect is ground rupture, also called surface faulting. The common secondary seismic hazards include ground shaking and liquefaction. The following sections present a discussion of these and other hazards as they apply to the site. Based on topographic and lithologic data, the risk of regional subsidence or uplift, lurching, or landslides, is low to negligible at the site.

3.1.1 Ground Rupture

As previously noted, the site is not located within a designated Alquist-Priolo Earthquake Fault Zone and no known surface expression of active faults is believed to exist within the site; as such, the risk of fault rupture through the site is considered low.

3.1.2 Ground Shaking

Seismic design provisions of current building codes generally prescribe minimum lateral forces, applied statically to the structure, combined with the gravity forces of dead and live loads. The code-prescribed lateral forces are generally considered to be substantially smaller than the actual forces that would be associated with a major earthquake. Therefore, structures should be able to: (1) resist minor earthquakes without damage, (2) resist moderate earthquakes without structural damage but with some nonstructural damage, and (3) resist major earthquakes without collapse, but with some structural as well as nonstructural damage. Conformance to the current building code recommendations does not constitute any kind of guarantee that significant structural damage would not occur in the event of a maximum magnitude earthquake; however, it is reasonable to expect that a well-designed and well-constructed structure will not collapse or cause loss of life in a major earthquake (SEAOC, 1996). California Building Code (CBC, 2019) seismic design parameters are presented later in this report.

3.1.3 Liquefaction / Cyclic Softening

The site is located within a mapped State of California Seismic Hazard Zone (CGS, 2019) for areas that may be susceptible to liquefaction.

Soil liquefaction results from loss of strength during cyclic loading, such as imposed by earthquakes. The soil considered most susceptible to liquefaction is clean, loose, saturated, uniformly graded fine sand below the groundwater table. Empirical evidence indicates that loose silty sand is also potentially liquefiable. When seismic ground shaking occurs, the soil is subjected to cyclic shear stresses that can cause excess hydrostatic pressures to develop. If excess hydrostatic pressures exceed the effective confining stress from the overlying soil, it is said to have liquefied. If the sand consolidates or vents to the surface during and following liquefaction, ground settlement and surface deformation may occur. In addition to liquefaction of sandy materials, clayey soil can also undergo “cyclic-softening” or strength loss as a result of cyclic loading.

Liquefaction hazard maps are created using a variety of information, including regional geologic mapping, regional groundwater level and observances of historic liquefaction. They should not be considered site-specific predictors of liquefaction hazard but instead areas where regional information indicates that the potential for liquefaction is higher.

The existing subsurface data does not provide sufficient information for performing a rigorous liquefaction hazard evaluation. Analysis of boring and CPT data included in the 2006 T&R and 2018 Rockridge investigations indicate up to 5½ inches of liquefaction-induced settlement in localized areas. Based on our review of the existing data using preliminary 2019 CBC seismic parameters, we anticipate that an updated estimate of liquefaction-induced settlement based on the requirements of the building code will be greater.

Liquefaction potential and settlement analyses should be performed during design-level exploration using updated site-specific seismic parameters in accordance with the 2019 CBC. The design-level assessment should focus on identifying the lateral and vertical extent of isolated layers of potentially liquefiable clayey sand and gravel that were encountered below groundwater elevation at some of exploration locations. The cyclic-softening hazard for fine-grained materials, if this type of soil is encountered, should be evaluated using the criteria presented by Bray and Sancio (2006). The liquefaction assessment during design-level study should also consider groundwater depth based on proposed site grades, when known.

3.1.4 Liquefaction-Induced Surface Rupture

In order for liquefaction-induced ground failure to occur, the pore water pressure generated within the liquefied strata must exert a force sufficient to break through the overlying soil and vent to the surface resulting in sand boils or fissures. Based on our review of the available exploration data, the sandy materials susceptible to liquefaction are generally interlayered with clay and silt that may not liquefy. Based on the current data, the potentially liquefiable soil are overlain by a non-liquefiable cap sufficient to prevent surface rupture, however, further study is necessary to determine if the clayey and silty interbedded soil will liquefy. If future evaluation shows an insufficient thickness of non-liquefiable soil cap, building pads may require construction with engineered fill and reinforcement such as geogrid to reduce the risk of surface rupture such as sand boils from occurring.

3.1.5 Lateral Spreading

Lateral spreading is a failure within a nearly horizontal soil zone (possibly due to liquefaction) that causes the overlying soil mass to move toward a free face or down a gentle slope. Based on the site location and distance from New York Slough, we anticipate that the risk for lateral spreading is low, however this risk should be further evaluated as part of future design-level study considering liquefaction potential.

3.2 NON-ENGINEERED FILL

As discussed, we identified that there is likely artificial fill approximately 2 to 15 feet deep throughout the site. The fill generally consists of loose to medium dense sand and gravel with variable silt and clay. Based on the 2006 and 2008 reports, we understand the majority of the fill throughout the site was placed following demolition of the on-site structures and improvements and was done so without geotechnical engineering controls. Based on conversations with you, we understand that drilling borings and digging test pits to determine the extents and thickness of the artificial fill is not feasible due to environmental constraints. We may recommend removal, processing and replacement of this existing non-engineered fill if not restricted by environmental constraints; all construction debris and any other unsuitable material should be removed from the fill during processing. After removal and recompaction of the fill underneath the building, shallow foundations can be used for structural support. If existing fill is left in place in portions of the site that are being developed with walkways or other improvements that are not sensitive to settlement, on-going maintenance should be anticipated. Areas receiving fill during site grading included in the 2008 T&R report may be excluded from a fill over excavation recommendation.

3.3 COMPRESSIBLE SOIL

The 2005 and 2006 investigations encountered an approximately 3 to 43-foot-thick layer of soft to medium stiff, compressible clay in the southeastern portion of the site and at isolated areas in

the northwestern portion of the site. Laboratory testing during previous exploration indicates soft clay in the southeastern portion of the site is normally to lightly overconsolidated. Structural loads and grading are yet to be determined; however, we anticipate that the compressible clay will experience moderate settlement under new fill loads if site grades are raised, with the magnitude of settlement depending on the building loads and height of fill.

Preliminarily, based on the previous laboratory testing and our experience on nearby projects, we anticipate settlement within the southwestern portion of the site approximately ½ inch per foot of additional fill may be possible; this settlement will primarily occur over up to 25 years after fill placement. Raising of site grades and construction of structures may result in several inches of settlement in areas underlain by compressible material. We recommend mitigating this settlement with a surcharge program with vertical wick drains and monitoring to confirm surcharge settlement is essentially complete before construction of the buildings.

Given the time passed since the construction of the earthen berm, we anticipate that the primary settlement of the underlying compressible material below the berm has been completed.

3.4 FLOODING

Federal Emergency Management Agency (FEMA) Flood Insurance Maps indicate that portions of the site are within a flood hazard area subject to inundation by the 0.2-percent-annual-chance flood event, or 1-percent-annual-chance flood event with average depth less than one foot or with drainage areas of less than one square mile. The Civil Engineer should review pertinent information relating to possible flood levels for the subject site based on final pad elevations and provide appropriate design measures for development of the project.

3.5 SOIL CORROSION POTENTIAL

One near-surface soil sample collected during the 2006 exploration was tested for corrosion potential. Based on the resistivity and chloride ion measurements, the soil samples are considered ‘highly corrosive’ with respect to corrosion of buried cast/ductile iron and steel structures according to the Caltrans Corrosion Guidelines (2018). Sulfate ion testing was not performed as a part of this investigation. We recommend performing additional testing during design-level study and retaining a corrosion consultant to provide specific long-term corrosion protection recommendations for buried metal and concrete pipes and foundations.

4.0 PLANNING CONSIDERATIONS

From a geotechnical engineering viewpoint, the site is suitable for the proposed development, provided the preliminary geotechnical considerations in this report are properly addressed in a design-level study. Based on our research and preliminary exploration, the main geotechnical concerns at the site include:

- Liquefaction potential and related secondary effects
- Shallow groundwater
- Compressible soil
- Existing fill
- Corrosive soil

In order to reduce the effects of the above geotechnical concerns, the foundations should be sufficiently stiff to move as a rigid units within tolerable differential movements. Foundation alternatives and combinations to be considered include structural mat foundation systems founded on ground improvement and deep foundation systems. We preliminarily discuss foundation considerations in the following sections.

4.1 2019 CBC SEISMIC DESIGN PARAMETERS

Based on the existing site data, we classified the site as Site Class E in accordance with the 2019 California Building Code (CBC). The 2019 CBC is based on the 2016 edition of the American Society of Civil Engineers document titled "Minimum Design Loads and Associated Criteria for Buildings and Other Structures" (ASCE 71-16).

We provide the 2019 CBC seismic design parameters in Table 4.1-1 below, which include design spectral response acceleration parameters based on the mapped Risk Targeted Maximum Considered Earthquake (MCE_R) spectral response acceleration parameters.

TABLE 4.1-1: 2019 CBC Seismic Design Parameters

PARAMETER	VALUE
Site Class	E
Mapped MCE_R Spectral Response Acceleration at Short Periods, S_S (g)	1.789
Mapped MCE_R Spectral Response Acceleration at 1-second Period, S_1 (g)	0.604
Site Coefficient, F_A	*
Site Coefficient, F_V	*
MCE_R Spectral Response Acceleration at Short Periods, S_{MS} (g)	*
MCE_R Spectral Response Acceleration at 1-second Period, S_{M1} (g)	*
Design Spectral Response Acceleration at Short Periods, S_{DS} (g)	*
Design Spectral Response Acceleration at 1-second Period, S_{D1} (g)	*
MCE_G Peak Ground Acceleration adjusted for Site Class effects, PGA_M (g)	0.821
Long-period transition-period, T_L (sec)	8

*Requires site-specific ground motion hazard analysis
Latitude: 38.030244 degrees, **Longitude:** -121.878868 degrees

As noted in Table 4.1-1, a ground motion hazard analysis needs to be performed in accordance with Section 11.4.8 of ASCE 7-16, for structures on Site Class E.

Based on our experience with similar developments at nearby sites, performing a Non-Ergodic Site Response Analysis may result in a reduction of ground motions. The reduction in turn can result in significant project cost savings. Assessing the benefit of performing the non-ergodic site response analysis versus the baseline site-specific hazard analysis will require collaboration with the Structural Engineer once the design is further developed. The analysis can be conducted during or after the design-level study.

4.2 FOUNDATIONS

The primary hazards at the site with regard to foundation design include compressible soft clay, liquefaction potential, and existing non-engineered fill. Other considerations that should be further

assessed as to their impacts to foundations as part of the design-level study include shallow groundwater and corrosion potential.

Depending on the final site development concept and structural loads, we anticipate the proposed residential structures can be supported by a post-tensioned mat foundation; we recommend assuming building pads will comprise geogrid reinforced and engineered fill. Within areas of compressible soil deposits, we recommend surcharging to reduce the risk of static load settlement.

Preliminary recommendations based on the current concept plans are provided in the following sections.

4.2.1 Post-Tensioned Mat Foundation

We recommend that the proposed residential structures be supported on post-tensioned (PT) mat foundations bearing on competent soil or engineered fill. On a preliminary basis, we recommend assuming that PT mats are a minimum of 10 inches thick. The Structural Engineer should determine the actual PT mat thickness using geotechnical recommendations in a design-level geotechnical report.

PT mats are typically underlain by a moisture reduction system as recommended below. In addition, the building pad subgrade is typically moisture conditioned such that the subgrade soil is at a moisture content at least 3 to 5 percentage points above optimum immediately prior to foundation construction. The subgrade should not be allowed to dry prior to concrete placement.

Based on the results of liquefaction-induced settlement presented in the 2006 and 2018 investigation reports, PT slabs should be designed for up to 3 inches of post-liquefaction differential settlement. As discussed in Section 3.1.4, liquefaction-induced surface rupture will be further evaluated in future studies. For planning purposes, we recommend assuming mitigation of these hazards with construction of reinforced building pads comprising engineered fill and geogrid.

Future collaboration with the structural engineer is important to develop specific foundation recommendations once final structural details and loading are developed.

4.2.2 Slab Moisture Vapor Reduction

When buildings are constructed with a concrete slab-on-grade, including post-tensioned mats, water vapor from beneath the slab will migrate through the slab and into the building. This water vapor can be reduced but not stopped. Vapor transmission can negatively affect floor coverings and lead to increased moisture within a building. When water vapor migrating through the slab would be undesirable, we typically recommend a moisture retarder system to reduce, but not stop, water vapor transmission upward through the slab-on-grade. This generally involves installing a Class A vapor retarder membrane (ASTM E1745, latest edition). A layer of 4 inches of clean crushed rock may be provided below the concrete slab-on-grade floors. Lastly, we typically recommend a concrete water-cement ratio for slabs-on-grade of no more than 0.50, special inspections during concrete placement, and moist curing slabs for a minimum of 3 days (or other equivalent curing specified by the structural engineer).

4.2.3 Soft Soil Surcharge

Based on our understanding of the future structures on site, we estimate that buildings within the compressible soil deposits discussed in Section 3.3 may undergo several inches of static settlement following construction if not mitigated. To reduce the risk of static settlement within this area, we recommend installation of vertical wick drains through the compressible material and placement of a soil surcharge. For planning purposes, we estimate that wicks will be placed throughout the extents of the compressible soft clay deposits. We estimate a surcharge consisting of 5 feet fill above the final site grade will be sufficient to complete the primary settlement of underlying compressible soil. Based on our experience with similar projects, we anticipate the combination of wick drains spaced at 4 to 5 feet apart in addition to soil surcharge can reduce the time needed to complete primary settlement to approximately 4 to 6 months depending on thickness of compressible soil. Wick drain spacing, height of surcharge, and duration of settlement will be included in the design-level study.

5.0 PRELIMINARY PAVEMENT

5.1 FLEXIBLE PAVEMENT

Based on our experience with nearby developments, we assume an R-value of 5 for the site soil for preliminary pavement design. Using an assumed R-value of 5, and in accordance with the design methods contained in Topic 630 of Caltrans Highway Design Manual, we developed the preliminary flexible pavement sections presented in Table 5.1-1 below.

TABLE 5.1-1: Preliminary Pavement Sections

TRAFFIC INDEX	HOT MIX ASPHALT (inches)	CLASS 2 AGGREGATE BASE (inches)
5	3	10
6	3½	12½
7	4	15½

The above preliminary pavement sections are provided for estimating only. The Civil Engineer should determine the appropriate traffic indexes for parking areas, entry/exit drives, and fire/maintenance roads based on anticipated vehicle loading and frequencies.

5.2 RIGID PAVEMENT

Concrete pavement sections can be used to resist heavy loads and turning forces in areas such as fire lanes or trash enclosures. Final design of rigid pavement sections, and accompanying reinforcement, should be performed based on estimated traffic loads and frequencies. We recommend the following minimum design sections for rigid pavements.

- Use a minimum section of 6 inches of Portland Cement concrete over 6 inches of Caltrans Class 2 Aggregate Base.
- Concrete pavement should have a minimum 28-day compressive strength of 3,500 psi.
- Provide minimum control joint spacing in accordance with Portland Cement Association guidelines.

6.0 DESIGN-LEVEL GEOTECHNICAL REPORT

This report presents preliminary geotechnical findings, conclusions and recommendations intended for preliminary planning purposes only. A design-level geotechnical exploration and assessment should be performed when development plans are available. The design-level geotechnical report should further discuss topics presented in this report and address the following items.

- Additional field exploration and laboratory testing to support design-level recommendations
- Design-level analyses related to geologic and geotechnical hazards
- Site-specific seismic hazard analysis based on CBC 2019 (ASCE 7-16)
- Design recommendations for structural mat foundation systems and engineered building pads
- Design-level wick drain installation and soil surcharge recommendations
- Design-level earthwork and improvement design and construction recommendations

7.0 LIMITATIONS AND UNIFORMITY OF CONDITIONS

This report presents geotechnical recommendations for design of the improvements discussed in Section 1.2 for the 420 East 3rd Street project. If changes occur in the nature or design of the project, we should be allowed to review this report and provide additional recommendations, if any. It is the responsibility of the owner to transmit the information and recommendations of this report to the appropriate organizations or people involved in design of the project, including but not limited to developers, owners, buyers, architects, engineers, and designers. The conclusions and recommendations contained in this report are solely professional opinions and are valid for a period of no more than 2 years from the date of report issuance.

We strived to perform our professional services in accordance with generally accepted principles and practices currently employed in the area; no warranty is provided, either express or implied. There are risks of earth movement and property damages inherent in building on or with earth materials.

This report is based upon field and other conditions discovered at the time of report preparation. We developed this report with limited subsurface exploration data. No project-specific subsurface exploration was performed so actual subsurface conditions could vary from those assumed in this report. An exploration should be performed prior to site design. We recommend that the owner establish a contingency fund to cover such costs. If unexpected conditions are encountered, we must be notified immediately to review these conditions and provide additional and/or modified recommendations, as necessary.

Our services did not include excavation sloping or shoring, soil volume change factors, flood potential, or a geohazard exploration. In addition, our geotechnical exploration did not include work to determine the existence or extent of possible hazardous materials. If any hazardous materials are encountered during construction, the proper regulatory officials must be notified immediately.

This document must not be subject to unauthorized reuse, that is, reusing without our written authorization. Such authorization is essential because it requires us to evaluate the document's applicability given new circumstances, not the least of which is passage of time.

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FIGURES

FIGURE 1: Vicinity Map
FIGURE 2: Site Plan
FIGURE 3: Regional Geologic Map (Dibblee, 2006)
FIGURE 4: Regional Faulting and Seismicity Map

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BASE MAP SOURCE: GOOGLE EARTH MAPPING SERVICE

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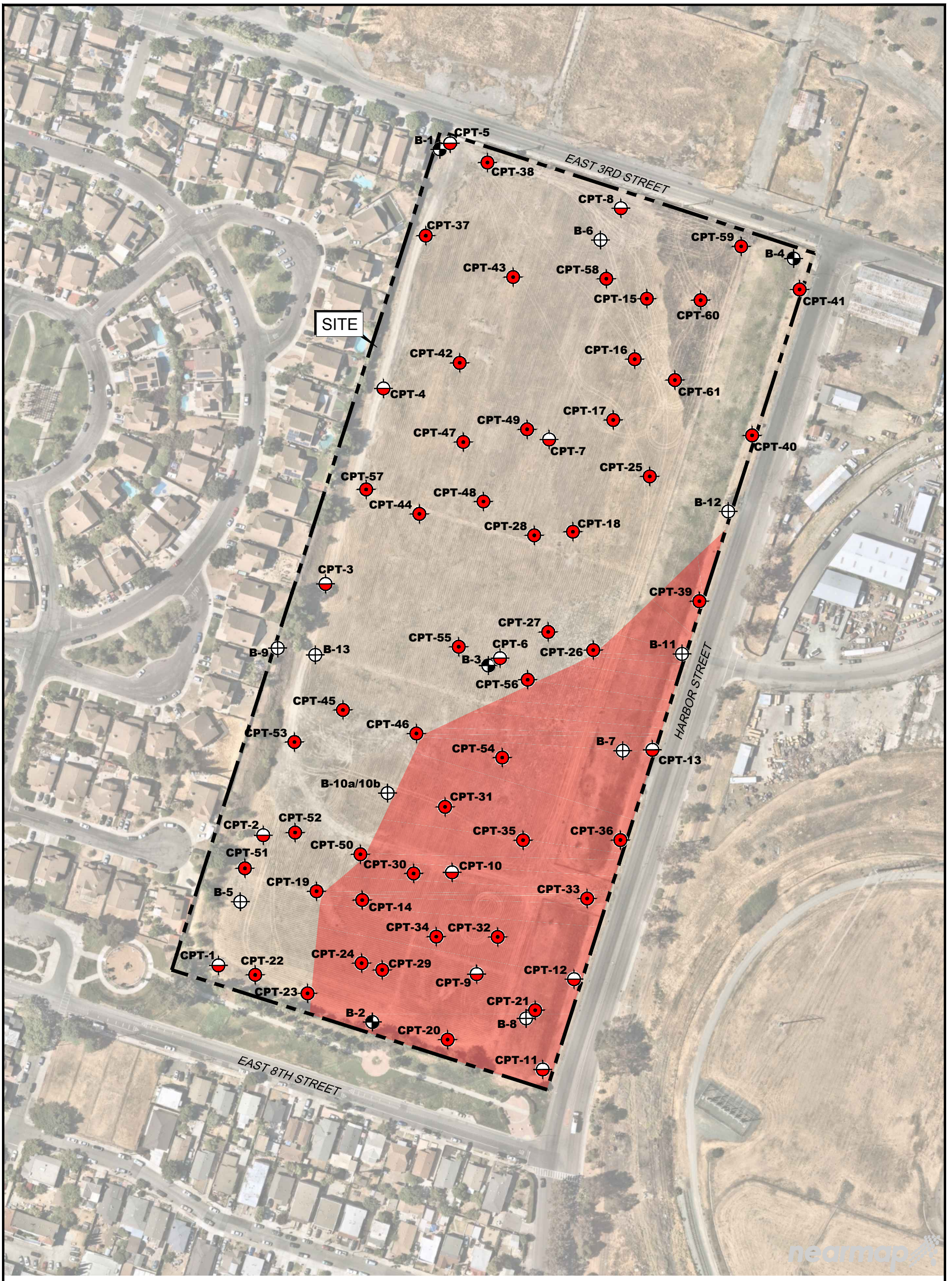
VICINITY MAP
420 EAST 3RD STREET DEVELOPMENT
PITTSBURG, CALIFORNIA

PROJECT NO.: 18562.000.001	FIGURE NO. 1
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EXPLANATION

ALL LOCATIONS ARE APPROXIMATE

- EXTENTS OF COMPRESSIBLE MATERIAL
- B-4 — BORING (TREADWELL & ROLLO, INC., 8/06)
- B-13 — BORING (TREADWELL & ROLLO, INC., 12/05 AND 2/06)
- CPT-13 — CPT (TREADWELL & ROLLO, INC., 8/06)
- CPT-61 — CPT (TREADWELL & ROLLO, INC., 12/05 AND 2/06)

BASE MAP SOURCE: NEARMAP MAPPING SERVICE

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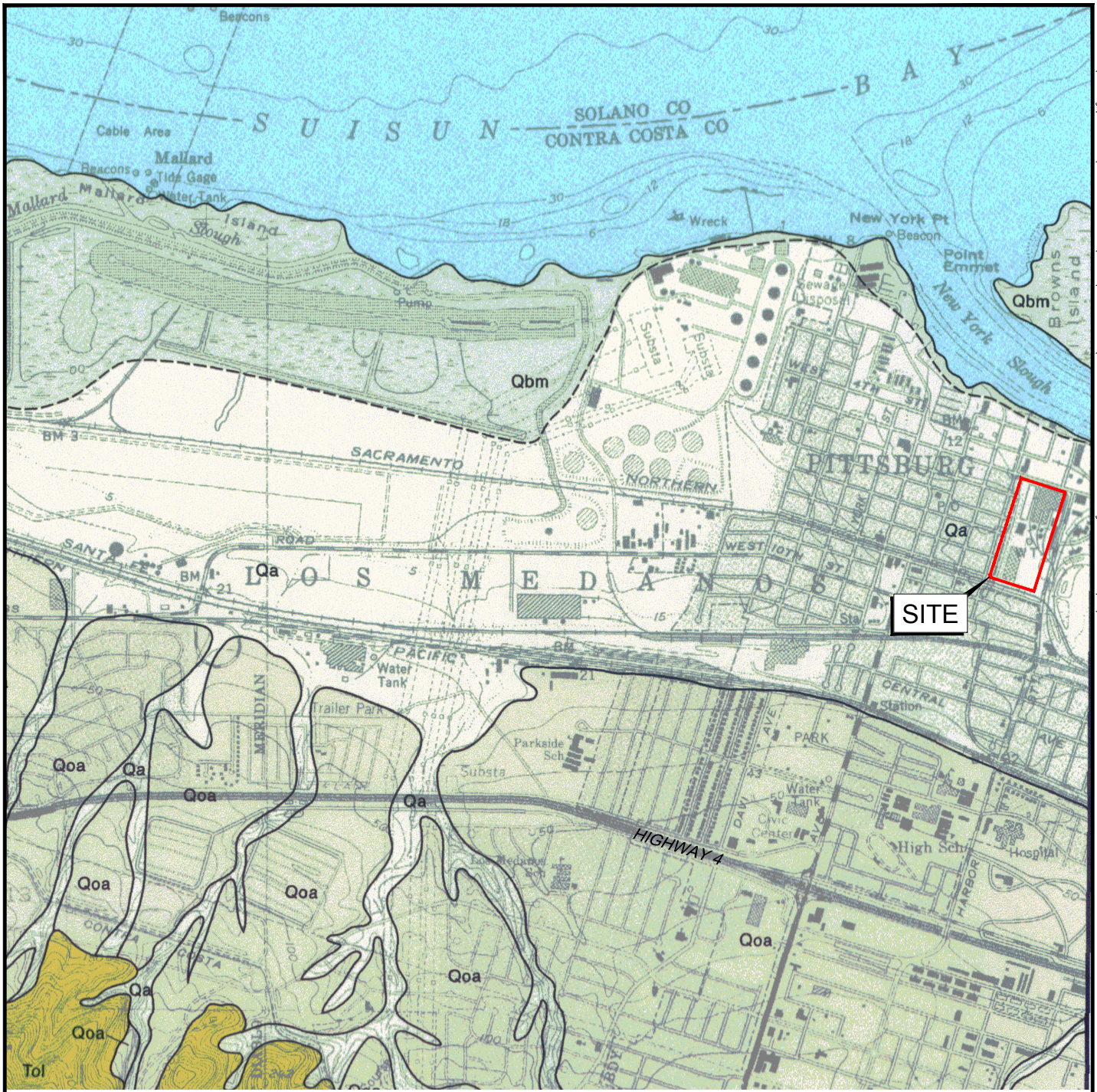
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SITE PLAN
420 EAST 3RD STREET DEVELOPMENT
PITTSBURG, CALIFORNIA

PROJECT NO.: 18562.000.001	FIGURE NO. 2
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EXPLANATION

GEOLOGIC CONTACT-DASHED WHERE GRADATIONAL OR APPROXIMATELY LOCATED

FAULT-DASHED WHERE INFERRED, DOTTED WHERE CONCEALED, QUERIED WHERE EXISTENCE IS DOUBTFUL. SAWTEETH ARE ON UPPER PLATE OF LOW ANGLE THRUST FAULT

Qa	ALLUVIUM
Qoa	OLDER ALLUVIUM
Qbm	BAY MUD

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BASE MAP SOURCE: DIBBLEE, 2006

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REGIONAL GEOLOGIC MAP

420 EAST 3RD STREET DEVELOPMENT

PITTSBURG, CALIFORNIA

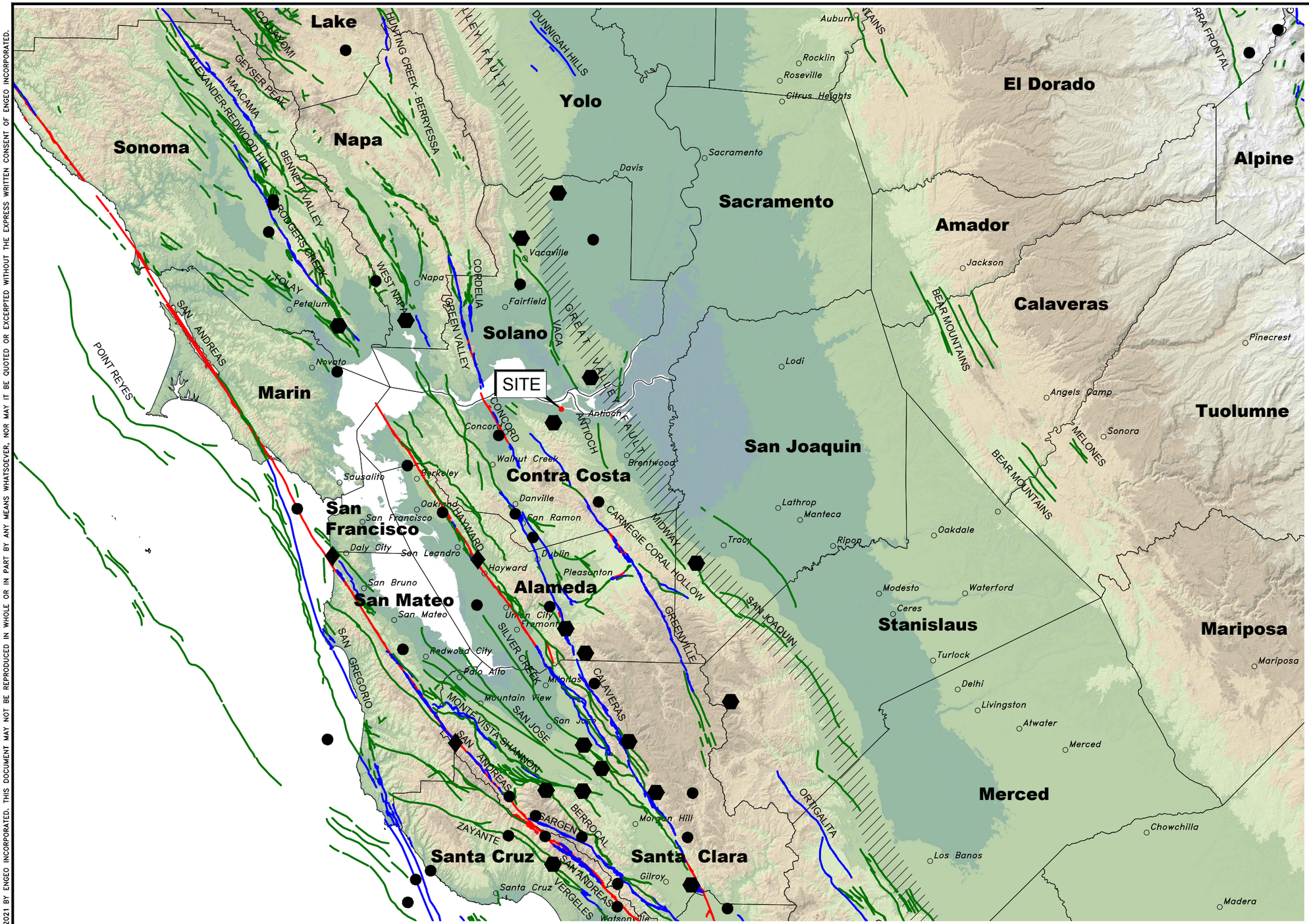
PROJECT NO.: 18562.000.001	FIGURE NO. 3
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BASE MAP SOURCE:
COLOR HILLSHADE IMAGE BASED ON THE NATIONAL ELEVATION DATASET (NED) AT 30 METER RESOLUTION
U.S.G.S. QUATERNARY FAULT DATABASE, NOVEMBER, 2010
U.S.G.S. HISTORIC EARTHQUAKE DATABASE (1800–2000)

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REGIONAL FAULTING AND SEISMICITY
420 EAST 3RD STREET DEVELOPMENT
PITTSBURG, CALIFORNIA

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FIGURE NO. 4

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Appendix D
Phase I Environmental Site Report

PHASE I ENVIRONMENTAL SITE ASSESSMENT
FORMER JOHNS MANVILLE PLANT SITE
420 EAST 3RD STREET
PITTSBURG, CALIFORNIA

Prepared for:

Integral Communities
888 San Clemente, Suite 100
Newport Beach, California 92660

Prepared by:

GSI Environmental Inc.
19200 Von Karman Avenue, Suite 800
Irvine, California 92612
949.679.1070

GSI Job No. 5785
Issued: 9 April 2021

PHASE I ENVIRONMENTAL SITE ASSESSMENT
Former Johns Manville Plant Site
420 East 3rd Street
Pittsburg, California

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Former Johns Manville Plant Site
420 East 3rd Street
Pittsburg, California

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PHASE I ENVIRONMENTAL SITE ASSESSMENT
Former Johns Manville Plant Site
420 East 3rd Street
Pittsburg, California

ACRONYMS

µg/L	Micrograms per Liter
AAI	All Appropriate Inquiries
ACM	Asbestos-Containing Material
APN	Assessor's Parcel Number
ASTM	American Society for Testing and Materials
AUL	Activity and Use Limitation
BAAQMD	Bay Area Air Quality Management District
bgs	Below Ground Surface
BTEX	Benzene, Toluene, Ethylbenzene and Xylenes
CalGEM	California Geologic Energy Management Division
CEQA	California Environmental Quality Act
CREC	Controlled Recognized Environmental Condition
DTSC	Department of Toxic Substances Control
EPA	U.S. Environmental Protection Agency
ESA	Environmental Site Assessment
HAZNET	Facility and Manifest Data
HREC	Historical Recognized Environmental Condition
LUC	Land Use Covenant
LUST	Leaking Underground Storage Tank
MCL	Maximum Contaminant Level
mg/kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
NAPL	Non-aqueous Phase Liquid
NAVD88	North American Vertical Datum of 1988
NGVD	National Geodetic Vertical Datum
O&M	Operations and Maintenance
OSHA	Occupational Safety and Health Administration
PCB	Polychlorinated Biphenyl
PCE	Perchloroethylene, Tetrachloroethylene, Tetrachloroethene, PERC
RAP	Remedial Action Plan
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
SLIC	Spills, Leaks, Investigation, and Cleanup
SQG	Small Quantity Generator
SVOC	Semi-Volatile Organic Compound
SWRCB	State Water Resources Control Board
TCE	Trichloroethylene, Trichloroethene
TPH	Total Petroleum Hydrocarbons
TPH-d	Total Petroleum Hydrocarbons (diesel range)
TPH-g	Total Petroleum Hydrocarbons (gasoline range)
TPH-o	Total Petroleum Hydrocarbons (oil range)
USGS	United States Geological Survey

PHASE I ENVIRONMENTAL SITE ASSESSMENT
Former Johns Manville Plant Site
420 East 3rd Street
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UST	Underground Storage Tank
VCA	Voluntary Cleanup Agreement
VOC	Volatile Organic Compound
WellSTAR	Well Statewide Tracking and Reporting System

PHASE I ENVIRONMENTAL SITE ASSESSMENT
Former Johns Manville Plant Site
420 East 3rd Street
Pittsburg, California

FINDINGS AND OPINIONS

At the request of Integral Communities, GSI Environmental Inc. (GSI) has performed a Phase I Environmental Site Assessment (ESA) in conformance with the scope and limitations of ASTM International, Inc. (ASTM) Standard E1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Assessment Process* (ASTM Standard) for the property identified below and in Figures 1 and 2. Any exceptions to, or deletions from, this practice are described in Section 8.0 of this report.

SITE IDENTIFICATION	
Name:	Former Johns Manville Plant Site
Address:	420 East 3rd Street
City:	Pittsburg
County:	Contra Costa
State:	California
Assessor Parcel Number(s):	073-050-001-4

The purpose of the Phase I ESA was to identify Recognized Environmental Conditions (RECs) as defined in the ASTM Standard. It is our understanding that this Phase I ESA has been solicited as part of environmental due diligence activities in connection with the acquisition and redevelopment of the Site.

This report presents the results of the Phase I ESA and is based on the following:

- Review of the physical setting and Site reconnaissance;
- Review of historical information from Sanborn fire insurance maps, topographic maps, aerial photographs, and city directories;
- Review of prior Site reports provided to GSI;
- Information obtained from owner and/or user interviews;
- Review of available agency files, including the following;
    - City of Pittsburg Building Department (Community Development)
    - City of Pittsburg Public Works Department
    - Contra Costa County Environmental Health Department
    - Contra Costa County Fire Protection Department
    - Bay Area Air Quality Management District (BAAQMD)
    - Department of Toxic Substances Control (DTSC)
    - San Francisco Bay Regional Water Quality Control Board (Water Board)
    - CalFire, Office of the State Fire Marshal
    - State Water Resources Control Board (SWRCB) GeoTracker website

- DTSC EnviroStor website
- California Geologic Energy Management Division (CalGEM) website

The following summarizes the findings for the Site based on review of Site reconnaissance information, regulatory agency databases and files, historical information, physical setting information, and readily available documents.

- The Site located at 420 East 3rd Street in north Pittsburg, California is presently undeveloped and secured by a chain-link fence.
- No RECs were observed during the Site reconnaissance, only *de minimis* conditions were observed.
- A review of historical information indicates that the former Site occupant, Johns Manville Products Company, produced asbestos-cement products, asphalt roofing materials, and asbestos-containing pipe covering. In addition to numerous above-ground tanks and what appears to be materials stored outdoors, a surface impoundment (evaporation pond) is visible on aerial photographs of the Site. As a result of Site operations between 1927 and 2003, a significant amount of asbestos-containing material (ACM) was deposited onto the ground. Manufacture of ACM ceased in 1980 and commercial-grade roofing materials were manufactured at the plant until 2003, when all operations were discontinued.
- Areas of potential concern at the former Plant Site were a former evaporation pond and several additional areas of concern that were discovered while abatement and demolition activities were being conducted. Several environmental investigations were conducted at the Site, beginning in 1986 and continuing through 2005. The selected remedy for the former Plant Site was the removal of ACM- and petroleum hydrocarbon-affected soil from the Site and placement in engineered containment berms along the eastern boundary of the former Plant Site. ACM-impacted material and debris were placed into a trench dug to 10 feet bgs along the eastern boundary of the former Plant Site, which was then capped by hydrocarbon-impacted soil, as approved by the DTSC. An engineered textile and 2 feet of clean, low-permeability soil was then added to the top of the ACM and petroleum hydrocarbon-impacted materials to create the capped, vegetated berms. There is an automated irrigation system to maintain the vegetation. The berms consist of two distinct segments referred to below as the “northern” and “southern” berms. Drainage swales were installed adjacent to the berm and graded so that stormwater runs off toward catch basins on the eastern Site boundary. Ongoing maintenance and monitoring have been continuously performed in accordance with an Operations and Maintenance (O&M) Agreement for the Site.
- Post-remediation environmental samples indicate that groundwater contains volatile organic compounds (VOCs) and total petroleum hydrocarbons (TPH) quantified as diesel (TPH-d), oil (TPH-o), and gasoline (TPH-g), some of which exceed drinking water maximum contaminant levels (MCLs). Soil vapor contains VOCs, including tetrachloroethene (PCE), trichloroethene (TCE), and BTEX (volatile aromatic compounds benzene, toluene, ethylbenzene, and xylene, often associated with petroleum hydrocarbons). The most elevated petroleum hydrocarbon and BTEX concentrations were from samples collected in the vicinity of the former evaporation pond and the most elevated VOC concentrations were from samples collected in the southwestern quadrant of the Site. Soil contains asbestos below the 1% threshold to be considered a hazardous material or waste.

- O&M inspections at the Site report that the Plant Site and encapsulation berms are in good condition. Landscape maintenance, irrigation system repairs, rodent bait station inspections, and rodent burrow destruction occur on a regular basis.

This assessment has revealed no RECs, controlled RECs (CRECs), historical RECs (HRECs), or *de minimis* conditions in connection with the Site except for those described below.

Recognized Environmental Conditions (RECs)

RECs are defined in the ASTM Standard as "*the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions."*

This Phase I ESA has revealed no evidence of RECs in connection with the Site, with the following exception:

- Groundwater and soil vapor beneath the Site is impacted with VOCs and petroleum hydrocarbons. VOCs in groundwater may be originating from an off-site, upgradient source. This condition is identified as a REC.

Controlled Recognized Environmental Conditions (CRECs)

CRECs are defined in the ASTM Standard as *"a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls. (for example, property use restrictions, or engineering controls)."*

This Phase I ESA has revealed no evidence of CRECs in connection with the Site, with the following exceptions:

- Two engineered encapsulation berms contain ACM-impacted soil and debris, and petroleum hydrocarbon-impacted soil that were excavated during Site remedial actions. The Bermed Property is subject to the Site Land Use Covenant (LUC). This condition is identified as a CREC.
- The Soil Management Area within the Residential Property has underlying soil impacted with VOCs and petroleum hydrocarbons below 4 feet above the National Geodetic Vertical Datum (NGVD). The Residential Property is subject to the Site LUC. This condition is identified as a CREC.

Historical Recognized Environmental Conditions (HRECs)

HRECs are defined in in the ASTM Standard as *"a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria*

established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, or engineering controls)." [1]

This Phase I ESA has revealed no evidence of HRECs in connection with the Site.

De Minimis **Conditions**

De minimis conditions are defined in in the ASTM Standard as *"a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis conditions are not recognized environmental conditions or controlled recognized environmental conditions."*

This Phase I ESA has revealed no evidence of de minimis conditions in connection with the Site, with the following exception:

- One unmarked, 55-gallon steel drum (with lid) exists in the northeast corner of the Site along the fence line. Two unmarked, 55-gallon steel drums (with lids) exist within the bermed area, specifically located at the southwest corner of the northernmost fenced-in berm area. The content of the drums should be characterized for waste disposal profiling and disposed at an appropriately licensed facility.

Recommendations

GSI has evaluated the information collected during the course of this Phase I ESA. Based on the Findings above, we recommend the following:

- Additional soil vapor investigation to assess potential vapor intrusion risks with respect to proposed future residential development; and
- Additional groundwater investigation to assess impacts from the upgradient dry cleaner property and previous Site operations.

[1] If the Site has received closure in the past, but a review of the closure information indicates that Site conditions do not meet unrestricted/residential land use standards, the Site is no longer considered an HREC, and must be identified as an REC.

PHASE I ENVIRONMENTAL SITE ASSESSMENT
Former Johns Manville Plant Site
420 East 3rd Street
Pittsburg, California

1.0 INTRODUCTION

This Phase I Environmental Site Assessment (ESA) was conducted to fulfill ASTM International, Inc. (ASTM) Standard E1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM Standard) and the U.S. Environmental Protection Agency (EPA) *Standards and Practices for All Appropriate Inquiries* (40 CFR Part 312) for the property identified below (the Site; Figures 1 and 2).

SITE IDENTIFICATION	
Name:	Former Johns Manville Plant Site
Address:	420 East 3rd Street
City:	Pittsburg
County:	Contra Costa
State:	California
Assessor Parcel Number(s):	073-050-001-4

1.1 Purpose of the ESA

The purpose of this ESA was to identify Recognized Environmental Conditions (RECs) as defined in the ASTM Standard. It is our understanding that this Phase I ESA has been solicited as part of environmental due diligence activities in connection with the acquisition and redevelopment of the Site.

1.2 Significant Assumptions or Data Gaps

Owner and User questionnaires were not returned for this ESA. However, numerous documents pertaining to Site environmental issues, investigations, and remediation were obtained by GSI for review. It is our opinion that no significant data gaps exist in the availability of documentation regarding Site environmental conditions.

1.3 Limitations

GSI has completed this Phase I ESA in accordance with generally accepted environmental property assessment practices applicable at the time and location of the assessment. This Phase I ESA is not and should not be construed as a warranty or guarantee, expressed or implied, regarding the presence or absence of environmental contaminants that may affect the Site. All findings, opinions, and conclusions reported in this Phase I ESA are based on conditions and available information existing at the time of the assessment. No independent verification of the information provided to GSI was made. While GSI has no reason to doubt the accuracy of the information provided, this report is accurate and complete only to the extent that information provided to GSI was itself accurate and complete. Site conditions and regulations (local, state, tribal, and federal) can change over time. Therefore, changes in Site conditions, available information, and/or regulations may alter the findings, opinions, and conclusions of this Phase I ESA.

1.4 Non-Scope Considerations

Non-scope considerations include environmental issues or conditions that may warrant additional assessment but are outside the scope of the ASTM Standard. Environmental issues that are

considered non-scope considerations are summarized in the ASTM standard and include, but are not limited to, asbestos-containing materials (ACM), indoor air quality, lead-based paint, mold, and radon. GSI was not retained to evaluate non-scope considerations as part of this ESA.

1.5 User Reliance

This report and all related correspondence have been prepared exclusively for use by Integral Communities and may not be relied upon by any other person or entity without the express written permission of GSI and Integral Communities. Without express written permission of both GSI and Integral Communities, no third parties shall have any rights of recourse or recovery under course of action against GSI, its officers, employees, subcontractors, vendors, or successors.

2.0 SITE DESCRIPTION

GSI contracted with EDR to compile a physical setting report (Appendix A) that was used in combination with information obtained during Site reconnaissance, historical document review, interviews with the Site owner representatives, review of regulatory agency records, and review of prior Site reports provided to GSI to produce a description of the Site and its physical setting.

2.1 Current and Past Site Use

Historically, the Site was occupied by the Johns Manville Products Company, which from the mid-1920s until 1980 produced ACM products, such as asbestos-cement products, asphalt roofing materials, and asbestos-containing pipe covering. As a result of Site operations, a significant amount of ACM was deposited onto the ground. Manufacture of ACM ceased in 1980 and commercial-grade roofing materials were manufactured at the plant until 2003, when all operations were discontinued. Several environmental investigations were conducted at the Site, beginning in 1986 and continuing through 2005. Historical areas of concern included a former evaporation pond, a former asbestos product storage area, and groundwater impacted by the former evaporation pond.

The Johns Manville Products Company entered into a Voluntary Cleanup Agreement (VCA) with the Department of Toxic Substances (DTSC) in November 2000. Pittsburg River Park LLC purchased the Site in September 2004 and entered into a new VCA with the DTSC in November 2004. Asbestos abatement and demolition activities were initiated in late 2005 and continued throughout 2006 and again in late 2007 and early 2008. Remedial actions to excavate and encapsulate ACM- and petroleum hydrocarbon-impacted soil were conducted in parallel with Site demolition activities, resulting in the removal of 11 underground storage tanks (USTs), off-site disposal of approximately 10,500 cubic yards of ACM, off-site disposal of approximately 18,000 cubic yards of petroleum hydrocarbon-impacted soil, and the encapsulation of approximately 60,000 cubic yards of ACM-affected soil and debris and 4,000 cubic yards of petroleum hydrocarbon-impacted soil within the on-Site bermed area. All on-Site groundwater monitoring wells were abandoned prior to excavation activities. Two water supply wells that were discovered during demolition activities were also abandoned at that time. The Site has remained vacant since 2005 (LFR, 2008a). Since 2008, the bermed area has been inspected twice a year in accordance with the Site Operations and Maintenance (O&M) Plan (LFR, 2008b). No significant damage or issues have been reported. The most frequently reported maintenance issue is the presence of rodent burrows in the upper 2 feet of clean fill cover for the berms (PES, 2019).

2.2 Site Physical Description

The Site is approximately 20.5 acres and is currently undeveloped. The Site is separated into two sub-areas referred to as the “Bermed Property” and the “Residential Property.” The Bermed Property is approximately 3.2 acres along the length of the eastern Site boundary, where

asbestos- and petroleum hydrocarbon-impacted soil were stockpiled and covered (as described in Section 2.1). There are two sections of the berm separated by a road, approximately 58 feet wide, that provides access to Harbor Street. The north section of the berm is approximately 1,070 feet long and the south section of the berm is approximately 300 feet long. The berms are both approximately 85 feet wide and are roughly 10 feet high (LFR, 2008a). The Residential Property is the remainder of the Site, which has undergone remediation and has been approved by the DTSC for residential use (PES, 2017).

The Site is currently a flat, fenced-in vacant lot, primarily covered by grass. Trees and shrubbery exist along the southern fence-line and sporadically along the western fence-line. The Bermed Property abuts the eastern boundary of the Site and is isolated by fencing.

SITE DETAILS	
Physical Description:	Undeveloped parcel located at the southwest corner of the intersection at 3rd Street and Harbor Boulevard in north Pittsburg, California
Roads:	The property is bounded by E. 3rd Street to the north, by the City of Pittsburg's E. 8th Street Linear Park to the south, by Harbor Street to the east, and by a residential neighborhood to the west. There is a graded dirt road on the Site that extends south from E. 3rd Street and then east to Harbor Street.
Parking Facilities:	N/A
Site Zoning:	Most of the property is located in the Downtown Medium Density Residential Use District (DMDR) zoning designation. The northern part of the property is in a Downtown Commercial (DC) zoning district.[2]
Vicinity Zoning:	Residential, Commercial, and Industrial.
Site Size (acres):	20.5 acres
Current Property Use:	Undeveloped and vacant
Surface Drainage Direction:	Surface water from the Site drains into structures installed to capture runoff from the Residential Property. Runoff from the Bermed Property is collected in swales that flow to catch basins located on the eastern boundary of the Site that are connected to the city stormwater system.

BUILDING DESCRIPTION	
Number of Buildings:	None
Building Age:	N/A
Building Details	N/A
Basements:	N/A
Building Square footage:	N/A
Building Occupants:	N/A
Building Operations:	N/A
Building Interior Hazardous Substance Use or Presence:	N/A
Building Exterior Hazardous Substance Use or Presence:	N/A
Other:	Four buildings in the northern half of the Site were demolished in 2005-2006.

[2] http://www.ci.pittsburg.ca.us/index.aspx?page=228

SITE UTILITIES	
Sewage:	City provides sewer services in vicinity to the Site.
Electricity:	Pacific Gas and Electric (PG&E) services the area in vicinity to the Site.
Potable Water:	City provides water services. An above-ground irrigation system was installed at the Site to support vegetation.
Heating System:	N/A
Cooling System:	N/A
Gas:	PG&E services the area in vicinity to the Site.
Other:	Site stormwater catch basins, which collect runoff from the bermed area, are connected to the city stormwater system.

2.3 Surrounding Properties

SURROUNDING PROPERTIES	
Direction	**Address and Use**
North and Northeast:	Vacant land, Koch Carbon at 707 East 3rd Street
East and Southeast:	Several light-industrial businesses: Collision Repair at 598 East 3rd Street, Auto Truck & Marine Services at 601 Industry Road, US Glass & Aluminum, Inc. at 605 Industry Road, Calpine Power/Los Medanos Energy at 750 East 3rd Street
South and Southwest:	City park, Faultless Cleaners at 427 East 10th Street (permanently closed), Universal Auto Repair at 499 East 10th Street
West and Northwest:	Single-family residences

2.4 Geologic, Hydrogeologic, Hydrologic, and Topographic Conditions

The Site lies within the Coast Range geomorphic province and the Pittsburg Plain Groundwater Basin. Geology in the area is characterized by alluvial sediments from the Coast Range mountains and fluvial deposits from the Sacramento River Delta (ERM, 2006a). According to the EDR Radius Map Report (Appendix A), portions of the Site are within the 500-year flood zone. Up to 7 feet of fill material has been observed during previous Site investigations (URS, 2006). Native lithology underlying the Site and vicinity is composed of interlayered silt, sand, clay, and gravel. Groundwater flows to the north-northeast toward New York Slough, which is the closest surface water body to the Site. The San Joaquin River enters Suisun Bay through New York Slough. Previous reports have encountered groundwater at depths as shallow as 5 feet below ground surface (bgs) and as deep as 19 feet bgs (URS, 2006; LFR, 2008a). A recent geotechnical investigation reported groundwater at 3.3 to 7.9 feet bgs in the vicinity of the Site (Rockridge Geotechnical, 2018). Groundwater beneath the Site contains total petroleum hydrocarbons (TPH) identified as diesel (TPH-d), volatile organic compounds (VOCs), and semi-volatile organic compounds (SVOCs). An upgradient, off-site source may be a contributor to VOC impacts to groundwater (Arcadis, 2017).

According to recent topographic mapping, the surface elevation ranges from 12 to 13 feet above the North American Vertical Datum of 1988 (NAVD88) at the north end of the Site and 15 to 20 feet NAVD88 at the south end of the Site (Sandis, 2017). The berms on the east side of the Site are approximately 10 feet higher than the surrounding land.

SITE DATA	CURRENT AVAILABLE INFORMATION
Depth to Groundwater:	3.3 to 7.9 feet bgs (Rockridge Geotechnical, 2018)
Closest Surface Water:	New York Slough, approximately 1,000 feet north
Tidal Influence:	Likely in shallow water-bearing zone (ERM, 2006a)

3.0 SITE RECONNAISSANCE

Site reconnaissance was performed on 10 March 2021 to observe current Site conditions and identify and document potential notable environmental conditions. Kalin Howell of GSI conducted the Site reconnaissance. The table below summarizes observations during the Site visit. Photographs taken during Site reconnaissance are included in Appendix B.

Observations of Site conditions that may indicate the likelihood of an REC in connection with the Site are discussed in the following sections. If the observation is indicated with a "yes", additional information related to that item is included below the table and in Section 7.0 if relevant to Site RECs.

GENERAL OBSERVATIONS	YES	NO
Heating/Cooling System		X
Hazardous Substances and Petroleum Products in Connection with Identified Uses		X
Storage Tanks (current or removed)		X
Wells (dry, irrigation, injection, monitoring, abandoned, etc.)		X
Drains, Sumps, Clarifiers	X	
Odors		X
Pools of Liquid	X	
Drums	X	
Hazardous Substance and Petroleum Products Containers (Not Necessarily in Connection with Identified Uses)		X
Unidentified Substance Containers		X
Air Emissions		X
Equipment that may Contain PCBs		X
Soil Stockpiles		X
Pits, Ponds, or Lagoons (Site or adjoining)		X
Stained Soil or Pavement		X
Stressed Vegetation from Something other than Insufficient Water	X	
Solid Waste, Construction Debris, Trash Mounds	X	
Wastewater, Stormwater, Discharged Water		X
Septic Systems or Cesspools		X

Drains, Sumps, Clarifiers

Grated stormwater drains exist at the southeast and northeast corners of the Site along the fence-line.

Pools of Liquid

Various small (less than 4 feet in diameter) pools of water were observed across the Site, primarily on the north-south trending gravel path located along the western side of the Site. A rainfall event occurred the day prior to the Site reconnaissance.

Drums

One unmarked, 55-gallon steel drum (with lid) exists in the northeast corner of the Site along the fence line. Two unmarked, 55-gallon steel drums (with lids) exist within the bermed area, specifically located at the southwest corner of the northernmost fenced-in berm area.

Stressed Vegetation from Something other than Insufficient Water

A roughly 10-foot by 10-foot blackened area exists in the south-central area of the Site. The area appears to be a small burn site and contains pieces of charred wood, part of a charred rubber automobile tire, a charred microchip, and charred grasses.

Solid Waste, Construction Debris, Trash Mounds

Various trash debris exists throughout the Site, primarily collecting along the fences. Trash debris includes, but is not limited to, cardboard pieces, plastic jugs, beverage bottles, plastic wrappers, cigarette butts, and cylindrical wooden logs.

4.0 HISTORICAL INFORMATION

GSI contracted with EDR to compile historical documents for the Site and surrounding area to develop an understanding of the history of the Site. The following historical data sources were compiled and are included in the Appendices:

- Sanborn fire insurance maps (Appendix C);
- United States Geological Survey (USGS) topographic maps (Appendix D);
- Aerial photographs (Appendix E); and
- City directories (Appendix F).

Pertinent historical information is incorporated in the Summary of Findings (Section 7.0).

Historical Source	Available Dates
Sanborn Fire Insurance Maps	1927, 1949, 1958, 1966
USGS Topographic Maps	1907, 1908, 1918, 1953, 1968, 1973, 1978-1980, 1997, 2012
Aerial Photographs	1939, 1952, 1959, 1963, 1966, 1979, 1984, 1993, 1998, 2006, 2009, 2012, 2016
City Directories	1975, 1980, 1985, 1989, 1992, 1995, 2000, 2005, 2010, 2014, 2017

Subject Property

Documents reviewed for this Phase I ESA indicated that the Johns Manville Products Company produced asbestos-cement products, asphalt roofing materials, and asbestos-containing pipe covering. Initially, there were four buildings on the northern half of the Site, which are visible on the 1927 Sanborn Fire Insurance Map of the facility; two additional warehouse-like buildings appear in the southwest quadrant of the Site on later aerial photographs, the first in 1952 and the second (which appears to be an expansion of the first) in 1966. In addition to numerous above-ground tanks and what appears to be materials stored outdoors, a surface impoundment is visible on aerial photographs from 1939 through 1963. Four asphalt stills used to convert heavy oil to asphalt are depicted on the Sanborn Fire Insurance Maps (1949-1966) and are also visible on the aerial photographs (1939-1966). Vapors off-gassing from the stills were conveyed to a condenser, mixed with water, and the resultant oil-water slurry was piped to this surface impoundment, referred to as an evaporation pond. The evaporation pond was later filled with scrap and construction debris (ERM, 2006a; PES, 2017). On the 2006 aerial photograph, the on-Site structures are no longer present.

As a result of Site operations between 1927 and 2003, a significant amount of ACM was deposited onto the ground. Manufacture of ACM ceased in 1980 and commercial-grade roofing materials were manufactured at the plant until 2003, when all operations were discontinued. Areas of potential concern at the former Plant Site were a former evaporation pond and several additional

areas of concern that were discovered while abatement and demolition activities were being conducted. Several environmental investigations were conducted at the Site, beginning in 1986 and continuing through 2005. The selected remedy for the former Plant Site was the construction of engineered containment berms along the eastern boundary of the former Plant Site (ERM; 2006a, 2006b; LFR, 2007). ACM-impacted material and debris were placed into a trench dug to 10 feet bgs along the eastern boundary of the former Plant Site, which was then capped by hydrocarbon-impacted soil, as approved by the DTSC. An engineered textile and 2 feet of clean, low-permeability soil were then added to the top of the ACM- and petroleum hydrocarbon-impacted materials to create the capped, vegetated berms. There is an automated irrigation system to maintain the vegetation. The berms consist of two distinct segments referred to below as the "northern" and "southern" berms. Drainage swales were installed adjacent to the berm and graded so that stormwater runs off toward catch basins on the eastern Site boundary (Arcadis, 2016). The Bermed Area is visible on the 2009, 2012, and 2016 aerial photographs.

Ongoing maintenance and monitoring have been continuously performed in accordance with an O&M Agreement (DTSC 2009a).

Surrounding Properties

Two parcels associated with the Johns Manville Company are adjacent to the Site: the Access Parcel and the North Parcel. The Access Parcel has remained undeveloped since the early 1900s. The North Parcel was used for bulk asbestos fiber storage from approximately 1926 to the mid-1980s. Raw material was delivered to the property by barge from the New York Slough.

Property to the west and south appears to have been largely residential from the early 1900s through the present with a small number of commercial businesses interspersed at times (e.g., automobile painting and storage shown west of the Site on the 1927 and 1966 Sanborn maps, respectively). Rail lines were historically located to the south and east of the Site. The property east of the Site appears to have been agricultural, transitioning to industrial uses around the 1950s. The former Tesoro coke facility was located north of the Site. The former Tesoro property was first developed in the 1920s and was used by Tesoro to convey petroleum coke from easterly-adjacent coke piles onto barges that would berth at the adjacent wharf on New York Slough. The bulk coke piles and associated development on this property appear to have been removed in the 2012-2016 timeframe.

Historical review details are summarized in the table below.

Historical Summary			
Year	**Source**	**Site Description**	**Adjacent Site Description**
1907	USGS	No buildings indicated on the Site. There is a road on the northern portion of the Site that appears to connect the Site to the City of Pittsburg. A rail line enters the property from the southwest and splits into two mid-Site, with one line extending north to New York Slough and one line extending east to a developed area off-site.	Development is present west of the Site and in a smaller area east of the Site.
1908	USGS	No change.	No change.
1918	USGS	No change.	No change.
1927	Sanborn map	Four buildings present on the northern portion of the Site with the following labels: Pipe Covering Building, Shingle Building, and two unlabeled building footprints labeled "CONC FOUNDATIONS." Also	Adjacent properties to the south, east, and north are not shown. Residential lots are depicted to the west.

Historical Summary			
Year	**Source**	**Site Description**	**Adjacent Site Description**
		identified: Steel fuel oil "TK ON GRD" and boiler house. A rail spur that splits into three lines enters the southeast area of the site from a rail line running along present-day Harbor Street.	
1939	Aerial photo	Four buildings present on the northern portion of the Site. There are a number of ancillary structures, tanks, and/or material accumulations on the central eastern portion of the Site, just south of the easternmost three buildings. There is what appears to be a surface impoundment in the southeastern portion of the Site, indicated by a roughly circular dark spot. The rail spur is present, with the main line running parallel to Harbor Street, then a single spur crossing Harbor street in a northwest/southeast direction to enter/exit the property in the southeast portion of the Site, and the spur splitting into three spurs in the central portion of the Site.	There appear to be numerous small lots with presumably residential structures to the west and south of the property. The land immediately to the east of the Site is mostly undeveloped with a few roads and/or rail lines. East of this a large parcel with what appears to be numerous narrow rectangular plots of land (potentially agricultural) and some narrow structures that could be warehouses or greenhouses. The property to the north of the Site is mostly undeveloped with what appears to be one primary road and potentially a number of smaller roads. There may also be a structure or foundation on the eastern side of the site.
1949	Sanborn map	Four buildings present on the northern portion of the Site with the following labels: Pipe Covering Building, Shingle Building, Roofing Storage, and Rag Storage/Pulp Beater Building. Machine shop and woodworking uses, and paints and putty canning are also indicated on the building labeled Roofing Storage. Four recuperation tanks and a sand tank or bin are depicted in the Rag Storage Yard, in the southwestern portion of the Rag Storage/Pulp Beater Building. Coating and Saturator tanks, a transformer room, and a paper storage area are depicted in the southeastern portion of the Rag Storage/Pulp Beater Building. Four stills are shown south of the Rag Storage Yard. Process lines and fire (water) lines are depicted across the property. A number of large tanks are also depicted on the central portion of the property, the following of which were labeled: steel fuel oil (2,500 gal), steel "TK ON GRD" (100,000 gal), pump and separator tank, No. 1 (100,000 gal), No. 2 (100,000 gal), No. 3 (50,000 gal), and No. 4 (5,000 gal). The rail spur is also depicted on the map.	Adjacent properties to the south, east, and north are not shown. Residential lots are depicted to the west.
1952	Aerial photo	The Site is mostly unchanged from the 1939 aerial photograph, except for the appearance of a warehouse in the southwestern corner of the property and a number of small ancillary structures, tanks, or accumulations between the warehouse and the northwesternmost building.	The adjacent properties are mostly unchanged from the 1939 aerial photograph, except for some structures that appear on the northern portion of the property immediately to the east of the Site. The numerous narrow rectangular plots of land are no longer present on the property further to the east, but the narrow structures that could be warehouses or greenhouses are still present.

Historical Summary			
Year	**Source**	**Site Description**	**Adjacent Site Description**
1953	USGS	Four buildings present on the northern portion of the Site. One building is depicted in the southwest area of the Site. Three rail spurs enter the southeast area of the site from a rail line running along present-day Harbor Street. A water tower is identified on the Site.	Significant development is depicted in the City of Pittsburg and surrounding area. A steel mill is identified east of the Site.
1958	Sanborn map	The Site is mostly unchanged from the depiction shown on the 1949 map. A finished product warehouse is depicted in the southwestern area of the property. The area previously labeled as the Rag Storage Yard is occupied by a 100,000 gal. water tank, six recuperation tanks, a filler dust tank, and three sand bins.	Adjacent properties to the south, east, and north are not shown. Residential lots are depicted to the west.
1959	Aerial photo	The Site is mostly unchanged from the 1952 aerial photograph, except that there are a larger number of what appear to be small ancillary structures, tanks, or accumulations in the central portion of the Site. There appears to be some surface discoloration (much lighter in color) surrounding the supposed surface impoundment.	The adjacent properties are mostly unchanged from the 1952 aerial photograph, except for additional structures that appear on the property immediately to the east of the Site. There appears to be a grid-like structure on the property north of the Site.
1963	Aerial photo	The Site is mostly unchanged from the 1959 aerial photograph, although the 1963 image has much better resolution. The four buildings on the northern portion of the Site are clearly visible, along with some tanks in the area between the two easternmost buildings. There are numerous above-ground tanks present in the central portion of the Site, along with a water tower, rail cars, small structures. There are some small structures in the southeast quadrant of the Site, with what appear to be neatly organized material accumulations or bins. The surface impoundment is not as pronounced as was in early images.	The adjacent properties are mostly unchanged from the 1959 aerial photograph. The property immediately to the east of the Site has additional structures, cars parked alongside roadways and buildings, and what appears to be outdoor storage. The narrow structures that could have been either warehouses or greenhouses on the property further to the east are no longer present and the property appears to be roughly graded. The property north of the Site has been further developed into what appears to be a bulk materials processing and/or shipping yard (presumably coal or coke).
1966	Aerial photo	The Site is mostly unchanged from the 1963 aerial photograph. The surface impoundment is no longer present and there are a few small structures in its former location. The warehouse in the southwestern quadrant appears to have doubled in size.	The adjacent properties are mostly unchanged from the 1963 aerial photograph. The area of vacant land in the southern portion of the property to the east of the Site appears to have drainage features. The property to the north of the Site appears to have more bulk material on-site, and a barge or ship is present at the dock on New York Slough.
1966	Sanborn map	The Site is mostly unchanged from the depiction shown on the 1958 map.	Adjacent properties to the south, east, and north are not shown. Residential lots are depicted to the west.
1968	USGS	No change.	Additional development is depicted in the City of Pittsburg and surrounding area.
1973	USGS	The Site is mostly unchanged, with four smaller structures depicted in the middle of the property.	No change.

Historical Summary			
Year	**Source**	**Site Description**	**Adjacent Site Description**
1978-1980	USGS	The Site is mostly unchanged, with one smaller structure depicted in the eastern middle of the property.	Industrial waste ponds are depicted on the property east of the Site. Additional development is depicted.
1979	Aerial photo	No change from the 1966 aerial photograph.	No change from the 1966 aerial photograph.
1984	Aerial photo	No change.	No change.
1993	Aerial photo	The Site is mostly unchanged from the 1984 aerial photograph. There are fewer structures and accumulations in the southeastern quadrant of the Site.	The adjacent properties to the south, east, and north are mostly unchanged from the 1984 aerial photograph. There appears to be additional grading, delineation, and/or drainage features in the area identified as industrial waste ponds on the 1980 USGS topographic map. It appears that removal of some of the rail lines has occurred. The adjacent properties to the west have been razed and regraded. A new subdivision and associated streets have started to be developed.
1997	USGS	No change.	No change.
1998	Aerial photo	The Site is mostly unchanged from the 1993 aerial photograph.	The adjacent properties are mostly unchanged from the 1993 aerial photograph, except that the subdivision to the west of the Site has largely been completed except for the northernmost portion.
2006	Aerial photo	On-site structures are no longer present. There appear to be remnants of foundations in the southern portion of the Site, and potentially some discoloration (much lighter in color) in the central to southern central portion of the Site. Most of the Site appears to be bare soil.	The adjacent properties are mostly unchanged from the 1998 aerial photograph. What appears to be an industrial development is present east of the Site. A linear park appears south of the Site. And the subdivision to the west of the Site appears to be completely developed.
2009	Aerial photo	The Site appears vacant, with the appearance of mostly bare soil and potentially some minor vegetation. The bermed area is visible along the eastern Site boundary.	The adjacent properties are mostly unchanged from the 2006 aerial photograph, except for an additional industrial development southeast of the Site.
2012	Aerial photo	No change.	The adjacent properties are mostly unchanged from the 2009 aerial photograph, except that the bulk materials stored on the property north of the Site are no longer present.
2012	USGS	Site is vacant. No structures, roads, or rail spurs are depicted on the property.	No change.
2016	Aerial photo	No change.	The adjacent properties are mostly unchanged from the 2012 aerial photograph, except that the bulk materials facility north of the Site is no longer present.

City directory listings were provided by EDR. The only address that appeared to be associated with the Site in the directory listings was 600 East 3rd Street. Johns Manville-related business names were also listed without any specific address. The following listings are potentially associated with industrial activities or hazardous material use based on the business name.

Historical City Directory Summary		
Address	**Year**	**Directory Listing**
325 E. 3rd Street	1975	Browns Garage
389 E. 3rd Street	1980	Walnut Creek Roofing
389 E. 3rd Street	1989 1992	Allform Construction
391 E. 3rd Street	1989 1992	Cal Indo Trading Plant, Cal Indo Trading Co.
391 E. 3rd Street	1985	Allform Construction
595 E. 3rd Street	1975 1980 1985 1989 1992 1995 2000	Diablo Service Corp.
595 E. 3rd Street	2010	Tesoro
598 E. 3rd Street	1989 1992	D&L Transmission Repair
598 E. 3rd Street	1992 1995	Pittsburg Transmissions Repair
598 E. 3rd Street	2000	K&S Auto Body Shop & Paint
598 E. 3rd Street	2005 2010 2014 2017	Collision Repair Molina Auto Center, Molina Smog Testers Tech Auto Center
600 E. 3rd Street	1975	Dalco Freight Lines
600 E. 3rd Street	1980 1985	Delzer Pipeline
600 E. 3rd Street	1980	Three D Sand Co.
600 E. 3rd Street	1989	Roofing Materials Sales
600 E. 3rd Street	1992	Hess Door & Window Co. Roofing Materials Sales
600 E. 3rd Street	2000	Manville Corp. Roof Materials Dist. Sales Office
707 E. 3rd Street	2005 2010 2014 2017	Koch Carbon LLC
No street number listed.	1975 1980 1985 1989	Johns Manville Prod. Manville Building Products Manville Sales Corp.
No street number listed.	1975	Texaco Bulk Plant
No street number listed.	1980	Owl Constructors
No street number listed.	1980	Camall Trucking Inc.

5.0 OWNER/USER PROVIDED INFORMATION AND INTERVIEWS

The following owner and user provided documentation was reviewed for this Phase I ESA.

5.1 Documents

The documents summarized below were reviewed as part of this Phase I ESA.

Final Supplemental Soil Characterization (URS, 2006)

- This report documents Site characterization activities conducted in anticipation of constructing multi-family residential and mixed-use housing on the property. Soil was collected from 16 borings in November 2005 and analyzed for asbestos, VOCs, SVOCs, TPH, polychlorinated biphenyls (PCBs), and metals.

Final Remedial Action Plan (RAP), Harbor Park (Former Johns Manville Plant) (ERM, 2006a)

- The remedy selected for the Site was excavation and encapsulation of the ACM- and petroleum hydrocarbon-impacted soil in an engineered berm. The RAP established cleanup goals for Site contaminants of concern in soil. Monitored natural attenuation was selected as the remedy for groundwater with chemicals exceeding maximum contaminant levels (MCLs) for drinking water. The RAP also presents a work plan for and summarizes the results of a groundwater treatability study for petroleum hydrocarbons. From June to August 2005 approximately 14,000 gallons of groundwater were extracted from 20 to 25 feet bgs in the evaporation pond area to remove non-aqueous phase liquid (NAPL). Approximately 202 gallons of NAPL were removed, plus an additional 104 gallons of petroleum hydrocarbon-related contaminants dissolved in groundwater.

Draft Final Remedial Design and Implementation Plan, Harbor Park Development (Former Johns Manville Plant) (ERM, 2006b)

- This document presents the engineering plan for remedy implementation. It specifies the methods and safety and quality control practices to construct the remedy, outlines the well abandonment procedure (if additional wells are discovered during remedy construction), and defines the post-remediation confirmation sampling and general operations and maintenance plan.

Addendum to the Remedial Design and Implementation Plan, Harbor Park Development (Former Johns Manville) (LFR, 2007)

- This addendum to ERM, 2006b, revised and clarified portions of the remedial design based on conditions encountered in the field. It further specifies the collection of post-remediation soil and soil gas samples and documents that future excavations should not extend below the water table (defined as the upper boundary of the sediments that are within the seasonal limits of groundwater fluctuation, defined as 4 feet above the National Geodetic Vertical Datum (NGVD)[3] at the time).

Remedial Action Completion Report, Former Johns Manville Facility (LFR, 2008a)

- Post-remediation groundwater samples contained TPH-d (maximum 500,000 micrograms per liter [μg/L]), TPH as motor oil (TPH-o) (maximum 540,000 μg/L), TPH as gasoline (TPH-g) (maximum 770 μg/L), and VOCs. BTEX (volatile aromatic compounds benzene, toluene, ethylbenzene, and xylene, often associated with petroleum hydrocarbons) compounds were detected in the sample collected at GGW-6, located in the former evaporation pond area. Tetrachloroethene (PCE) and trichloroethene (TCE) were

[3] The Addendum to the Remedial Design and Implementation Plan (LFR, 2008b) references the National Geodetic Vertical Datum of 1929 (known as the Sea Level Datum prior to 1973). The current vertical datum used for the United States is the North American Vertical Datum of 1988 (NAVD88).

detected in one sample (collected at sample location GGW-1, in the southwestern corner of the Site) at 72 μg/L and 7.9 μg/L, respectively, both above their 5 μg/L MCLs. Cis-1,2-dichloroethene (cis-1,2-DCE) and 1,1-DCE were also detected in the same groundwater sample above their respective MCLs. The only other solvent detection was cis-1,2-DCE (below its MCL) in the sample collected at GGW-6. No VOCs were detected in the groundwater samples collected from the northern—or downgradient—portion of the Site. Soil vapor samples contained VOCs, including PCE, TCE, 1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, and BTEX. The most elevated petroleum hydrocarbon and BTEX concentrations were from samples collected in the vicinity of the former evaporation pond and the most elevated VOC concentrations were from samples collected in the southwestern quadrant of the Site.

Operation and Maintenance Plan for the Engineered Containment Berm on the Plant Site of the Former Johns Manville Facility (LFR, 2008b)

- This plan describes the protocols for operation, maintenance, and repair of the Site containment berm. It specifies monitoring and maintenance procedures, schedules, and objectives, as well as reporting requirements.

Limited Phase II Site Investigation Report, Tesoro Pittsburg Terminal (Secor, 2008)

- This report describes the results of an environmental investigation conducted at the former Tesoro Terminal that was located north of the Site. Analytical results showed that soil at this property was impacted with TPH-d and TPH-o, metals (including arsenic, nickel, vanadium, copper, and zinc), and SVOCs commonly associated with petroleum hydrocarbons. Groundwater samples contained TPH-d (maximum 2,800 μg/L), TPH-o (maximum 13,000 μg/L), TPH-g (maximum 640 μg/L), pentachlorophenol (maximum 91 μg/L), a SVOC, and VOCs. TCE was detected in four samples, ranging from 0.57 μg/L to 12 μg/L. Cis-1,2-DCE (maximum 3.7 μg/L), 1,1-DCE (maximum 4 μg/L), 1,1-dichloroethane (1,1-DCA) (maximum 17 μg/L), and 1,2,3-trichlorobenzene (maximum 1.9 μg/L) were also detected in groundwater samples collected during this investigation. Investigators distinguished two water-bearing zones at this site, one encountered around 12 to 15 feet bgs and a second zone encountered at 30 to 35 feet bgs (only one boring was advanced below 30 feet bgs, however). The report notes that fuel oil was historically used for dust suppression on this property. The report also notes that solvents were reported used at the property and the presence of VOCs in groundwater may be due to the on-site solvent use or possibly from an off-site source.

Additional Phase II Investigation Report, Tesoro Pittsburg Terminal (Stantec, 2008)

- This report describes the results of additional environmental samples collected at the former Tesoro Terminal. Analytical results confirmed the presence of TPH-d, TPH-o, metals, and SVOCs in soil, the metals and SVOCs most likely related to coke handling at the property and the TPH-d and TPH-o attributed to the historical use of fuel oil for dust suppression. The investigation also confirmed the presence of TPH-d (maximum 290 μg/L), TPH-g (maximum 1,300 μg/L), and VOCs in groundwater. TCE was detected in three samples, ranging from 0.77 μg/L to 1,000 μg/L. Cis-1,2-DCE (maximum 250 μg/L), trans-1,2-DCE (maximum 28 μg/L), and vinyl chloride (maximum 1.6 μg/L) were also detected in groundwater samples collected during this investigation. The report concluded that the TPH-g and VOCs in groundwater may be due the reported historical use of solvent at the site or possibly an off-site source, e.g., the Johns Manville site.

Covenant to Restrict Use of Property, Environmental Restriction, Re: Former Johns Manville Plant Site (DTSC, 2009a)

- This deed restriction identifies two sub-areas of the Site, the Bermed Property, and the Residential Property subject to administrative controls, and specifies that the portion of the Residential Property in the vicinity of the former evaporation pond is a "Soil Management Area". Section 6.2 of this Phase I ESA describes the Site limitations associated with this agreement.

Operations and Maintenance Agreement, Former Johns Manville Plant Site (DTSC, 2009b)

- This agreement authorizes the DTSC to oversee the investigation and/or remediation of the Site and the operation and maintenance of any remediation system installed at the Site. The remediation system is described as the "consolidation of asbestos containing materials and the soil containing total petroleum hydrocarbons in a containment berm constructed along the eastern boundary of the Site." The remediation system is required to be operated and maintained as described in the Site Operation and Maintenance Plan (LFR, 2008b) until the DTSC authorizes its modification or discontinuation. The remediation system is also required to be evaluated every five years to determine if human health and the environment are being adequately protected. The agreement has provisions for notifying the DTSC of field sampling activities and change of consultants or project managers.

Remedial Action Certification, Former Johns Manville Plant Site (DTSC, 2009c)

- This document certifies that all remedial actions have been completed, however, ongoing O&M is required. The document summarizes remediation completed at the Site, including the groundwater treatability study conducted in the evaporation pond area.

Revised Five-Year Review Report, Former Plant Site and North Parcel (Arcadis, 2016)

- This is the fourth 5-Year Review report prepared for the North Parcel and the first prepared for the Former Plant Site (subject Site). The report is required per the O&M Agreements for the Plant Site and the North Parcel. The report concluded that the engineered caps on both sites are in good condition and continue to function as intended. The O&M procedures in place at the time of the review were anticipated to be continued for the next 5-year period.

Phase I Environmental Site Assessment, Plant Parcel (PES, 2017)

- This Phase I ESA report was prepared on behalf of Third Street Pittsburg Campus Owner LLC and Making Waves Foundation to support an acquisition of the property.

Notification Memorandum: Environmental Due Diligence Investigation Results (Arcadis, 2017)

- This memorandum transmits the results of soil, soil gas, and groundwater sampling activities conducted between September 29 and October 11, 2017. VOC and TPH-g concentrations reported for soil gas samples were lower than San Francisco Bay Regional Water Quality Control Board (Water Board) environmental screening levels (ESLs). VOCs, SVOCs, and TPH-d concentrations in groundwater were "consistent with the results of historical site investigations." Soil samples that were collected for analysis of asbestos from areas where no historical asbestos data existed did not exceed the 1% threshold to be considered a hazardous material or waste (0.25% maximum on the Plant Site).

Topographic Survey (Sandis, 2017)

- A topographic survey conducted between 27 February and 1 March 2017 is presented as a detailed series of 1 inch = 20 feet topographic maps with a 1-foot contour interval.

Pipeline Safety Hazard Assessment, Pittsburg School Campus for Making Waves Foundation (Placeworks, 2018)

- This assessment concluded that there is one pipeline within 1,500 feet of the Site, a 24-inch natural gas transmission pipeline located approximately 875 feet east of the property.

Geotechnical Investigation, Proposed New Campus & Sports Complex (Rockridge Geotechnical, 2018)

- This report documented a geotechnical investigation conducted in anticipation of constructing a private charter school and a sports complex on the property and an adjacent parcel.

Semi-Annual Operation and Maintenance Report for the North Parcel and the Former Johns Manville Plant Site (Arcadis, 2018)

- This report documents O&M activities at the Site between July 1 and December 1, 2017. Activities included cap inspections at the former Plant Site and the North Parcel, landscape maintenance, irrigation system repairs, inspecting rodent bait stations, and filling gopher burrows. The Plant Site and encapsulation berms were in good condition at the time of the inspection.

Draft Remedial Action Plan Amendment and Implementation Plan, Former Johns Manville Site (PES, 2019)

- This document was prepared in anticipation of constructing a private charter school on the property. Due to the Site deed restrictions, remediation of the Bermed Property would be required in order to develop the Site for use as a school for persons under the age of 21 (described in Section 6.2). This plan proposed to excavate and off-haul the contaminated soil and materials encapsulated at the Bermed Property and eliminate the administrative controls (deed restriction) on the property.

Semi-Annual Operation and Maintenance Report, North Parcel and the Former Johns Manville Plant Site (PES, 2021)

- This report documents O&M activities at the Site between March 1 and August 31, 2020. Activities included cap inspections at the former Plant Site and the North Parcel, landscape maintenance, irrigation system repairs, inspecting rodent bait stations, and filling rodent burrows. The Plant Site and encapsulation berms were in good condition at the time of the inspection.

Owner/User-supplied documents are included in Appendix G[4] and have been incorporated in the Summary of Findings (Section 7.0).

[4] Due to file size, the Phase I ESA prepared by PES in 2017 is not included in Appendix G, but is available upon request.

5.2 Interviews/Questionnaires

User and Owner Questionnaires were provided to Integral Communities to obtain information to supplement documentation provided by Making Waves Foundation (Owner) to Integral Communities (User).

Mr. Kevin Fryer, a representative for Integral Communities, has no specialized knowledge of the Site or its history, and declined to complete a questionnaire. Mr. Fryer forwarded the documentation provided by Making Waves Foundation (Owner) for GSI's review.

Integral Communities forwarded the Owner Questionnaire to Making Waves Foundation. The Owner questionnaire was not returned to GSI prior to publication of this report.

6.0 RECORDS REVIEW

Environmental records were obtained by requesting records from state and local regulatory agencies and conducting a search of federal and state databases.

6.1 Regulatory Agency Records Review

Regulatory agency records were requested on 22 February 2021. Agency requests included a request for reasonably ascertainable records for the Site address and APN. All agency file review requests and documents subsequently supplied by the agencies are included in Appendix H. Significant available agency records are identified in the table below.

AGENCY	ANTICIPATED RECORD TYPES	RECORDS AVAILABLE?		
		YES	NO	OTHER
City and Local Agencies				
City of Pittsburg Building Department (Community Development)	Historical tenants, property use, permits.	X		
City of Pittsburg Public Works Department	Industrial waste discharge permits or violations.		X	
County Agencies				
Contra Costa County Environmental Health Department	Agency oversight information and documents, hazardous materials storage, accidents, spills, leaks, and site investigations and remedial actions.	X		
Contra Costa County Fire Protection Department	Hazardous materials/waste storage, accidents, spills, leaks.			1
State and Regional Agencies				
BAAQMD	Air emissions and permits.	X		
DTSC (see EnviroStor)	Agency oversight information and documents.	X		
Water Board (see GeoTracker)	Agency oversight information and documents.	X		
CalFire, Office of the State Fire Marshal	Hazardous materials/waste storage, oil/gas pipelines, USTs.		X	
Agency Websites				
SWRCB GeoTracker	Agency oversight information and documents.	X		
DTSC EnviroStor	Agency oversight information and documents.	X		
CalGEM	Oil and gas development, active oil wells, plugged wells, methane.			2

1 = Due to the Contra Costa Health Order, the Contra Costa County Fire Department is unable to process file review requests for an undetermined amount of time.
2 = No features or conditions of concern were returned within a 0.25-mile radius of the property address.

Information that GSI obtained from regulatory agency records is summarized below. Where significant relative to RECs, our findings are incorporated in Section 7.0.

City of Pittsburg, Community Development

- Records include numerous plumbing, electrical, building, and mechanical permits from the late 1970s to mid-1990s that appear to be related to typical facility tenant improvements. There are also dated and undated structural drawings and notes for bulk storage silo foundations and tanks, asphalt tanks, and various building alteration. A 28 June 2006 building permit references the intended demolition of six buildings.

Contra Costa County Environmental Health Department

- 9 May 1985 Hazardous Waste Generator Inspection and Compliance Report states that employee training plans, spill contingency plans, manifests, and material safety data sheet (MSDS) library were in place.
- November 1985, January 1986, and February 1986 letters from the Manville Building Materials Group indicate the intention to abandon-in-place a 7,500-gallon solvent storage tank that is located under a loading dock. The tank stored Chevron 350B Thinner, composed of naphthalenes and paraffins. Approval for the abandonment was provided by the Riverview Fire Protection District on 7 February 1986. A 24 April 1986 UST abandonment information form refers to the anticipated removal of a 7,500-gallon mineral spirits UST.
- 22 April 1986 UST abandonment information form refers to the anticipated removal of a 10,000-gallon and a 2,500-gallon diesel UST. An inspection log refers to the removal of these USTs on 28 April 1986. The log reports that the 10,000-gallon tank was in "very good condition w/ tank wrapping," and that the 2,500-gallon tank showed "breaks in the center weld seam at bottom." Soil samples were collected at the excavation bottom. Both tanks were off-hauled from the Site to other properties for fire protection water storage. Soil analytical results were reported to the Health Department on 28 May 1986. Diesel and naphthalenes were not detected above the 1 milligram per kilogram (mg/kg) reporting limit. Mineral spirits were detected in one sample at 75 mg/kg.
- 29 January 1987 letter from Manville Service Corporation and a 11 December 1986 letter from the DTSC references a remedial action to address asbestos at the Site, described as a 9-inch minimum soil cover over the Site (with a maintenance plan), followed by a deed restriction for the property.
- 11 January 1990 Hazardous Material Incident Information Sheet documents an explosion of an asphalt tank. The log notes that water was applied to the outside of the tank and that some asphalt leaked from "piping when roof blew off."
- 11 May 1990 unsigned notes and a 23 May 1990 follow-up letter from Manville refer to compliance issues such as a labeling violation related to the accumulation date for used motor oil, biennial reporting of hazardous waste, spill prevention plan, and training documentation. No violations were observed on a follow-up inspection on 5 June 1991.
- 5 January 1993 letter from Manville Roofing Systems refers to compliance issues such as open waste oil drums and labeling of accumulation dates on waste oil drums and tank. It notes that a site map will be updated with respect to the "100K tank." A letter dated 8 June

1993 proposes that the waste oil be reclassified as non-hazardous, and the accumulation container labeled “excluded recyclable material.”

- 28 June 1994 memorandum from City of Pittsburg Building Division references the planned replacement of “collapsed 50,000 gallon asphalt tank.”
- 14 March 1996[5] incident form documents the removal of two transformers and associated PCB leak.
- 17 May 1996 incident form documents that an employee was instructed to “pump water (oil on top) out of drain ditch to the railroad tracks.” A 29 May 1996 inspection form refers to compliance issues such as employee training and documentation, waste oil accumulation, and discharge of oily water to the ground and to the sanitary sewer.
- 22 March 1997 incident form documents an asphalt fire in the processing unit. Material was released to an unlined soil surface impoundment area.
- 16 October 1997 inspection report notes that no violations were observed.
- 9 April 1998 Incident, Notification, and Complaint Report Form refers to removing asbestos panels between 4:00 and 12:00, and that the complaint was referred to OSHA.
- 6 November 1998 Incident, Notification, and Complaint Report Form refers to a 3,000-gallon spill of asphalt flux, “1,000 gallons in storm drain.” It describes that the spill occurred during off-loading of a rail car at the Site. Also reported to the state Office of Emergency Services.
- 6 January 2004 letter from Johns Manville notified Health Services that operations at the Site had been discontinued and that it was in the process of removing operating equipment and materials. A 3 February 2005 letter further specifies that operations were discontinued in 2003 and that Johns Manville was no longer the owner or operator of the facility as of October 2004.

BAAQMD

- A permit report shows that ERM West, Inc. applied to operate a vacuum-enhanced recovery system at the property. The permit was approved on 11 May 2005.

GeoTracker

- Manville Sales Corp. (SLT2O208311)[6] is listed as an open but inactive cleanup program site. The profile for the Site reports that the plant was constructed from 1925 to 1928 and operated as an asbestos-cement products, asphalt roofing materials, and asbestos-containing pipe covering manufacturing facility. An evaporation pond was located in the southwest quadrant of the Site and received water and oil residuals. A series of four asphalt stills were used to convert heavy oil to asphalt. The stills were initially fired with fuel oil and later with natural gas. A series of four pipes routed off-gases to a condenser line where water cooled the vapor. The condenser line conveyed the resultant oil-water slurry to a condenser and then to the evaporation pond via an underground pipe. The residual oil on the pond was burned off approximately twice a year. The evaporation pond was in use by 1946 and remained relatively constant in size until sometime after 1959

[5] Year not listed on incident form. Inferred from placement in record file.
[6] https://geotracker.waterboards.ca.gov/profile_report?global_id=SLT2O208311

when it was filled with scrap and construction debris. The area was subsequently paved over with blacktop.

- The State Water Resources Control Board (SWRCB) also provided records pertaining to 2019 coverage under the General Permit to Discharge Storm Water Associated with Construction Activity.

EnviroStor

- Johns Manville (07390022)[7] is listed as a voluntary cleanup program site. Cleanup status is shown as "Certified" and under operations and maintenance as of 12 November 2009. The profile for the Site reports that an engineered containment berm was the selected remedy for the Former Plant Site. The containment berm is described as two distinct segments referred to as the "northern and southern" berms. A school was proposed for the Plant Parcel but is no longer planned. The Site has an ongoing O&M Plan, and the next 5 Year Review is due in 2021.
- There are 87 documents dating from 1999 to 2020 publicly available on EnviroStor. Document types include voluntary cleanup agreements, public notices, fact sheets, O&M plans, O&M agreements, O&M reports, regulatory oversight cost estimates and schedules, work plans, investigation reports, remedial action plans, remedial design reports, 5 Year Review reports, deed restrictions, and California Environmental Quality Act (CEQA) documentation. Some of these documents specifically pertain to the North Parcel. Relevant documents are summarized in Section 5.1.

California Geologic Energy Management Division (CalGEM)

The CalGEM[8] online Well Finder mapping application interfaces with the online Well Statewide Tracking and Reporting System (WellSTAR) database and is updated nightly. The Well Finder is used to find and locate oil and gas wells and other types of related facilities throughout the state. The Site is not within a mapped oil field and wells do not appear to be located within at least 0.25-mile of the Site.

6.2 Environmental Lien Search and Activity and Use Limitations

GSI was not retained to perform a search for environmental liens at the Site.[9] However, activity and use limitations (AULs) are enumerated in a land use covenant (LUC) that has been recorded for the property as a condition of the remedial activities performed at the Site. Pittsburg River Partners, LLC entered into a *Covenant to Restrict Use of Property* with the DTSC, which was recorded on 7 October 2009. The LUC specifically identified the two sub-areas of the Site, the Bermed Property and the Residential Property, and documents that the Residential Property has been approved for residential land use by the DTSC. The LUC specifies that the portion of the Residential Property in the vicinity of the former evaporation pond is a "Soil Management Area" due to the presence of residual VOCs and petroleum hydrocarbons in soil and groundwater below 4 feet NGVD, and that the Bermed Property is intended to be used as a landscaped buffer for

[7] https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=07390022
[8] https://www.conservation.ca.gov/calgem/Pages/WellFinder.aspx
[9] AULs are defined in the ASTM Standard as legal or physical restrictions or limitations on the use of, or access to, a site or facility: (1) to reduce or eliminate potential exposure to hazardous substances or petroleum products in the soil, soil vapor, groundwater, and/or surface water on the property, or (2) to prevent activities that could interfere with the effectiveness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment.

residential uses at the Site. It also provides that DTSC and the party responsible for implementing O&M activities at the Site be provided access to the Site (DTSC, 2009).

The following AULs are specified in the LUC for the Bermed Property portion of the Site:

- Residential human habitation; use for a hospital, school, or day care; and raising food are prohibited;
- Drilling for water, oil or gas, or extraction of groundwater without written approval of DTSC are prohibited;
- Activities that may disturb the berms, except as authorized pursuant to the O&M Agreement or otherwise approved in writing by DTSC, are prohibited;
- A Soil Management Plan and Health and Safety Plan must be prepared and approved by DTSC prior to any activities that will disturb the berm; and
- DTSC must be notified regarding any disturbance or damage to the lowest 6 inches of the cover soil of the berms and provide permission for any removal of affected soil.

The following AULs are specified in the LUC for the Residential Property portion of the Site:

- Groundwater extraction for use as drinking water, irrigation, or any other purpose other than monitoring, treatment, or construction dewatering is prohibited; and
- Activities that may disturb the soil at or below an elevation of 4 feet NGVD or that would encounter groundwater if it occurs at a shallower depth are subject to a Soil Management Plan and DTSC approval.

A LUC with similar AULs has also been recorded for the North/Access Parcel, a related property located north of the Site (PES, 2017).

6.3 Regulatory Database Review

GSI contracted with EDR to compile a database report that summarizes the results of a search of federal, state, and tribal agency databases to assess whether the Site or nearby properties are under investigation for potential environmental issues or have been identified as conducting operations that could potentially impact the environment. The database report includes searches of regulatory databases of sites with environmental liens, deed restrictions, land use restrictions, engineering controls, and institutional controls.[10] Significant findings from the database report are summarized below and in Section 7.0. The database report is included as Appendix A.

6.3.1 Subject Site

The Site is listed on the databases summarized in the table below.

EDR Map ID	Site Name	Regulatory List / Database
A1	Pittsburg River Park	CA HAZNET CA HWTS
A2	Making Waves Academy	CA NPDES CA CIWQS

[10] In some cases, environmental databases are not updated by the specific regulatory agencies for periods of up to 1 year (depending on the database). The dates of updates are provided in in the Regulatory Database Search Report, included in Appendix H.

EDR Map ID	Site Name	Regulatory List / Database
A3	Johns Manville Site	FINDS
A4	Johns Manville	CA HAZNET CA HWTS
A5	Johns Manville	CA EnviroStor CA CPS-SLIC CA VCP CA DEED CA CERS
A6	Johns Manville Site	RCRA NonGen / NLR
A7	Former Johns Manville Site Remediation	CA HAZNET CA NPDES CA Contra Costa Co. Site List CA HWTS
A8	420 East 3rd Street	ERNS
A9	Manville Sales Corp.	FINDS
A10	Former Johns Manville Plant Site	CA CIWQS
A11	420 East 3rd Street	CA CHMIRS
B12	Johns-Manyille-Roofing (sic) Systems	CA HIST UST
B13	Johns-Manville Roofing	CA HIST UST CA EMI
B14	Manville Sales Corp.	CA CPS-SLIC

Abbreviations:
CERS = California Environmental Protection Agency (Cal/EPA) Regulated Site Portal database; combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs
CHMIRS = California Hazardous Material Incident Reporting System
CIWQS = California Integrated Water Quality System; tracks information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities
Contra Costa Co. Site List = Sites from the underground tank, hazardous waste generator, and business plan/2185 programs
CPS-SLIC = State Water Resources Control Board's (SWRCB's) GeoTracker database of Cleanup Program Sites (also known as Site Cleanups and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites)
DEED = Deed Restriction listing (DTSC)
EMI = Emissions inventory data collected by the Air Resources Board and local air pollution agencies
EnviroStor = DTSC's Site Mitigation and Brownfields Reuse Program's EnviroStor database
ERNS = Emergency Response Notification System; records and stores information on reported releases of oil and hazardous substances
FINDS = Facility Index System; contains both facility information and 'pointers' to other sources that contain more detail
HAZNET = Facility and manifest data (Cal/EPA)
HIST UST = Hazardous Substance Storage Container Database; historical listing of UST sites
HWTS = Hazardous Waste Tracking System; manifest ID number information from the early 1980s and manifest data from 1993
NPDES = A listing of National Pollutant Discharge Elimination System (NPDES) permits, including stormwater
RCRA NonGen / NLR = Resource Conservation and Recovery Act (RCRA) Non-Generators / No Longer Regulated
VCP = Voluntary Cleanup Program properties (DTSC)

Review of the EDR report regarding the listings above included the following information:

- Listings for Pittsburg River Park span 2005-2006 and are related to Site remediation activities;
- Listings for Making Waves Academy are related to an NPDES General Permit for stormwater discharges associated with construction;
- The Johns Manville Corporation listings in HAZNET and HWTS contain facility and manifest information from 1996 through 2005 for the following waste codes: 331 (off-specification, aged, or surplus organics), 223 (unspecified oil-containing waste), 151 (asbestos-containing waste), 221 (waste oil and mixed oil), 551 (laboratory waste chemicals), 561 (detergent and soap), 741 (liquids with halogenated organic compounds >1,000 mg/L), 731 (liquids with polychlorinated biphenyls >50 mg/L), 222 (oil/water separation sludge), 792 (liquids with pH ≤2 with metals), and empty containers;
- The Johns Manville Corporation listings in the CERS, CPS-SLIC, DEED, EnviroStor, and VCP databases are related to the environmental investigation, remediation, and post-remediation O&M activities at the Site;
- An EnviroStor entry states that the Tesoro Pittsburg Terminal located at 595 East 3rd Street has contamination that may be coming from the Johns Manville Site;
- The VCP summary reports that the linear park south of the Site has been investigated for the presence of ACM, which was found in shallow soil in a localized area in the northeast corner of the park property;
- The Johns Manville Corporation RCRA NonGen/NLR listing summarizes biennial reporting data for the following hazardous waste codes: D001 (ignitable waste), D002 (corrosive waste), D005 (barium), D006 (cadmium), D008 (lead), D009 (mercury), D010 (selenium), D011 (silver), D018 (benzene), D026 (cresol), D039 (tetrachloroethene [PCE]), D040 (trichloroethene [TCE]), F002 (spent halogenated solvents), F003 (spent non-halogenated solvents), and F005 (spent non-halogenated solvents);
- The Former Johns Manville Site Remediation listings are related to Site remediation activities;
- The listings for 420 East 3rd Street in the ERNS and CHMIRS databases refer to an equipment failure on 6 November 1998 involving a rail tank car and an above-ground storage tank that resulted in a 6,000-gallon spill of asphalt flux that was released to soil and 1,000 gallons that entered the storm drain and reached surface water; and
- The HIST UST listing for Johns-Manville-Roofing Systems documents three USTs: (1) a 10,000-gallon diesel UST (construction date unknown); (2) a 2,400-gallon diesel UST (installation date unknown); and (3) a 7,500-gallon naphthalene UST installed in 1956.

6.3.2 Nearby Sites

For the purposes of the assessment of the potential impact to the Site from nearby facilities identified in the database report, the local groundwater gradient is assumed to be to the north to northeast. Below is a discussion of facilities in close proximity to the Site that potentially contain subsurface impacts.

EDR Map ID	Site Name & Address	Distance/Direction from the Site	Likely to Impact the Site
E33, G42, G48	**Pittsburg Plumbing, 441 East 10th Street**	**<1/8 mile south-southwest**	**No**
Limited information available for this property. The CA LUST database reports that a preliminary site assessment was initiated on 9 May 1994 due to a leak confirmed on 25 September 1986. The LUST database reports that the potential contaminants of concern were waste, motor, hydraulic, and lubricating oil. The site history is summarized as "Samples taken following over-excavation, yielded nondetectable levels of hydrocarbon contamination, therefore, the site generally meets the criteria for low risk closure." The Cortese database indicates that cleanup was completed, and the case closed. The site's GeoTracker ID is T0601300442. Based on the regulatory closure for the UST case, it is unlikely that past petroleum releases at this property would significantly affect the Site.			
G43, G44, G47	**Faultless Cleaners, 427 East 10th Street**	**<1/8 mile south-southwest**	**Yes**
The EDR Hist Cleaner database reports this property was operated as a dry cleaning business from 1969 to 2014. This property is reported as a RCRA Small Quantity Generator (SQG) in 1986. No notices of violation were reported by the RCRA-SQG database. The EMI database lists BAAQMD reports of emissions of total organic hydrocarbon gases between 1990 and 2010. The HAZNET listings contain facility and manifest information from 1993 through 1995 for the following waste codes: • 741 (liquids with halogenated organic compounds >1,000 milligrams per liter [mg/L]); and • 211 (halogenated solvents, including PCE). The CA LUST database lists a gasoline UST leak confirmed on 27 July 1994. A 'No Further Action' letter was issued on 26 January 1999. The Cortese database also indicates that cleanup was completed, and the case closed. Dry cleaners can represent a risk to soil, soil vapor, and groundwater. Based on the longevity of dry cleaning operations at this property and the likely use of PCE, it is possible that releases at this property could potentially affect the Site.			
G46	**Dulceria ARCO Iris, 409 East 10th Street**	**<1/8 mile south-southwest**	**No**
This gasoline service station is identified on the EDR HIST AUTO database from 2004 to 2012. No other information is provided. Based on the absence of reportable spills, leaks, investigation, or remediation, this property does not appear to be likely to significantly affect the Site.			
G54	**Las Palmas Auto Repair, 418 East 10th Street**	**1/8-1/4 mile south-southwest**	**No**
This site is listed as a hazardous waste generator in the CERS HAZ WASTE database. The CERS HAZ WASTE database reports 10 violations: 1. Violation of California Health and Safety Code Chapter 6.5 regarding the hazardous waste generator program and administration/documentation, dated 26 May 2015; 2. Violation of California Health and Safety Code Chapter 6.95 regarding the business plan program and administration/documentation, dated 9 May 2016; 3. Violation of California Health and Safety Code Chapter 6.95 regarding the business plan program and administration/documentation, dated 23 June 2016; 4. Violation of California Health and Safety Code Chapter 6.95 regarding the business plan program and administration/documentation, dated 14 April 2017; 5. Violation of California Health and Safety Code Chapter 6.5 regarding tiered permitting and administration/documentation, dated 14 April 2017;			

EDR Map ID	Site Name & Address	Distance/Direction from the Site	Likely to Impact the Site
6. Violation of California Health and Safety Code Chapter 6.95 regarding failure to submit a site map with all required content, dated 25 June 2018; 7. Violation of California Health and Safety Code Chapter 6.5 regarding failure to send hazardous waste off-site for treatment, storage, or disposal within the required number of days, dated 25 June 2018; 8. Violation of California Code of Regulations, Title 22, Chapter 12, Section 66262.40(a) regarding failure to keep a copy of signed manifests for at least three years, dated 25 June 2018; 9. Violation of California Health and Safety Code Chapter 6.95 regarding the business plan program and administration/documentation, dated 1 April 2019; and 10. Violation of California Health and Safety Code Chapter 6.11 regarding failure to electronically report program data, dated 1 April 2019. Based on the numerous inspections/evaluations performed by Contra Costa County Health Services Department, absence of reportable spills/leaks, and the administrative nature of the regulatory violations at this property, this property does not appear to be likely to significantly affect the Site.			
G55, G56	**West Coast Auto Body & Paint, 430 East 10th Street**	**1/8-1/4 mile south-southwest**	**No**
This site is listed as a hazardous waste generator in the CERS HAZ WASTE database and as a non-generator in the RCRA NonGen/NLR database. The CERS HAZ WASTE database reports seven violations: 1. Violation of California Health and Safety Code Chapter 6.67 regarding the hazardous waste generator program and administration/documentation, dated 24 June 2014; 2. Violation of California Health and Safety Code Chapter 6.5 regarding the hazardous waste generator program and administration/documentation, dated 1 May 2015; 3. Violation of California Health and Safety Code Chapter 6.5 regarding the hazardous waste generator program and administration/documentation, dated 26 May 2015; 4. Violation of California Health and Safety Code Chapter 6.5 regarding tiered permitting and administration/documentation, dated 9 May 2016; 5. Violation of California Health and Safety Code Chapter 6.5 tiered permitting and administration/documentation, dated 14 April 2017; 6. Violation of California Health and Safety Code Chapter 6.5 regarding the hazardous waste generator program and administration/documentation, dated 17 September 2017; and 7. Violation of California Code of Regulations, Title 22, Chapter 1, Section 265.173 regarding failure to meet container management requirements, dated 20 April 2018. Based on the numerous inspections/evaluations performed by Contra Costa County Health Services Department, absence of reportable spills/leaks, and the administrative nature of the regulatory violations at this property, this property does not appear likely to significantly affect the Site.			
H45	**Universal Auto Repair, 499 East 10th Street**	**<1/8 mile south**	**No**
This site is listed as a hazardous waste generator in the CERS HAZ WASTE database, but no other information is provided. The EMI database lists BAAQMD reports of emissions of total organic hydrocarbon gases and reactive organic gases between 2002 and 2018, which could be related to a spray paint booth. Contra Costa County Site List reports the business was registered under its CUPA program. The CERS database reports five violations: 1. Violation of California Health and Safety Code Chapter 6.95 regarding the business plan program and administration/documentation, dated 30 July 2013; 2. Violation of California Health and Safety Code Chapter 6.95 regarding the business plan program and administration/documentation, dated 9 May 2016;			

EDR Map ID	Site Name & Address	Distance/Direction from the Site	Likely to Impact the Site
3. Violation of California Health and Safety Code Chapter 6.95 regarding the business plan program and administration/documentation, dated 9 November 2016; 4. Violation of California Health and Safety Code Chapter 6.5 regarding the hazardous waste generator program and operations/maintenance, dated 9 November 2016; and 5. Violation of California Code of Regulations, Title 22, Chapter 12, Section 66262.12 regarding failure to obtain an identification number prior to treating, storing, disposing of, transporting, or offering for transportation any hazardous waste, dated 19 December 2019 (related to an inactive EPA ID No. CAL000419783). Based on the numerous inspections/evaluations performed by Contra Costa County Health Services Department, absence of reportable spills/leaks, and the administrative nature of the small number of regulatory violations at this property, it is unlikely that operations at this property would significantly affect the Site.			
H51	**Banister Electric, Inc., 498 East 10th Street**	**1/8-1/4 mile south**	**No**
See description below for Bay Saw & Tool Repair.			
H52	**Bay Saw & Tool Repair, 498 East 10th Street**	**1/8-1/4 mile south**	**No**
This site is listed as a hazardous waste generator in the CERS HAZ WASTE database and as a non-generator in the RCRA NonGen/NLR database. The CERS HAZ WASTE database reports seven violations: 1. Violation of California Health and Safety Code Chapter 6.67 regarding the hazardous waste generator program and administration/documentation, dated 24 June 2014; 2. Violation of California Health and Safety Code Chapter 6.5 regarding the hazardous waste generator program and administration/documentation, dated 2 December 2016; 3. Violation of California Health and Safety Code Chapter 6.5 regarding the hazardous waste generator program and operations/maintenance, dated 2 December 2016; 4. Violation of California Health and Safety Code Chapter 6.5 regarding the hazardous waste generator program and operations/maintenance, dated 11 January 2017; 5. Violation of California Health and Safety Code Chapter 6.5 regarding the hazardous waste generator program and administration/documentation, dated 11 January 2017; 6. Violation of California Health and Safety Code Chapter 6.5 regarding tiered permitting and administration/documentation, dated 14 April 2017; and 7. Violation of California Health and Safety Code Chapter 6.5 regarding the hazardous waste generator program and administration/documentation, dated 17 September 2017. Based on the numerous inspections/evaluations performed by Contra Costa County Health Services Department, absence of reportable spills/leaks, and the administrative nature of the regulatory violations at this property, this property does not appear to be likely to significantly affect the Site.			
H53	**My Generator Guy, 498 East 10th Street**	**1/8-1/4 mile south**	**No**
This site is listed as a non-generator in the RCRA NonGen/NLR database. No violations are listed for this property. Based on the absence of reportable spills/leaks and notices of violation, this property does not appear to be likely to significantly affect the Site.			
H57	**Electro Manufacturing Co., 494 East 10th Street**	**1/8-1/4 mile south**	**No**
This site is on the Contra Costa County Site List as a hazardous waste generator and under its CUPA program. No other information is provided. Based on the absence of reportable spills/leaks and notices of violation, this property does not appear to be likely to significantly affect the Site.			

EDR Map ID	Site Name & Address	Distance/Direction from the Site	Likely to Impact the Site
H67, H70	**JCS (JC's) Auto Body, 999 Harbor Street**	**1/8-1/4 mile south**	**No**
This site is listed as a hazardous waste generator in the CERS HAZ WASTE database and as a non-generator in the RCRA NonGen/NLR database. This site is also on the Contra Costa County Site List as a hazardous waste generator and under its CUPA program. No violations are listed for this property. Based on the absence of reportable spills/leaks and notices of violation, this property does not appear to be likely to significantly affect the Site.			
H68, H69, H71	**O'Brien's Auto Repair, 999 Harbor Street**	**1/8-1/4 mile south**	**No**
This site is listed as a hazardous waste generator in the CERS HAZ WASTE database and as a non-generator in the RCRA NonGen/NLR database. This site is also on the Contra Costa County Site List as a hazardous waste generator under its CUPA program and as a UST site. The CERS database reports 13 violations: 1. Violation of California Health and Safety Code Chapter 6.95 regarding the business plan program and administration/documentation, dated 15 April 2016; 2. Violation of California Health and Safety Code Chapter 6.5 regarding the hazardous waste generator program and administration/documentation, dated 15 April 2016; 3. Violation of California Health and Safety Code Chapter 6.95 regarding the business plan program and administration/documentation, dated 9 May 2016; 4. Violation of California Health and Safety Code Chapter 6.95 regarding the business plan program and administration/documentation, dated 23 June 2016; 5. Violation of California Code of Regulations, Title 22, Chapter 45, Section 67450.2(b)(2) regarding failure to submit the signature page for the onsite treatment notification, dated 14 April 2017; 6. Violation of California Health and Safety Code Chapter 6.95 regarding the business plan program and administration/documentation, dated 14 April 2017; 7. Violation of California Health and Safety Code Chapter 6.95 regarding the business plan program and administration/documentation, dated 26 May 2017; 8. Violation of California Code of Regulations, Title 22, Chapter 45, Section 67450.2(b)(2) regarding failure to submit the signature page for the onsite treatment notification, dated 26 May 2017; 9. Violation of California Health and Safety Code Chapter 6.95 regarding failure to complete and electronically submit a hazardous materials business plan, dated 27 March 2018; 10. Violation of California Health and Safety Code Chapter 6.95 regarding failure to complete and electronically submit a hazardous materials business plan, dated 1 April 2019; 11. Violation of California Health and Safety Code Chapter 6.11 regarding failure to report program data electronically, dated 1 April 2019; 12. Violation of California Code of Regulations, Title 22, Chapter 1, Section 265.173 regarding failure to meet container management requirements, dated 2 April 2019; and 13. Violation of California Health and Safety Code Chapter 6.5 regarding failure to comply with one or more of the required consolidated manifesting procedures and retain copies of receipts for three years, dated 2 April 2019. Based on the numerous inspections/evaluations performed by Contra Costa County Health Services Department, absence of reportable spills/leaks, and the administrative nature of the regulatory violations at this property, this property does not appear to be likely to significantly affect the Site.			

EDR Map ID	Site Name & Address	Distance/Direction from the Site	Likely to Impact the Site
I60, I61, I62	**Pittsburg Motor Parts, Inc., 360 East 10th Street**	**1/8-1/4 mile southwest**	**No**
This site is listed as a hazardous waste generator in the CERS HAZ WASTE database and as a non-generator in the RCRA NonGen/NLR database. This site is also on the Contra Costa County Site List as a hazardous waste generator and under its CUPA program. The CERS HAZ WASTE database reports one violation: 1. Violation of California Health and Safety Code Chapter 6.67 regarding the hazardous waste generator program and administration/documentation, dated 24 June 2014. Based on the inspections/evaluations performed by Contra Costa County Health Services Department, absence of reportable spills/leaks, and the administrative nature of the regulatory violation at this property, this property does not appear to be likely to significantly affect the Site.			
N78	**DeRosa Auto Body, 1090 Harbor Street**	**1/8-1/4 mile south**	**No**
This site is listed on the HAZNET and HWTS databases, as well as on the Contra Costa County Site List as a hazardous waste generator under its CUPA program. The HAZNET listing contains facility and manifest information from 2009 for waste code 214 (unspecified solvent mixture). The HWTS database indicates the site was active from 19 August 2009 through 30 June 2012. This property does not appear to be likely to significantly affect the Site.			
N81, N82	**California Expanded Metal Products Co.**	**1/8-1/4 mile south**	**No**
This site is listed as a hazardous waste generator in the CERS HAZ WASTE database and is on the Contra Costa County Site List as a hazardous waste generator under its CUPA program. The CERS database reports three violations: 1. Violation of California Health and Safety Code Chapter 6.95 regarding the business plan program and administration/documentation, dated 30 January 2013; 2. Violation of California Health and Safety Code Chapter 6.95 regarding the business plan program and administration/documentation, dated 14 March 2017; and 3. Violation of California Health and Safety Code Chapter 6.95 regarding the hazardous waste generator program and operations/maintenance, dated 14 March 2017. Based on the inspections/evaluations performed by Contra Costa County Health Services Department, absence of reportable spills/leaks, and the administrative nature of the regulatory violation at this property, this property does not appear to be likely to significantly affect the Site.			

Several other industrial facilities were listed within the applicable search radii north and east of the Site. Due to their relative cross- or downgradient location, and that the environmental issues listed at these facilities were generally constrained to the respective properties, these properties are not considered likely to impact the Site.

7.0 SUMMARY OF FINDINGS

The following sections summarize the complete results of findings for the Site based on review of Site reconnaissance information, regulatory agency databases and files, historical information, physical setting information, and readily available documents.

- The Site located at 420 East 3rd Street in north Pittsburg, California is presently undeveloped and secured by a chain-link fence.
- No RECs were observed during the Site reconnaissance, only *de minimis* conditions were observed.

- A review of historical information indicates that the Johns Manville Products Company formerly occupied the Site and produced asbestos-cement products, asphalt roofing materials, and asbestos-containing pipe covering. In addition to numerous above-ground tanks and what appears to be materials stored outdoors, a surface impoundment (evaporation pond) is visible on aerial photographs of the Site. As a result of Site operations between 1927 and 2003, a significant amount of ACM was deposited onto the ground. Manufacture of ACM ceased in 1980 and commercial-grade roofing materials were manufactured at the plant until 2003, when all operations were discontinued.
- Areas of potential concern at the former Plant Site included a former evaporation pond and several additional areas of concern that were discovered while abatement and demolition activities were being conducted. Several environmental investigations were conducted at the Site, beginning in 1986 and continuing through 2005. The selected remedy for the former Plant Site was removal of ACM- and petroleum hydrocarbon-affected soil from the Site and placement in engineered containment berms along the eastern boundary of the former Plant Site. ACM-impacted material and debris were placed into a trench dug to 10 feet bgs along the eastern boundary of the former Plant Site, which was then capped by hydrocarbon-impacted soil excavated from the Site, as approved by the DTSC. An engineered textile and 2 feet of clean, low-permeability soil were then added to the top of the ACM- and petroleum hydrocarbon-impacted materials to create the capped, vegetated berms. There is an automated irrigation system to maintain the vegetation. The berms consist of two distinct segments referred to below as the “northern” and “southern” berms. Drainage swales were installed adjacent to the berm and graded so that stormwater runs off toward catch basins on the eastern Site boundary. Ongoing maintenance and monitoring have been continuously performed in accordance with an O&M Agreement for the Site.
- Post-remediation environmental samples indicate that groundwater contains TPH-d, TPH-o, TPH-g, and VOCs, some of which exceed drinking water MCLs. Soil vapor contains VOCs, including PCE, TCE, and BTEX. The most elevated petroleum hydrocarbon and BTEX concentrations were from samples collected in the vicinity of the former evaporation pond, and the most elevated VOC concentrations were from samples collected in the southwestern quadrant of the Site. Soil contains asbestos below the 1% threshold to be considered a hazardous material or waste.
- O&M inspections at the Site report that the Plant Site and encapsulation berms are in good condition. Landscape maintenance, irrigation system repairs, rodent bait station inspections, and rodent burrow destruction occur on a regular basis.

GSI has evaluated the information collected during the course of this Phase I ESA. Based on the Findings summarized above, this assessment has revealed the following CRECs and RECs in connection with the Site:

- Two engineered encapsulation berms contain ACM-impacted soil and debris and petroleum hydrocarbon-impacted soil that was excavated during Site remedial actions. The Bermed Property is subject to the Site LUC. This condition is identified as a CREC.
- The Soil Management Area within the Residential Property has underlying soil impacted with VOCs and petroleum hydrocarbons below 4 feet NGVD. The Residential Property is subject to the Site LUC. This condition is identified as a CREC.

- Groundwater and soil vapor beneath the Site is impacted with VOCs and petroleum hydrocarbons. VOCs in groundwater may be originating from an off-site, upgradient source. This condition is identified as a REC.

8.0 DATA GAPS OR FAILURES

Standard ASTM E1237-13 defines a "data gap" as a lack of or inability to obtain information required by the Standard despite good faith efforts by the environmental professional to gather the information. Significant data gaps are identified as those which affected the ability to identify RECs. A "data failure" is a type of data gap and is considered a failure to achieve the historical research objectives even after reviewing reasonably ascertainable standard historical sources.

Owner and User questionnaires were not returned for this ESA. However, numerous documents pertaining to Site environmental issues, investigations, and remediation were obtained by GSI for review. It is our opinion that no significant data gaps exist in the availability of documentation regarding Site environmental conditions.

This Phase I ESA has revealed no significant data gaps or data failures.

9.0 DELETIONS OR DEVIATIONS FROM THE ASTM STANDARD

There were no deletions or deviations from ASTM Practice E1527-13 in conducting this Phase I ESA.

10.0 CERTIFICATION

The Site is defined as the following:

SITE IDENTIFICATION	
Name:	Former Johns Manville Plant Site
Address:	420 East 3rd Street
City:	Pittsburg
County:	Contra Costa
State:	California
Assessor Parcel Number(s):	073-050-001-4

This environmental review of the Site as defined above was conducted by GSI on behalf of Integral Communities. The review conducted by GSI meets or exceeds the requirements for a Phase I ESA specified in the ASTM Standard.

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312. We have the specific qualifications based on education, training, and experience to assess the nature, history, and setting of the subject property. We have developed and performed all the appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Jennifer Duffield, PE
Senior Associate Engineer
9 April 2021

Farid Achour, PhD, PG
Principal Hydrogeologist
9 April 2021

11.0 REFERENCES

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Arcadis, 2017. Notification Memorandum: Environmental Due Diligence Investigation Results, Former Johns Manville Plant Site, 420 East Third Street, Pittsburg, California. Consultant's report prepared for Pittsburg River Park, LLC. November 20.

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LFR Inc. (LFR), 2007. Addendum to the Remedial Design and Implementation Plan, Harbor Park Development (Former Johns Manville). August 1.

LFR, 2008a. Remedial Action Completion Report, Former Johns Manville Facility, 420 East 3rd Street, Pittsburg, California. Consultant's report prepared for Pittsburg River Park, LLC. October 21.

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PES, 2021. Semi-Annual Operation and Maintenance Report, North Parcel and Former Johns Manville Plant Site, 420 East 3rd Street, Pittsburg, California. Consultant's report prepared for Third Street Pittsburg LLC and Third Street Pittsburg Campus Owner LLC. February 26.

Placeworks, 2018. Pipeline Safety Hazard Assessment, Pittsburg School Campus for Making Waves Foundation. Consultant's report prepared for Making Waves Foundation. June.

Rockridge Geotechnical, 2018. Geotechnical Investigation, Proposed New Campus & Sports Complex, Making Waves Academy, 595 E. 3rd Street, Pittsburg, California. Consultant's report prepared for Making Waves Academy and Foundation. May 11.

Sandis, 2017. Topographic Survey, 415 & 420 East 3rd Street, Pittsburg, California. Dates of field survey: February 27 to March 1, 2017. March 13.

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Stantec Consulting Corporation (Stantec), 2008. Additional Phase II Investigation Report, Tesoro Pittsburg Terminal, 595 East Third Street, Pittsburg, California. Consultant's report prepared for Tesoro Refining and Marketing Company. November 13.

URS Corporation (URS), 2006. Final Supplemental Soil Characterization, 420 East Third Street, Pittsburg, California. Consultant's report prepared for Trammell Crow Residential. March 10.

PHASE I ENVIRONMENTAL SITE ASSESSMENT
FORMER JOHNS MANVILLE PLANT SITE
420 EAST 3RD STREET
PITTSBURG, CALIFORNIA

Integral Communities

Figures

Figure 1. Site Location Map

Figure 2. Site Plan



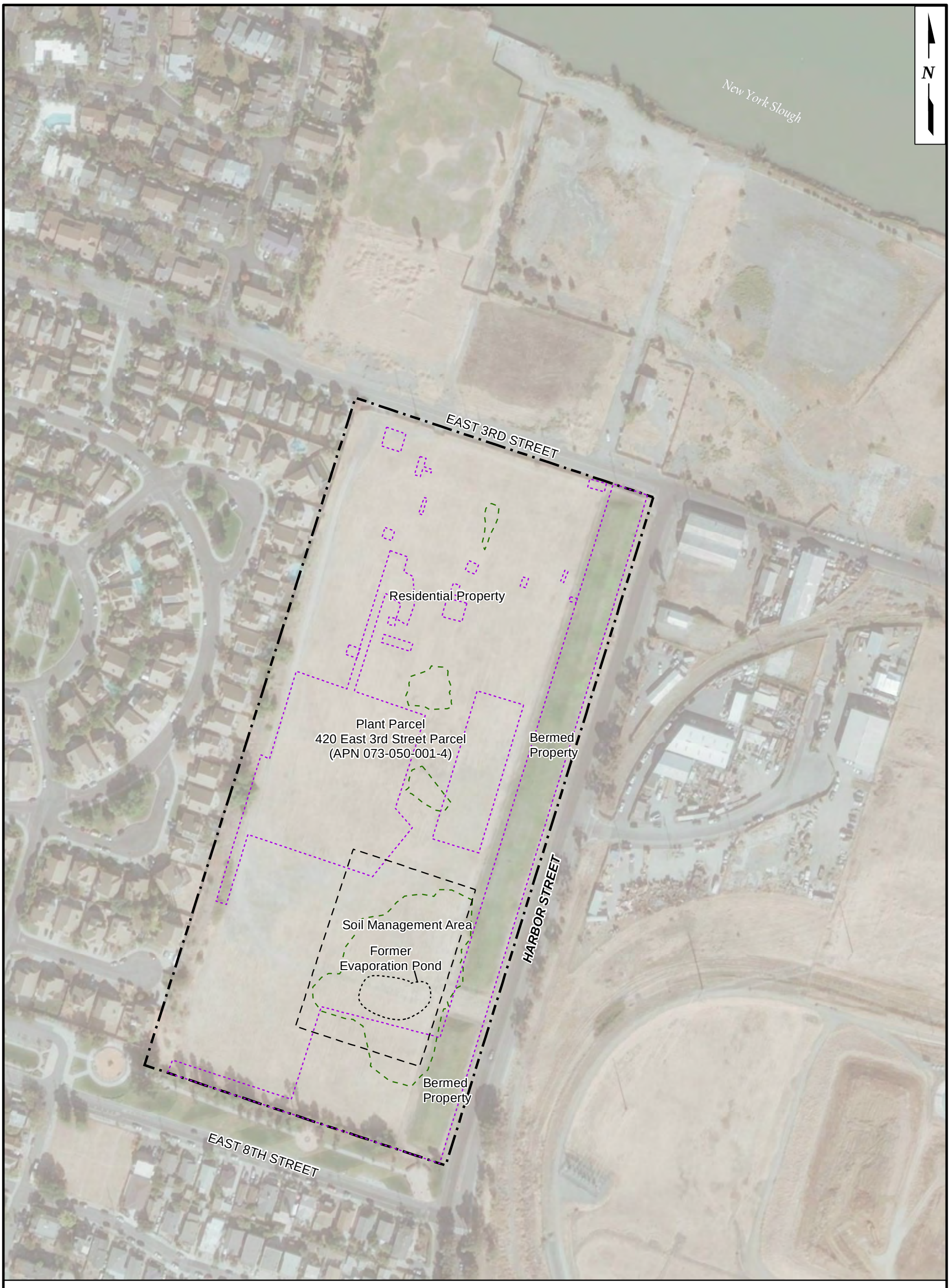
Reference map provided by Esri, 2018.

GSI ENVIRONMENTAL

GSI Job No.	5785	Drawn by:	XO
Issued:	23-Mar-2021	Chk'd by:	JPD
Revised:		Aprv'd by:	JPD
Map ID:	Pittsburg_SiteLocMap	**FIGURE 1**	

SITE LOCATION MAP

420 East 3rd Street, Pittsburg, California



Notes:

Imagery downloaded from ESRI Images, March 2021.

LEGEND

- Approximate Extent of Excavation for Asbestos
- Approximate Extent of Excavation for Petroleum Hydrocarbons
- Approximate Property Boundary

Feet
0 75 150

GSI ENVIRONMENTAL

GSI Job No. 5785	Map ID: Pittsburg_SitePlan		
Issued: 24-Mar-2021	Drawn By: XO		
	Chk'd By: JPD	Aprv'd By: JPD	

SITE PLAN

420 East 3rd Street, Pittsburg, California

FIGURE 2

PHASE I ENVIRONMENTAL SITE ASSESSMENT
FORMER JOHNS MANVILLE PLANT SITE
420 EAST 3RD STREET
PITTSBURG, CALIFORNIA

Integral Communities

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Appendix G	User-Supplied Documents
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GSI ENVIRONMENTAL

PHASE I ENVIRONMENTAL SITE ASSESSMENT
FORMER JOHNS MANVILLE PLANT SITE
420 EAST 3RD STREET
PITTSBURG, CALIFORNIA

Integral Communities

Appendix A

Regulatory Database Search Report

STATE WATER RESOURCES CONTROL BOARD
HAZARDOUS SUBSTANCE STORAGE CONTAINER INFORMATION FOR CONTRA COSTA COUNTY

CONTAINER TYPES: 1,2,3,4,5
(1=FARM MOTOR VEHICLE FUEL TANKS, 2=ALL OTHER PRODUCT TANKS, 3=WASTE TANKS, 4=SUMPS, 5=PITS, PONDS, LAGOONS & OTHERS)

I OWNER
MANVILLE CORPORATION
E 3RD & HARBOR PITTSBURG CA 94509

II FACILITY

	MAILING ADDRESS	DEALER/FOREMAN/SUPERVISOR	TYPE OF BUSINESS
JOHNS-MANVILLE-ROOFING SYSTEMS	TOWNSHIP/RANGE/SECTION	TELEPHONE	NO. OF CONTAINERS
E 3RD & HARBOR STREET			
PITTSBURG CA 94565	P.O. BOX 591	A.W. MACRAE	ROOFING-MANUFACTURE
	PITTSBURG CA 94565		
CROSS STREET :		(415) 432-6426	3
HARBOR			

III 24-HR. CONTACT PERSON / TELEPHONE
DAY: G. PARSONS (415) 432-6426 NIGHT: E.A. PELL (415) 754-1036

********** OWNER ASSIGNED CONTAINER NUMBER: 0003 ********** STATE BOARD ASSIGNED CONTAINER ID NUMBER: 0000002154000T **********

IV DESCRIPTION
A. CONTAINER TYPE : TANK
B. MANUFACTURER/YR OF MFG: /
C. YEAR INSTALLED : 1956
D. CAPACITY (GALLONS) : 7,500
E. REPAIRS : UNKN IF YES WHEN :
F. CURRENTLY USED : YES IF NO, YEAR OF LAST USE:
G. STORES : PRODUCT
H. MOTOR VEHICLE FUEL/WASTE OIL : NO CONTAINS:

IS CONTAINER LOCATED ON A FARM : NO

V CONTAINER CONSTRUCTION
A. THICKNESS: B. VAULTING: UNKNOWN C. WALLING: UNKNOWN
D. MATERIAL : UNKNOWN
E. LINING : UNKNOWN
F. WRAPPING : UNKNOWN

VI PIPING
A. ABOVEGROUND PIPING : UNKNOWN B. UNDERGROUND PIPING : GRAVITY
C. REPAIRS : UNKN IF YES, YEAR OF MOST RECENT REPAIR:

VII LEAK DETECTION
PRESSURE TEST INTERNAL INSPECTION

VIII CHEMICAL COMPOSITION OF SUBSTANCES CURRENTLY STORED IN CONTAINER
91203 NAPTHALENE

HAZARDOUS SUBSTANCE STORAGE CONTAINER INFORMATION FOR CONTRA COSTA COUNTY

CONTAINER TYPES: 1,2,3,4,5

(1=FARM MOTOR VEHICLE FUEL TANKS, 2=ALL OTHER PRODUCT TANKS, 3=WASTE TANKS, 4=SUMPS, 5=PITS, PONDS, LAGOONS & OTHERS)

********** OWNER ASSIGNED CONTAINER NUMBER: 0001 ********** STATE BOARD ASSIGNED CONTAINER ID NUMBER: 00000021540002 **********

IV DESCRIPTION
- A. CONTAINER TYPE : TANK
- B. MANUFACTURER/YR OF MFG:
- C. YEAR INSTALLED :
- D. CAPACITY (GALLONS) : 10,000
- E. REPAIRS : NONE IF YES WHEN :
- F. CURRENTLY USED : YES IF NO, YEAR OF LAST USE:
- G. STORES : PRODUCT
- H. MOTOR VEHICLE FUEL/WASTE OIL : YES CONTAINS: DIESEL

IS CONTAINER LOCATED ON A FARM : NO

V CONTAINER CONSTRUCTION
- A. THICKNESS:
- B. VAULTING: UNKNOWN
- C. WALLING: UNKNOWN
- D. MATERIAL : UNKNOWN
- E. LINING : UNKNOWN
- F. WRAPPING : NONE

VI PIPING
- A. ABOVEGROUND PIPING :
- B. UNDERGROUND PIPING : GRAVITY
- C. REPAIRS : NONE IF YES, YEAR OF MOST RECENT REPAIR:

VII LEAK DETECTION
VISUAL STOCK INVENTORY

VIII CHEMICAL COMPOSITION OF SUBSTANCES CURRENTLY STORED IN CONTAINER
12034 DIESEL MOTOR VEHICLE FUEL

********** OWNER ASSIGNED CONTAINER NUMBER: 0002 ********** STATE BOARD ASSIGNED CONTAINER ID NUMBER: 00000021540003 **********

IV DESCRIPTION
- A. CONTAINER TYPE : TANK
- B. MANUFACTURER/YR OF MFG:
- C. YEAR INSTALLED : UNK
- D. CAPACITY (GALLONS) : 2,400
- E. REPAIRS : NONE IF YES WHEN :
- F. CURRENTLY USED : YES IF NO, YEAR OF LAST USE:
- G. STORES : PRODUCT
- H. MOTOR VEHICLE FUEL/WASTE OIL : YES CONTAINS: DIESEL

IS CONTAINER LOCATED ON A FARM : NO

V CONTAINER CONSTRUCTION
- A. THICKNESS:
- B. VAULTING: UNKNOWN
- C. WALLING: UNKNOWN
- D. MATERIAL : UNKNOWN
- E. LINING : UNKNOWN
- F. WRAPPING : UNKNOWN

VI PIPING
- A. ABOVEGROUND PIPING :
- B. UNDERGROUND PIPING : GRAVITY
- C. REPAIRS : NONE IF YES, YEAR OF MOST RECENT REPAIR:

VII LEAK DETECTION
VISUAL STOCK INVENTORY INTERNAL INSPECTION

VIII CHEMICAL COMPOSITION OF SUBSTANCES CURRENTLY STORED IN CONTAINER
12034 DIESEL MOTOR VEHICLE FUEL

420 East 3rd Street
420 East 3rd Street
Pittsburg, CA 94565

Inquiry Number: 6377157.2s
February 23, 2021

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

420 EAST 3RD STREET
PITTSBURG, CA 94565

COORDINATES

Latitude (North):	38.0302440 - 38° 1' 48.87''
Longitude (West):	121.8788680 - 121° 52' 43.92''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	598395.9
UTM Y (Meters):	4209558.0
Elevation:	15 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5619720 HONKER BAY, CA
Version Date:	2012
Northeast Map:	5619678 ANTIOCH NORTH, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140606
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
420 EAST 3RD STREET
PITTSBURG, CA 94565

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	PITTSBURG RIVER PARK	420 E 3RD ST	CA HAZNET, CA HWTS		TP
A2	MAKING WAVES ACADEMY	420 E THIRD ST	CA NPDES, CA CIWQS		TP
A3	JOHNS MANVILLE SITE	420 EAST 3RD ST	FINDS		TP
A4	JOHNS MANVILLE	420 E 3RD ST	CA HAZNET, CA HWTS		TP
A5	JOHNS MANVILLE	420 EAST 3RD STREET	CA ENVIROSTOR, CA CPS-SLIC, CA VCP, CA DEED, CA...		TP
A6	JOHNS MANVILLE SITE	420 EAST 3RD ST	RCRA NonGen / NLR		TP
A7	FORMER JOHNS MANVILL	420 EAST 3RD STREET	CA HAZNET, CA NPDES, CA CONTRA COSTA CO. SITE...		TP
A8		420 EAST 3RD STREET	ERNS		TP
A9	MANVILLE SALES CORP	420 EAST 3RD	FINDS		TP
A10	FORMER JOHNS MANVILL	420 EAST 3RD ST	CA CIWQS		TP
A11		420 E. 3RD STREET	CA CHMIRS		TP
B12	JOHNS-MANYILLE-ROOFI	E 3RD AND HARDOR STR	CA HIST UST	Lower	39, 0.007, NE
B13	JOHNS-MANVILLE-ROOFI	E 3RD & HARBOR STREE	CA HIST UST, CA EMI	Lower	39, 0.007, NE
B14	MANVILLE SALES CORP	UNKNOWN 3RD & HARBOR	CA CPS-SLIC	Lower	40, 0.008, NE
15	CAL ASIA DEVELOPMENT	391 3RD ST E	CA LUST, CA Cortese, CA HIST CORTESE, CA CONTRA...	Lower	48, 0.009, North
B16	TESORO PITTSBURG TER	535 E 3RD ST	RCRA-LQG, FINDS, RI MANIFEST	Lower	124, 0.023, NE
B17	CITY OF PITTSBURG	593 3RD ST	RCRA-SQG	Lower	157, 0.030, NE
B18	DIABLO SERVICES	595 EAST THIRD ST	CA CPS-SLIC, CA CERS	Lower	167, 0.032, NE
B19	TOSCO CORPORATION, D	595 EAST THIRD STREE	RCRA-SQG	Lower	167, 0.032, NE
B20	TESORO REFINING & MA	595 E 3RD ST	EDR Hist Auto	Lower	167, 0.032, NE
B21	DIABLO SERVICE CORP.	595 THIRD	CA Cortese, CA HAZNET, CA CERS, CA HWTS	Lower	167, 0.032, NE
B22	TESORO REFINING & MA	595 3RD ST E	CA AST	Lower	167, 0.032, NE
B23	TESORO PITTSBURG TER	595 E 3RD ST	CA CHMIRS, CA CONTRA COSTA CO. SITE LIST, CA WDS,...	Lower	167, 0.032, NE
B24	DIABLO SERVICE CORP	595 E 3RD	SEMS-ARCHIVE	Lower	167, 0.032, NE
C25	AUTO TRUCK & MARINE	601 INDUSTRY RD	RCRA NonGen / NLR	Lower	216, 0.041, East
C26	AUTO TRUCK & MARINE	601 INDUSTRY RD	CA CERS HAZ WASTE, CA HAZNET, CA CERS, CA HWTS	Lower	216, 0.041, East
C27	AUTO TRUCK & MARINE	601 INDUSTRY RD	CA CONTRA COSTA CO. SITE LIST	Lower	216, 0.041, East
28	VETERAN'S BUILDING P	855 EAST ST	CA CONTRA COSTA CO. SITE LIST	Higher	262, 0.050, SW
D29	D & L TRANSMISSION	598 EAST 3RD ST	EDR Hist Auto	Lower	340, 0.064, ENE
D30	K AND S BODY SHOP	598 E 3RD ST	RCRA-SQG, CA CERS HAZ WASTE, CA EMI, CA CONTRA...	Lower	340, 0.064, ENE
D31	K AND S BODY SHOP	600 E. 3RD STREET	SEMS-ARCHIVE, CA ENVIROSTOR	Lower	346, 0.066, ENE
C32	B G'S MARINE CENTER,	3 INDUSTRY RD	CA CONTRA COSTA CO. SITE LIST	Lower	380, 0.072, East
E33	PITTSBURG PLUMBING	441 10TH ST E	CA LUST, CA Cortese, CA ENF, CA HIST CORTESE, CA...	Higher	439, 0.083, South
34	H & B SEASIDE	301 3RD ST	EDR Hist Auto	Lower	441, 0.084, NNW
F35	8 & 12 INDUSTRY ROAD	8-12 INDUSTRY ROAD	US BROWNFIELDS	Lower	501, 0.095, East
F36	DELTA AUTO WRECKER	6 INDUSTRY ROAD	SEMS-ARCHIVE, CA RESPONSE, CA ENVIROSTOR, CA...	Lower	515, 0.098, East
37	BAYOU TRANSPORTATION	10 SANTA CRUZ CT	RCRA NonGen / NLR	Higher	516, 0.098, WSW
F38	PITTSBURG DISPOSAL S	12 INDUSTRY WAY	CA SWEEPS UST	Lower	533, 0.101, East
F39	PITTSBURG DISPOSL DB	12 INDUSTRY RD	CA CERS HAZ WASTE, CA CERS TANKS, RCRA NonGen /...	Lower	533, 0.101, East

MAPPED SITES SUMMARY

Target Property Address:
420 EAST 3RD STREET
PITTSBURG, CA 94565

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
F40	12 INDUSTRY ROAD	12 INDUSTRY ROAD	US BROWNFIELDS, FINDS	Lower	533, 0.101, East
F41	PACIFIC COAST GENERA	12 INDUSTRY RD	RCRA NonGen / NLR	Lower	533, 0.101, East
E42	PITTSBURG PLUMBING	441 E 10TH ST	CA CONTRA COSTA CO. SITE LIST	Higher	567, 0.107, SSW
G43	FAUTLESS CLEANERS	427 E 10TH ST	RCRA-SQG, CA EMI, CA HAZNET, CA CONTRA COSTA CO....	Higher	567, 0.107, SSW
G44	FAULTLESS CLEANERS	427 E 10TH ST	EDR Hist Cleaner	Higher	567, 0.107, SSW
H45	UNIVERSAL AUTO REPAI	499 E 10TH STREET	CA CERS HAZ WASTE, CA EMI, CA CONTRA COSTA CO....	Higher	570, 0.108, South
G46	DULCERIA ARCO IRIS	409 E 10TH ST	EDR Hist Auto	Higher	583, 0.110, SSW
G47	FAULTLESS CLEANERS	427 10TH ST E	CA LUST, CA Cortese, CA HIST CORTESE, CA CERS	Higher	618, 0.117, SSW
G48	PITTSBURG PLUMBING	441 10TH ST E	CA LUST	Higher	632, 0.120, SSW
I49	D & F AUTO SALES	327 E 10TH ST	CA CONTRA COSTA CO. SITE LIST	Higher	681, 0.129, SW
I50	JOHN STANLEY AUTO BO	325 E 10TH ST B	CA CONTRA COSTA CO. SITE LIST	Higher	686, 0.130, SW
H51	BANISTER ELECTRIC, I	498 E 10TH ST	CA CERS HAZ WASTE, CA HIST UST, CA CONTRA COSTA...	Higher	689, 0.130, South
H52	BAY SAW AND TOOL	498 E 10TH ST	RCRA NonGen / NLR	Higher	689, 0.130, South
H53	MY GENERATOR GUY	498 E 10TH ST	RCRA NonGen / NLR	Higher	689, 0.130, South
G54	LAS PALMAS AUTO REPA	418 E 10TH ST	CA CERS HAZ WASTE, CA CONTRA COSTA CO. SITE LIST,...	Higher	698, 0.132, SSW
G55	WEST COAST AUTO BODY	430 E 10TH ST	CA CERS HAZ WASTE, CA CONTRA COSTA CO. SITE LIST,...	Higher	698, 0.132, SSW
G56	WEST COAST AUTO BODY	430 E 10TH ST	RCRA NonGen / NLR	Higher	698, 0.132, SSW
H57	ELECTRO MFG CO	494 E 10TH ST	CA CONTRA COSTA CO. SITE LIST	Higher	699, 0.132, South
I58	FRANK DEROSA AND SON	340 E 10TH ST	CA CONTRA COSTA CO. SITE LIST	Higher	738, 0.140, SW
59	KOCH CARBON INC.	700-707 E. 3RD STREE	SEMS-ARCHIVE	Lower	749, 0.142, East
I60	PITTSBURG MOTOR PART	360 10TH ST E	CA CERS HAZ WASTE	Higher	772, 0.146, SW
I61	PITTSBURG MOTOR PART	360 E 10TH ST	RCRA NonGen / NLR	Higher	773, 0.146, SW
I62	PITTSBURG MOTOR PART	360 E 10TH ST	CA CONTRA COSTA CO. SITE LIST	Higher	773, 0.146, SW
J63	MARINE EXPRESS PITTS	695 E 3RD ST	CA CERS HAZ WASTE, CA HIST UST, CA HAZNET, CA...	Lower	777, 0.147, ENE
J64	MARINE EXPRESS, INC	695 E. THIRD STREET	RCRA NonGen / NLR	Lower	777, 0.147, ENE
J65	695 EAST THIRD STREE	695 EAST THIRD STREE	CA CPS-SLIC, CA BROWNFIELDS, CA CERS	Lower	777, 0.147, ENE
J66	JERICO DREDGING INC.	695 E 3RD ST	CA HIST UST	Lower	777, 0.147, ENE
H67	JCS AUTO BODY	999 HARBOR ST STE C	RCRA NonGen / NLR	Higher	780, 0.148, South
H68	OBRIENS AUTO REPAIR	999 HARBOR ST STE D	RCRA NonGen / NLR	Higher	780, 0.148, South
H69	O'BRIENS AUTOMOTIVE	999 HARBOR ST A	CA CONTRA COSTA CO. SITE LIST	Higher	780, 0.148, South
H70	JC'S AUTO BODY	999 HARBOR ST STE C	CA CERS HAZ WASTE, CA CONTRA COSTA CO. SITE LIST	Higher	780, 0.148, South
H71	O'BRIENS AUTOMOTIVE	999 HARBOR ST STE A	CA CERS HAZ WASTE, CA CERS	Higher	780, 0.148, South
K72	RIVERVIEW FIRE STATI	200 E 6TH ST	CA HIST UST, CA CONTRA COSTA CO. SITE LIST	Higher	824, 0.156, West
73	RIVERSIDE REDEVELOPM	500 CUMBERLAND ST	CA CONTRA COSTA CO. SITE LIST	Higher	934, 0.177, WNW
K74	MAGNOLI, ED	192 7TH ST	CA CONTRA COSTA CO. SITE LIST	Higher	950, 0.180, West
L75	LAST CHANCE CLUB	340 CUMBERLAND ST	CA CONTRA COSTA CO. SITE LIST	Higher	970, 0.184, NW
M76	GRANBERG PUMPS METER	1051 LOS MEDANOS ST	RCRA NonGen / NLR	Higher	976, 0.185, SW
M77	GRANBERG PUMP & METE	1051 LOS MEDANOS ST	CA CERS HAZ WASTE, CA HAZNET, CA CONTRA COSTA CO...	Higher	976, 0.185, SW
N78	DEROSA AUTO BODY	1090 HARBOR ST	CA HAZNET, CA CONTRA COSTA CO. SITE LIST, CA HWTS	Higher	977, 0.185, South

MAPPED SITES SUMMARY

Target Property Address:
420 EAST 3RD STREET
PITTSBURG, CA 94565

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
M79	CATALINE BUILT HOMES	1050 LOS MEDANOS STR	CA SWEEPS UST, CA HIST UST	Higher	979, 0.185, SW
M80	CATALINE BUILT HOMES	1050 LOS MEDANOS ST	CA LUST, CA Cortese, CA HIST CORTESE, CA CONTRA...	Higher	979, 0.185, SW
N81	CALIFORNIA EXPANDED	1001 PITTSBURG-ANTIO	CA CONTRA COSTA CO. SITE LIST	Higher	1086, 0.206, South
N82	CALIFORNIA EXPANDED	1001A PITTSBURG ANTI	CA CERS HAZ WASTE, CA CERS	Higher	1086, 0.206, South
83	IMPULSE TECHNOLOGY	695 RAILROAD AVE	CA CONTRA COSTA CO. SITE LIST	Higher	1112, 0.211, West
O84	PITTSBURG, CA MAIN P	835 RAILROAD AVENUE	RCRA NonGen / NLR	Higher	1131, 0.214, WSW
L85	CALIFORNIA THEATER	351 RAILROAD AVE	CA CONTRA COSTA CO. SITE LIST	Higher	1137, 0.215, NW
L86	VACANIT LOTS	085-222-014-4TH LOT	CA HIST UST	Higher	1149, 0.218, NW
O87	CITY OF PITTSBURG	985 RAILROAD AVE	CA LUST, CA CONTRA COSTA CO. SITE LIST, CA CERS	Higher	1161, 0.220, WSW
O88	CITY OF PITTSBURG	985 RAILROAD AVE	CA Cortese, CA HAZNET, CA HWTS	Higher	1161, 0.220, WSW
89	PITTSBURG REDEVELOPM	4TH ST & RAILROAD AV	CA CONTRA COSTA CO. SITE LIST	Higher	1235, 0.234, WNW
P90	RAMOS OIL	1001 RAILROAD AVE	RCRA NonGen / NLR	Higher	1270, 0.241, WSW
P91	REDDING PETROLEUM IN	1001 RAILROAD AVE	CA LUST, CA SWEEPS UST, CA HIST UST, CA CERS	Higher	1270, 0.241, WSW
P92	RAMOS OIL - PITTSBUR	1001 RAILROAD AVE	CA UST	Higher	1270, 0.241, WSW
P93	REDDING PETROLEUM	1001 RAILROAD AVENUE	CA LUST, CA Cortese	Higher	1270, 0.241, WSW
94	BURLINGTON NORTHERN	ADJOINING USS POSCO	CA ENVIROSTOR, CA VCP	Higher	1278, 0.242, SSE
Q95	KOCH CARBON LLC	707 E 3RD ST	RCRA NonGen / NLR	Lower	1279, 0.242, East
Q96	KOCH CARBON LLC	707 E 3RD ST	CA CERS TANKS, CA HAZNET, CA HWTS	Lower	1279, 0.242, East
Q97	GWF POWER SYSTEMS IN	707-799 3RD ST E	CA CPS-SLIC, CA CERS	Lower	1279, 0.242, East
Q98	KOCH CARBON LLC	707 E 3RD ST	CA ENVIROSTOR, CA CPS-SLIC, CA CERS HAZ WASTE, CA...	Lower	1279, 0.242, East
P99	PITTSBURG VALERO	1005 RAILROAD AVE	CA UST	Higher	1307, 0.248, WSW
P100	PITTSBURG VALERO	1005 RAILROAD AVE	CA CERS HAZ WASTE, CA CERS TANKS, CA CONTRA COSTA...	Higher	1307, 0.248, WSW
P101	BELL GAS	998 RAILROAD AVE	CA LUST, CA SWEEPS UST, CA Cortese, CA HIST...	Higher	1342, 0.254, WSW
R102	RAILROAD AVENUE ICE	1095 RAILROAD AVE	CA HIST CORTESE, CA CONTRA COSTA CO. SITE LIST	Higher	1430, 0.271, SW
R103	PITTSBURG ST REDEVLO	1095 RAILROAD AVE	CA LUST	Higher	1430, 0.271, SW
R104	PITTSBURG REDEVLOPME	1095 RAILROAD AVE	CA LUST, CA Cortese, CA CERS	Higher	1430, 0.271, SW
Q105	KOCH CARBON INC.	700- 707 E. 3RD STRE	CA ENVIROSTOR	Lower	1520, 0.288, East
106	PITTSBURG MARINA	51 MARINA BLVD	CA LUST, CA SWEEPS UST, CA CHMIRS, CA Cortese, CA...	Lower	1691, 0.320, NW
S107	PEPSI COLA COMPANY	338 CENTRAL AVE	CA LUST, CA HIST UST, CA ENF, CA HIST CORTESE, CA...	Higher	1792, 0.339, SW
S108	PEPSI COLA COMPANY	338 CENTRAL AVE	CA LUST, CA SWEEPS UST, CA Cortese	Higher	1792, 0.339, SW
109	SANTA FE PITTSBURG D	1 SANTA FE AVE W	CA LUST, CA Cortese, CA HIST CORTESE, CA CERS	Higher	1952, 0.370, WSW
T110	DIVING SYSTEMS INTER	895 3RD	CA HIST CORTESE	Lower	2013, 0.381, East
T111	GWF POWER SYSTEMS,LP	895 E 3RD STREET	CA ENVIROSTOR, CA VCP, CA DEED, CA EMI, CA CONTRA...	Lower	2013, 0.381, East
T112	BLUE PLANET	895 E. 3RD STREET	US BROWNFIELDS, FINDS	Lower	2013, 0.381, East
T113	GWF POWER SYSTEM	895 E. 3RD STREET	SEMS-ARCHIVE	Lower	2013, 0.381, East
114	THE BERM	27 MARINA BOULEVARD	US BROWNFIELDS	Lower	2157, 0.409, NW
U115	PITTSBURG REDEVELOPM	1300 RAILROAD	CA LUST, CA ENF, CA HIST CORTESE, CA CONTRA COSTA...	Higher	2236, 0.423, SW
U116	PITTSBURG ST RDEVELO	1300 RAILROAD AVE	CA LUST, CA Cortese, CA CERS	Higher	2236, 0.423, SW
117	PITTSBURG MARINA EXP	MONTEZUMA & CODY	CA ENVIROSTOR	Lower	2702, 0.512, NNW

MAPPED SITES SUMMARY

Target Property Address:
420 EAST 3RD STREET
PITTSBURG, CA 94565

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
118	MARINA SCHOOL EXPANS	EAST 8TH AND EAST 10	CA ENVIROSTOR, CA SCH	Lower	2758, 0.522, West
119	SIGNODE SUPPLY CORP.	1 LESLIE DR	CA ENVIROSTOR, CA VCP, CA CERS HAZ WASTE, CA...	Higher	3077, 0.583, WSW
V120	PITTSBURG HIGH SCHOO	250 SCHOOL STREET	CA ENVIROSTOR, CA SCH	Higher	3125, 0.592, SSW
V121	PITTSBURG SENIOR HIG	250 SCHOOL STREET	CA ENVIROSTOR, CA SCH, CA HIST UST, CA NPDES, CA...	Higher	3125, 0.592, SSW
122	PG AND E GAS PLANT P	APPROX 1/2 MILE E HA	EDR MGP	Higher	3303, 0.626, ESE
123	TRANS BAY CABLE CONV	570 TO 620 & 650 W.	CA ENVIROSTOR, CA VCP, CA DEED	Lower	4615, 0.874, West
124	PG&E PITTSBURG POWER	595 WEST 10TH STREET	CA ENVIROSTOR	Lower	4754, 0.900, West
W125	NRG DELTA, LLC	696 W 10TH STREET	CA ENVIROSTOR, CA CERS HAZ WASTE, CA HIST UST, CA..	Lower	5182, 0.981, West
W126	PG&E, PITTSBURG POWE	696 W. 10TH STREET	CA Toxic Pits	Lower	5182, 0.981, West
W127	PITTSBURG GENERATING	696 W 10TH ST	SEMS, CORRACTS, RCRA-TSDF, RCRA-SQG, US FIN ASSUR	Lower	5182, 0.981, West

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 9 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
PITTSBURG RIVER PARK 420 E 3RD ST PITTSBURG, CA 94565	CA HAZNET GEPAID: CAC002590447 CA HWTS	N/A
MAKING WAVES ACADEMY 420 E THIRD ST PITTSBURG, CA 94565	CA NPDES Facility Status: Terminated CA CIWQS	N/A
JOHNS MANVILLE SITE 420 EAST 3RD ST PITTSBURG, CA 94565	FINDS	N/A
JOHNS MANVILLE 420 E 3RD ST PITTSBURG, CA 94565	CA HAZNET GEPAID: CAR000010074 CA HWTS	N/A
JOHNS MANVILLE 420 EAST 3RD STREET PITTSBURG, CA 94565	CA ENVIROSTOR Facility Id: 07390022 Status: Certified / Operation & Maintenance CA CPS-SLIC Database: CPS-SLIC, Date of Government Version: 12/04/2020 Facility Status: Open - Inactive Global Id: SLT2O208311 CA VCP Status: Certified / Operation & Maintenance Facility Id: 07390022 CA DEED Status: CERTIFIED / OPERATION & MAINTENANCE Envirostor ID: 7390022 CA CERS	N/A
JOHNS MANVILLE SITE 420 EAST 3RD ST PITTSBURG, CA 94565	RCRA NonGen / NLR EPA ID:: CAR000010074	CAR000010074
FORMER JOHNS MANVILL 420 EAST 3RD STREET PITTSBURG, CA 94565	CA HAZNET GEPAID: CAL000299140 CA NPDES CA CONTRA COSTA CO. SITE LIST	N/A

EXECUTIVE SUMMARY

	Facility Id: FA0031924 CA HWTS	
420 EAST 3RD STREET 420 EAST 3RD STREET PITTSBURG, CA 94565	ERNS NRC Report #: 462904 Incident Date Time: 1998-11-06 03:15:00	N/A
MANVILLE SALES CORP 420 EAST 3RD PITTSBURG, CA 94565	FINDS Registry ID:: 110066772754	N/A
FORMER JOHNS MANVILL 420 EAST 3RD ST PITTSBURG, CA 94565	CA CIWQS	N/A
420 E. 3RD STREET 420 E. 3RD STREET PITTSBURG, CA	CA CHMIRS OES Incident Number: 8-4998	N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing

Federal RCRA generators list

RCRA-VSQG ---------- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

EXECUTIVE SUMMARY

Federal institutional controls / engineering controls registries

LUCIS ---- Land Use Control Information System
US ENG CONTROLS ---- Engineering Controls Sites List
US INST CONTROLS ---- Institutional Controls Sites List

State and tribal landfill and/or solid waste disposal site lists

CA SWF/LF ---- Solid Waste Information System

State and tribal leaking storage tank lists

INDIAN LUST ---- Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

FEMA UST ---- Underground Storage Tank Listing
INDIAN UST ---- Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

INDIAN VCP ---- Voluntary Cleanup Priority Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

CA WMUDS/SWAT ---- Waste Management Unit Database
CA SWRCY ---- Recycler Database
CA HAULERS ---- Registered Waste Tire Haulers Listing
INDIAN ODI ---- Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9 ---- Torres Martinez Reservation Illegal Dump Site Locations
ODI ---- Open Dump Inventory
IHS OPEN DUMPS ---- Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ---- Delisted National Clandestine Laboratory Register
CA HIST Cal-Sites ---- Historical Calsites Database
CA CDL ---- Clandestine Drug Labs
US CDL ---- National Clandestine Laboratory Register
CA PFAS ---- PFAS Contamination Site Location Listing

Local Lists of Registered Storage Tanks

CA FID UST ---- Facility Inventory Database

Local Land Records

CA LIENS ---- Environmental Liens Listing
LIENS 2 ---- CERCLA Lien Information

Records of Emergency Release Reports

HMIRS ---- Hazardous Materials Information Reporting System

CA LDS ---- Land Disposal Sites Listing
CA MCS ---- Military Cleanup Sites Listing
CA SPILLS 90 ---- SPILLS 90 data from FirstSearch

Other Ascertainable Records

FUDS ---- Formerly Used Defense Sites
DOD ---- Department of Defense Sites
SCRD DRYCLEANERS ---- State Coalition for Remediation of Drycleaners Listing
EPA WATCH LIST ---- EPA WATCH LIST
TSCA ---- Toxic Substances Control Act
TRIS ---- Toxic Chemical Release Inventory System
SSTS ---- Section 7 Tracking Systems
ROD ---- Records Of Decision
RMP ---- Risk Management Plans
RAATS ---- RCRA Administrative Action Tracking System
PRP ---- Potentially Responsible Parties
PADS ---- PCB Activity Database System
ICIS ---- Integrated Compliance Information System
FTTS ---- FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS ---- Material Licensing Tracking System
COAL ASH DOE ---- Steam-Electric Plant Operation Data
COAL ASH EPA ---- Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER ---- PCB Transformer Registration Database
RADINFO ---- Radiation Information Database
HIST FTTS ---- FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS ---- Incident and Accident Data
CONSENT ---- Superfund (CERCLA) Consent Decrees
INDIAN RESERV ---- Indian Reservations
FUSRAP ---- Formerly Utilized Sites Remedial Action Program
UMTRA ---- Uranium Mill Tailings Sites
LEAD SMELTERS ---- Lead Smelter Sites
US AIRS ---- Aerometric Information Retrieval System Facility Subsystem
US MINES ---- Mines Master Index File
ABANDONED MINES ---- Abandoned Mines
DOCKET HWC ---- Hazardous Waste Compliance Docket Listing
UXO ---- Unexploded Ordnance Sites
FUELS PROGRAM ---- EPA Fuels Program Registered Listing
CA BOND EXP. PLAN ---- Bond Expenditure Plan
CA CUPA Listings ---- CUPA Resources List
CA DRYCLEANERS ---- Cleaner Facilities
CA HWT ---- Registered Hazardous Waste Transporter Database
CA MINES ---- Mines Site Location Listing
CA MWMP ---- Medical Waste Management Program Listing
CA PEST LIC ---- Pesticide Regulation Licenses Listing
CA PROC ---- Certified Processors Database
CA Notify 65 ---- Proposition 65 Records
CA UIC ---- UIC Listing
CA UIC GEO ---- UIC GEO (GEOTRACKER)
CA WASTEWATER PITS ---- Oil Wastewater Pits Listing
CA WIP ---- Well Investigation Program Case List
CA MILITARY PRIV SITES ---- MILITARY PRIV SITES (GEOTRACKER)
CA PROJECT ---- PROJECT (GEOTRACKER)
CA WDR ---- Waste Discharge Requirements Listing

CA NON-CASE INFO NON-CASE INFO (GEOTRACKER)
CA OTHER OIL GAS OTHER OIL & GAS (GEOTRACKER)
CA PROD WATER PONDS PROD WATER PONDS (GEOTRACKER)
CA SAMPLING POINT SAMPLING POINT (GEOTRACKER)
CA WELL STIM PROJ Well Stimulation Project (GEOTRACKER)
MINES MRDS Mineral Resources Data System

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

CA RGA LF Recovered Government Archive Solid Waste Facilities List
CA RGA LUST Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

A review of the SEMS-ARCHIVE list, as provided by EDR, and dated 12/30/2020 has revealed that there are 5 SEMS-ARCHIVE sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
DIABLO SERVICE CORP Site ID: 0900137 EPA Id: CAD982357956	595 E 3RD	NE 0 - 1/8 (0.032 mi.)	B24	138
K AND S BODY SHOP	***600 E. 3RD STREET***	***ENE 0 - 1/8 (0.066 mi.)***	***D31***	***164***

Site ID: 0905524 EPA Id: CASFN0905524				
DELTA AUTO WRECKER	***6 INDUSTRY ROAD***	***E 0 - 1/8 (0.098 mi.)***	***F36***	***175***
KOCH CARBON INC. Site ID: 0905525 EPA Id: CASFN0905525	700-707 E. 3RD STREE	E 1/8 - 1/4 (0.142 mi.)	59	285
GWF POWER SYSTEM Site ID: 0905522 EPA Id: CASFN0905522	895 E. 3RD STREET	E 1/4 - 1/2 (0.381 mi.)	T113	638

Federal RCRA CORRACTS facilities list

CORRACTS: CORRACTS is a list of handlers with RCRA Corrective Action Activity. This report shows which nationally-defined corrective action core events have occurred for every handler that has had corrective action activity.

A review of the CORRACTS list, as provided by EDR, and dated 12/14/2020 has revealed that there is 1 CORRACTS site within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
PITTSBURG GENERATING EPA ID:: CAT080011695	***696 W 10TH ST***	***W 1/2 - 1 (0.981 mi.)***	***W127***	***748***

Federal RCRA generators list

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 12/14/2020 has revealed that there is 1 RCRA-LQG site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
TESORO PITTSBURG TER EPA ID:: CAR000091496	***535 E 3RD ST***	***NE 0 - 1/8 (0.023 mi.)***	***B16***	***111***

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 12/14/2020 has revealed that there are 4

RCRA-SQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
FAUTLESS CLEANERS EPA ID:: CAD981617491	***427 E 10TH ST***	***SSW 0 - 1/8 (0.107 mi.)***	***G43***	***212***

Lower Elevation	Address	Direction / Distance	Map ID	Page
CITY OF PITTSBURG EPA ID:: CAP000081190	593 3RD ST	NE 0 - 1/8 (0.030 mi.)	B17	119
TOSCO CORPORATION, D EPA ID:: CAD000629030	595 EAST THIRD STREE	NE 0 - 1/8 (0.032 mi.)	B19	123
K AND S BODY SHOP EPA ID:: CAR000002287	***598 E 3RD ST***	***ENE 0 - 1/8 (0.064 mi.)***	***D30***	***152***

State- and tribal - equivalent NPL

CA RESPONSE: Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

A review of the CA RESPONSE list, as provided by EDR, has revealed that there is 1 CA RESPONSE site within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
DELTA AUTO WRECKER Database: RESPONSE, Date of Government Version: 10/26/2020 Status: Active Facility Id: 07750026	***6 INDUSTRY ROAD***	***E 0 - 1/8 (0.098 mi.)***	***F36***	***175***

State- and tribal - equivalent CERCLIS

CA ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the CA ENVIROSTOR list, as provided by EDR, and dated 10/26/2020 has revealed that there are 14 CA ENVIROSTOR sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BURLINGTON NORTHERN Facility Id: 70000118	***ADJOINING USS POSCO***	***SSE 1/8 - 1/4 (0.242 mi.)***	***94***	***381***

Status: Active

SIGNODE SUPPLY CORP.	***1 LESLIE DR***	***WSW 1/2 - 1 (0.583 mi.)***	***119***	***659***
Facility Id: 60002656				
Status: Active				
PITTSBURG HIGH SCHOO	***250 SCHOOL STREET***	***SSW 1/2 - 1 (0.592 mi.)***	***V120***	***668***
Facility Id: 60000830				
Status: No Action Required				
PITTSBURG SENIOR HIG	***250 SCHOOL STREET***	***SSW 1/2 - 1 (0.592 mi.)***	***V121***	***671***
Facility Id: 60000879				
Status: No Further Action				

Lower Elevation	Address	Direction / Distance	Map ID	Page
K AND S BODY SHOP	***600 E. 3RD STREET***	***ENE 0 - 1/8 (0.066 mi.)***	***D31***	***164***
Facility Id: 07750025				
Status: No Further Action				
DELTA AUTO WRECKER	***6 INDUSTRY ROAD***	***E 0 - 1/8 (0.098 mi.)***	***F36***	***175***
Facility Id: 07750026				
Status: Active				
KOCH CARBON LLC	***707 E 3RD ST***	***E 1/8 - 1/4 (0.242 mi.)***	***Q98***	***491***
Facility Id: 71003798				
Status: Refer: Other Agency				
KOCH CARBON INC.	700- 707 E. 3RD STRE	E 1/4 - 1/2 (0.288 mi.)	Q105	578
Facility Id: 07290043				
Status: Refer: RWQCB				
GWF POWER SYSTEMS,LP	***895 E 3RD STREET***	***E 1/4 - 1/2 (0.381 mi.)***	***T111***	***615***
Facility Id: 07490047				
Status: Certified O&M - Land Use Restrictions Only				
PITTSBURG MARINA EXP	MONTEZUMA & CODY	NNW 1/2 - 1 (0.512 mi.)	117	653
Facility Id: 07150006				
Status: No Further Action				
MARINA SCHOOL EXPANS	***EAST 8TH AND EAST 10***	***W 1/2 - 1 (0.522 mi.)***	***118***	***654***
Facility Id: 70000066				
Status: No Further Action				
TRANS BAY CABLE CONV	***570 TO 620 & 650 W.***	***W 1/2 - 1 (0.874 mi.)***	***123***	***681***
Facility Id: 60000487				
Status: Certified O&M - Land Use Restrictions Only				
PG&E PITTSBURG POWER	595 WEST 10TH STREET	W 1/2 - 1 (0.900 mi.)	124	697
Facility Id: 07490048				
Status: No Action Required				
NRG DELTA, LLC	***696 W 10TH STREET***	***W 1/2 - 1 (0.981 mi.)***	***W125***	***698***
Facility Id: 80001834				
Status: Active				

State and tribal leaking storage tank lists

CA LUST: Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the CA LUST list, as provided by EDR, has revealed that there are 17 CA LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
PITTSBURG PLUMBING	***441 10TH ST E***	***S 0 - 1/8 (0.083 mi.)***	***E33***	***167***
Database: LUST REG 2, Date of Government Version: 09/30/2004 Facility Id: 07-0478 Facility Status: Preliminary site assessment underway				
FAULTLESS CLEANERS	***427 10TH ST E***	***SSW 0 - 1/8 (0.117 mi.)***	***G47***	***247***
Database: LUST REG 2, Date of Government Version: 09/30/2004 Database: LUST, Date of Government Version: 12/04/2020 Status: Completed - Case Closed Facility Id: 07-0574 Facility Status: Case Closed Global Id: T0601300530 date9: 2/22/1999				
PITTSBURG PLUMBING	441 10TH ST E	SSW 0 - 1/8 (0.120 mi.)	G48	250
Database: LUST, Date of Government Version: 12/04/2020 Status: Completed - Case Closed Global Id: T0601300442				
CATALINE BUILT HOMES	***1050 LOS MEDANOS ST***	***SW 1/8 - 1/4 (0.185 mi.)***	***M80***	***341***
Database: LUST REG 2, Date of Government Version: 09/30/2004 Database: LUST, Date of Government Version: 12/04/2020 Status: Completed - Case Closed Facility Id: 07-0516 Facility Status: Case Closed Global Id: T0601300477 date9: 3/21/1997				
CITY OF PITTSBURG	***985 RAILROAD AVE***	***WSW 1/8 - 1/4 (0.220 mi.)***	***O87***	***352***
Database: LUST, Date of Government Version: 12/04/2020 Status: Completed - Case Closed Global Id: T0601359176				
REDDING PETROLEUM IN	***1001 RAILROAD AVE***	***WSW 1/8 - 1/4 (0.241 mi.)***	***P91***	***362***
Database: LUST, Date of Government Version: 12/04/2020 Status: Open - Eligible for Closure Global Id: T0601382732				
REDDING PETROLEUM	***1001 RAILROAD AVENUE***	***WSW 1/8 - 1/4 (0.241 mi.)***	***P93***	***380***
Database: LUST REG 2, Date of Government Version: 09/30/2004 Facility Id: 07-0832 Facility Status: Preliminary site assessment workplan submitted				
BELL GAS	***998 RAILROAD AVE***	***WSW 1/4 - 1/2 (0.254 mi.)***	***P101***	***549***
Database: LUST REG 2, Date of Government Version: 09/30/2004 Database: LUST, Date of Government Version: 12/04/2020 Status: Completed - Case Closed Facility Id: 07-0588 Facility Status: Leak being confirmed				

Global Id: T0601300541

PITTSBURG ST REDEVLO 1095 RAILROAD AVE SW 1/4 - 1/2 (0.271 mi.) R103 574
Database: LUST REG 2, Date of Government Version: 09/30/2004
Facility Id: 07-0093
Facility Status: Case Closed
date9: 10/1/1997

PITTSBURG REDEVLOPME 1095 RAILROAD AVE SW 1/4 - 1/2 (0.271 mi.) R104 574
Database: LUST, Date of Government Version: 12/04/2020
Status: Completed - Case Closed
Global Id: T0601300089

PEPSI COLA COMPANY 338 CENTRAL AVE SW 1/4 - 1/2 (0.339 mi.) S107 585
Database: LUST, Date of Government Version: 12/04/2020
Status: Completed - Case Closed
Global Id: T0601300216

PEPSI COLA COMPANY 338 CENTRAL AVE SW 1/4 - 1/2 (0.339 mi.) S108 611
Database: LUST REG 2, Date of Government Version: 09/30/2004
Facility Id: 07-0233
Facility Status: Leak being confirmed

SANTA FE PITTSBURG D 1 SANTA FE AVE W WSW 1/4 - 1/2 (0.370 mi.) 109 613
Database: LUST REG 2, Date of Government Version: 09/30/2004
Database: LUST, Date of Government Version: 12/04/2020
Status: Completed - Case Closed
Facility Id: 07-0470
Facility Status: Case Closed
Global Id: T0601300435
date9: 7/23/1998

PITTSBURG REDEVELOPM 1300 RAILROAD SW 1/4 - 1/2 (0.423 mi.) U115 645
Database: LUST, Date of Government Version: 12/04/2020
Status: Completed - Case Closed
Global Id: T0601300441

PITTSBURG ST RDEVELO 1300 RAILROAD AVE SW 1/4 - 1/2 (0.423 mi.) U116 652
Database: LUST REG 2, Date of Government Version: 09/30/2004
Facility Id: 07-0477
Facility Status: Preliminary site assessment underway

Lower Elevation	Address	Direction / Distance	Map ID	Page

CAL ASIA DEVELOPMENT 391 3RD ST E N 0 - 1/8 (0.009 mi.) 15 108
Database: LUST REG 2, Date of Government Version: 09/30/2004
Database: LUST, Date of Government Version: 12/04/2020
Status: Completed - Case Closed
Facility Id: 07-0046
Facility Status: Case Closed
Global Id: T0601300043
date9: 3/24/1997

PITTSBURG MARINA 51 MARINA BLVD NW 1/4 - 1/2 (0.320 mi.) 106 579
Database: LUST REG 2, Date of Government Version: 09/30/2004
Database: LUST, Date of Government Version: 12/04/2020
Status: Completed - Case Closed
Facility Id: 07-0784
Facility Status: Leak being confirmed
Global Id: T0601300729

EXECUTIVE SUMMARY

CA CPS-SLIC: Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the CA CPS-SLIC list, as provided by EDR, has revealed that there are 5 CA CPS-SLIC sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
MANVILLE SALES CORP	UNKNOWN 3RD & HARBOR	NE 0 - 1/8 (0.008 mi.)	B14	108
Database: SLIC REG 2, Date of Government Version: 09/30/2004 Facility Id: 07S0091				
DIABLO SERVICES	***595 EAST THIRD ST***	***NE 0 - 1/8 (0.032 mi.)***	***B18***	***122***
Database: SLIC REG 2, Date of Government Version: 09/30/2004 Database: CPS-SLIC, Date of Government Version: 12/04/2020 Facility Status: Open - Site Assessment Facility Id: SL1822C630 Global Id: SL1822C630				
695 EAST THIRD STREE	***695 EAST THIRD STREE***	***ENE 1/8 - 1/4 (0.147 mi.)***	***J65***	***304***
Database: CPS-SLIC, Date of Government Version: 12/04/2020 Facility Status: Completed - Case Closed Global Id: SL0601397790				
GWF POWER SYSTEMS IN	***707-799 3RD ST E***	***E 1/8 - 1/4 (0.242 mi.)***	***Q97***	***490***
Database: CPS-SLIC, Date of Government Version: 12/04/2020 Facility Status: Open - Inactive Global Id: SLT2O209312				
KOCH CARBON LLC	***707 E 3RD ST***	***E 1/8 - 1/4 (0.242 mi.)***	***Q98***	***491***
Database: CPS-SLIC, Date of Government Version: 12/04/2020 Facility Status: Completed - Case Closed Global Id: SL0601387949				

State and tribal registered storage tank lists

CA UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the CA UST list, as provided by EDR, has revealed that there are 2 CA UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RAMOS OIL - PITTSBUR	1001 RAILROAD AVE	WSW 1/8 - 1/4 (0.241 mi.)	P92	380
Database: UST, Date of Government Version: 12/04/2020 Facility Id: 07-000-701647				
PITTSBURG VALERO	1005 RAILROAD AVE	WSW 1/8 - 1/4 (0.248 mi.)	P99	515
Database: UST, Date of Government Version: 12/04/2020 Facility Id: 07-000-701647				

CA AST: A listing of aboveground storage tank petroleum storage tank locations.

A review of the CA AST list, as provided by EDR, has revealed that there is 1 CA AST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
TESORO REFINING & MA	595 3RD ST E	NE 0 - 1/8 (0.032 mi.)	B22	134
Database: AST, Date of Government Version: 07/06/2016				

State and tribal voluntary cleanup sites

CA VCP: Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

A review of the CA VCP list, as provided by EDR, and dated 10/26/2020 has revealed that there are 2 CA VCP sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BURLINGTON NORTHERN	***ADJOINING USS POSCO***	***SSE 1/8 - 1/4 (0.242 mi.)***	***94***	***381***
Status: Active				
Facility Id: 70000118				

Lower Elevation	Address	Direction / Distance	Map ID	Page
GWF POWER SYSTEMS,LP	***895 E 3RD STREET***	***E 1/4 - 1/2 (0.381 mi.)***	***T111***	***615***
Status: Certified O&M - Land Use Restrictions Only				
Facility Id: 07490047				

State and tribal Brownfields sites

CA BROWNFIELDS: A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

A review of the CA BROWNFIELDS list, as provided by EDR, and dated 09/21/2020 has revealed that there is 1 CA BROWNFIELDS site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
695 EAST THIRD STREE	***695 EAST THIRD STREE***	***ENE 1/8 - 1/4 (0.147 mi.)***	***J65***	***304***

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: The EPA's listing of Brownfields properties from the Cleanups in My Community program,

which provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

A review of the US BROWNFIELDS list, as provided by EDR, and dated 09/14/2020 has revealed that there are 4 US BROWNFIELDS sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
8 & 12 INDUSTRY ROAD ACRES property ID: 240328 Cleanup Completion Date: -	8-12 INDUSTRY ROAD	E 0 - 1/8 (0.095 mi.)	F35	172
12 INDUSTRY ROAD ACRES property ID: 240329 Cleanup Completion Date: -	***12 INDUSTRY ROAD***	***E 0 - 1/8 (0.101 mi.)***	***F40***	***207***
BLUE PLANET ACRES property ID: 239512 Cleanup Completion Date: -	***895 E. 3RD STREET***	***E 1/4 - 1/2 (0.381 mi.)***	***T112***	***635***
THE BERM ACRES property ID: 238078 Cleanup Completion Date: -	27 MARINA BOULEVARD	NW 1/4 - 1/2 (0.409 mi.)	114	639

Local Lists of Hazardous waste / Contaminated Sites

CA CERS HAZ WASTE: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

A review of the CA CERS HAZ WASTE list, as provided by EDR, and dated 10/19/2020 has revealed that there are 15 CA CERS HAZ WASTE sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
UNIVERSAL AUTO REPAI	***499 E 10TH STREET***	***S 0 - 1/8 (0.108 mi.)***	***H45***	***233***
BANISTER ELECTRIC, I	***498 E 10TH ST***	***S 1/8 - 1/4 (0.130 mi.)***	***H51***	***252***
LAS PALMAS AUTO REPA	***418 E 10TH ST***	***SSW 1/8 - 1/4 (0.132 mi.)***	***G54***	***264***
WEST COAST AUTO BODY	***430 E 10TH ST***	***SSW 1/8 - 1/4 (0.132 mi.)***	***G55***	***273***
PITTSBURG MOTOR PART	360 10TH ST E	SW 1/8 - 1/4 (0.146 mi.)	I60	286
JC'S AUTO BODY	***999 HARBOR ST STE C***	***S 1/8 - 1/4 (0.148 mi.)***	***H70***	***312***
O'BRIENS AUTOMOTIVE	***999 HARBOR ST STE A***	***S 1/8 - 1/4 (0.148 mi.)***	***H71***	***314***
GRANBERG PUMP & METE	***1051 LOS MEDANOS ST***	***SW 1/8 - 1/4 (0.185 mi.)***	***M77***	***330***
CALIFORNIA EXPANDED	***1001A PITTSBURG ANTI***	***S 1/8 - 1/4 (0.206 mi.)***	***N82***	***344***
PITTSBURG VALERO	***1005 RAILROAD AVE***	***WSW 1/8 - 1/4 (0.248 mi.)***	***P100***	***516***

Lower Elevation	Address	Direction / Distance	Map ID	Page
AUTO TRUCK & MARINE	***601 INDUSTRY RD***	***E 0 - 1/8 (0.041 mi.)***	***C26***	***142***
K AND S BODY SHOP	***598 E 3RD ST***	***ENE 0 - 1/8 (0.064 mi.)***	***D30***	***152***
PITTSBURG DISPOSL DB	***12 INDUSTRY RD***	***E 0 - 1/8 (0.101 mi.)***	***F39***	***190***
MARINE EXPRESS PITTS	***695 E 3RD ST***	***ENE 1/8 - 1/4 (0.147 mi.)***	***J63***	***292***
KOCH CARBON LLC	***707 E 3RD ST***	***E 1/8 - 1/4 (0.242 mi.)***	***Q98***	***491***

CA Toxic Pits: The Toxic Pits Cleanup Act Sites database identifies sites suspected of containing hazardous substances where cleanup has not yet been completed. The data come from the State Water Resources Control Board.

A review of the CA Toxic Pits list, as provided by EDR, and dated 07/01/1995 has revealed that there is 1 CA Toxic Pits site within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
PG&E, PITTSBURG POWE Closure Date: / / Task #: 02008 Status: ACTIVE	696 W. 10TH STREET	W 1/2 - 1 (0.981 mi.)	W126	748

Local Lists of Registered Storage Tanks

CA SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the CA SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 3 CA SWEEPS UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CATALINE BUILT HOMES Comp Number: 12590	***1050 LOS MEDANOS STR***	***SW 1/8 - 1/4 (0.185 mi.)***	***M79***	***339***
REDDING PETROLEUM IN Status: A Tank Status: A Comp Number: 1647	***1001 RAILROAD AVE***	***WSW 1/8 - 1/4 (0.241 mi.)***	***P91***	***362***

Lower Elevation	Address	Direction / Distance	Map ID	Page
PITTSBURG DISPOSAL S Comp Number: 70075	12 INDUSTRY WAY	E 0 - 1/8 (0.101 mi.)	F38	189

CA HIST UST: Historical UST Registered Database.

A review of the CA HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 9 CA HIST UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BANISTER ELECTRIC, I Facility Id: 00000013084	***498 E 10TH ST***	***S 1/8 - 1/4 (0.130 mi.)***	***H51***	***252***
RIVERVIEW FIRE STATI Facility Id: 00000022333	***200 E 6TH ST***	***W 1/8 - 1/4 (0.156 mi.)***	***K72***	***325***
CATALINE BUILT HOMES Facility Id: 00000012590	***1050 LOS MEDANOS STR***	***SW 1/8 - 1/4 (0.185 mi.)***	***M79***	***339***
VACANIT LOTS	085-222-014-4TH LOT	NW 1/8 - 1/4 (0.218 mi.)	L86	352

Facility Id: 00000056919

REDDING PETROLEUM IN	***1001 RAILROAD AVE***	***WSW 1/8 - 1/4 (0.241 mi.)***	***P91***	***362***
Facility Id: 00000001647				

Lower Elevation	Address	Direction / Distance	Map ID	Page
JOHNS-MANYILLE-ROOFI	E 3RD AND HARDOR STR	NE 0 - 1/8 (0.007 mi.)	B12	102
JOHNS-MANVILLE-ROOFI	***E 3RD & HARBOR STREE***	***NE 0 - 1/8 (0.007 mi.)***	***B13***	***103***
Facility Id: 00000021540				
MARINE EXPRESS PITTS	***695 E 3RD ST***	***ENE 1/8 - 1/4 (0.147 mi.)***	***J63***	***292***
JERICO DREDGING INC.	695 E 3RD ST	ENE 1/8 - 1/4 (0.147 mi.)	J66	306
Facility Id: 00000019252				

CA CERS TANKS: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

A review of the CA CERS TANKS list, as provided by EDR, and dated 10/19/2020 has revealed that there are 3 CA CERS TANKS sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
PITTSBURG VALERO	***1005 RAILROAD AVE***	***WSW 1/8 - 1/4 (0.248 mi.)***	***P100***	***516***

Lower Elevation	Address	Direction / Distance	Map ID	Page
PITTSBURG DISPOSL DB	***12 INDUSTRY RD***	***E 0 - 1/8 (0.101 mi.)***	***F39***	***190***
KOCH CARBON LLC	***707 E 3RD ST***	***E 1/8 - 1/4 (0.242 mi.)***	***Q96***	***405***

Local Land Records

CA DEED: The use of recorded land use restrictions is one of the methods the DTSC uses to protect the public from unsafe exposures to hazardous substances and wastes .

A review of the CA DEED list, as provided by EDR, and dated 11/30/2020 has revealed that there is 1 CA DEED site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
GWF POWER SYSTEMS,LP	***895 E 3RD STREET***	***E 1/4 - 1/2 (0.381 mi.)***	***T111***	***615***
Status: CERTIFIED O&M - LAND USE RESTRICTIONS ONLY				
Envirostor ID: 7490047				

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 12/14/2020 has revealed that

there are 15 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BAYOU TRANSPORTATION EPA ID:: CAR000219956	10 SANTA CRUZ CT	WSW 0 - 1/8 (0.098 mi.)	37	186
BAY SAW AND TOOL EPA ID:: CAL000152460	498 E 10TH ST	S 1/8 - 1/4 (0.130 mi.)	H52	259
MY GENERATOR GUY EPA ID:: CAL000453170	498 E 10TH ST	S 1/8 - 1/4 (0.130 mi.)	H53	261
WEST COAST AUTO BODY EPA ID:: CAL000431161	430 E 10TH ST	SSW 1/8 - 1/4 (0.132 mi.)	G56	282
PITTSBURG MOTOR PART EPA ID:: CAL000005785	360 E 10TH ST	SW 1/8 - 1/4 (0.146 mi.)	I61	289
JCS AUTO BODY EPA ID:: CAL000436526	999 HARBOR ST STE C	S 1/8 - 1/4 (0.148 mi.)	H67	306
OBRIENS AUTO REPAIR EPA ID:: CAL000387777	999 HARBOR ST STE D	S 1/8 - 1/4 (0.148 mi.)	H68	309
GRANBERG PUMPS METER EPA ID:: CAL000410872	1051 LOS MEDANOS ST	SW 1/8 - 1/4 (0.185 mi.)	M76	327
PITTSBURG, CA MAIN P	835 RAILROAD AVENUE	WSW 1/8 - 1/4 (0.214 mi.)	O84	349
RAMOS OIL EPA ID:: CAL000254760	1001 RAILROAD AVE	WSW 1/8 - 1/4 (0.241 mi.)	P90	359

Lower Elevation	Address	Direction / Distance	Map ID	Page
AUTO TRUCK & MARINE EPA ID:: CAL000064404	601 INDUSTRY RD	E 0 - 1/8 (0.041 mi.)	C25	139
PITTSBURG DISPOSL DB EPA ID:: CAD006814958	***12 INDUSTRY RD***	***E 0 - 1/8 (0.101 mi.)***	***F39***	***190***
PACIFIC COAST GENERA EPA ID:: CAL000349653	12 INDUSTRY RD	E 0 - 1/8 (0.101 mi.)	F41	209
MARINE EXPRESS, INC EPA ID:: CAL000434568	695 E. THIRD STREET	ENE 1/8 - 1/4 (0.147 mi.)	J64	302
KOCH CARBON LLC EPA ID:: CAL000172095	707 E 3RD ST	E 1/8 - 1/4 (0.242 mi.)	Q95	403

CA Cortese: The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

A review of the CA Cortese list, as provided by EDR, and dated 06/22/2020 has revealed that there are 14 CA Cortese sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
PITTSBURG PLUMBING Cleanup Status: COMPLETED - CASE CLOSED	***441 10TH ST E***	***S 0 - 1/8 (0.083 mi.)***	***E33***	***167***
FAULTLESS CLEANERS Cleanup Status: COMPLETED - CASE CLOSED	***427 10TH ST E***	***SSW 0 - 1/8 (0.117 mi.)***	***G47***	***247***
CATALINE BUILT HOMES	***1050 LOS MEDANOS ST***	***SW 1/8 - 1/4 (0.185 mi.)***	***M80***	***341***

Cleanup Status: COMPLETED - CASE CLOSED

CITY OF PITTSBURG	***985 RAILROAD AVE***	***WSW 1/8 - 1/4 (0.220 mi.)***	***O88***	***357***
Cleanup Status: COMPLETED - CASE CLOSED				
REDDING PETROLEUM	***1001 RAILROAD AVENUE***	***WSW 1/8 - 1/4 (0.241 mi.)***	***P93***	***380***
Cleanup Status: OPEN - ELIGIBLE FOR CLOSURE				
BELL GAS	***998 RAILROAD AVE***	***WSW 1/4 - 1/2 (0.254 mi.)***	***P101***	***549***
Cleanup Status: COMPLETED - CASE CLOSED				
PITTSBURG REDEVLOPME	***1095 RAILROAD AVE***	***SW 1/4 - 1/2 (0.271 mi.)***	***R104***	***574***
Cleanup Status: COMPLETED - CASE CLOSED				
PEPSI COLA COMPANY	***338 CENTRAL AVE***	***SW 1/4 - 1/2 (0.339 mi.)***	***S108***	***611***
Cleanup Status: COMPLETED - CASE CLOSED				
SANTA FE PITTSBURG D	***1 SANTA FE AVE W***	***WSW 1/4 - 1/2 (0.370 mi.)***	***109***	***613***
Cleanup Status: COMPLETED - CASE CLOSED				
PITTSBURG ST RDEVELO	***1300 RAILROAD AVE***	***SW 1/4 - 1/2 (0.423 mi.)***	***U116***	***652***
Cleanup Status: COMPLETED - CASE CLOSED				

Lower Elevation	**Address**	**Direction / Distance**	**Map ID**	**Page**
CAL ASIA DEVELOPMENT	***391 3RD ST E***	***N 0 - 1/8 (0.009 mi.)***	***15***	***108***
Cleanup Status: COMPLETED - CASE CLOSED				
DIABLO SERVICE CORP.	***595 THIRD***	***NE 0 - 1/8 (0.032 mi.)***	***B21***	***127***
DELTA AUTO WRECKER	***6 INDUSTRY ROAD***	***E 0 - 1/8 (0.098 mi.)***	***F36***	***175***
Envirostor Id: 7750026				
Cleanup Status: ACTIVE				
PITTSBURG MARINA	***51 MARINA BLVD***	***NW 1/4 - 1/2 (0.320 mi.)***	***106***	***579***
Cleanup Status: COMPLETED - CASE CLOSED				

CA HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

A review of the CA HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there are 11 CA HIST CORTESE sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	**Address**	**Direction / Distance**	**Map ID**	**Page**
PITTSBURG PLUMBING	***441 10TH ST E***	***S 0 - 1/8 (0.083 mi.)***	***E33***	***167***
Reg Id: 07-0478				
FAULTLESS CLEANERS	***427 10TH ST E***	***SSW 0 - 1/8 (0.117 mi.)***	***G47***	***247***
Reg Id: 07-0574				
CATALINE BUILT HOMES	***1050 LOS MEDANOS ST***	***SW 1/8 - 1/4 (0.185 mi.)***	***M80***	***341***
Reg Id: 07-0516				
BELL GAS	***998 RAILROAD AVE***	***WSW 1/4 - 1/2 (0.254 mi.)***	***P101***	***549***
Reg Id: 07-0588				
RAILROAD AVENUE ICE	***1095 RAILROAD AVE***	***SW 1/4 - 1/2 (0.271 mi.)***	***R102***	***573***
Reg Id: 07-0093				
PEPSI COLA COMPANY	***338 CENTRAL AVE***	***SW 1/4 - 1/2 (0.339 mi.)***	***S107***	***585***
Reg Id: 07-0233				
SANTA FE PITTSBURG D	***1 SANTA FE AVE W***	***WSW 1/4 - 1/2 (0.370 mi.)***	***109***	***613***

Reg Id: 07-0470

PITTSBURG REDEVELOPM	***1300 RAILROAD***	***SW 1/4 - 1/2 (0.423 mi.)***	***U115***	***645***

Reg Id: 07-0477

Lower Elevation	Address	Direction / Distance	Map ID	Page
CAL ASIA DEVELOPMENT	***391 3RD ST E***	***N 0 - 1/8 (0.009 mi.)***	***15***	***108***
Reg Id: 07-0046				
PITTSBURG MARINA	***51 MARINA BLVD***	***NW 1/4 - 1/2 (0.320 mi.)***	***106***	***579***
Reg Id: 07-0784				
DIVING SYSTEMS INTER	895 3RD	E 1/4 - 1/2 (0.381 mi.)	T110	615
Reg Id: 3243				

CA HWP: Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

A review of the CA HWP list, as provided by EDR, and dated 11/13/2020 has revealed that there is 1 CA HWP site within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
NRG DELTA, LLC	***696 W 10TH STREET***	***W 1/2 - 1 (0.981 mi.)***	***W125***	***698***
EPA Id: CAT080011695				
Cleanup Status: CLOSED				

RI MANIFEST: Hazardous waste manifest information

A review of the RI MANIFEST list, as provided by EDR, and dated 12/31/2018 has revealed that there is 1 RI MANIFEST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
TESORO PITTSBURG TER	***535 E 3RD ST***	***NE 0 - 1/8 (0.023 mi.)***	***B16***	***111***
EPA Id: CAR000091496				
Manifest Document Number: 001988952SKS				

CA CONTRA COSTA CO. SITE LIST: Lists includes sites from the Underground Tank Program, Hazardous Waste Generator Program & Business Plan 12185 Program

A review of the CA CONTRA COSTA CO. SITE LIST list, as provided by EDR, and dated 10/19/2020 has revealed that there are 36 CA CONTRA COSTA CO. SITE LIST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
VETERAN'S BUILDING P	855 EAST ST	SW 0 - 1/8 (0.050 mi.)	28	151
Facility Id: FA0029455				
PITTSBURG PLUMBING	441 E 10TH ST	SSW 0 - 1/8 (0.107 mi.)	E42	212
Facility Id: FA0027995				
FAUTLESS CLEANERS	***427 E 10TH ST***	***SSW 0 - 1/8 (0.107 mi.)***	***G43***	***212***

Facility Id: FA0033393				
UNIVERSAL AUTO REPAI Facility Id: FA0033384	***499 E 10TH STREET***	***S 0 - 1/8 (0.108 mi.)***	***H45***	***233***
D & F AUTO SALES Facility Id: FA0028086	327 E 10TH ST	SW 1/8 - 1/4 (0.129 mi.)	I49	251
JOHN STANLEY AUTO BO Facility Id: FA0029610	325 E 10TH ST B	SW 1/8 - 1/4 (0.130 mi.)	I50	252
BANISTER ELECTRIC, I Facility Id: FA0031643	***498 E 10TH ST***	***S 1/8 - 1/4 (0.130 mi.)***	***H51***	***252***
LAS PALMAS AUTO REPA Facility Id: FA0027886	***418 E 10TH ST***	***SSW 1/8 - 1/4 (0.132 mi.)***	***G54***	***264***
WEST COAST AUTO BODY Facility Id: FA0031033	***430 E 10TH ST***	***SSW 1/8 - 1/4 (0.132 mi.)***	***G55***	***273***
ELECTRO MFG CO Facility Id: FA0028206	494 E 10TH ST	S 1/8 - 1/4 (0.132 mi.)	H57	285
FRANK DEROSA AND SON Facility Id: FA0028203	340 E 10TH ST	SW 1/8 - 1/4 (0.140 mi.)	I58	285
PITTSBURG MOTOR PART Facility Id: FA0033422	360 E 10TH ST	SW 1/8 - 1/4 (0.146 mi.)	I62	292
O'BRIENS AUTOMOTIVE Facility Id: FA0029489	999 HARBOR ST A	S 1/8 - 1/4 (0.148 mi.)	H69	311
JC'S AUTO BODY Facility Id: FA0041169	***999 HARBOR ST STE C***	***S 1/8 - 1/4 (0.148 mi.)***	***H70***	***312***
RIVERVIEW FIRE STATI Facility Id: FA0031935	***200 E 6TH ST***	***W 1/8 - 1/4 (0.156 mi.)***	***K72***	***325***
RIVERSIDE REDEVELOPM Facility Id: FA0028461	500 CUMBERLAND ST	WNW 1/8 - 1/4 (0.177 mi.)	73	326
MAGNOLI, ED Facility Id: FA0033253	192 7TH ST	W 1/8 - 1/4 (0.180 mi.)	K74	327
LAST CHANCE CLUB Facility Id: FA0033466	340 CUMBERLAND ST	NW 1/8 - 1/4 (0.184 mi.)	L75	327
GRANBERG PUMP & METE Facility Id: FA0039573	***1051 LOS MEDANOS ST***	***SW 1/8 - 1/4 (0.185 mi.)***	***M77***	***330***
DEROSA AUTO BODY Facility Id: FA0031017	***1090 HARBOR ST***	***S 1/8 - 1/4 (0.185 mi.)***	***N78***	***337***
CATALINE BUILT HOMES Facility Id: FA0031629	***1050 LOS MEDANOS ST***	***SW 1/8 - 1/4 (0.185 mi.)***	***M80***	***341***
CALIFORNIA EXPANDED Facility Id: FA0031484	1001 PITTSBURG-ANTIO	S 1/8 - 1/4 (0.206 mi.)	N81	343
IMPULSE TECHNOLOGY Facility Id: FA0028204	695 RAILROAD AVE	W 1/8 - 1/4 (0.211 mi.)	83	348
CALIFORNIA THEATER Facility Id: FA0031114	351 RAILROAD AVE	NW 1/8 - 1/4 (0.215 mi.)	L85	351
CITY OF PITTSBURG Facility Id: FA0030255	***985 RAILROAD AVE***	***WSW 1/8 - 1/4 (0.220 mi.)***	***O87***	***352***
PITTSBURG REDEVELOPM	4TH ST & RAILROAD AV	WNW 1/8 - 1/4 (0.234 mi.)	89	359

Facility Id: FA0033362				
PITTSBURG VALERO Facility Id: FA0030687	***1005 RAILROAD AVE***	***WSW 1/8 - 1/4 (0.248 mi.)***	***P100***	***516***

Lower Elevation	Address	Direction / Distance	Map ID	Page
CAL ASIA DEVELOPMENT Facility Id: FA0032592	***391 3RD ST E***	***N 0 - 1/8 (0.009 mi.)***	***15***	***108***
TESORO PITTSBURG TER Facility Id: FA0032877	***595 E 3RD ST***	***NE 0 - 1/8 (0.032 mi.)***	***B23***	***135***
AUTO TRUCK & MARINE Facility Id: FA0030266	601 INDUSTRY RD	E 0 - 1/8 (0.041 mi.)	C27	150
K AND S BODY SHOP Facility Id: FA0028194	***598 E 3RD ST***	***ENE 0 - 1/8 (0.064 mi.)***	***D30***	***152***
B G'S MARINE CENTER, Facility Id: FA0028262	3 INDUSTRY RD	E 0 - 1/8 (0.072 mi.)	C32	167
DELTA AUTO WRECKER Facility Id: FA0028212	***6 INDUSTRY ROAD***	***E 0 - 1/8 (0.098 mi.)***	***F36***	***175***
PITTSBURG DISPOSL DB Facility Id: FA0032630	***12 INDUSTRY RD***	***E 0 - 1/8 (0.101 mi.)***	***F39***	***190***
MARINE EXPRESS PITTS Facility Id: FA0039855	***695 E 3RD ST***	***ENE 1/8 - 1/4 (0.147 mi.)***	***J63***	***292***
KOCH CARBON LLC Facility Id: FA0031875	***707 E 3RD ST***	***E 1/8 - 1/4 (0.242 mi.)***	***Q98***	***491***

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

A review of the EDR MGP list, as provided by EDR, has revealed that there is 1 EDR MGP site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
PG AND E GAS PLANT P	APPROX 1/2 MILE E HA	ESE 1/2 - 1 (0.626 mi.)	122	681

EXECUTIVE SUMMARY

EDR Hist Auto: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Auto list, as provided by EDR, has revealed that there are 4 EDR Hist Auto sites within approximately 0.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
DULCERIA ARCO IRIS	409 E 10TH ST	SSW 0 - 1/8 (0.110 mi.)	G46	247

Lower Elevation	Address	Direction / Distance	Map ID	Page
TESORO REFINING & MA	595 E 3RD ST	NE 0 - 1/8 (0.032 mi.)	B20	126
D & L TRANSMISSION	598 EAST 3RD ST	ENE 0 - 1/8 (0.064 mi.)	D29	151
H & B SEASIDE	301 3RD ST	NNW 0 - 1/8 (0.084 mi.)	34	172

EDR Hist Cleaner: EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Cleaner list, as provided by EDR, has revealed that there is 1 EDR Hist Cleaner site within approximately 0.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
FAULTLESS CLEANERS	427 E 10TH ST	SSW 0 - 1/8 (0.107 mi.)	G44	232

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 2 records.

Site Name	Database(s)
PG&E GAS PLANT PITTSBURG	SEMS-ARCHIVE
PACIFIC GAS AND ELECTRIC/SHELL - W	CA BOND EXP. PLAN

OVERVIEW MAP - 6377157.2S



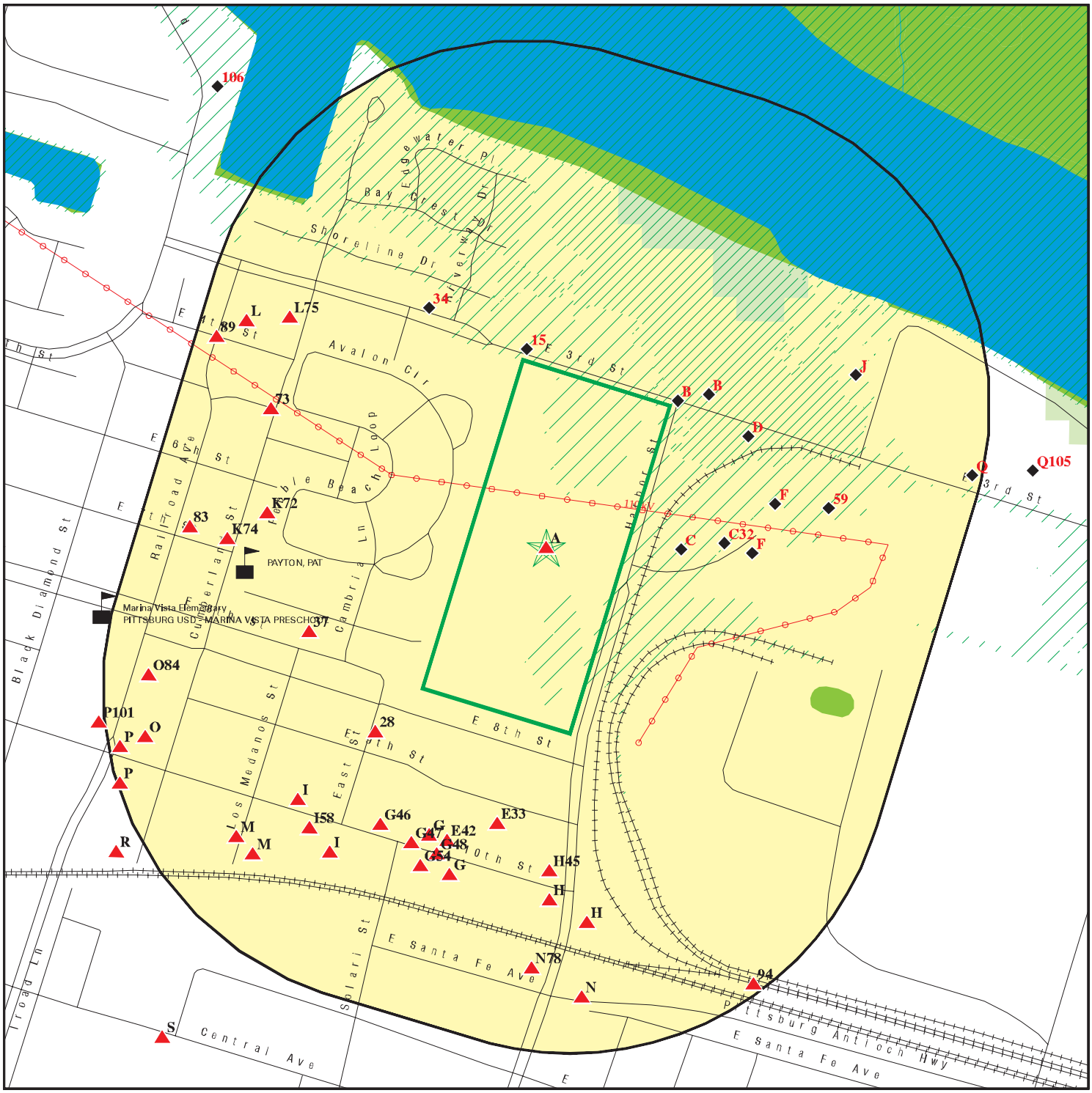
- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- County Boundary
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 420 East 3rd Street	CLIENT: GSI Environmental
ADDRESS: 420 East 3rd Street Pittsburg CA 94565	CONTACT: Jennifer Duffield INQUIRY #: 6377157.2s
LAT/LONG: 38.030244 / 121.878868	DATE: February 23, 2021 11:05 am

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DETAIL MAP - 6377157.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

0 1/16 1/8 1/4 Miles

Indian Reservations BIA

Power transmission lines

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

State Wetlands

Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 420 East 3rd Street	CLIENT: GSI Environmental
ADDRESS: 420 East 3rd Street Pittsburg CA 94565	CONTACT: Jennifer Duffield INQUIRY #: 6377157.2s
LAT/LONG: 38.030244 / 121.878868	DATE: February 23, 2021 11:06 am

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		3	1	1	NR	NR	5
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	1	NR	1
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		1	0	NR	NR	NR	1
RCRA-SQG	0.250		4	0	NR	NR	NR	4
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001	1	0	NR	NR	NR	NR	1
State- and tribal - equivalent NPL								
CA RESPONSE	1.000		1	0	0	0	NR	1
State- and tribal - equivalent CERCLIS								
CA ENVIROSTOR	1.000	1	2	2	2	8	NR	15
State and tribal landfill and/or solid waste disposal site lists								
CA SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
CA LUST	0.500		4	4	9	NR	NR	17

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
CA CPS-SLIC	0.500	1	2	3	0	NR	NR	6
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
CA UST	0.250		0	2	NR	NR	NR	2
CA AST	0.250		1	0	NR	NR	NR	1
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
CA VCP	0.500	1	0	1	1	NR	NR	3
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
CA BROWNFIELDS	0.500		0	1	0	NR	NR	1
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		2	0	2	NR	NR	4
Local Lists of Landfill / Solid Waste Disposal Sites								
CA WMUDS/SWAT	0.500		0	0	0	NR	NR	0
CA SWRCY	0.500		0	0	0	NR	NR	0
CA HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
CA HIST Cal-Sites	1.000		0	0	0	0	NR	0
CA SCH	0.250		0	0	NR	NR	NR	0
CA CDL	0.001		0	NR	NR	NR	NR	0
CA CERS HAZ WASTE	0.250		4	11	NR	NR	NR	15
CA Toxic Pits	1.000		0	0	0	1	NR	1
US CDL	0.001		0	NR	NR	NR	NR	0
CA PFAS	0.500		0	0	0	NR	NR	0
Local Lists of Registered Storage Tanks								
CA SWEEPS UST	0.250		1	2	NR	NR	NR	3
CA HIST UST	0.250		2	7	NR	NR	NR	9
CA FID UST	0.250		0	0	NR	NR	NR	0
CA CERS TANKS	0.250		1	2	NR	NR	NR	3
Local Land Records								
CA LIENS	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LIENS 2	0.001		0	NR	NR	NR	NR	0
CA DEED	0.500	1	0	0	1	NR	NR	2
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
CA CHMIRS	0.001	1	0	NR	NR	NR	NR	1
CA LDS	0.001		0	NR	NR	NR	NR	0
CA MCS	0.001		0	NR	NR	NR	NR	0
CA SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250	1	4	11	NR	NR	NR	16
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	0.001	2	0	NR	NR	NR	NR	2
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
CA Cortese	0.500		5	3	6	NR	NR	14
CA CUPA Listings	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
CA DRYCLEANERS	0.250		0	0	NR	NR	NR	0
CA EMI	0.001		0	NR	NR	NR	NR	0
CA ENF	0.001		0	NR	NR	NR	NR	0
CA Financial Assurance	0.001		0	NR	NR	NR	NR	0
CA HAZNET	0.001	3	0	NR	NR	NR	NR	3
CA ICE	0.001		0	NR	NR	NR	NR	0
CA HIST CORTESE	0.500		3	1	7	NR	NR	11
CA HWP	1.000		0	0	0	1	NR	1
CA HWT	0.250		0	0	NR	NR	NR	0
RI MANIFEST	0.250		1	0	NR	NR	NR	1
CA MINES	0.250		0	0	NR	NR	NR	0
CA MWMP	0.250		0	0	NR	NR	NR	0
CA NPDES	0.001	2	0	NR	NR	NR	NR	2
CA PEST LIC	0.001		0	NR	NR	NR	NR	0
CA PROC	0.500		0	0	0	NR	NR	0
CA Notify 65	1.000		0	0	0	0	NR	0
CA CONTRA COSTA CO. SITE LIST	TP	1	11	25	NR	NR	NR	37
CA UIC	0.001		0	NR	NR	NR	NR	0
CA UIC GEO	0.001		0	NR	NR	NR	NR	0
CA WASTEWATER PITS	0.500		0	0	0	NR	NR	0
CA WDS	0.001		0	NR	NR	NR	NR	0
CA WIP	0.250		0	0	NR	NR	NR	0
CA MILITARY PRIV SITES	0.001		0	NR	NR	NR	NR	0
CA PROJECT	0.001		0	NR	NR	NR	NR	0
CA WDR	0.001		0	NR	NR	NR	NR	0
CA CIWQS	0.001	2	0	NR	NR	NR	NR	2
CA CERS	0.001	1	0	NR	NR	NR	NR	1
CA NON-CASE INFO	0.001		0	NR	NR	NR	NR	0
CA OTHER OIL GAS	0.001		0	NR	NR	NR	NR	0
CA PROD WATER PONDS	0.001		0	NR	NR	NR	NR	0
CA SAMPLING POINT	0.001		0	NR	NR	NR	NR	0
CA WELL STIM PROJ	0.001		0	NR	NR	NR	NR	0
CA HWTS	TP	3	NR	NR	NR	NR	NR	3
MINES MRDS	0.001		0	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	1	NR	1
EDR Hist Auto	0.125		4	NR	NR	NR	NR	4
EDR Hist Cleaner	0.125		1	NR	NR	NR	NR	1
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
CA RGA LF	0.001		0	NR	NR	NR	NR	0
CA RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		21	57	76	29	12	0	195

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 **PITTSBURG RIVER PARK LLC** **CA HAZNET** **S112945519**
Target **420 E 3RD ST** **CA HWTS** **N/A**
Property **PITTSBURG, CA 94565**

Site 1 of 11 in cluster A

Actual:
15 ft.

HAZNET:

Name:	PITTSBURG RIVER PARK LLC
Address:	420 E 3RD ST
Address 2:	Not reported
City,State,Zip:	PITTSBURG, CA 945652216
Contact:	DOUG MOBERG
Telephone:	9259460455
Mailing Name:	Not reported
Mailing Address:	1830 EMBARCADARO STE 104
Year:	2006
Gepaid:	CAC002590447
TSD EPA ID:	CAD980887418
CA Waste Code:	221 - Waste oil and mixed oil
Disposal Method:	R01 - Recycler
Tons:	2.47
Year:	2005
Gepaid:	CAC002590447
TSD EPA ID:	CAL000161743
CA Waste Code:	223 - Unspecified oil-containing waste
Disposal Method:	R01 - Recycler
Tons:	13.761
Year:	2005
Gepaid:	CAC002590447
TSD EPA ID:	CAL000161743
CA Waste Code:	221 - Waste oil and mixed oil
Disposal Method:	R01 - Recycler
Tons:	5.32
Year:	2005
Gepaid:	CAC002590447
TSD EPA ID:	CAD980887418
CA Waste Code:	221 - Waste oil and mixed oil
Disposal Method:	R01 - Recycler
Tons:	7.6

Additional Info:

Year:	2006
Gen EPA ID:	CAC002590447
Shipment Date:	20060110
Creation Date:	6/22/2006 18:32:46
Receipt Date:	20060110
Manifest ID:	24734325
Trans EPA ID:	CAD982413262
Trans Name:	EVERGREEN ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980887418
Trans Name:	EVERGREEN OIL INC

PITTSBURG RIVER PARK LLC (Continued) **S112945519**

TSDF Alt EPA ID:	CAD980887418
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	2.47
Waste Quantity:	650
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2005
Gen EPA ID:	CAC002590447
Shipment Date:	20050826
Creation Date:	4/13/2006 18:45:56
Receipt Date:	20050826
Manifest ID:	23791082
Trans EPA ID:	CAD982413262
Trans Name:	EVERGREEN ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980887418
Trans Name:	EVERGREEN OIL INC
TSDF Alt EPA ID:	CAD980887418
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	7.6
Waste Quantity:	2000
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20050518
Creation Date:	8/24/2005 7:27:35
Receipt Date:	20050518
Manifest ID:	24316991
Trans EPA ID:	CAR000007013
Trans Name:	CLEARWATER ENVIRONMENTAL
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAL000161743
Trans Name:	ALVISO INDEPENDENT OIL
TSDF Alt EPA ID:	CAL000161743
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	NONE
Meth Code:	R01 - Recycler

PITTSBURG RIVER PARK LLC (Continued) **S112945519**

Quantity Tons:	13.761
Waste Quantity:	3300
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20050518
Creation Date:	7/27/2005 10:48:47
Receipt Date:	20050525
Manifest ID:	24316990
Trans EPA ID:	CAR000007013
Trans Name:	CLEARWATER ENVIRONMENTAL
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAL000161743
Trans Name:	ALVISO INDEPENDENT OIL
TSDF Alt EPA ID:	CAL000161743
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	NONE
Meth Code:	R01 - Recycler
Quantity Tons:	5.32
Waste Quantity:	1400
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

HWTS:

Name:	PITTSBURG RIVER PARK LLC
Address:	420 E 3RD ST
Address 2:	Not reported
City,State,Zip:	PITTSBURG, CA 945652216
EPA ID:	CAC002590447
Inactive Date:	11/08/2005
Create Date:	05/11/2005
Last Act Date:	11/07/2005
Mailing Name:	Not reported
Mailing Address:	1830 EMBARCADARO STE 104
Mailing Address 2:	Not reported
Mailing City,State,Zip:	OAKLAND, CA 94606
Owner Name:	PITTSBURG RIVER PARK LLC
Owner Address:	420 E 3RD
Owner Address 2:	Not reported
Owner City,State,Zip:	PITTSBURG, CA 945650000
Contact Name:	DOUG MOBERG
Contact Address:	1830 EMBARCADARO STE 104
Contact Address 2:	Not reported
City,State,Zip:	OAKLAND, CA 94606

A2 **MAKING WAVES ACADEMY PITTSBURG CAMPUS** **CA NPDES** **S123812197**
Target **420 E THIRD ST** **CA CIWQS** **N/A**
Property **PITTSBURG, CA 94565**

Site 2 of 11 in cluster A

Actual: **15 ft.**

NPDES:

Name:	MAKING WAVES ACADEMY PITTSBURG CAMPUS
Address:	420 E THIRD ST
City,State,Zip:	PITTSBURG, CA 94565
Facility Status:	Terminated
NPDES Number:	CAS000002
Region:	2
Agency Number:	0
Regulatory Measure ID:	507666
Place ID:	Not reported
Order Number:	2009-0009-DWQ
WDID:	2 07C386595
Regulatory Measure Type:	Enrollee
Program Type:	Construction
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	04/15/2019
Termination Date Of Regulatory Measure:	08/07/2019
Expiration Date Of Regulatory Measure:	Not reported
Discharge Address:	3045 Research Drive
Discharge Name:	Third Street Pittsburg Campus Owner LLC
Discharge City:	Richmond
Discharge State:	California
Discharge Zip:	94806
Status:	Not reported
Status Date:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported

Name:	MAKING WAVES ACADEMY PITTSBURG CAMPUS
Address:	420 E THIRD ST
City,State,Zip:	PITTSBURG, CA 94565
Facility Status:	Not reported
NPDES Number:	Not reported
Region:	Not reported
Agency Number:	Not reported
Regulatory Measure ID:	Not reported
Place ID:	Not reported
Order Number:	Not reported
WDID:	2 07C386595
Regulatory Measure Type:	Construction
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Discharge Address:	Not reported
Discharge Name:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported

MAKING WAVES ACADEMY PITTSBURG CAMPUS (Continued) **S123812197**

Status:	Terminated
Status Date:	08/07/2019
Operator Name:	Third Street Pittsburg Campus Owner LLC
Operator Address:	3045 Research Drive
Operator City:	Richmond
Operator State:	California
Operator Zip:	94806

CIWQS:

Name:	MAKING WAVES ACADEMY PITTSBURG CAMPUS
Address:	420 E THIRD ST
City,State,Zip:	PITTSBURG, CA 94565
Agency:	Third Street Pittsburg Campus Owner LLC
Agency Address:	3045 Research Drive Suite 250, Richmond, CA 94806
Place/Project Type:	Construction
SIC/NAICS:	Not reported
Region:	2
Program:	CONSTW
Regulatory Measure Status:	Terminated
Regulatory Measure Type:	Storm water construction
Order Number:	2009-0009-DWQ
WDID:	2 07C386595
NPDES Number:	CAS000002
Adoption Date:	01/01/1900
Effective Date:	04/15/2019
Termination Date:	08/07/2019
Expiration/Review Date:	01/01/1900
Design Flow:	Not reported
Major/Minor:	Not reported
Complexity:	Not reported
TTWQ:	Not reported
Enforcement Actions within 5 years:	0
Violations within 5 years:	0
Latitude:	38.0305
Longitude:	-121.8788

A3 **JOHNS MANVILLE SITE NO 721540** **FINDS** **1026426206**
Target **420 EAST 3RD ST** **N/A**
Property **PITTSBURG, CA 94565**

Site 3 of 11 in cluster A

Actual:
15 ft.

FINDS:
Registry ID: 110070756324

Click Here:

Environmental Interest/Information System:
HAZARDOUS WASTE BIENNIAL REPORTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

A4 **JOHNS MANVILLE** **CA HAZNET** **S123636973**
Target **420 E 3RD ST** **CA HWTS** **N/A**
Property **PITTSBURG, CA 94565**

Site 4 of 11 in cluster A

Actual:
15 ft.

HAZNET:

Name:	JOHNS MANVILLE
Address:	420 E 3RD ST
Address 2:	Not reported
City,State,Zip:	PITTSBURG, CA 945652216
Contact:	BRIAN OLSON
Telephone:	3039782218
Mailing Name:	Not reported
Mailing Address:	PO BOX 5108 MS 10-07
Year:	2005
Gepaid:	CAR000010074
TSD EPA ID:	CAD980887418
CA Waste Code:	221 - Waste oil and mixed oil
Disposal Method:	R01 - Recycler
Tons:	30.647
Year:	2003
Gepaid:	CAR000010074
TSD EPA ID:	CAD008488025
CA Waste Code:	792 - Liquids with pH <= 2 with metals
Disposal Method:	R01 - Recycler
Tons:	6.35925
Year:	2003
Gepaid:	CAR000010074
TSD EPA ID:	NVD982358483
CA Waste Code:	-
Disposal Method:	-
Tons:	7.089
Year:	2003
Gepaid:	CAR000010074
TSD EPA ID:	NVD982358483
CA Waste Code:	221 - Waste oil and mixed oil
Disposal Method:	R01 - Recycler
Tons:	32.528
Year:	2003
Gepaid:	CAR000010074
TSD EPA ID:	KYD053348108
CA Waste Code:	741 - Liquids with halogenated organic compounds >= 1,000 Mg./L
Disposal Method:	*** - Invalid Code
Tons:	Not reported
Year:	2003
Gepaid:	CAR000010074
TSD EPA ID:	CAD053044053
CA Waste Code:	741 - Liquids with halogenated organic compounds >= 1,000 Mg./L
Disposal Method:	H01 - Transfer Station
Tons:	0.2085
Year:	2003

JOHNS MANVILLE (Continued) **S123636973**

Gepaid:	CAR000010074
TSD EPA ID:	KYD053348108
CA Waste Code:	222 - Oil/water separation sludge
Disposal Method:	-
Tons:	1.05
Year:	2002
Gepaid:	CAR000010074
TSD EPA ID:	NVD982358483
CA Waste Code:	221 - Waste oil and mixed oil
Disposal Method:	R01 - Recycler
Tons:	124.507
Year:	2002
Gepaid:	CAR000010074
TSD EPA ID:	CAD053044053
CA Waste Code:	741 - Liquids with halogenated organic compounds >= 1,000 Mg./L
Disposal Method:	H01 - Transfer Station
Tons:	1.81395
Year:	2001
Gepaid:	CAR000010074
TSD EPA ID:	CAD053044053
CA Waste Code:	741 - Liquids with halogenated organic compounds >= 1,000 Mg./L
Disposal Method:	H01 - Transfer Station
Tons:	1.28405

Click this hyperlink while viewing on your computer to access
50 additional CA HAZNET: record(s) in the EDR Site Report.

Additional Info:

Year:	2003
Gen EPA ID:	CAR000010074
Shipment Date:	20031211
Creation Date:	8/13/2004 7:53:20
Receipt Date:	20040117
Manifest ID:	22872227
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	NED986382133
Trans 2 Name:	SMITH SYSTEM TRANS
TSDF EPA ID:	KYD053348108
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	KYD053348108
TSDF Alt Name:	Not reported
Waste Code Description:	222 - Oil/water separation sludge
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	1.05
Waste Quantity:	2100
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported

JOHNS MANVILLE (Continued) **S123636973**

Additional Code 5:	Not reported
Shipment Date:	20031211
Creation Date:	8/13/2004 7:53:20
Receipt Date:	20040117
Manifest ID:	22872227
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	NED986382133
Trans 2 Name:	SMITH SYSTEM TRANS
TSDF EPA ID:	KYD053348108
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	KYD053348108
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	F002
Meth Code:	*** - Invalid Code
Quantity Tons:	Not reported
Waste Quantity:	200
Quantity Unit:	Not reported
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20030822
Creation Date:	7/29/2004 7:43:54
Receipt Date:	20030823
Manifest ID:	22084936
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	NVD982358483
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	1.9
Waste Quantity:	500
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20030822
Creation Date:	7/29/2004 7:43:54
Receipt Date:	20030823
Manifest ID:	22084936
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported

JOHNS MANVILLE (Continued) **S123636973**

Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	NVD982358483
TSDF Alt Name:	Not reported
Waste Code Description:	- Not reported
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	7.089
Waste Quantity:	1700
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20030812
Creation Date:	7/28/2004 10:46:45
Receipt Date:	20030812
Manifest ID:	22084929
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	NVD982358483
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	6.308
Waste Quantity:	1660
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20030724
Creation Date:	7/23/2004 13:22:40
Receipt Date:	20030725
Manifest ID:	22084906
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	NVD982358483
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	5.7

JOHNS MANVILLE (Continued) **S123636973**

Waste Quantity:	1500
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20030709
Creation Date:	7/22/2004 8:36:14
Receipt Date:	20030709
Manifest ID:	22084901
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	NVD982358483
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	8.36
Waste Quantity:	2200
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20030709
Creation Date:	7/22/2004 8:36:14
Receipt Date:	20030710
Manifest ID:	22084902
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	NVD982358483
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	3.8
Waste Quantity:	1000
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20030626

JOHNS MANVILLE (Continued) **S123636973**

Creation Date:	7/22/2004 7:51:02
Receipt Date:	20030627
Manifest ID:	22084892
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	NVD982358483
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	6.46
Waste Quantity:	1700
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20030513
Creation Date:	9/2/2003 18:30:58
Receipt Date:	20030513
Manifest ID:	22021015
Trans EPA ID:	NJD986619328
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008488025
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD008488025
TSDF Alt Name:	Not reported
Waste Code Description:	792 - Not reported
RCRA Code:	D002
Meth Code:	R01 - Recycler
Quantity Tons:	6.35925
Waste Quantity:	1525
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2002
Gen EPA ID:	CAR000010074

Shipment Date:	20021226
Creation Date:	3/31/2003 18:31:15
Receipt Date:	20021227
Manifest ID:	22198798
Trans EPA ID:	SCR000075150
Trans Name:	Not reported

JOHNS MANVILLE (Continued) **S123636973**

Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.19599
Waste Quantity:	47
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20021119
Creation Date:	2/13/2003 18:31:35
Receipt Date:	20021120
Manifest ID:	22139546
Trans EPA ID:	SCR000075150
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.21684
Waste Quantity:	52
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20021024
Creation Date:	2/18/2003 18:31:24
Receipt Date:	20021025
Manifest ID:	21332767
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler

JOHNS MANVILLE (Continued) **S123636973**

Quantity Tons:	3.8
Waste Quantity:	1000
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20021011
Creation Date:	2/11/2003 18:31:24
Receipt Date:	20021014
Manifest ID:	21911633
Trans EPA ID:	SCR000075150
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.2085
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20021001
Creation Date:	1/28/2003 18:31:46
Receipt Date:	20021002
Manifest ID:	21332760
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	5.7
Waste Quantity:	1500
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

JOHNS MANVILLE (Continued) **S123636973**

Shipment Date:	20020910
Creation Date:	1/27/2003 18:33:26
Receipt Date:	20020911
Manifest ID:	21332636
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	5.681
Waste Quantity:	1495
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20020829
Creation Date:	2/6/2003 18:31:16
Receipt Date:	20020830
Manifest ID:	21934048
Trans EPA ID:	SCR000075150
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.20016
Waste Quantity:	48
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20020730
Creation Date:	9/19/2002 18:30:45
Receipt Date:	20020806
Manifest ID:	21332513
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483

JOHNS MANVILLE (Continued) **S123636973**

Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	19
Waste Quantity:	5000
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20020724
Creation Date:	3/12/2003 18:31:29
Receipt Date:	20020725
Manifest ID:	21742594
Trans EPA ID:	SCR000075150
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.20016
Waste Quantity:	48
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20020717
Creation Date:	9/3/2002 18:32:13
Receipt Date:	20020717
Manifest ID:	21332585
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	6.536
Waste Quantity:	1720
Quantity Unit:	G

JOHNS MANVILLE (Continued) **S123636973**

Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	1999
Gen EPA ID:	CAR000010074
Shipment Date:	19991210
Creation Date:	2/1/2000 0:00:00
Receipt Date:	19991211
Manifest ID:	98194664
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	6.84
Waste Quantity:	1800
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19991210
Creation Date:	2/1/2000 0:00:00
Receipt Date:	19991212
Manifest ID:	98194681
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	9.5
Waste Quantity:	2500
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

JOHNS MANVILLE (Continued) **S123636973**

Shipment Date:	19991110
Creation Date:	1/11/2000 0:00:00
Receipt Date:	19991110
Manifest ID:	98194475
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	7.41
Waste Quantity:	1950
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19991011
Creation Date:	11/22/1999 0:00:00
Receipt Date:	19991011
Manifest ID:	98194483
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	9.31
Waste Quantity:	2450
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19991005
Creation Date:	11/19/1999 0:00:00
Receipt Date:	19991007
Manifest ID:	98194624
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483

JOHNS MANVILLE (Continued) **S123636973**

Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	6.5398
Waste Quantity:	1721
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19990921
Creation Date:	11/18/1999 0:00:00
Receipt Date:	19990924
Manifest ID:	98007656
Trans EPA ID:	CAD009661844
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	AZD982465866
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	731 - Liquids with polychlorinated biphenyls > 50 mg/l
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	2.2935
Waste Quantity:	550
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19990725
Creation Date:	9/1/1999 0:00:00
Receipt Date:	19990727
Manifest ID:	98194425
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	5.7
Waste Quantity:	1500
Quantity Unit:	G

JOHNS MANVILLE (Continued) **S123636973**

Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19990719
Creation Date:	8/24/1999 0:00:00
Receipt Date:	19990721
Manifest ID:	98194493
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	9.481
Waste Quantity:	2495
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19990715
Creation Date:	8/24/1999 0:00:00
Receipt Date:	Not reported
Manifest ID:	98194491
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	5.4606
Waste Quantity:	1437
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19990712
Creation Date:	8/24/1999 0:00:00
Receipt Date:	19990713

JOHNS MANVILLE (Continued) **S123636973**

Manifest ID:	98194489
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	6.536
Waste Quantity:	1720
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2000
Gen EPA ID:	CAR000010074
Shipment Date:	20001214
Creation Date:	2/1/2001 0:00:00
Receipt Date:	20001215
Manifest ID:	20560596
Trans EPA ID:	SCR000075150
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD053044053
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.3252
Waste Quantity:	78
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20001204
Creation Date:	2/1/2001 0:00:00
Receipt Date:	20001205
Manifest ID:	98193991
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported

JOHNS MANVILLE (Continued) **S123636973**

TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	NVD982358483
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	9.12
Waste Quantity:	2400
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20001122
Creation Date:	2/1/2001 0:00:00
Receipt Date:	20001129
Manifest ID:	20572739
Trans EPA ID:	SCR000075150
Trans Name:	Not reported
Trans 2 EPA ID:	SCR000074591
Trans 2 Name:	Not reported
TSDF EPA ID:	CA0000084517
Trans Name:	Not reported
TSDF Alt EPA ID:	CA0000084517
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	D006
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.025
Waste Quantity:	6
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20001103
Creation Date:	1/9/2001 0:00:00
Receipt Date:	20001103
Manifest ID:	20572317
Trans EPA ID:	SCR000075150
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.3252
Waste Quantity:	78

JOHNS MANVILLE (Continued) **S123636973**

Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20001031
Creation Date:	1/9/2001 0:00:00
Receipt Date:	20001101
Manifest ID:	98193987
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	NVD982358483
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	3.8
Waste Quantity:	1000
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20001016
Creation Date:	12/8/2000 0:00:00
Receipt Date:	20001017
Manifest ID:	98193983
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	7.6
Waste Quantity:	2000
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20000927
Creation Date:	12/8/2000 0:00:00

JOHNS MANVILLE (Continued) **S123636973**

Receipt Date:	20000928
Manifest ID:	98193890
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	8.74
Waste Quantity:	2300
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20000920
Creation Date:	11/13/2000 0:00:00
Receipt Date:	20000920
Manifest ID:	99660266
Trans EPA ID:	SCR000075150
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD053044053
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.321
Waste Quantity:	77
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20000907
Creation Date:	10/30/2000 0:00:00
Receipt Date:	20000910
Manifest ID:	98193886
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported

JOHNS MANVILLE (Continued) **S123636973**

TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	8.74
Waste Quantity:	2300
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20000810
Creation Date:	10/23/2000 0:00:00
Receipt Date:	20000812
Manifest ID:	98193881
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	8.379
Waste Quantity:	2205
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2005
Gen EPA ID:	CAR000010074
Shipment Date:	20050812
Creation Date:	4/13/2006 18:47:49
Receipt Date:	20050812
Manifest ID:	23803424
Trans EPA ID:	CAD982413262
Trans Name:	EVERGREEN ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980887418
Trans Name:	EVERGREEN OIL INC
TSDF Alt EPA ID:	CAD980887418
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	3.8

JOHNS MANVILLE (Continued) **S123636973**

Waste Quantity:	1000
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20050805
Creation Date:	11/23/2005 18:30:57
Receipt Date:	20050805
Manifest ID:	23803418
Trans EPA ID:	CAD982413262
Trans Name:	EVERGREEN ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980887418
Trans Name:	EVERGREEN OIL INC
TSDF Alt EPA ID:	CAD980887418
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	4.56
Waste Quantity:	1200
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20050728
Creation Date:	10/28/2005 18:30:54
Receipt Date:	20050729
Manifest ID:	23791126
Trans EPA ID:	CAD982413262
Trans Name:	EVERGREEN ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980887418
Trans Name:	EVERGREEN OIL INC
TSDF Alt EPA ID:	CAD980887418
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	6.308
Waste Quantity:	1660
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20050715

JOHNS MANVILLE (Continued) **S123636973**

Creation Date:	10/11/2005 18:31:29
Receipt Date:	20050715
Manifest ID:	23803384
Trans EPA ID:	CAD982413262
Trans Name:	EVERGREEN ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980887418
Trans Name:	EVERGREEN OIL INC
TSDF Alt EPA ID:	CAD980887418
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	5.605
Waste Quantity:	1475
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20050711
Creation Date:	10/11/2005 18:31:29
Receipt Date:	20050712
Manifest ID:	23803382
Trans EPA ID:	CAD982413262
Trans Name:	EVERGREEN ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980887418
Trans Name:	EVERGREEN OIL INC
TSDF Alt EPA ID:	CAD980887418
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	6.574
Waste Quantity:	1730
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20050701
Creation Date:	9/16/2005 18:31:41
Receipt Date:	20050701
Manifest ID:	23803378
Trans EPA ID:	CAD982413262
Trans Name:	EVERGREEN ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980887418
Trans Name:	EVERGREEN OIL INC

JOHNS MANVILLE (Continued) **S123636973**

TSDF Alt EPA ID:	CAD980887418
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	3.8
Waste Quantity:	1000
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	1997
Gen EPA ID:	CAR000010074
Shipment Date:	19971208
Creation Date:	7/23/1998 0:00:00
Receipt Date:	19971209
Manifest ID:	96631357
Trans EPA ID:	CAD009466392
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358983
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	20.85
Waste Quantity:	5000
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19971107
Creation Date:	7/23/1998 0:00:00
Receipt Date:	19971107
Manifest ID:	96631300
Trans EPA ID:	CAD009466392
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358983
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	- Not reported

JOHNS MANVILLE (Continued) **S123636973**

Quantity Tons:	0
Waste Quantity:	4300
Quantity Unit:	*
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19971031
Creation Date:	7/23/1998 0:00:00
Receipt Date:	19971031
Manifest ID:	96740284
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	4.17
Waste Quantity:	1000
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19971014
Creation Date:	3/18/1998 0:00:00
Receipt Date:	Not reported
Manifest ID:	96603235
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982411993
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	- Not reported
RCRA Code:	D009
Meth Code:	- Not reported
Quantity Tons:	0.1375
Waste Quantity:	275
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

JOHNS MANVILLE (Continued) **S123636973**

Shipment Date:	19971010
Creation Date:	7/23/1998 0:00:00
Receipt Date:	19971014
Manifest ID:	96740289
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	2.919
Waste Quantity:	700
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19971002
Creation Date:	7/23/1998 0:00:00
Receipt Date:	19971002
Manifest ID:	96832146
Trans EPA ID:	CAD983652272
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358983
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	18.765
Waste Quantity:	4500
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19970903
Creation Date:	7/23/1998 0:00:00
Receipt Date:	19970904
Manifest ID:	96832147
Trans EPA ID:	CAD983652272
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358983

JOHNS MANVILLE (Continued) **S123636973**

Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	19.0777
Waste Quantity:	4575
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19970804
Creation Date:	12/11/1997 0:00:00
Receipt Date:	19970804
Manifest ID:	96832119
Trans EPA ID:	CAC001305048
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358983
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	15.71
Waste Quantity:	31420
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19970627
Creation Date:	12/4/1997 0:00:00
Receipt Date:	19970628
Manifest ID:	96051584
Trans EPA ID:	CA0000061275
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NV0982358983
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	0
Waste Quantity:	41000
Quantity Unit:	G

JOHNS MANVILLE (Continued) **S123636973**

Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19970609
Creation Date:	12/4/1997 0:00:00
Receipt Date:	19970609
Manifest ID:	96700222
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	2.7105
Waste Quantity:	650
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2001
Gen EPA ID:	CAR000010074
Shipment Date:	20011226
Creation Date:	2/20/2002 0:00:00
Receipt Date:	20011228
Manifest ID:	21325300
Trans EPA ID:	SCR000075150
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD053044053
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.2001
Waste Quantity:	48
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

JOHNS MANVILLE (Continued) **S123636973**

Shipment Date:	20011226
Creation Date:	7/29/2002 18:35:10
Receipt Date:	Not reported
Manifest ID:	21332457
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	3.04
Waste Quantity:	800
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20011215
Creation Date:	2/13/2002 0:00:00
Receipt Date:	20011218
Manifest ID:	96774749
Trans EPA ID:	CAD981695638
Trans Name:	Not reported
Trans 2 EPA ID:	CAD981695638
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982042475
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD982042475
TSDF Alt Name:	Not reported
Waste Code Description:	151 - Asbestos-containing waste
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	0.8428
Waste Quantity:	1
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20011203
Creation Date:	1/16/2002 0:00:00
Receipt Date:	20011205
Manifest ID:	20867224
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483

JOHNS MANVILLE (Continued) **S123636973**

Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	7.6
Waste Quantity:	2000
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20011128
Creation Date:	1/16/2002 0:00:00
Receipt Date:	20011129
Manifest ID:	96774747
Trans EPA ID:	CAD981695638
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982042475
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	151 - Asbestos-containing waste
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	1.6856
Waste Quantity:	2
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20011114
Creation Date:	1/16/2002 0:00:00
Receipt Date:	20011115
Manifest ID:	21310621
Trans EPA ID:	SCR000075150
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD053044053
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.2085
Waste Quantity:	50
Quantity Unit:	G

JOHNS MANVILLE (Continued) **S123636973**

Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20011112
Creation Date:	1/16/2002 0:00:00
Receipt Date:	20011113
Manifest ID:	20610684
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	NVD982358483
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	8.55
Waste Quantity:	2250
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20011022
Creation Date:	1/16/2002 0:00:00
Receipt Date:	20011023
Manifest ID:	20610687
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	NVD982358483
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	5.7
Waste Quantity:	1500
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20011015
Creation Date:	12/17/2001 0:00:00
Receipt Date:	20011017

JOHNS MANVILLE (Continued) **S123636973**

Manifest ID:	20610689
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	NVD982358483
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	4.56
Waste Quantity:	1200
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20011008
Creation Date:	12/17/2001 0:00:00
Receipt Date:	20011009
Manifest ID:	20610692
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	5.7
Waste Quantity:	1500
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	1998
Gen EPA ID:	CAR000010074

Shipment Date:	19981226
Creation Date:	7/23/1998 0:00:00
Receipt Date:	19971229
Manifest ID:	97306111
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported

JOHNS MANVILLE (Continued) **S123636973**

TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	8.34
Waste Quantity:	2000
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19981216
Creation Date:	2/26/1999 0:00:00
Receipt Date:	19981231
Manifest ID:	98322383
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	SCD987574647
Trans 2 Name:	Not reported
TSDF EPA ID:	UTD981552177
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	551 - Laboratory waste chemicals 561 Detergent and soap
RCRA Code:	Not reported
Meth Code:	T03 - Treatment, Incineration
Quantity Tons:	0.005
Waste Quantity:	10
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19981216
Creation Date:	2/26/1999 0:00:00
Receipt Date:	19981231
Manifest ID:	98322383
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	SCD987574647
Trans 2 Name:	Not reported
TSDF EPA ID:	UTD981552177
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	551 - Laboratory waste chemicals 561 Detergent and soap
RCRA Code:	D005
Meth Code:	T03 - Treatment, Incineration
Quantity Tons:	0.0075
Waste Quantity:	15

JOHNS MANVILLE (Continued) **S123636973**

Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19981216
Creation Date:	2/26/1999 0:00:00
Receipt Date:	19981231
Manifest ID:	98322383
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	SCD987574647
Trans 2 Name:	Not reported
TSDF EPA ID:	UTD981552177
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	551 - Laboratory waste chemicals 561 Detergent and soap
RCRA Code:	D001
Meth Code:	T03 - Treatment, Incineration
Quantity Tons:	0.004
Waste Quantity:	8
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19981216
Creation Date:	2/26/1999 0:00:00
Receipt Date:	19981231
Manifest ID:	98322383
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	SCD987574647
Trans 2 Name:	Not reported
TSDF EPA ID:	UTD981552177
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	551 - Laboratory waste chemicals 561 Detergent and soap
RCRA Code:	D002
Meth Code:	T03 - Treatment, Incineration
Quantity Tons:	0.01
Waste Quantity:	20
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19981112
Creation Date:	1/13/1999 0:00:00

JOHNS MANVILLE (Continued) **S123636973**

Receipt Date:	19981113
Manifest ID:	97307442
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0
Waste Quantity:	200
Quantity Unit:	*
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19981103
Creation Date:	1/13/1999 0:00:00
Receipt Date:	19981103
Manifest ID:	97307489
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	7.6
Waste Quantity:	2000
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19980908
Creation Date:	11/23/1998 0:00:00
Receipt Date:	19980909
Manifest ID:	97307447
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported

JOHNS MANVILLE (Continued) **S123636973**

TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	9.88
Waste Quantity:	2600
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19980828
Creation Date:	11/2/1998 0:00:00
Receipt Date:	19980828
Manifest ID:	98265558
Trans EPA ID:	CAD982413262
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980887418
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD980887418
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	18.24
Waste Quantity:	4800
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19980827
Creation Date:	11/2/1998 0:00:00
Receipt Date:	19980830
Manifest ID:	97307451
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	5.7
Waste Quantity:	1500
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported

JOHNS MANVILLE (Continued) **S123636973**

Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	1996
Gen EPA ID:	CAR000010074
Shipment Date:	19961224
Creation Date:	5/30/1997 0:00:00
Receipt Date:	19961227
Manifest ID:	96051385
Trans EPA ID:	CA0000061275
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	17.097
Waste Quantity:	4100
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19961205
Creation Date:	5/20/1997 0:00:00
Receipt Date:	19961210
Manifest ID:	96051360
Trans EPA ID:	CA0000061275
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	151 - Asbestos-containing waste
RCRA Code:	Not reported
Meth Code:	D99 - Disposal, Other
Quantity Tons:	0.2
Waste Quantity:	400
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19961120

JOHNS MANVILLE (Continued) **S123636973**

Creation Date:	5/20/1997 0:00:00
Receipt Date:	19961120
Manifest ID:	96218608
Trans EPA ID:	CAD000048934
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAL000027741
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	151 - Asbestos-containing waste
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	16.856
Waste Quantity:	20
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19961108
Creation Date:	5/20/1997 0:00:00
Receipt Date:	19961119
Manifest ID:	96051306
Trans EPA ID:	CA0000061275
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD000088252
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	513 - Empty containers less than 30 gallons
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19961108
Creation Date:	6/11/1997 0:00:00
Receipt Date:	Not reported
Manifest ID:	96051305
Trans EPA ID:	CA0000061275
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	Not reported

JOHNS MANVILLE (Continued) **S123636973**

TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	151 - Asbestos-containing waste
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	1.2
Waste Quantity:	2400
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19961108
Creation Date:	6/11/1997 0:00:00
Receipt Date:	Not reported
Manifest ID:	96051305
Trans EPA ID:	CA0000061275
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	261 - Not reported
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	0.005
Waste Quantity:	10
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19961108
Creation Date:	5/20/1997 0:00:00
Receipt Date:	19961119
Manifest ID:	96051306
Trans EPA ID:	CA0000061275
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD000088252
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	513 - Empty containers less than 30 gallons
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	Not reported

JOHNS MANVILLE (Continued) **S123636973**

Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19961101
Creation Date:	5/20/1997 0:00:00
Receipt Date:	19961102
Manifest ID:	96051317
Trans EPA ID:	CA0000061275
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	17.2012
Waste Quantity:	4125
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19960918
Creation Date:	5/20/1997 0:00:00
Receipt Date:	19960920
Manifest ID:	96051285
Trans EPA ID:	CA0000061275
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NV0982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	- Not reported
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	20.85
Waste Quantity:	5000
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19960906
Creation Date:	5/30/1997 0:00:00
Receipt Date:	19960909
Manifest ID:	96051221

JOHNS MANVILLE (Continued) **S123636973**

Trans EPA ID:	CA0000061275
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD000088252
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.066
Waste Quantity:	20
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

HWTS:

Name:	JOHNS MANVILLE
Address:	420 E 3RD ST
Address 2:	Not reported
City,State,Zip:	PITTSBURG, CA 945652216
EPA ID:	CAR000010074
Inactive Date:	06/30/2005
Create Date:	06/20/1996
Last Act Date:	05/25/2007
Mailing Name:	Not reported
Mailing Address:	PO BOX 5108 MS 10-07
Mailing Address 2:	Not reported
Mailing City,State,Zip:	DENVER, CO 802175108
Owner Name:	JOHNS MANVILLE
Owner Address:	420 E 3RD ST
Owner Address 2:	Not reported
Owner City,State,Zip:	PITTSBURG, CA 945650519
Contact Name:	BRIAN OLSON
Contact Address:	PO BOX 5108
Contact Address 2:	Not reported
City,State,Zip:	DENVER, CO 802175108

NAICS:

EPA ID:	CAR000010074
Create Date:	2002-03-14 16:36:30.000
NAICS Code:	324122
NAICS Description:	Asphalt Shingle and Coating Materials Manufacturing
Issued EPA ID Date:	1996-06-20 00:00:00
Inactive Date:	2005-06-30 15:01:00
Facility Name:	JOHNS MANVILLE
Facility Address:	420 E 3RD ST
Facility Address 2:	Not reported
Facility City:	PITTSBURG
Facility County:	Not reported
Facility State:	CA
Facility Zip:	945652216

A5 Target Property — **JOHNS MANVILLE**, **420 EAST 3RD STREET**, **PITTSBURG, CA 94565**

Site 5 of 11 in cluster A

CA ENVIROSTOR **S109443840**
CA CPS-SLIC **N/A**
CA VCP
CA DEED
CA CERS

Actual: 15 ft.

ENVIROSTOR:

Name:	JOHNS MANVILLE
Address:	420 EAST 3RD STREET
City,State,Zip:	PITTSBURG, CA 94565
Facility ID:	07390022
Status:	Certified / Operation & Maintenance
Status Date:	11/12/2009
Site Code:	202202
Site Type:	Voluntary Cleanup
Site Type Detailed:	Voluntary Cleanup
Acres:	25.3
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Isabella Roman
Supervisor:	Kimberly Walsh
Division Branch:	Cleanup Berkeley
Assembly:	14
Senate:	07
Special Program:	Voluntary Cleanup Program
Restricted Use:	YES
Site Mgmt Req:	NONE SPECIFIED
Funding:	Responsible Party
Latitude:	38.03024
Longitude:	-121.8788
APN:	073-010-007, 073-010-008, 073-050-001, 073010007, 073010008, 073050001 Not reported
Past Use:	MANUFACTURING - OTHER
Potential COC:	Asbestos Containing Materials (ACM TPH-diesel TPH-gas TPH-MOTOR OIL Trichloroethylene (TCE
Confirmed COC:	Asbestos Containing Materials (ACM TPH-diesel TPH-gas Trichloroethylene (TCE TPH-MOTOR OIL
Potential Description:	OTH, SOIL
Alias Name:	Harbor Park Development
Alias Type:	Alternate Name
Alias Name:	MANVILLE ASBESTOS-PITTSBURG
Alias Type:	Alternate Name
Alias Name:	073-010-007
Alias Type:	APN
Alias Name:	073-010-008
Alias Type:	APN
Alias Name:	073-050-001
Alias Type:	APN
Alias Name:	073010007
Alias Type:	APN
Alias Name:	073010008
Alias Type:	APN
Alias Name:	073050001
Alias Type:	APN
Alias Name:	110033606747
Alias Type:	EPA (FRS #)
Alias Name:	201318
Alias Type:	Project Code (Site Code)

JOHNS MANVILLE (Continued) **S109443840**

Alias Name: 202201
Alias Type: Project Code (Site Code)
Alias Name: 202202
Alias Type: Project Code (Site Code)
Alias Name: 07390022
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: OU 2- North Parcel
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 08/29/2011
Comments: It was completed earlier than expected.

Completed Area Name: OU 2- North Parcel
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 03/02/2012
Comments: Approved on 3/2/2012.

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 11/29/2012
Comments: The purpose of the inspections is to ensure that the encapsulated asbestos containing material (ACM) is not exposed at the ground surface . Based upon the observations, repairs on the fence and filling of animal burrows were recommended. Repairs are to be reported in the next inspection Report. This Report was approved on 11/29/2012.

Completed Area Name: OU 2- North Parcel
Completed Sub Area Name: Not reported
Completed Document Type: 5 Year Review Workplan
Completed Date: 04/22/2011
Comments: The Workplan was approved.

Completed Area Name: OU 2- North Parcel
Completed Sub Area Name: Not reported
Completed Document Type: 5 Year Review Reports
Completed Date: 01/25/2012
Comments: Completed.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: 5 Year Review Reports
Completed Date: 12/20/2016
Comments: Not reported

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 09/13/2010
Comments: Minor maintenancec issues identified, recommended repairs conducted and up to standards.

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported

JOHNS MANVILLE (Continued) **S109443840**

Completed Document Type: Operations and Maintenance Report
Completed Date: 12/03/2010
Comments: Not reported

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 01/31/2011
Comments: Not reported

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 05/25/2011
Comments: Not reported

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 08/29/2011
Comments: Not reported

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 12/08/2011
Comments: Completed on 12/8/2011.

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 03/02/2012
Comments: Approved on 3/2/2012.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 05/20/1999
Comments: Further action related to TCE in groundwater needed

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 11/13/2008
Comments: Copies of Files for Tesoro submitted to DTSC in May 2012.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 11/13/2008
Comments: This report for Tesoro Pittsburg Terminal located at 595 EAST THIRD STREET and has contamination which may be coming from the Johns Manville Site.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report

JOHNS MANVILLE (Continued) **S109443840**

Completed Date:	02/22/2013
Comments:	Semiannual Operation and Maintenance (O&M) Report is for the North and Berm Parcels. The inspection for the period from July 1 through December 31, 2012 was conducted on December 24, 2012. The North Parcel was in good condition. O&M was done on the irrigation system and there were few animal burrows. The Berm Parcel was in good condition. Burrows were filled in with soil, bare soil was hydro-seeded and the irrigation system was repaired.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Report
Completed Date:	09/25/2013
Comments:	The Report was approved, however, DTSC requests for a workplan for controlling and eradicating ground squirrels. DTSC also recommends maintaining a permanent irrigation system in good condition according to the O&M Plan.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Report
Completed Date:	05/23/2014
Comments:	DTSC recommends the following actions at the Berms: 1. Verification of soil cap thickness making sure that the original recommended thickness is maintained. 2. Restoration of plant species (Cape Plumbago, Purple Trailing Lantana and Bearberry Contoneaster) recommended in the Operations and Maintenance Plan.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Report
Completed Date:	09/29/2014
Comments:	Same
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Report
Completed Date:	06/01/2015
Comments:	The Semi-annual Operation and Maintenance Report is for the North and Berm Parcels for the period from July 1, 2014 through December 31, 2014. The North Parcel consists of a soil cap and the Berm Parcel consists of 2 two berms with a soil cover. In July 2014, a water line was installed within the footprint of the old road which lies adjacent to the North Parcel. No potentially impacted soil was disturbed during the installation. In the Fall of 2014, the Berm vegetation was assessed and barren areas were observed. On December 22, 2014, both the southern and northern berms were hydro-seeded with a mix of Native Ornamental Fine Fescue . The Berms are infested with ground squirrels and gophers (rodents). Baiting has shown to be an effective and long-term mitigation strategy against ground squirrels. Passive Exhaust Rodent Control treatment has been found effective in mitigating gophers. Rodent inspections continue on a quarterly basis and results will be reported in the semi-annual reports.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Report

JOHNS MANVILLE (Continued) **S109443840**

Completed Date: 09/04/2015
Comments: The Report includes inspections associated with the Rodent Mitigation Plan of 2013. All the required repairs and maintenance items completed on July 10, 2015, are included in the Report

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 02/10/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 02/25/2016
Comments: The Report includes inspections associated with the Rodent Mitigation Plan of 2013. The North and the Berm Parcels were in good condition at the time of Inspection.

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Technical Workplan
Completed Date: 10/23/2013
Comments: The Draft Rodent Mitigation Plan and Response to Comments constitute RP Final document. Ground squirrels will be controlled using an Anticoagulant bait in T-Boxes. Effectiveness of this control method will be evaluated by observing numbers of active burrows.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Financial Assurance Documentation
Completed Date: 04/03/2014
Comments: On April 2, 2014, the California Environmental Protection Agency, Department of Toxic Substances Control, conducted a financial assurance review. No violations were discovered during the review.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Financial Assurance Documentation
Completed Date: 01/17/2014
Comments: This is a copy of the Cost Estimate that was initially submitted with the O&M Plan and was listed by the Financial Assurance Unit under of Pittsburg River Park LLC.

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 01/10/2014
Comments: This was the first report on results of inspections at the Berm Parcel after implementation of Baits as a Rodent Control Measure for ground squirrels. In general, rodents were not observed during the inspection that took place on December 13, 2014. The number of active burrows identified increased slightly relative to the inspection on November 29 because the mowing allowed for easier burrow identification. This report was for the period of 11/15 & 29/ 2013 & 12/13/ 2013.

JOHNS MANVILLE (Continued) **S109443840**

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 03/20/2014
Comments: This is the second report regarding Rodent Mitigation Plan Summary of Interim Berm Inspections. It is for the period of 11/15/2013 through 3/14/2014.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Financial Assurance Documentation
Completed Date: 11/24/2014
Comments: The Final Cost Estimate Amount of $ 176,705 was accepted by the Branch Chief on 11/24/2014.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 01/18/2018
Comments: Final approval provided via email.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 08/27/2018
Comments: Second Semi-Annual 2017 OM Report Approved via email

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: 5 Year Review Workplan
Completed Date: 02/25/2016
Comments: DTSC accepts the Work Plan on condition that the following recommendations are addressed: 1. The Five Year Review Report should include an updated cost estimate for Financial Assurance. 2. Section 3.1 Site Inspection & Cap Thickness Evaluation. The text in the second and third paragraphs states that field inspections will include cap thickness measurements. Consideration should be given to installing permanent monuments to help measure cap thickness at the same locations over time.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 02/13/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Financial Assurance Documentation
Completed Date: 04/23/2018
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Workplan
Completed Date: 10/02/2017
Comments: Approval for workplan was not needed. See memo.

JOHNS MANVILLE (Continued) **S109443840**

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Monitoring Report
Completed Date:	12/11/2017
Comments:	Results submitted to DTSC for reference. No approval/concurrence necessary.
Completed Area Name:	OU 1 -Plant Site
Completed Sub Area Name:	Not reported
Completed Document Type:	Fact Sheets
Completed Date:	03/06/2019
Comments:	Completed
Completed Area Name:	OU 1 -Plant Site
Completed Sub Area Name:	Not reported
Completed Document Type:	Public Notice
Completed Date:	03/06/2019
Comments:	Completed
Completed Area Name:	OU 1 -Plant Site
Completed Sub Area Name:	Not reported
Completed Document Type:	Public Participation Plan / Community Relations Plan
Completed Date:	03/25/2019
Comments:	Public Participation Plan
Completed Area Name:	OU 1 -Plant Site
Completed Sub Area Name:	Not reported
Completed Document Type:	Supplemental Site Investigation Workplan
Completed Date:	12/10/2019
Comments:	Not reported
Completed Area Name:	OU 1 -Plant Site
Completed Sub Area Name:	Not reported
Completed Document Type:	Technical Report
Completed Date:	02/28/2020
Comments:	Informational submittal detailing the findings of waste characterization sampling for Berm Removal.
Completed Area Name:	OU 2- North Parcel
Completed Sub Area Name:	Not reported
Completed Document Type:	Remedial Action Plan
Completed Date:	12/01/1986
Comments:	Required the installation of a 9 inch engineered fill material over the existing soil and graded to facilitate runoff.
Completed Area Name:	OU 2- North Parcel
Completed Sub Area Name:	Not reported
Completed Document Type:	5 Year Review Reports
Completed Date:	06/13/2001
Comments:	animal burrows, holes and cracks were noted during the inspection. Area was repaired.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Phase 1
Completed Date:	06/18/1987
Comments:	completed site screening, further investigation is needed.

JOHNS MANVILLE (Continued) **S109443840**

Completed Area Name:	OU 1 -Plant Site
Completed Sub Area Name:	Not reported
Completed Document Type:	Remedial Action Plan
Completed Date:	06/22/2006
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Report
Completed Date:	08/07/2001
Comments:	Approved
Completed Area Name:	OU 1 -Plant Site
Completed Sub Area Name:	Not reported
Completed Document Type:	Removal Action Design
Completed Date:	08/25/2006
Comments:	Not reported
Completed Area Name:	OU 1 -Plant Site
Completed Sub Area Name:	Not reported
Completed Document Type:	Fieldwork
Completed Date:	03/03/2008
Comments:	Field work completed
Completed Area Name:	OU 1 -Plant Site
Completed Sub Area Name:	Not reported
Completed Document Type:	Remedial Action Completion Report
Completed Date:	11/06/2008
Comments:	Remedial actions have been completed in accordance with the RAP.
Completed Area Name:	OU 2- North Parcel
Completed Sub Area Name:	Not reported
Completed Document Type:	Land Use Restriction
Completed Date:	12/10/2007
Comments:	Sent to the County and received a receipt for our record.
Completed Area Name:	OU 1 -Plant Site
Completed Sub Area Name:	Not reported
Completed Document Type:	Operation & Maintenance Order/Agreement
Completed Date:	09/25/2009
Comments:	The Operation and Maintenance Agreement provides for ongoing inspection, reporting, maintenance, and repair of the engineered containment berm located on the east side of the Plant Site.
Completed Area Name:	OU 1 -Plant Site
Completed Sub Area Name:	Not reported
Completed Document Type:	CEQA - Initial Study/ Neg. Declaration
Completed Date:	06/22/2006
Comments:	Not reported
Completed Area Name:	OU 2- North Parcel
Completed Sub Area Name:	Not reported
Completed Document Type:	Operation & Maintenance Order/Agreement
Completed Date:	09/25/2009
Comments:	The Operation and Maintenance Agreement provides for ongoing inspection, reporting, maintenance, and repair of the soil cap that covers most of the North Parcel.

JOHNS MANVILLE (Continued) **S109443840**

Completed Area Name:	OU 1 -Plant Site
Completed Sub Area Name:	Not reported
Completed Document Type:	Land Use Restriction
Completed Date:	10/07/2009
Comments:	The Land Use Covenant prohibits residential and other sensitive uses on the 3.2-acre Berm Property along the eastern boundary of the Plant Site. The Land Use Covenant identifies a 17.3-acre portion of the Plant Site as the Residential Property. Extraction of groundwater is restricted over the entire Plant Site and there are restrictions on disturbance of a localized area where there are residual petroleum hydrocarbons in groundwater.

Completed Area Name:	OU 1 -Plant Site
Completed Sub Area Name:	Not reported
Completed Document Type:	Certification
Completed Date:	11/12/2009
Comments:	DTSC certified completion of the remedial action at the Plant Site. An Operation and Maintenance Agreement and Land Use Covenant are in place and there will ongoing inspection and maintenance of the containment area.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Standard Voluntary Agreement
Completed Date:	03/22/2005
Comments:	VCA with Pittsburg River Park LLC signed

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Standard Voluntary Agreement
Completed Date:	07/13/2000
Comments:	VCA with John Manville signed

Completed Area Name:	OU 2- North Parcel
Completed Sub Area Name:	Not reported
Completed Document Type:	Certification
Completed Date:	11/12/2009
Comments:	DTSC certified completion of the remedial action at the North Parcel. An Operation and Maintenance Agreement and Land Use Covenant are in place and there will ongoing inspection and maintenance of the soil cover.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Annual Oversight Cost Estimate
Completed Date:	10/13/2010
Comments:	Completed earlier than expected.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Annual Oversight Cost Estimate
Completed Date:	10/01/2014
Comments:	Cost Estimates Letter for Fiscal Year 2014-2015

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Annual Oversight Cost Estimate

JOHNS MANVILLE (Continued) **S109443840**

Completed Date: 10/06/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/02/2017
Comments: Completed Cost Estimate and Schedule for the 17-18 Fiscal Year.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/24/2015
Comments: DTSC Final Cost Estimate for FY 2015/2016

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 12/30/2013
Comments: DTSC conducted a site inspection to look for signs of the Tensar Geogrid material in the soil that may have been brought to the surface by the ground squirrels. No Tensar Geogrid material was observed. DTSC recommends verification of soil cap thickness, planting plant species that were recommended in the O&M Plan, mitigation of the squirrels to prevent further damage to the cap, filling in burrows and properly maintaining the irrigation system.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/04/2013
Comments: Annual Cost Estimates and Schedule for fiscal year 2013-2014 sent on 9/4/2013

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/17/2012
Comments: Completed 10/17/2012

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Pre-HARP Form
Completed Date: 10/03/2013
Comments: The Harp Form was signed 10/3/2013 for the site visit of 10/7/2013

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 11/02/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 01/04/2018
Comments: Letter to DTSC from Making Waves

JOHNS MANVILLE (Continued) **S109443840**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 12/18/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/07/2020
Comments: Annual cost estimate letter projecting costs for DTSC oversight during fiscal year 2020-2021.

Completed Area Name: OU 2- North Parcel
Completed Sub Area Name: Not reported
Completed Document Type: Operation & Maintenance Order/Agreement
Completed Date: 10/15/2018
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Consultation
Completed Date: 01/11/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 01/11/2019
Comments: Not reported

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Operation & Maintenance Order/Agreement
Completed Date: 10/15/2018
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: CEQA - Initial Study/ Environmental Impact Report
Completed Date: 02/26/2019
Comments: EIR conducted by the City of Pittsburg.

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Fact Sheets
Completed Date: 02/02/2006
Comments: Completed

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Public Notice
Completed Date: 01/24/2006
Comments: Not reported

Completed Area Name: OU 2- North Parcel
Completed Sub Area Name: Not reported

JOHNS MANVILLE (Continued) **S109443840**

Completed Document Type:	5 Year Review Reports
Completed Date:	12/11/2006
Comments:	Not reported
Completed Area Name:	OU 1 -Plant Site
Completed Sub Area Name:	Not reported
Completed Document Type:	Design/Implementation Workplan
Completed Date:	11/02/2007
Comments:	Grading plan approval from the city, approval letter for the RDIP addendum.
Completed Area Name:	OU 1 -Plant Site
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Plan
Completed Date:	10/09/2008
Comments:	The Operation and Maintenance Plan outlines the procedures for operating, maintaining, and repairing the berm where asbestos-cotaining materials and petroleum hydrocarbon-affected soil is contained on-site.
Completed Area Name:	OU 3 - City of Pittsburg Linear Park Property
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Characterization Report
Completed Date:	09/14/2009
Comments:	The Soil Investigation Report presents the results of a limited, shallow soil investigation that was performed to determine whether asbestos-containing materials (ACM) are present in Linear Park Property. Soil samples were collected from soil borings that were drilled at 16 locations to a depth of 10 feet or less. The samples were also analyzed for total petroleum hydrocarbons as diesel and motor oil, polynuclear aromatic compounds, and volatile organic compounds, although no significant concentrations of these analytes were detected. ACM was found to occur in shallow soil in a localized area around soil borings SB-3 and SB-5 at the northeast corner of the property
Completed Area Name:	OU 3 - City of Pittsburg Linear Park Property
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Characterization Workplan
Completed Date:	07/11/2008
Comments:	The Work Plan scope of work included drilling of up to 16 soil borings to investigate for the presence of asbestos-containing materials within 10 feet of the ground surface in the Linear Park Property. The Work Plan was prepared because asbestos-containing materials were observed to extend beyond the southern boundary of the former Johns Manville Plant Site when cleanup activities were conducted.
Completed Area Name:	OU 2- North Parcel
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Report
Completed Date:	12/16/2009
Comments:	All repairs recomended appear approppriate and address of problems identified. The report is technically sound.
Completed Area Name:	OU 1 -Plant Site
Completed Sub Area Name:	Not reported

JOHNS MANVILLE (Continued) **S109443840**

Completed Document Type:	Operations and Maintenance Report
Completed Date:	12/16/2009
Comments:	All repairs recomended appear appropriate and address of problems identified. The report is technically sound.
Completed Area Name:	OU 2- North Parcel
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Report
Completed Date:	03/16/2010
Comments:	All structures found to be in proper condition. Minor problems found. Report approved.
Completed Area Name:	OU 1 -Plant Site
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Report
Completed Date:	02/02/2010
Comments:	Minor problems reported, appropriate corrective actions proposed
Completed Area Name:	OU 1 -Plant Site
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Report
Completed Date:	02/02/2010
Comments:	Minor problems reported, appropriate corrective actions proposed.
Completed Area Name:	OU 1 -Plant Site
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Report
Completed Date:	08/03/2010
Comments:	Everything appears to be relatively stable. No unusual events or trends were reported by the operator or noticed by the reviewer.
Completed Area Name:	OU 2- North Parcel
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Report
Completed Date:	09/10/2010
Comments:	Minor maintenancec issues identified, recommended repairs conducted and up to standards.
Completed Area Name:	OU 2- North Parcel
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Report
Completed Date:	03/07/2011
Comments:	Not reported
Future Area Name:	PROJECT WIDE
Future Sub Area Name:	Not reported
Future Document Type:	5 Year Review Reports
Future Due Date:	2021
Future Area Name:	OU 1 -Plant Site
Future Sub Area Name:	Not reported
Future Document Type:	Remedial Action Completion Report
Future Due Date:	2022
Future Area Name:	OU 1 -Plant Site
Future Sub Area Name:	Not reported
Future Document Type:	Certification
Future Due Date:	2023
Schedule Area Name:	Not reported

JOHNS MANVILLE (Continued) **S109443840**

Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

CPS-SLIC:

Name:	MANVILLE SALES CORP
Address:	420 EAST 3RD
City,State,Zip:	PITTSBURG, CA
Region:	STATE
Facility Status:	**Open - Inactive**
Status Date:	05/04/2009
Global Id:	SLT2O208311
Lead Agency:	SAN FRANCISCO BAY RWQCB (REGION 2)
Lead Agency Case Number:	Not reported
Latitude:	38.0316645808865
Longitude:	-121.878118515014
Case Type:	Cleanup Program Site
Case Worker:	UUU
Local Agency:	Not reported
RB Case Number:	07S0091
File Location:	Not reported
Potential Media Affected:	Soil
Potential Contaminants of Concern:	Asbestos Containing Materials (ACM), Other Petroleum
Site History:	Manville records indicate that the Roofing Materials Plant was constructed at the Site from 1925 through 1928. Asbestos-cement products, asphalt roofing materials, and asbestoscontaining pipe covering were the principal products manufactured at the Site prior to cessation of asbestos-containing product manufacturing by Manville. An evaporation pond was located in the southwest quadrant of the Site and received water and oil residuals produced during manufacture of roofing materials. Historic aerial photos and company records were reviewed to determine the operational history of the evaporation pond. A series of four asphalt stills were used to convert heavy oil (purchased in bulk from a number of refineries) to asphalt which was used in the manufacture of roofing products. The stills were initially fired with fuel oil and later with natural gas. Air was delivered to each still via a series of air lines. The addition of air to the heated heavy oil reduced the viscosity of the heavy oil. This process was referred to as "asphalt blowing". The off gases of the asphalt blowing process were collected in a series of 4 pipes which routed the gases to a condenser line. Water was delivered to the condenser line by a series of nozzles to cool the vapor. The condenser line conveyed the resultant oil water slurry to a condenser located to the south of the stills. The oil water mixture was transported from the condenser to the evaporation pond via an underground pipe. The residual oil on the pond was burned off periodically. It is estimated that this occurred approximately two times per year. Review of aerial photos indicates that the evaporation pond was in use by 1946 and remained relatively constant in size until sometime after 1959 when it was filled with scrap and construction debris. The area was subsequently paved over with blacktop.

Click here to access the California GeoTracker records for this facility:

JOHNS MANVILLE (Continued) **S109443840**

VCP:

Name:	JOHNS MANVILLE
Address:	420 EAST 3RD STREET
City,State,Zip:	PITTSBURG, CA 94565
Facility ID:	07390022
Site Type:	Voluntary Cleanup
Site Type Detail:	Voluntary Cleanup
Site Mgmt. Req.:	NONE SPECIFIED
Acres:	25.3
National Priorities List:	NO
Cleanup Oversight Agencies:	SMBRP
Lead Agency:	SMBRP
Lead Agency Description:	DTSC - Site Cleanup Program
Project Manager:	Isabella Roman
Supervisor:	Kimberly Walsh
Division Branch:	Cleanup Berkeley
Site Code:	202202
Assembly:	14
Senate:	07
Special Programs Code:	Voluntary Cleanup Program
Status:	Certified / Operation & Maintenance
Status Date:	11/12/2009
Restricted Use:	YES
Funding:	Responsible Party
Lat/Long:	38.03024 / -121.8788
APN:	073-010-007, 073-010-008, 073-050-001, 073010007, 073010008, 073050001
	Not reported
Past Use:	MANUFACTURING - OTHER
Potential COC:	40001, 30024, 30025, 3002502, 30027
Confirmed COC:	40001,30024,30025,30027,3002502
Potential Description:	OTH, SOIL
Alias Name:	Harbor Park Development
Alias Type:	Alternate Name
Alias Name:	MANVILLE ASBESTOS-PITTSBURG
Alias Type:	Alternate Name
Alias Name:	073-010-007
Alias Type:	APN
Alias Name:	073-010-008
Alias Type:	APN
Alias Name:	073-050-001
Alias Type:	APN
Alias Name:	073010007
Alias Type:	APN
Alias Name:	073010008
Alias Type:	APN
Alias Name:	073050001
Alias Type:	APN
Alias Name:	110033606747
Alias Type:	EPA (FRS #)
Alias Name:	201318
Alias Type:	Project Code (Site Code)
Alias Name:	202201
Alias Type:	Project Code (Site Code)
Alias Name:	202202
Alias Type:	Project Code (Site Code)
Alias Name:	07390022
Alias Type:	Envirostor ID Number

JOHNS MANVILLE (Continued) **S109443840**

Completed Info:

Completed Area Name:	OU 2- North Parcel
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Report
Completed Date:	08/29/2011
Comments:	It was completed earlier than expected.
Completed Area Name:	OU 2- North Parcel
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Report
Completed Date:	03/02/2012
Comments:	Approved on 3/2/2012.
Completed Area Name:	OU 1 -Plant Site
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Report
Completed Date:	11/29/2012
Comments:	The purpose of the inspections is to ensure that the encapsulated asbestos containing material (ACM) is not exposed at the ground surface . Based upon the observations, repairs on the fence and filling of animal burrows were recommended. Repairs are to be reported in the next inspection Report. This Report was approved on 11/29/2012.
Completed Area Name:	OU 2- North Parcel
Completed Sub Area Name:	Not reported
Completed Document Type:	5 Year Review Workplan
Completed Date:	04/22/2011
Comments:	The Workplan was approved.
Completed Area Name:	OU 2- North Parcel
Completed Sub Area Name:	Not reported
Completed Document Type:	5 Year Review Reports
Completed Date:	01/25/2012
Comments:	Completed.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	5 Year Review Reports
Completed Date:	12/20/2016
Comments:	Not reported
Completed Area Name:	OU 1 -Plant Site
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Report
Completed Date:	09/13/2010
Comments:	Minor maintenancec issues identified, recommended repairs conducted and up to standards.
Completed Area Name:	OU 1 -Plant Site
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Report
Completed Date:	12/03/2010
Comments:	Not reported
Completed Area Name:	OU 1 -Plant Site
Completed Sub Area Name:	Not reported

JOHNS MANVILLE (Continued) **S109443840**

Completed Document Type: Operations and Maintenance Report
Completed Date: 01/31/2011
Comments: Not reported

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 05/25/2011
Comments: Not reported

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 08/29/2011
Comments: Not reported

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 12/08/2011
Comments: Completed on 12/8/2011.

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 03/02/2012
Comments: Approved on 3/2/2012.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 05/20/1999
Comments: Further action related to TCE in groundwater needed

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 11/13/2008
Comments: Copies of Files for Tesoro submitted to DTSC in May 2012.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 11/13/2008
Comments: This report for Tesoro Pittsburg Terminal located at 595 EAST THIRD STREET and has contamination which may be coming from the Johns Manville Site.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 02/22/2013
Comments: Semiannual Operation and Maintenance (O&M) Report is for the North and Berm Parcels. The inspection for the period from July 1 through December 31, 2012 was conducted on December 24, 2012. The North Parcel was in good condition. O&M was done on the irrigation system and there were few animal burrows. The Berm Parcel was in good

JOHNS MANVILLE (Continued) **S109443840**

condition. Burrows were filled in with soil, bare soil was hydro-seeded and the irrigation system was repaired.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 09/25/2013
Comments: The Report was approved, however, DTSC requests for a workplan for controlling and eradicating ground squirrels. DTSC also recommends maintaining a permanent irrigation system in good condition according to the O&M Plan.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 05/23/2014
Comments: DTSC recommends the following actions at the Berms: 1. Verification of soil cap thickness making sure that the original recommended thickness is maintained. 2. Restoration of plant species (Cape Plumbago, Purple Trailing Lantana and Bearberry Contoneaster) recommended in the Operations and Maintenance Plan.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 09/29/2014
Comments: Same

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 06/01/2015
Comments: The Semi-annual Operation and Maintenance Report is for the North and Berm Parcels for the period from July 1, 2014 through December 31, 2014. The North Parcel consists of a soil cap and the Berm Parcel consists of 2 two berms with a soil cover. In July 2014, a water line was installed within the footprint of the old road which lies adjacent to the North Parcel. No potentially impacted soil was disturbed during the installation. In the Fall of 2014, the Berm vegetation was assessed and barren areas were observed. On December 22, 2014, both the southern and northern berms were hydro-seeded with a mix of Native Ornamental Fine Fescue . The Berms are infested with ground squirrels and gophers (rodents). Baiting has shown to be an effective and long-term mitigation strategy against ground squirrels. Passive Exhaust Rodent Control treatment has been found effective in mitigating gophers. Rodent inspections continue on a quarterly basis and results will be reported in the semi-annual reports.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 09/04/2015
Comments: The Report includes inspections associated with the Rodent Mitigation Plan of 2013. All the required repairs and maintenance items completed on July 10, 2015, are included in the Report

Completed Area Name: PROJECT WIDE

JOHNS MANVILLE (Continued) **S109443840**

Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 02/10/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 02/25/2016
Comments: The Report includes inspections associated with the Rodent Mitigation Plan of 2013. The North and the Berm Parcels were in good condition at the time of Inspection.

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Technical Workplan
Completed Date: 10/23/2013
Comments: The Draft Rodent Mitigation Plan and Response to Comments constitute RP Final document. Ground squirrels will be controlled using an Anticoagulant bait in T-Boxes. Effectiveness of this control method will be evaluated by observing numbers of active burrows.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Financial Assurance Documentation
Completed Date: 04/03/2014
Comments: On April 2, 2014, the California Environmental Protection Agency, Department of Toxic Substances Control, conducted a financial assurance review. No violations were discovered during the review.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Financial Assurance Documentation
Completed Date: 01/17/2014
Comments: This is a copy of the Cost Estimate that was initially submitted with the O&M Plan and was listed by the Financial Assurance Unit under of Pittsburg River Park LLC.

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 01/10/2014
Comments: This was the first report on results of inspections at the Berm Parcel after implementation of Baits as a Rodent Control Measure for ground squirrels. In general, rodents were not observed during the inspection that took place on December 13, 2014. The number of active burrows identified increased slightly relative to the inspection on November 29 because the mowing allowed for easier burrow identification. This report was for the period of 11/15 & 29/ 2013 & 12/13/ 2013.

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 03/20/2014
Comments: This is the second report regarding Rodent Mitigation Plan Summary of Interim Berm Inspections. It is for the period of 11/15/2013 through

JOHNS MANVILLE (Continued) **S109443840**

3/14/2014.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Financial Assurance Documentation
Completed Date: 11/24/2014
Comments: The Final Cost Estimate Amount of $ 176,705 was accepted by the Branch Chief on 11/24/2014.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 01/18/2018
Comments: Final approval provided via email.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 08/27/2018
Comments: Second Semi-Annual 2017 OM Report Approved via email

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: 5 Year Review Workplan
Completed Date: 02/25/2016
Comments: DTSC accepts the Work Plan on condition that the following recommendations are addressed: 1. The Five Year Review Report should include an updated cost estimate for Financial Assurance. 2. Section 3.1 Site Inspection & Cap Thickness Evaluation. The text in the second and third paragraphs states that field inspections will include cap thickness measurements. Consideration should be given to installing permanent monuments to help measure cap thickness at the same locations over time.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 02/13/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Financial Assurance Documentation
Completed Date: 04/23/2018
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Workplan
Completed Date: 10/02/2017
Comments: Approval for workplan was not needed. See memo.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 12/11/2017
Comments: Results submitted to DTSC for reference. No approval/concurrence

JOHNS MANVILLE (Continued) **S109443840**

necessary.

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Fact Sheets
Completed Date: 03/06/2019
Comments: Completed

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Public Notice
Completed Date: 03/06/2019
Comments: Completed

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Public Participation Plan / Community Relations Plan
Completed Date: 03/25/2019
Comments: Public Participation Plan

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Workplan
Completed Date: 12/10/2019
Comments: Not reported

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 02/28/2020
Comments: Informational submittal detailing the findings of waste characterization sampling for Berm Removal.

Completed Area Name: OU 2- North Parcel
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Action Plan
Completed Date: 12/01/1986
Comments: Required the installation of a 9 inch engineered fill material over the existing soil and graded to facilitate runoff.

Completed Area Name: OU 2- North Parcel
Completed Sub Area Name: Not reported
Completed Document Type: 5 Year Review Reports
Completed Date: 06/13/2001
Comments: animal burrows, holes and cracks were noted during the inspection. Area was repaired.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 06/18/1987
Comments: completed site screening, further investigation is needed.

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Action Plan
Completed Date: 06/22/2006

JOHNS MANVILLE (Continued) **S109443840**

Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 08/07/2001
Comments: Approved

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Design
Completed Date: 08/25/2006
Comments: Not reported

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 03/03/2008
Comments: Field work completed

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Action Completion Report
Completed Date: 11/06/2008
Comments: Remedial actions have been completed in accordance with the RAP.

Completed Area Name: OU 2- North Parcel
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction
Completed Date: 12/10/2007
Comments: Sent to the County and received a receipt for our record.

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Operation & Maintenance Order/Agreement
Completed Date: 09/25/2009
Comments: The Operation and Maintenance Agreement provides for ongoing inspection, reporting, maintenance, and repair of the engineered containment berm located on the east side of the Plant Site.

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: CEQA - Initial Study/ Neg. Declaration
Completed Date: 06/22/2006
Comments: Not reported

Completed Area Name: OU 2- North Parcel
Completed Sub Area Name: Not reported
Completed Document Type: Operation & Maintenance Order/Agreement
Completed Date: 09/25/2009
Comments: The Operation and Maintenance Agreement provides for ongoing inspection, reporting, maintenance, and repair of the soil cap that covers most of the North Parcel.

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction

JOHNS MANVILLE (Continued) **S109443840**

Completed Date:	10/07/2009
Comments:	The Land Use Covenant prohibits residential and other sensitive uses on the 3.2-acre Berm Property along the eastern boundary of the Plant Site. The Land Use Covenant identifies a 17.3-acre portion of the Plant Site as the Residential Property. Extraction of groundwater is restricted over the entire Plant Site and there are restrictions on disturbance of a localized area where there are residual petroleum hydrocarbons in groundwater.
Completed Area Name:	OU 1 -Plant Site
Completed Sub Area Name:	Not reported
Completed Document Type:	Certification
Completed Date:	11/12/2009
Comments:	DTSC certified completion of the remedial action at the Plant Site. An Operation and Maintenance Agreement and Land Use Covenant are in place and there will ongoing inspection and maintenance of the containment area.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Standard Voluntary Agreement
Completed Date:	03/22/2005
Comments:	VCA with Pittsburg River Park LLC signed
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Standard Voluntary Agreement
Completed Date:	07/13/2000
Comments:	VCA with John Manville signed
Completed Area Name:	OU 2- North Parcel
Completed Sub Area Name:	Not reported
Completed Document Type:	Certification
Completed Date:	11/12/2009
Comments:	DTSC certified completion of the remedial action at the North Parcel. An Operation and Maintenance Agreement and Land Use Covenant are in place and there will ongoing inspection and maintenance of the soil cover.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Annual Oversight Cost Estimate
Completed Date:	10/13/2010
Comments:	Completed earlier than expected.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Annual Oversight Cost Estimate
Completed Date:	10/01/2014
Comments:	Cost Estimates Letter for Fiscal Year 2014-2015
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Annual Oversight Cost Estimate
Completed Date:	10/06/2016
Comments:	Not reported

JOHNS MANVILLE (Continued) **S109443840**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/02/2017
Comments: Completed Cost Estimate and Schedule for the 17-18 Fiscal Year.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/24/2015
Comments: DTSC Final Cost Estimate for FY 2015/2016

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 12/30/2013
Comments: DTSC conducted a site inspection to look for signs of the Tensar Geogrid material in the soil that may have been brought to the surface by the ground squirrels. No Tensar Geogrid material was observed. DTSC recommends verification of soil cap thickness, planting plant species that were recommended in the O&M Plan, mitigation of the squirrels to prevent further damage to the cap, filling in burrows and properly maintaining the irrigation system.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/04/2013
Comments: Annual Cost Estimates and Schedule for fiscal year 2013-2014 sent on 9/4/2013

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/17/2012
Comments: Completed 10/17/2012

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Pre-HARP Form
Completed Date: 10/03/2013
Comments: The Harp Form was signed 10/3/2013 for the site visit of 10/7/2013

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 11/02/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 01/04/2018
Comments: Letter to DTSC from Making Waves

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

JOHNS MANVILLE (Continued) **S109443840**

Completed Document Type: Correspondence
Completed Date: 12/18/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/07/2020
Comments: Annual cost estimate letter projecting costs for DTSC oversight during fiscal year 2020-2021.

Completed Area Name: OU 2- North Parcel
Completed Sub Area Name: Not reported
Completed Document Type: Operation & Maintenance Order/Agreement
Completed Date: 10/15/2018
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Consultation
Completed Date: 01/11/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 01/11/2019
Comments: Not reported

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Operation & Maintenance Order/Agreement
Completed Date: 10/15/2018
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: CEQA - Initial Study/ Environmental Impact Report
Completed Date: 02/26/2019
Comments: EIR conducted by the City of Pittsburg.

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Fact Sheets
Completed Date: 02/02/2006
Comments: Completed

Completed Area Name: OU 1 -Plant Site
Completed Sub Area Name: Not reported
Completed Document Type: Public Notice
Completed Date: 01/24/2006
Comments: Not reported

Completed Area Name: OU 2- North Parcel
Completed Sub Area Name: Not reported
Completed Document Type: 5 Year Review Reports
Completed Date: 12/11/2006

JOHNS MANVILLE (Continued) **S109443840**

Comments:	Not reported
Completed Area Name:	OU 1 -Plant Site
Completed Sub Area Name:	Not reported
Completed Document Type:	Design/Implementation Workplan
Completed Date:	11/02/2007
Comments:	Grading plan approval from the city, approval letter for the RDIP addendum.
Completed Area Name:	OU 1 -Plant Site
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Plan
Completed Date:	10/09/2008
Comments:	The Operation and Maintenance Plan outlines the procedures for operating, maintaining, and repairing the berm where asbestos-cotaining materials and petroleum hydrocarbon-affected soil is contained on-site.
Completed Area Name:	OU 3 - City of Pittsburg Linear Park Property
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Characterization Report
Completed Date:	09/14/2009
Comments:	The Soil Investigation Report presents the results of a limited, shallow soil investigation that was performed to determine whether asbestos-containing materials (ACM) are present in Linear Park Property. Soil samples were collected from soil borings that were drilled at 16 locations to a depth of 10 feet or less. The samples were also analyzed for total petroleum hydrocarbons as diesel and motor oil, polynuclear aromatic compounds, and volatile organic compounds, although no significant concentrations of these analytes were detected. ACM was found to occur in shallow soil in a localized area around soil borings SB-3 and SB-5 at the northeast corner of the property
Completed Area Name:	OU 3 - City of Pittsburg Linear Park Property
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Characterization Workplan
Completed Date:	07/11/2008
Comments:	The Work Plan scope of work included drilling of up to 16 soil borings to investigate for the presence of asbestos-containing materials within 10 feet of the ground surface in the Linear Park Property. The Work Plan was prepared because asbestos-containing materials were observed to extend beyond the southern boundary of the former Johns Manville Plant Site when cleanup activities were conducted.
Completed Area Name:	OU 2- North Parcel
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Report
Completed Date:	12/16/2009
Comments:	All repairs recomended appear approppriate and address of problems identified. The report is technically sound.
Completed Area Name:	OU 1 -Plant Site
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Report
Completed Date:	12/16/2009

JOHNS MANVILLE (Continued) **S109443840**

Comments:	All repairs recomended appear appropriate and address of problems identified. The report is technically sound.
Completed Area Name:	OU 2- North Parcel
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Report
Completed Date:	03/16/2010
Comments:	All structures found to be in proper condition. Minor problems found. Report approved.
Completed Area Name:	OU 1 -Plant Site
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Report
Completed Date:	02/02/2010
Comments:	Minor problems reported, appropriate corrective actions proposed
Completed Area Name:	OU 1 -Plant Site
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Report
Completed Date:	02/02/2010
Comments:	Minor problems reported, appropriate corrective actions proposed.
Completed Area Name:	OU 1 -Plant Site
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Report
Completed Date:	08/03/2010
Comments:	Everything appears to be relatively stable. No unusual events or trends were reported by the operator or noticed by the reviewer.
Completed Area Name:	OU 2- North Parcel
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Report
Completed Date:	09/10/2010
Comments:	Minor maintenancec issues identified, recommended repairs conducted and up to standards.
Completed Area Name:	OU 2- North Parcel
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Report
Completed Date:	03/07/2011
Comments:	Not reported
Future Area Name:	PROJECT WIDE
Future Sub Area Name:	Not reported
Future Document Type:	5 Year Review Reports
Future Due Date:	2021
Future Area Name:	OU 1 -Plant Site
Future Sub Area Name:	Not reported
Future Document Type:	Remedial Action Completion Report
Future Due Date:	2022
Future Area Name:	OU 1 -Plant Site
Future Sub Area Name:	Not reported
Future Document Type:	Certification
Future Due Date:	2023
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported

JOHNS MANVILLE (Continued) **S109443840**

Schedule Due Date: Not reported
Schedule Revised Date: Not reported

DEED:
Name: JOHNS MANVILLE
Address: 420 EAST 3RD STREET
City,State,Zip: PITTSBURG, CA 94565
Envirostor ID: 7390022
Area: OU 1 -PLANT SITE
Sub Area: Not reported
Site Type: VOLUNTARY CLEANUP
Status: CERTIFIED / OPERATION & MAINTENANCE
Agency: Not reported
Covenant Uploaded: Not reported
Deed Date(s): Not reported
File Name: Envirostor Land Use Restrictions

Name: JOHNS MANVILLE
Address: 420 EAST 3RD STREET
City,State,Zip: PITTSBURG, CA 94565
Envirostor ID: 7390022
Area: OU 2- NORTH PARCEL
Sub Area: Not reported
Site Type: VOLUNTARY CLEANUP
Status: CERTIFIED / OPERATION & MAINTENANCE
Agency: Not reported
Covenant Uploaded: Not reported
Deed Date(s): Not reported
File Name: Envirostor Land Use Restrictions

CERS:
Name: MANVILLE SALES CORP
Address: 420 EAST 3RD
City,State,Zip: PITTSBURG, CA
Site ID: 216949
CERS ID: SLT2O208311
CERS Description: Cleanup Program Site

Affiliation:
Affiliation Type Desc: Regional Board Caseworker
Entity Name: Regional Water Board - SAN FRANCISCO BAY RWQCB (REGION 2)
Entity Title: Not reported
Affiliation Address: 1515 CLAY ST SUITE 1400
Affiliation City: OAKLAND
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

A6 **JOHNS MANVILLE SITE NO 721540** **RCRA NonGen / NLR** **1001085683**
Target **420 EAST 3RD ST** **CAR000010074**
Property **PITTSBURG, CA 94565**

Site 6 of 11 in cluster A

Actual: **15 ft.**

RCRA NonGen / NLR:

Date Form Received by Agency:	2004-02-24 00:00:00.0
Handler Name:	JOHNS MANVILLE SITE NO 721540
Handler Address:	420 EAST 3RD ST
Handler City,State,Zip:	PITTSBURG, CA 94565
EPA ID:	CAR000010074
Contact Name:	BRIAN OLSON
Contact Address:	Not reported
Contact City,State,Zip:	Not reported
Contact Telephone:	303-978-2218
Contact Fax:	Not reported
Contact Email:	OLSONB@JM.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Private
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	2003
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	PO BOX 5108
Mailing City,State,Zip:	DENVER, CO 80217-5108
Owner Name:	JOHNS MANVILLE
Owner Type:	Private
Operator Name:	JOHNS MANVILLE
Operator Type:	Private
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	NN
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported

JOHNS MANVILLE SITE NO 721540 (Continued) **1001085683**

Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2004-12-03 00:00:00.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	Not reported
Manifest Broker:	Not reported
Sub-Part P Indicator:	Not reported

Biennial: List of Years
Year: 2003

Click Here for Biennial Reporting System Data:

Hazardous Waste Summary:

Waste Code:	D001
Waste Description:	IGNITABLE WASTE
Waste Code:	D002
Waste Description:	CORROSIVE WASTE
Waste Code:	D005
Waste Description:	BARIUM
Waste Code:	D006
Waste Description:	CADMIUM
Waste Code:	D007
Waste Description:	CHROMIUM
Waste Code:	D008
Waste Description:	LEAD
Waste Code:	D009

JOHNS MANVILLE SITE NO 721540 (Continued) **1001085683**

Waste Description: MERCURY

Waste Code: D010
Waste Description: SELENIUM

Waste Code: D011
Waste Description: SILVER

Waste Code: D018
Waste Description: BENZENE

Waste Code: D026
Waste Description: CRESOL

Waste Code: D039
Waste Description: TETRACHLOROETHYLENE

Waste Code: D040
Waste Description: TRICHLORETHYLENE

Waste Code: F002
Waste Description: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F003
Waste Description: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F005
Waste Description: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Handler - Owner Operator:
Owner/Operator Indicator: Owner
Owner/Operator Name: JOHNS MANVILLE
Legal Status: Private
Date Became Current: 1925-01-01 00:00:00.

JOHNS MANVILLE SITE NO 721540 (Continued) **1001085683**

Date Ended Current:	Not reported
Owner/Operator Address:	PO BOX 5108
Owner/Operator City,State,Zip:	DENVER, CO 80217-5108
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	JOHNS MANVILLE
Legal Status:	Private
Date Became Current:	1925-01-01 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	SCHULLER INTERNATIONAL INC
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	P O BOX 591
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565-0591
Owner/Operator Telephone:	510-427-2401
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	1996-03-18 00:00:00.0
Handler Name:	SCHULLER INTERNATIONAL INC
Federal Waste Generator Description:	Small Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported
Receive Date:	2004-02-24 00:00:00.0
Handler Name:	JOHNS MANVILLE SITE NO 721540
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported

JOHNS MANVILLE SITE NO 721540 (Continued) **1001085683**

Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 324122
NAICS Description: ASPHALT SHINGLE AND COATING MATERIALS MANUFACTURING

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

A7 Target Property **FORMER JOHNS MANVILLE SITE REMEDIATION**
420 EAST 3RD STREET
PITTSBURG, CA 94565

CA HAZNET **S113139304**
CA NPDES **N/A**
CA CONTRA COSTA CO. SITE LIST
CA HWTS

Site 7 of 11 in cluster A

Actual: 15 ft.

HAZNET:
Name: PITTSBURG RIVER PARK LLC
Address: 420 E 3RD ST
Address 2: Not reported
City,State,Zip: PITTSBURG, CA 945652216
Contact: MICHAEL SINGER/PROJECT DIR
Telephone: 7814318101
Mailing Name: Not reported
Mailing Address: 40 WALNUT ST STE 301

Year: 2006
Gepaid: CAL000299140
TSD EPA ID: CAL000190080
CA Waste Code: 151 - Asbestos containing waste
Disposal Method: -
Tons: 93.6

Year: 2006
Gepaid: CAL000299140
TSD EPA ID: CAD982042475
CA Waste Code: -
Disposal Method: D80 - Disposal, Land Fill
Tons: 25.284

Year: 2006
Gepaid: CAL000299140
TSD EPA ID: CAD982042475
CA Waste Code: 151 - Asbestos containing waste
Disposal Method: D80 - Disposal, Land Fill
Tons: 16.856

Year: 2006
Gepaid: CAL000299140
TSD EPA ID: CAD98204475
CA Waste Code: 151 - Asbestos containing waste
Disposal Method: D80 - Disposal, Land Fill
Tons: 25.284

FORMER JOHNS MANVILLE SITE REMEDIATION (Continued) **S113139304**

Year:	2006
Gepaid:	CAL000299140
TSD EPA ID:	CAD932042475
CA Waste Code:	151 - Asbestos containing waste
Disposal Method:	D80 - Disposal, Land Fill
Tons:	16.856

Year:	2006
Gepaid:	CAL000299140
TSD EPA ID:	CAD782042475
CA Waste Code:	151 - Asbestos containing waste
Disposal Method:	D80 - Disposal, Land Fill
Tons:	25.284

Year:	2006
Gepaid:	CAL000299140
TSD EPA ID:	CAT080033681
CA Waste Code:	352 - Other organic solids
Disposal Method:	D80 - Disposal, Land Fill
Tons:	0.125

Year:	2006
Gepaid:	CAL000299140
TSD EPA ID:	CAL000161743
CA Waste Code:	352 - Other organic solids
Disposal Method:	H01 - Transfer Station
Tons:	0.3

Year:	2006
Gepaid:	CAL000299140
TSD EPA ID:	CAD982411993
CA Waste Code:	261 - Polychlorinated biphenyls and material containing PCBs
Disposal Method:	-
Tons:	2.68447

Year:	2006
Gepaid:	CAL000299140
TSD EPA ID:	CAL000190080
CA Waste Code:	151 - Asbestos containing waste
Disposal Method:	132 -
Tons:	7.2

Click this hyperlink while viewing on your computer to access
7 additional CA HAZNET: record(s) in the EDR Site Report.

Additional Info:

Year:	2005
Gen EPA ID:	CAL000299140
Shipment Date:	20051221
Creation Date:	1/4/2007 18:30:12
Receipt Date:	20051221
Manifest ID:	23551186
Trans EPA ID:	CAR000007013
Trans Name:	CLEARWATER
Trans 2 EPA ID:	Not reported

FORMER JOHNS MANVILLE SITE REMEDIATION (Continued) **S113139304**

Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982042475
Trans Name:	NWS HAY ROAD LANDFILL
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	151 - Asbestos-containing waste
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	29.498
Waste Quantity:	35
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20051220
Creation Date:	1/4/2007 18:30:12
Receipt Date:	20051221
Manifest ID:	24774176
Trans EPA ID:	CAR000007013
Trans Name:	CLEARWATER ENVIRONMENTAL
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAL000161743
Trans Name:	ALVISO INDEPENDENT OIL
TSDF Alt EPA ID:	CAL000161743
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	6.255
Waste Quantity:	1500
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20051205
Creation Date:	1/2/2007 18:30:20
Receipt Date:	20051205
Manifest ID:	23550892
Trans EPA ID:	CAD980695605
Trans Name:	DELTA OILFIELD SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982042475
Trans Name:	NWS HAY ROAD LANDFILL
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	151 - Asbestos-containing waste
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	50.568

FORMER JOHNS MANVILLE SITE REMEDIATION (Continued) **S113139304**

Waste Quantity:	60
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20051122
Creation Date:	3/14/2007 18:30:14
Receipt Date:	20051122
Manifest ID:	24546545
Trans EPA ID:	CAR000007013
Trans Name:	CLEARWATER ENVIRONMENTAL
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAL000161743
Trans Name:	ALVISO INDEPENDENT OIL
TSDF Alt EPA ID:	CAL000161743
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	4.17
Waste Quantity:	1000
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20051121
Creation Date:	3/14/2007 18:30:14
Receipt Date:	20051122
Manifest ID:	24774144
Trans EPA ID:	CAR000007013
Trans Name:	CLEARWATER ENVIRONMENTAL
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAL000161743
Trans Name:	ALVISO INDEPENDENT OIL
TSDF Alt EPA ID:	CAL000161743
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	7.923
Waste Quantity:	1900
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20051116

FORMER JOHNS MANVILLE SITE REMEDIATION (Continued) **S113139304**

Creation Date:	3/14/2007 18:30:14
Receipt Date:	20051116
Manifest ID:	23551177
Trans EPA ID:	CAD980695605
Trans Name:	DELTA OILFIELD SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982804247
Trans Name:	NWS HAY ROAD LANDFILL
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	151 - Asbestos-containing waste
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	50.568
Waste Quantity:	60
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20051111
Creation Date:	1/2/2007 18:30:20
Receipt Date:	20051111
Manifest ID:	24687049
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENV SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	CAD059494310
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	5.421
Waste Quantity:	1300
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2006
Gen EPA ID:	CAL000299140

Shipment Date:	20061216
Creation Date:	3/30/2007 13:33:18
Receipt Date:	20061206
Manifest ID:	002184889JJK
Trans EPA ID:	CAR000084426
Trans Name:	SAI TRUCKING

FORMER JOHNS MANVILLE SITE REMEDIATION (Continued) **S113139304**

Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAL000190080
Trans Name:	FORWARD LANDFILL
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	151 - Asbestos-containing waste
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	7.2
Waste Quantity:	18
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20061214
Creation Date:	3/30/2007 13:34:03
Receipt Date:	20061214
Manifest ID:	002186088JJK
Trans EPA ID:	CAR000168716
Trans Name:	HENDOWSKI TRK
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAL000190080
Trans Name:	FORWARD LANDFILL
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	151 - Asbestos-containing waste
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	7.2
Waste Quantity:	18
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20061214
Creation Date:	3/30/2007 13:34:03
Receipt Date:	20061214
Manifest ID:	002186089JJK
Trans EPA ID:	CAR000169003
Trans Name:	JRO TRUCKING INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAL000190080
Trans Name:	FORWARD LANDFILL
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	151 - Asbestos-containing waste

FORMER JOHNS MANVILLE SITE REMEDIATION (Continued) **S113139304**

RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	7.2
Waste Quantity:	18
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20061214
Creation Date:	3/30/2007 13:34:03
Receipt Date:	20061214
Manifest ID:	002186090JJK
Trans EPA ID:	CAR000176735
Trans Name:	OROZCO TRUCKING
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAL000190080
Trans Name:	FORWARD LANDFILL
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	151 - Asbestos-containing waste
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	7.2
Waste Quantity:	18
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20061214
Creation Date:	3/30/2007 13:34:03
Receipt Date:	20061214
Manifest ID:	002186091JJK
Trans EPA ID:	CAR000094276
Trans Name:	D&A TRUCKING
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAL000190080
Trans Name:	FORWARD LANDFILL
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	151 - Asbestos-containing waste
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	7.2
Waste Quantity:	18
Quantity Unit:	Y
Additional Code 1:	Not reported

FORMER JOHNS MANVILLE SITE REMEDIATION (Continued) **S113139304**

Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20061214
Creation Date:	3/30/2007 13:34:03
Receipt Date:	20061214
Manifest ID:	002186092JJK
Trans EPA ID:	CAR000162966
Trans Name:	CRAIG
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAL000190080
Trans Name:	FORWARD LANDFILL
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	151 - Asbestos-containing waste
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	7.2
Waste Quantity:	18
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20061214
Creation Date:	3/30/2007 13:34:03
Receipt Date:	20061214
Manifest ID:	002186093JJK
Trans EPA ID:	CAR000172940
Trans Name:	WAKEFIELD TRUCKING
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAL000190080
Trans Name:	FORWARD LANDFILL
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	151 - Asbestos-containing waste
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	7.2
Waste Quantity:	18
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20061214
Creation Date:	3/30/2007 13:34:03

FORMER JOHNS MANVILLE SITE REMEDIATION (Continued) **S113139304**

Receipt Date:	20061214
Manifest ID:	002186094JJK
Trans EPA ID:	CAL000291334
Trans Name:	NORIEGAS T
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAL000190080
Trans Name:	FORWARD LANDFILL
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	151 - Asbestos-containing waste
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	7.2
Waste Quantity:	18
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20061214
Creation Date:	3/30/2007 13:34:03
Receipt Date:	20061214
Manifest ID:	002186095JJK
Trans EPA ID:	CAL000278436
Trans Name:	A&A RUBIO
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAL000190080
Trans Name:	FORWARD LANDFILL
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	151 - Asbestos-containing waste
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	7.2
Waste Quantity:	18
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20061214
Creation Date:	3/30/2007 13:34:03
Receipt Date:	20061214
Manifest ID:	002186096JJK
Trans EPA ID:	CAR000150631
Trans Name:	FERNANDO SALAS TRKG
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAL000190080

FORMER JOHNS MANVILLE SITE REMEDIATION (Continued) **S113139304**

Trans Name:	FORWARD LANDFILL
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	151 - Asbestos-containing waste
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	7.2
Waste Quantity:	18
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

NPDES:

Name:	FORMER JOHNS MANVILLE SITE REMEDIATION
Address:	420 EAST 3RD STREET
City,State,Zip:	PITTSBURG, CA 94565
Facility Status:	Not reported
NPDES Number:	Not reported
Region:	Not reported
Agency Number:	Not reported
Regulatory Measure ID:	Not reported
Place ID:	Not reported
Order Number:	Not reported
WDID:	Not reported
Regulatory Measure Type:	Construction
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Discharge Address:	Not reported
Discharge Name:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Status:	Returned
Status Date:	07/23/2019
Operator Name:	Third Street Pittsburg Campus Owner LLC
Operator Address:	3045 Research Drive
Operator City:	Richmond
Operator State:	California
Operator Zip:	94806

CONTRA COSTA CO. SITE LIST:

Name:	MAKING WAVES ACADEMY PROJECT
Address:	420 E 3RD ST
City:	PITTSBURG
Facility ID:	FA0031924
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	HWG: LESS THAN 5 TONS/YEAR
Region:	CONTRA COSTA

FORMER JOHNS MANVILLE SITE REMEDIATION (Continued) **S113139304**

Cupa Number: 721540

Name: MAKING WAVES ACADEMY PROJECT
Address: 420 E 3RD ST
City: PITTSBURG
Facility ID: FA0031924
Billing Status: INACTIVE, NON-BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: UNDERGROUND STORAGE TANK SITE
Region: CONTRA COSTA
Cupa Number: 721540

HWTS:
Name: PITTSBURG RIVER PARK LLC
Address: 420 E 3RD ST
Address 2: Not reported
City,State,Zip: PITTSBURG, CA 945652216
EPA ID: CAL000299140
Inactive Date: 06/30/2010
Create Date: 10/05/2005
Last Act Date: 12/08/2011
Mailing Name: Not reported
Mailing Address: 40 WALNUT ST STE 301
Mailing Address 2: Not reported
Mailing City,State,Zip: WELLESLEY, MA 024812102
Owner Name: PITTSBURG RIVER PARK LLC
Owner Address: 40 WALNUT ST STE 301
Owner Address 2: Not reported
Owner City,State,Zip: WELLESLEY, CA 024812102
Contact Name: MICHAEL SINGER/PROJECT DIR
Contact Address: 40 WALNUT ST STE 301
Contact Address 2: Not reported
City,State,Zip: WELLESLEY, MA 024812102

NAICS:
EPA ID: CAL000299140
Create Date: 2005-10-05 14:20:59.687
NAICS Code: 23311
NAICS Description: Land Subdivision and Land Development
Issued EPA ID Date: 2005-10-05 14:20:59.61000
Inactive Date: 2010-06-30 00:00:00
Facility Name: PITTSBURG RIVER PARK LLC
Facility Address: 420 E 3RD ST
Facility Address 2: Not reported
Facility City: PITTSBURG
Facility County: Not reported
Facility State: CA
Facility Zip: 945652216

A8 **ERNS** **98462904**
Target Property **420 EAST 3RD STREET**
PITTSBURG, CA 94565 **N/A**

Site 8 of 11 in cluster A

Actual: 15 ft.

Incident Commons:

NRC Report #:	462904
Description of Incident:	RAIL TANK CAR / MATERIAL SPILLED FM DUE TO A RUPTURED TRANSFER LINEBETWEEN THE CAR AND A STORAGE TANK
Type of Incident:	RAILROAD
Incident Cause:	EQUIPMENT FAILURE
Incident Date Time:	1998-11-06 03:15:00
Incident DTG:	OCCURRED
Incident Location:	Not reported
Loaction Address:	420 EAST 3RD STREET
Location Street 1:	Not reported
Location Street 2:	Not reported
Location Nearest City:	PITTSBURG
Location State:	CA
Location County:	CONTRA COSTA
Location Zip:	94565
Distance From City:	Not reported
Distance Units:	Not reported
Direction From City:	Not reported
Lat Deg:	Not reported
Lat Min:	Not reported
Lat Sec:	Not reported
Lat Quad:	Not reported
Long Deg:	Not reported
Long Min:	Not reported
Long Sec:	Not reported
Long Quad:	Not reported
Location Section:	Not reported
Location Township:	Not reported
Location range:	Not reported
Potential Range:	Not reported

Incidents:

NRC Report #:	462904
Aircraft Type:	UNKNOWN
Aircraft Model:	Not reported
Aircraft ID:	Not reported
Aircraft Fuel Capacity:	Not reported
Aircraft Fuel Capacity Units:	Not reported
Aircraft Fuel on Board:	Not reported
Aircraft Fuel on Board Units:	Not reported
Aircraft Spot Number:	Not reported
Aircraft Hanger:	Not reported
Aircraft Runway Number:	Not reported
Road Mile Marker:	Not reported
Building ID:	Not reported
Type of Fixed Object:	UNKNOWN
Power Generating Facility:	U
Generating Capacity:	Not reported
Type of Fuel:	Not reported
NPDES:	Not reported
NPDES Compliance:	U
Pipeline Type:	UNKNOWN
DOT Regulated:	U

(Continued) **98462904**

Pipeline Above Ground:	ABOVE
Exposed Underwater:	U
Pipeline Covered:	U
Railroad Hotline:	N
Grade Crossing:	N
Location Subdivision:	Not reported
Railroad Milepost:	UNKNOWN
Type Vehicle Involved:	UNKNOWN
Crossing Device Type:	Not reported
Device Operational:	Y
DOT Crossing Number:	Not reported
Brake Failure:	N
Description of Tank:	Not reported
Tank Above Ground:	ABOVE
Transportable Container:	U
Tank Regulated:	U
Tank Regulated By:	Not reported
Tank ID:	Not reported
Capacity of Tank:	Not reported
Capacity of Tank Units:	Not reported
Actual Amount:	Not reported
Actual Amount Units:	Not reported
Platform Rig Name:	Not reported
Platform Letter:	Not reported
Location Area ID:	Not reported
Location Block ID:	Not reported
OCSG Number:	Not reported
OCSP Number:	Not reported
State Lease Number:	Not reported
Pier Dock Number:	Not reported
Berth Slip Number:	Not reported
Continuous Release Type:	Not reported
Initial Continuous Release No:	Not reported
Continuous Release Permit:	Not reported
Allision:	N
Type of Structure:	Not reported
Structure Name:	Not reported
Structure Operational:	Y
Airbag Deployed:	Not reported
Date Tiem Normal Service:	Not reported
Service Disruption Time:	Not reported
Service Disruption Units:	Not reported
Transit Bus Flag:	Not reported
CR Begin Date:	Not reported
CR End Date:	Not reported
CR Change Date:	Not reported
FBI Contact:	Not reported
FBI Contact Date Time:	Not reported
Sub Part C Testing Req:	XXX
Conductor Testing:	Not reported
Engineer Testing:	Not reported
Trainman Testing:	Not reported
Yard Foreman Testing:	Not reported
RCL Operator Testing:	Not reported
Brakeman Testing:	Not reported
Train Dispatcher Testing:	Not reported
Signalman Testing:	Not reported

(Continued) **98462904**

Other Employee Testing:	Not reported
Unknown Testing:	Not reported
Passenger Handling:	Not reported
Passenger Route:	XXX
Passenger Delay:	XXX

Incident Details:

NRC Report #:	462904
Fire Involved:	N
Fire Extinguished:	U
Any Evacuations:	N
Number Evacuated:	Not reported
Who Evacuated:	Not reported
Radius of Evacuation:	Not reported
Any Injuries:	U
Number Injured:	Not reported
Number Hospitalized:	Not reported
Any Fatalities:	U
Number Fatalities:	Not reported
Any Damages:	N
Damage Amount:	Not reported
Air Corridor Closed:	N
Air Corridor Desc:	Not reported
Air Closure Time:	Not reported
Waterway Closed:	N
Waterway Desc:	Not reported
Waterway Closure Time:	Not reported
Road Closed:	N
Road Desc:	Not reported
Road Closure Time:	Not reported
Closure Direction:	Not reported
Major Artery:	N
Track Closed:	N
Track Desc:	Not reported
Track Closure Time:	Not reported
Media Interest:	Not reported
Medium Desc:	WATER
Additional Medium Info:	STORM DRAIN > SACRAMENTO RIVER
Body of Water:	Not reported
Tributary of:	Not reported
Release Secured:	U
Estimated Duration of Release:	Not reported
Release rate:	Not reported
Desc Remedial Action:	3000-5000 GALLONS SPILLED TO SOIL / CLEAN UP PREPARATIONS ARE UNDERWAY/SAND BAGS PLACED IN STORM DRAIN / MATERIAL CONTAINED / SPILL SECURED
State Agency on Scene:	Not reported
State Agency Report Number:	Not reported
Other Agency Notified:	Not reported
Weather Conditions:	Not reported
Air Temperature:	Not reported
Wind Speed:	Not reported
Wind Direction:	Not reported
Water Supply Contaminated:	U
Sheen Size:	Not reported
Sheen Color:	Not reported
Direction of Sheen Travel:	Not reported

(Continued) **98462904**

Sheen Odor Description:	Not reported
Wave Condition:	Not reported
Current Speed:	Not reported
Current Direction:	Not reported
Water Temperature:	Not reported
Track Close Dir:	Not reported
Empl Fatality:	Not reported
Pass Fatality:	Not reported
Community Impact:	N
Wind Speed Unit:	Not reported
Employee Injuries:	Not reported
Passenger Injuries:	Not reported
Occupant Fatality:	Not reported
Current Speed Unit:	Not reported
Road Closure Units:	Not reported
Track CLosure Units:	Not reported
Sheen Size Units:	Not reported
Additional Info:	MATERIAL IS CONTAINED WITHIN THE STORM DRAIN
State Agency Notified:	Not reported
Federal Agency Notified:	Not reported
nearest River Mile Marker:	Not reported
Sheen Size Length:	Not reported
Sheen Size Length Units:	Not reported
Sheen Size Width:	Not reported
Sheen Size Width Units:	Not reported
Offshore:	N
Duration Unit:	Not reported
Release Rate Unit:	Not reported
Release Rate Rate:	Not reported
Passengers Transferred:	UNK

Calls:

NRC Report #:	462904
Site ID:	98462904
Date Time Received:	1998-11-06 12:49:05
Date Time Complete:	1998-11-06 12:59:29
Call Type:	INC
Responsible Company:	JOHNS MANVILLE
Responsible Org Type:	PRIVATE ENTERPRISE
Responsible City:	PITTSBURG
Responsible State:	CA
Responsible Zip:	94565
On Behalf:	Not reported
Source:	UNAVAILABLE

Trains Detail:

Site ID:	98462904
Train Name Number:	UNKNOWN
Railroad Name:	UNKNOWN
Train Type:	UNKNOWN
Track Speed:	Not reported
Train Speed:	Not reported
Train Direction:	Not reported
Number Locomotives:	Not reported
Number Cars:	Not reported
Number Derailed:	Not reported

(Continued) **98462904**

Non Compliance With Hazmat: N

Material Involved:

NRC Report #:	462904
Chris Code:	ASP
Case Number:	Not reported
UN Number:	Not reported
Amount of Material:	6000
Unit of Measure:	GALLON(S)
Name of Material:	ASPHALT (FLUX)
If Reached Water:	YES
Amount in Water:	1000
Unit of Measure Reach Water:	GALLON(S)

A9 **MANVILLE SALES CORP** **FINDS** **1023378888**
Target **420 EAST 3RD** **N/A**
Property **PITTSBURG, CA 94565**

Site 9 of 11 in cluster A

Actual: **15 ft.**

FINDS:
Registry ID: 110066772754

Click Here:

Environmental Interest/Information System:
STATE MASTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

A10 **FORMER JOHNS MANVILLE PLANT SITE** **CA CIWQS** **S121639285**
Target **420 EAST 3RD ST** **N/A**
Property **PITTSBURG, CA 94565**

Site 10 of 11 in cluster A

Actual: **15 ft.**

CIWQS:

Name:	FORMER JOHNS MANVILLE PLANT SITE
Address:	420 EAST 3RD ST
City,State,Zip:	PITTSBURG, CA 94565
Agency:	Pittsburg River Park LLC
Agency Address:	36 Washington Street Ste 220, Wellesley, MA 02481
Place/Project Type:	Construction - Other
SIC/NAICS:	Not reported
Region:	2
Program:	CONSTW
Regulatory Measure Status:	Terminated
Regulatory Measure Type:	Storm water construction
Order Number:	2009-0009-DWQ
WDID:	2 07C336983
NPDES Number:	CAS000002
Adoption Date:	01/01/1900
Effective Date:	10/06/2005
Termination Date:	09/02/2010
Expiration/Review Date:	01/01/1900

FORMER JOHNS MANVILLE PLANT SITE (Continued) **S121639285**

Design Flow:	Not reported
Major/Minor:	Not reported
Complexity:	Not reported
TTWQ:	Not reported
Enforcement Actions within 5 years:	0
Violations within 5 years:	0
Latitude:	Not reported
Longitude:	Not reported

A11 **CA CHMIRS** **S105653651**
Target Property **420 E. 3RD STREET** **N/A**
PITTSBURG, CA

Site 11 of 11 in cluster A

Actual: 15 ft.

CHMIRS:

Name:	Not reported
Address:	420 E. 3RD STREET
City,State,Zip:	PITTSBURG, CA
OES Incident Number:	8-4998
OES notification:	11/06/1998
OES Date:	Not reported
OES Time:	Not reported
Date Completed:	**Not reported**
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA DOT PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	Yes
Waterway:	Storm Drian
Spill Site:	Not reported
Cleanup By:	Reporting Party
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported

(Continued) **S105653651**

Year:	1998
Agency:	Johns Manville
Incident Date:	11/6/199812:00:00 AM
Admin Agency:	Not reported
Amount:	Not reported
Contained:	Yes
Site Type:	Industrial Plant
E Date:	Not reported
Substance:	Asphalt Flux
Gallons:	1000
Unknown:	0
Substance #2:	Not reported
Substance #3:	Not reported
Evacuations:	0
Number of Injuries:	0
Number of Fatalities:	0
#1 Pipeline:	Not reported
#2 Pipeline:	Not reported
#3 Pipeline:	Not reported
#1 Vessel >= 300 Tons:	Not reported
#2 Vessel >= 300 Tons:	Not reported
#3 Vessel >= 300 Tons:	Not reported
Evacs:	Not reported
Injuries:	Not reported
Fatals:	Not reported
Comments:	Not reported
Description:	Hose ruptured during transfer from rail car to tank. Substance flowed into a storm drain and was contained there with sand bags.

B12 **JOHNS-MANYILLE-ROOFING SYSTEMS** **CA HIST UST** **S118411830**
NE **E 3RD AND HARDOR STREET** **N/A**
< 1/8 **PITTSBURG, CA 94565**
0.007 mi.
39 ft. **Site 1 of 12 in cluster B**

Relative: HIST UST:
Lower

Actual:
12 ft.

Name:	JOHNS-MANYILLE-ROOFING SYSTEMS
Address:	E 3RD AND HARDOR STREET
City,State,Zip:	PITTSBURG, CA 94565
File Number:	00022C8A
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00022C8A.pdf
Region:	Not reported
Facility ID:	Not reported
Facility Type:	Not reported
Other Type:	Not reported
Contact Name:	Not reported
Telephone:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City,St,Zip:	Not reported
Total Tanks:	Not reported
Tank Num:	Not reported
Container Num:	Not reported
Year Installed:	Not reported
Tank Capacity:	Not reported
Tank Used for:	Not reported

JOHNS-MANYILLE-ROOFING SYSTEMS (Continued) **S118411830**

Type of Fuel: Not reported
Container Construction Thickness: Not reported
Leak Detection: Not reported

Click here for Geo Tracker PDF:

B13 **JOHNS-MANVILLE-ROOFING SYSTEMS** **CA HIST UST** **U001597916**
NE **E 3RD & HARBOR STREET** **CA EMI** **N/A**
< 1/8 **PITTSBURG, CA 94565**
0.007 mi.
39 ft. **Site 2 of 12 in cluster B**

Relative: **Lower**
Actual: **12 ft.**

HIST UST:
Name: JOHNS-MANVILLE-ROOFING SYSTEMS
Address: E 3RD & HARBOR STREET
City,State,Zip: PITTSBURG, CA 94565
File Number: Not reported
URL: Not reported
Region: STATE
Facility ID: 00000021540
Facility Type: Other
Other Type: ROOFING-MANUFACTURE
Contact Name: A.W. MACRAE
Telephone: 4154326426
Owner Name: MANVILLE CORPORATION
Owner Address: E 3RD & HARBOR
Owner City,St,Zip: PITTSBURG, CA 94509
Total Tanks: 0003

Tank Num: 001
Container Num: 0003
Year Installed: 1956
Tank Capacity: 00007500
Tank Used for: PRODUCT
Type of Fuel: Not reported
Container Construction Thickness: Not reported
Leak Detection: Pressure Test

Tank Num: 002
Container Num: 0001
Year Installed: Not reported
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Container Construction Thickness: Not reported
Leak Detection: Visual, Stock Inventor

Tank Num: 003
Container Num: 0002
Year Installed: Not reported
Tank Capacity: 00002400
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Container Construction Thickness: Not reported
Leak Detection: Visual, Stock Inventor

EMI:

JOHNS-MANVILLE-ROOFING SYSTEMS (Continued) **U001597916**

Name:	MANVILLE CORPORATION
Address:	E 3RD & HARBOR STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	1987
County Code:	7
Air Basin:	SF
Facility ID:	119
Air District Name:	BA
SIC Code:	2952
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	10
NOX - Oxides of Nitrogen Tons/Yr:	3
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	6
Part. Matter 10 Micrometers and Smllr Tons/Yr:	4

Name:	MANVILLE ROOFING SYSTEMS DIV
Address:	E 3RD & HARBOR STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	1990
County Code:	7
Air Basin:	SF
Facility ID:	119
Air District Name:	BA
SIC Code:	2952
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	10
Reactive Organic Gases Tons/Yr:	10
Carbon Monoxide Emissions Tons/Yr:	5
NOX - Oxides of Nitrogen Tons/Yr:	2
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	8
Part. Matter 10 Micrometers and Smllr Tons/Yr:	7

Name:	SCHULLER ROOFING SYSTEMS
Address:	E 3RD & HARBOR STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	1995
County Code:	7
Air Basin:	SF
Facility ID:	119
Air District Name:	BA
SIC Code:	2952
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	13
Reactive Organic Gases Tons/Yr:	12
Carbon Monoxide Emissions Tons/Yr:	24
NOX - Oxides of Nitrogen Tons/Yr:	4
SOX - Oxides of Sulphur Tons/Yr:	0

JOHNS-MANVILLE-ROOFING SYSTEMS (Continued) **U001597916**

Particulate Matter Tons/Yr: 10
Part. Matter 10 Micrometers and Smllr Tons/Yr: 9

Name: SCHULLER ROOFING SYSTEMS
Address: E 3RD & HARBOR STREET
City,State,Zip: PITTSBURG, CA 94565
Year: 1996
County Code: 7
Air Basin: SF
Facility ID: 119
Air District Name: BA
SIC Code: 2952
Air District Name: BAY AREA AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 13
Reactive Organic Gases Tons/Yr: 12
Carbon Monoxide Emissions Tons/Yr: 24
NOX - Oxides of Nitrogen Tons/Yr: 4
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 10
Part. Matter 10 Micrometers and Smllr Tons/Yr: 10

Name: JOHNS-MANVILLE CORPORATION
Address: E 3RD & HARBOR STREET
City,State,Zip: PITTSBURG, CA 94565
Year: 1997
County Code: 7
Air Basin: SF
Facility ID: 119
Air District Name: BA
SIC Code: 2952
Air District Name: BAY AREA AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 16
Reactive Organic Gases Tons/Yr: 14
Carbon Monoxide Emissions Tons/Yr: 18
NOX - Oxides of Nitrogen Tons/Yr: 4
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 11
Part. Matter 10 Micrometers and Smllr Tons/Yr: 11

Name: JOHNS-MANVILLE INC
Address: E 3RD & HARBOR STREET
City,State,Zip: PITTSBURG, CA 94565
Year: 1998
County Code: 7
Air Basin: SF
Facility ID: 119
Air District Name: BA
SIC Code: 2952
Air District Name: BAY AREA AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 17
Reactive Organic Gases Tons/Yr: 17

JOHNS-MANVILLE-ROOFING SYSTEMS (Continued) **U001597916**

Carbon Monoxide Emissions Tons/Yr:	26
NOX - Oxides of Nitrogen Tons/Yr:	2
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	13
Part. Matter 10 Micrometers and Smllr Tons/Yr:	12

Name:	JOHNS MANVILLE CORPORATION
Address:	E 3RD & HARBOR STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	1999
County Code:	7
Air Basin:	SF
Facility ID:	119
Air District Name:	BA
SIC Code:	5039
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	15
Reactive Organic Gases Tons/Yr:	14
Carbon Monoxide Emissions Tons/Yr:	31
NOX - Oxides of Nitrogen Tons/Yr:	2
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	12
Part. Matter 10 Micrometers and Smllr Tons/Yr:	12

Name:	JOHNS MANVILLE CORPORATION
Address:	E 3RD & HARBOR STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	2000
County Code:	7
Air Basin:	SF
Facility ID:	119
Air District Name:	BA
SIC Code:	5039
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	15
Reactive Organic Gases Tons/Yr:	14
Carbon Monoxide Emissions Tons/Yr:	31
NOX - Oxides of Nitrogen Tons/Yr:	2
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	12
Part. Matter 10 Micrometers and Smllr Tons/Yr:	12

Name:	JOHNS MANVILLE CORPORATION
Address:	E 3RD & HARBOR STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	2001
County Code:	7
Air Basin:	SF
Facility ID:	119
Air District Name:	BA
SIC Code:	5039
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Y

JOHNS-MANVILLE-ROOFING SYSTEMS (Continued) **U001597916**

Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	12
Reactive Organic Gases Tons/Yr:	11
Carbon Monoxide Emissions Tons/Yr:	23
NOX - Oxides of Nitrogen Tons/Yr:	2
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	10
Part. Matter 10 Micrometers and Smllr Tons/Yr:	10

Name:	JOHNS MANVILLE CORPORATION
Address:	E 3RD & HARBOR STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	2002
County Code:	7
Air Basin:	SF
Facility ID:	119
Air District Name:	BA
SIC Code:	2952
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	12
Reactive Organic Gases Tons/Yr:	12
Carbon Monoxide Emissions Tons/Yr:	23
NOX - Oxides of Nitrogen Tons/Yr:	2
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	10
Part. Matter 10 Micrometers and Smllr Tons/Yr:	10

Name:	JOHNS MANVILLE CORPORATION
Address:	E 3RD & HARBOR STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	2003
County Code:	7
Air Basin:	SF
Facility ID:	119
Air District Name:	BA
SIC Code:	2952
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	12
Reactive Organic Gases Tons/Yr:	12
Carbon Monoxide Emissions Tons/Yr:	23
NOX - Oxides of Nitrogen Tons/Yr:	2
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	10
Part. Matter 10 Micrometers and Smllr Tons/Yr:	10

B14
NE
< 1/8
0.008 mi.
40 ft.

MANVILLE SALES CORP
UNKNOWN 3RD & HARBOR DR
PITTSBURG, CA

Site 3 of 12 in cluster B

CA CPS-SLIC **S101641603**
N/A

Relative:
Lower

Actual:
12 ft.

SLIC REG 2:

Region:	2
Facility ID:	07S0091
Facility Status:	Leak being confirmed
Date Closed:	Not reported
Local Case #:	Not reported
How Discovered:	Not reported
Leak Cause:	Not reported
Leak Source:	Not reported
Date Confirmed:	Not reported
Date Prelim Site Assmnt Workplan Submitted:	Not reported
Date Preliminary Site Assessment Began:	Not reported
Date Pollution Characterization Began:	Not reported
Date Remediation Plan Submitted:	Not reported
Date Remedial Action Underway:	Not reported
Date Post Remedial Action Monitoring Began:	Not reported

15
North
< 1/8
0.009 mi.
48 ft.

CAL ASIA DEVELOPMENT
391 3RD ST E
PITTSBURG, CA 94565

CA LUST **S101306998**
CA Cortese **N/A**
CA HIST CORTESE
CA CONTRA COSTA CO. SITE LIST
CA CERS

Relative:
Lower

Actual:
11 ft.

LUST REG 2:

Region:	2
Facility Id:	07-0046
Facility Status:	Case Closed
Case Number:	70034
How Discovered:	Tank Closure
Leak Cause:	UNK
Leak Source:	UNK
Date Leak Confirmed:	Not reported
Oversight Program:	LUST
Prelim. Site Assesment Wokplan Submitted:	Not reported
Preliminary Site Assesment Began:	Not reported
Pollution Characterization Began:	Not reported
Pollution Remediation Plan Submitted:	Not reported
Date Remediation Action Underway:	Not reported
Date Post Remedial Action Monitoring Began:	Not reported

LUST:

Name:	CAL ASIA DEVELOPMENT
Address:	391 3RD ST E
City,State,Zip:	PITTSBURG, CA 94565
Lead Agency:	SAN FRANCISCO BAY RWQCB (REGION 2)
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0601300043
Global Id:	T0601300043
Latitude:	38.0327392
Longitude:	-121.8799139
Status:	Completed - Case Closed
Status Date:	03/24/1997
Case Worker:	Not reported

CAL ASIA DEVELOPMENT (Continued) **S101306998**

RB Case Number: 07-0046
Local Agency: CONTRA COSTA COUNTY
File Location: Not reported
Local Case Number: 70034
Potential Media Affect: Soil
Potential Contaminants of Concern: Gasoline
Site History: Not reported

LUST:
Global Id: T0601300043
Contact Type: Local Agency Caseworker
Contact Name: SUE LOYD
Organization Name: CONTRA COSTA COUNTY
Address: 4333 PACHECO BLVD.
City: MARTINEZ
Email: sloyd@hsd.co.contra-costa.ca.us
Phone Number: Not reported

LUST:
Global Id: T0601300043
Action Type: Other
Date: 10/13/1987
Action: Leak Discovery

Global Id: T0601300043
Action Type: Other
Date: 10/13/1987
Action: Leak Stopped

Global Id: T0601300043
Action Type: Other
Date: 10/13/1987
Action: Leak Reported

LUST:
Global Id: T0601300043
Status: Open - Case Begin Date
Status Date: 10/13/1987

Global Id: T0601300043
Status: Completed - Case Closed
Status Date: 03/24/1997

CORTESE:
Name: CAL ASIA DEVELOPMENT
Address: 391 3RD ST E
City,State,Zip: PITTSBURG, CA 94565
Region: CORTESE
Envirostor Id: Not reported
Global ID: T0601300043
Site/Facility Type: LUST CLEANUP SITE
Cleanup Status: COMPLETED - CASE CLOSED
Status Date: Not reported
Site Code: Not reported
Latitude: Not reported

CAL ASIA DEVELOPMENT (Continued) **S101306998**

Longitude:	Not reported
Owner:	Not reported
Enf Type:	Not reported
Swat R:	Not reported
Flag:	active
Order No:	Not reported
Waste Discharge System No:	Not reported
Effective Date:	Not reported
Region 2:	Not reported
WID Id:	Not reported
Solid Waste Id No:	Not reported
Waste Management Uit Name:	Not reported
File Name:	Active Open

HIST CORTESE:

edr_fname:	CAL ASIA DEVELOPMENT
edr_fadd1:	391 3RD
City,State,Zip:	PITTSBURG, CA
Region:	CORTESE
Facility County Code:	7
Reg By:	LTNKA
Reg Id:	07-0046

CONTRA COSTA CO. SITE LIST:

Name:	CAL ASIA DEVELOPMENT
Address:	391 E 3RD ST
City:	PITTSBURG
Facility ID:	FA0032592
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	UNDERGROUND STORAGE TANK SITE
Region:	CONTRA COSTA
Cupa Number:	770034

CERS:

Name:	CAL ASIA DEVELOPMENT
Address:	391 3RD ST E
City,State,Zip:	PITTSBURG, CA 94565
Site ID:	213459
CERS ID:	T0601300043
CERS Description:	Leaking Underground Storage Tank Cleanup Site

Affiliation:

Affiliation Type Desc:	Local Agency Caseworker
Entity Name:	SUE LOYD - CONTRA COSTA COUNTY
Entity Title:	Not reported
Affiliation Address:	4333 PACHECO BLVD.
Affiliation City:	MARTINEZ
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

B16 **TESORO PITTSBURG TERMINAL** **RCRA-LQG** **1004676949**
NE **535 E 3RD ST** **FINDS** **CAR000091496**
< 1/8 **PITTSBURG, CA 94565** **RI MANIFEST**
0.023 mi.
124 ft. **Site 4 of 12 in cluster B**

Relative: **Lower**
Actual: **10 ft.**

RCRA-LQG:

Date Form Received by Agency:	2013-06-11 00:00:00.0
Handler Name:	TESORO PITTSBURG TERMINAL
Handler Address:	535 E 3RD ST
Handler City,State,Zip:	PITTSBURG, CA 94565
EPA ID:	CAR000091496
Contact Name:	ROSE P SALAZAR
Contact Address:	150 SOLANO WAY
Contact City,State,Zip:	MARTINEZ, CA 94553-1487
Contact Telephone:	925-370-3625
Contact Fax:	925-370-3359
Contact Email:	ROSE.P.SALAZAR@TSOCORP.COM
Contact Title:	SPVR WASTE COMPLIANCE
EPA Region:	09
Land Type:	Private
Federal Waste Generator Description:	Large Quantity Generator
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	150 SOLANO WAY
Mailing City,State,Zip:	MARTINEZ, CA 94553-1487
Owner Name:	TESORO REFINING AND MARKETING CO LLC
Owner Type:	Private
Operator Name:	TESORO REFINING AND MARKETING CO LLC
Operator Type:	Private
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported

TESORO PITTSBURG TERMINAL (Continued) **1004676949**

Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2013-06-25 14:20:43.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Hazardous Waste Summary:

Waste Code:	D000
Waste Description:	Not Defined
Waste Code:	D001
Waste Description:	IGNITABLE WASTE
Waste Code:	D002
Waste Description:	CORROSIVE WASTE
Waste Code:	D003
Waste Description:	REACTIVE WASTE
Waste Code:	D004
Waste Description:	ARSENIC
Waste Code:	D005
Waste Description:	BARIUM
Waste Code:	D006
Waste Description:	CADMIUM
Waste Code:	D007
Waste Description:	CHROMIUM

TESORO PITTSBURG TERMINAL (Continued) **1004676949**

Waste Code: D008
Waste Description: LEAD

Waste Code: D009
Waste Description: MERCURY

Waste Code: D010
Waste Description: SELENIUM

Waste Code: D011
Waste Description: SILVER

Waste Code: D018
Waste Description: BENZENE

Waste Code: D037
Waste Description: PENTACHLOROPHENOL

Waste Code: D039
Waste Description: TETRACHLOROETHYLENE

Waste Code: D040
Waste Description: TRICHLORETHYLENE

Waste Code: F001
Waste Description: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F002
Waste Description: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F003
Waste Description: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

TESORO PITTSBURG TERMINAL (Continued) **1004676949**

Waste Code: F004
Waste Description: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: CRESOLS, CRESYLIC ACID, AND NITROBENZENE; AND THE STILL BOTTOMS FROM THE RECOVERY OF THESE SOLVENTS; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F005
Waste Description: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F037
Waste Description: PETROLEUM REFINERY PRIMARY OIL/WATER/SOLIDS SEPARATION SLUDGE - ANY SLUDGE GENERATED FROM THE GRAVITATIONAL SEPARATION OF OIL/WATER/SOLIDS DURING THE STORAGE OR TREATMENT OF PROCESS WASTEWATERS AND OILY COOLING WASTEWATERS FROM PETROLEUM REFINERIES. SUCH SLUDGES INCLUDE, BUT ARE NOT LIMITED TO, THOSE GENERATED IN OIL/WATER/SOLIDS SEPARATORS; TANKS AND IMPOUNDMENTS; DITCHES AND OTHER CONVEYANCES; SUMPS; AND STORM WATER UNITS RECEIVING DRY WEATHER FLOW. SLUDGES GENERATED IN STORM WATER UNITS THAT DO NOT RECEIVE DRY WEATHER FLOW, SLUDGES GENERATED IN AGGRESSIVE BIOLOGICAL TREATMENT UNITS AS DEFINED IN SECTION 261.31(B)(2) (INCLUDING SLUDGES GENERATED IN ONE OR MORE ADDITIONAL UNITS AFTER WASTEWATERS HAVE BEEN TREATED IN AGGRESSIVE BIOLOGICAL TREATMENT UNITS), AND K051 WASTES ARE EXEMPTED FROM THIS LISTING.

Waste Code: K050
Waste Description: HEAT EXCHANGER BUNDLE CLEANING SLUDGE FROM THE PETROLEUM REFINING INDUSTRY.

Waste Code: K051
Waste Description: API SEPARATOR SLUDGE FROM THE PETROLEUM REFINING INDUSTRY.

Waste Code: K069
Waste Description: EMISSION CONTROL DUST/SLUDGE FROM SECONDARY LEAD SMELTING.

Waste Code: K170
Waste Description: K170

Handler - Owner Operator:
Owner/Operator Indicator: Owner
Owner/Operator Name: TESORO REFINING AND MARKETING CO LLC
Legal Status: Private
Date Became Current: 2012-12-01 00:00:00.
Date Ended Current: Not reported
Owner/Operator Address: 19100 RIDGEWOOD PKWY
Owner/Operator City,State,Zip: SAN ANTONIO, TX 78259
Owner/Operator Telephone: 800-299-0570
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported

TESORO PITTSBURG TERMINAL (Continued) **1004676949**

Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: TESORO REFINING AND MARKETING CO
Legal Status: Private
Date Became Current: 2001-01-01 00:00:00.
Date Ended Current: Not reported
Owner/Operator Address: 150 SOLANO WAY
Owner/Operator City,State,Zip: MARTINEZ, CA 94553
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: TESORO GOLDEN EAGLE REFINERY
Legal Status: Private
Date Became Current: 2001-01-01 00:00:00.
Date Ended Current: Not reported
Owner/Operator Address: Not reported
Owner/Operator City,State,Zip: Not reported
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: TESORO REFINING AND MARKETING CO LLC
Legal Status: Private
Date Became Current: 2012-12-01 00:00:00.
Date Ended Current: Not reported
Owner/Operator Address: Not reported
Owner/Operator City,State,Zip: Not reported
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: TESORO REFINING MARKETING CO
Legal Status: Private
Date Became Current: Not reported
Date Ended Current: Not reported
Owner/Operator Address: 3450 S 344TH WAY STE 100
Owner/Operator City,State,Zip: AUBURN, WA 98001-5931
Owner/Operator Telephone: 253-896-8700
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Historic Generators:
Receive Date: 2002-05-29 00:00:00.0
Handler Name: TESORO PITTSBURG TERMINAL
Federal Waste Generator Description: Small Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No

TESORO PITTSBURG TERMINAL (Continued) **1004676949**

Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2009-10-01 00:00:00.0
Handler Name: TESORO REFINING AND MARKETING COMPANY
Federal Waste Generator Description: Small Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2013-06-11 00:00:00.0
Handler Name: TESORO PITTSBURG TERMINAL
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 32411
NAICS Description: PETROLEUM REFINERIES

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

FINDS:
Registry ID: 110012209010

Click Here:

Environmental Interest/Information System:
California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of

TESORO PITTSBURG TERMINAL (Continued) **1004676949**

events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

RI MANIFEST:

EPA Id:	CAR000091496
GEN Cert Date:	9/16/2009
Manifest Document Number:	001988952SKS
Waste Description:	DICHLOROMETHANE
TSDF Id:	Not reported
TSDF Name:	Not reported
Qty:	500
WT/Vol Units:	P
TSDF Date:	Not reported
Transporter 2 Id:	NJD071629976
Item Number:	1
Transporter 2 Name:	9/28/2009
Transporter Name 2:	SAFETY KLEEN
Transporter EPAID:	TXR000050930
Transporter Receipt Date:	9/16/2009
Number Of Containers:	1
Container Type:	DM
Waste Code1:	F002
Waste Code2:	F003
Waste Code3:	Not reported
Waste Code4:	Not reported
Waste Code5:	Not reported
Waste Code6:	Not reported
Fee Exempt Code:	Not reported
Comment:	Not reported
Transporter Name 2:	SJ TRANSPORTATION CO INC
Company Permit Number:	Not reported
Year:	Not reported
Quarter:	Not reported
Transporter Contact Name:	Not reported
Transporter Contact Email:	Not reported
Filing Date:	Not reported
Total Fee:	Not reported
Billing Name:	Not reported
Paid Date:	Not reported
Paid Time:	Not reported
Facility Receipt Date:	Not reported
Fee:	Not reported
Manifest Created Date:	Not reported
Manifest Updated Date:	Not reported

RI MANIFEST:

Transporter Receipt Date:	9/16/2009
Number Of Containers:	1
Container Type:	DM
Waste Code1:	F002
Waste Code2:	F003
Waste Code3:	Not reported
Waste Code4:	Not reported

TESORO PITTSBURG TERMINAL (Continued) **1004676949**

Waste Code5:	Not reported
Waste Code6:	Not reported
Comment:	Not reported
Fee Exempt Code:	Not reported
TSDF Name:	Not reported
TSDF Id:	Not reported
Transporter Name 2:	SJ TRANSPORTATION CO INC
Company Permit Number:	Not reported
Year:	Not reported
EPA ID:	CAR000091496
Manifest Docket Number:	001988952SKS
Quarter:	Not reported
Waste Description:	DICHLOROMETHANE
Transporter Contact Name:	Not reported
Quantity:	500
Transporter Contact Email:	Not reported
WT/Vol Units:	P
Filing Date:	Not reported
Total Fee:	Not reported
Item Number:	1
Transporter Name:	SAFETY KLEEN
Billing Name:	Not reported
Transporter EPA ID:	TXR000050930
Date Paid:	Not reported
Time Paid:	Not reported
GEN Cert Date:	9/16/2009
Facility Receipt Date:	Not reported
Fee:	Not reported
Transporter 2 Receipt Date:	9/28/2009
Manifest Created Date:	Not reported
TSDF Receipt Date:	Not reported
Transporter 2 ID:	NJD071629976
Manifest Updated Date:	Not reported
Transporter Receipt Date:	9/16/2009
Number Of Containers:	1
Container Type:	DM
Waste Code1:	F002
Waste Code2:	F003
Waste Code3:	Not reported
Waste Code4:	Not reported
Waste Code5:	Not reported
Waste Code6:	Not reported
Comment:	Not reported
Fee Exempt Code:	Not reported
TSDF Name:	Not reported
TSDF Id:	Not reported
Transporter Name 2:	SJ TRANSPORTATION CO INC
Company Permit Number:	Not reported
Year:	Not reported
EPA ID:	CAR000091496
Manifest Docket Number:	001988952SKS
Quarter:	Not reported
Waste Description:	DICHLOROMETHANE
Transporter Contact Name:	Not reported
Quantity:	500
Transporter Contact Email:	Not reported

TESORO PITTSBURG TERMINAL (Continued) **1004676949**

WT/Vol Units:	P
Filing Date:	Not reported
Total Fee:	Not reported
Item Number:	1
Transporter Name:	SAFETY KLEEN
Billing Name:	Not reported
Transporter EPA ID:	TXR000050930
Date Paid:	Not reported
Time Paid:	Not reported
GEN Cert Date:	9/16/2009
Facility Receipt Date:	Not reported
Fee:	Not reported
Transporter 2 Receipt Date:	9/28/2009
Manifest Created Date:	Not reported
TSDF Receipt Date:	Not reported
Transporter 2 ID:	NJD071629976
Manifest Updated Date:	Not reported

B17 **CITY OF PITTSBURG** **RCRA-SQG** **1025879329**
NE **593 3RD ST** **CAP000081190**
< 1/8 **PITTSBURG, CA 94565**
0.030 mi.
157 ft. **Site 5 of 12 in cluster B**

Relative: RCRA-SQG:
Lower

Actual: Date Form Received by Agency:		2000-08-29 00:00:00.0
10 ft. Handler Name:	CITY OF PITTSBURG	
Handler Address:		593 3RD ST
Handler City,State,Zip:		PITTSBURG, CA 94565
EPA ID:		CAP000081190
Contact Name:		JOHN FULLER
Contact Address:		65 CIVIC AVE
Contact City,State,Zip:		PITTSBURG, CA 94565
Contact Telephone:		925-252-4110
Contact Fax:		Not reported
Contact Email:		Not reported
Contact Title:		Not reported
EPA Region:		09
Land Type:		Municipal
Federal Waste Generator Description:		Small Quantity Generator
Non-Notifier:		Not reported
Biennial Report Cycle:		Not reported
Accessibility:		Not reported
Active Site Indicator:		Handler Activities
State District Owner:		Not reported
State District:		Not reported
Mailing Address:		65 CIVIC AVE
Mailing City,State,Zip:		PITTSBURG, CA 94565
Owner Name:		CITY OF PITTSBURG
Owner Type:		Municipal
Operator Name:		Not reported
Operator Type:		Not reported
Short-Term Generator Activity:		No
Importer Activity:		No
Mixed Waste Generator:		No
Transporter Activity:		No
Transfer Facility Activity:		No

CITY OF PITTSBURG (Continued) **1025879329**

Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2002-10-22 12:10:42.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Hazardous Waste Summary:

Waste Code:	D008
Waste Description:	LEAD
Waste Code:	F002

CITY OF PITTSBURG (Continued) **1025879329**

Waste Description: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	CITY OF PITTSBURG
Legal Status:	Municipal
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	65 CIVIC AVE
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	925-252-4110
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	2000-08-29 00:00:00.0
Handler Name: CITY OF PITTSBURG	
Federal Waste Generator Description:	Small Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Codes: No NAICS Codes Found

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

B18 **DIABLO SERVICES** **CA CPS-SLIC** **S106235113**
NE **595 EAST THIRD ST** **CA CERS** **N/A**
< 1/8 **PITTSBURG, CA**
0.032 mi.
167 ft. **Site 6 of 12 in cluster B**

Relative:
Lower

Actual:
10 ft.

CPS-SLIC:

Name:	DIABLO SERVICES
Address:	595 EAST THIRD ST
City,State,Zip:	PITTSBURG, CA
Region:	STATE
Facility Status:	**Open - Site Assessment**
Status Date:	10/30/2019
Global Id:	SL1822C630
Lead Agency:	SAN FRANCISCO BAY RWQCB (REGION 2)
Lead Agency Case Number:	Not reported
Latitude:	38.0316086537386
Longitude:	-121.875240854401
Case Type:	Cleanup Program Site
Case Worker:	MYM
Local Agency:	Not reported
RB Case Number:	SL1822C630
File Location:	Not reported
Potential Media Affected:	Surface water
Potential Contaminants of Concern:	Not reported
Site History:	The site is located adjacent to water, it is frequently windy in this area, and coke is a granular material. This wind transport of coke is of concern to residents in the area as a nuisance, and is of concern to this Board because coke released from the terminal makes its way to the adjacent waters, either directly or by being carried in stormwater runoff from the neighborhood adjacent to the site. The best way to deal with the coke spread is a structural cover.

Click here to access the California GeoTracker records for this facility:

SLIC REG 2:

Region:	2
Facility ID:	SL1822C630
Facility Status:	Not reported
Date Closed:	Not reported
Local Case #:	Not reported
How Discovered:	CMP
Leak Cause:	Not reported
Leak Source:	Not reported
Date Confirmed:	Not reported
Date Prelim Site Assmnt Workplan Submitted:	Not reported
Date Preliminary Site Assessment Began:	Not reported
Date Pollution Characterization Began:	Not reported
Date Remediation Plan Submitted:	Not reported
Date Remedial Action Underway:	Not reported
Date Post Remedial Action Monitoring Began:	Not reported

CERS:

Name:	DIABLO SERVICES
Address:	595 EAST THIRD ST
City,State,Zip:	PITTSBURG, CA
Site ID:	437545
CERS ID:	SL1822C630

DIABLO SERVICES (Continued) **S106235113**

CERS Description: Cleanup Program Site

Affiliation:
Affiliation Type Desc: Regional Board Caseworker
Entity Name: MARTIN MUSONGE - SAN FRANCISCO BAY RWQCB (REGION 2)
Entity Title: Not reported
Affiliation Address: 1515 CLAY STREET
Affiliation City: OAKLAND
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

B19 **TOSCO CORPORATION, DIABLO TERMINAL** **RCRA-SQG** **1000175641**
NE **595 EAST THIRD STREET** **CAD000629030**
< 1/8 **PITTSBURG, CA 94565**
0.032 mi.
167 ft. **Site 7 of 12 in cluster B**

Relative: **Lower**
Actual: **10 ft.**

RCRA-SQG:
Date Form Received by Agency: 1996-09-01 00:00:00.0
Handler Name: TOSCO CORPORATION, DIABLO TERMINAL
Handler Address: 595 EAST THIRD STREET
Handler City,State,Zip: PITTSBURG, CA 94565
EPA ID: CAD000629030
Contact Name: Not reported
Contact Address: Not reported
Contact City,State,Zip: Not reported
Contact Telephone: Not reported
Contact Fax: Not reported
Contact Email: Not reported
Contact Title: Not reported
EPA Region: 09
Land Type: Not reported
Federal Waste Generator Description: Small Quantity Generator
Non-Notifier: Not reported
Biennial Report Cycle: Not reported
Accessibility: Not reported
Active Site Indicator: Handler Activities
State District Owner: CA
State District: 2
Mailing Address: 10100 SANTA MONICA BLVD
Mailing City,State,Zip: LOS ANGELES, CA 90067
Owner Name: Not reported
Owner Type: Not reported
Operator Name: NOT REQUIRED
Operator Type: Private
Short-Term Generator Activity: No
Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: No
Transfer Facility Activity: No
Recycler Activity with Storage: No
Small Quantity On-Site Burner Exemption: No
Smelting Melting and Refining Furnace Exemption: No
Underground Injection Control: No
Off-Site Waste Receipt: No

TOSCO CORPORATION, DIABLO TERMINAL (Continued) **1000175641**

Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	NN
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2002-09-17 13:59:46.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	Not reported
Manifest Broker:	Not reported
Sub-Part P Indicator:	Not reported

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	NOT REQUIRED
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	NOT REQUIRED
Owner/Operator City,State,Zip:	NOT REQUIRED, ME 99999
Owner/Operator Telephone:	415-555-1212
Owner/Operator Telephone Ext:	Not reported

TOSCO CORPORATION, DIABLO TERMINAL (Continued) **1000175641**

Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: TOSCO CORPORATION
Legal Status: Private
Date Became Current: Not reported
Date Ended Current: Not reported
Owner/Operator Address: NOT REQUIRED
Owner/Operator City,State,Zip: NOT REQUIRED, ME 99999
Owner/Operator Telephone: 415-555-1212
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Historic Generators:
Receive Date: 1996-09-01 00:00:00.0
Handler Name: TOSCO CORPORATION, DIABLO TERMINAL
Federal Waste Generator Description: Small Quantity Generator
State District Owner: CA
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 1980-08-18 00:00:00.0
Handler Name: TOSCO CORPORATION, DIABLO TERMINAL
Federal Waste Generator Description: Large Quantity Generator
State District Owner: CA
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 48832
NAICS Description: MARINE CARGO HANDLING

Facility Has Received Notices of Violation:
Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - General
Date Violation was Determined: 1993-05-06 00:00:00.0
Actual Return to Compliance Date: 1998-05-06 00:00:00.0
Return to Compliance Qualifier: Not Resolved
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported

TOSCO CORPORATION, DIABLO TERMINAL (Continued) **1000175641**

Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Evaluation Action Summary:

Evaluation Date:	1993-05-06 00:00:00.0
Evaluation Responsible Agency:	State Contractor/Grantee
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1998-05-06 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

B20 **TESORO REFINING & MARKETING** **EDR Hist Auto** **1021775158**
NE **595 E 3RD ST** **N/A**
< 1/8 **PITTSBURG, CA 94565**
0.032 mi.
167 ft. **Site 8 of 12 in cluster B**

Relative: EDR Hist Auto
Lower

Actual: **10 ft.**

Year:	Name:	Type:
2007	TESORO REFINING & MARKETING	Gasoline Service Stations
2008	TESORO REFINING & MARKETING	Gasoline Service Stations
2009	TESORO CORPORATION	Gasoline Service Stations
2014	TESORO CORPORATION	Gasoline Service Stations

B21
NE
< 1/8
0.032 mi.
167 ft.

DIABLO SERVICE CORP.
595 THIRD
PITTSBURG, CA 94565

Site 9 of 12 in cluster B

Database(s): CA Cortese, CA HAZNET, CA CERS, CA HWTS

EDR ID Number: S112998824
EPA ID Number: N/A

Relative:
Lower

Actual:
10 ft.

CORTESE:

Name:	DIABLO SERVICE CORP.
Address:	595 THIRD
City,State,Zip:	PITTSBURG, CA 94565
Region:	CORTESE
Envirostor Id:	Not reported
Global ID:	Not reported
Site/Facility Type:	Not reported
Cleanup Status:	Not reported
Status Date:	Not reported
Site Code:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Owner:	Not reported
Enf Type:	Not reported
Swat R:	Not reported
Flag:	CORTESE
Order No:	Not reported
Waste Discharge System No:	Not reported
Effective Date:	08/11/1998
Region 2:	2
WID Id:	2 07S006066
Solid Waste Id No:	Not reported
Waste Management Uit Name:	Not reported
File Name:	Cease Desist Orders & Cleanup Abatement Orders

HAZNET:

Name:	TOSCO CORPORATION, DIABLO TERMINAL
Address:	595 EAST THIRD ST
Address 2:	Not reported
City,State,Zip:	PITTSBURG, CA 945650000
Contact:	GIDGET KELSEY
Telephone:	9254323588
Mailing Name:	Not reported
Mailing Address:	595 EAST THIRD ST
Year:	2001
Gepaid:	CAD000629030
TSD EPA ID:	CA0000084517
CA Waste Code:	134 - Aqueous solution with total organic residues less than 10 percent
Disposal Method:	H01 - Transfer Station
Tons:	0.2604
Year:	2000
Gepaid:	CAD000629030
TSD EPA ID:	CAD981382732
CA Waste Code:	151 - Asbestos containing waste
Disposal Method:	D80 - Disposal, Land Fill
Tons:	25.284
Year:	2000
Gepaid:	CAD000629030

DIABLO SERVICE CORP. (Continued) **S112998824**

TSD EPA ID: CA0000084517
CA Waste Code: 134 - Aqueous solution with total organic residues less than 10 percent
Disposal Method: H01 - Transfer Station
Tons: 0.0672

Year: 1999
Gepaid: CAD000629030
TSD EPA ID: CAT080022148
CA Waste Code: 551 - Laboratory waste chemicals
Disposal Method: H01 - Transfer Station
Tons: 0.0333

Year: 1999
Gepaid: CAD000629030
TSD EPA ID: CAT080022148
CA Waste Code: 331 - Off-specification, aged or surplus organics
Disposal Method: H01 - Transfer Station
Tons: 0.0495

Year: 1999
Gepaid: CAD000629030
TSD EPA ID: CAT080022148
CA Waste Code: 541 - Photochemicals/photoprocessing waste
Disposal Method: H01 - Transfer Station
Tons: 0.0625

Year: 1993
Gepaid: CAD000629030
TSD EPA ID: CAD009466392
CA Waste Code: 512 - Other empty containers 30 gallons or more
Disposal Method: R01 - Recycler
Tons: 7.5

Year: 1984
Gepaid: CAD000629030
TSD EPA ID: CAD000094771
CA Waste Code: 122 - Alkaline solution without metals pH >= 12.5
Disposal Method: D83 - Disposal, Surface Impoundment
Tons: 2.085

Additional Info:
Year: 2000
Gen EPA ID: CAD000629030

Shipment Date: 20001120
Creation Date: 1/12/2001 0:00:00
Receipt Date: 20001122
Manifest ID: 20299993
Trans EPA ID: SCR000075150
Trans Name: Not reported
Trans 2 EPA ID: SCR000074591
Trans 2 Name: Not reported
TSDF EPA ID: CA0000084517
Trans Name: Not reported
TSDF Alt EPA ID: Not reported

DIABLO SERVICE CORP. (Continued) **S112998824**

TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	D039
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0672
Waste Quantity:	16
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20000508
Creation Date:	6/21/2000 0:00:00
Receipt Date:	20000510
Manifest ID:	92863848
Trans EPA ID:	CAD983668583
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD981382732
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD981382732
TSDF Alt Name:	Not reported
Waste Code Description:	151 - Asbestos-containing waste
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	25.284
Waste Quantity:	30
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	1999
Gen EPA ID:	CAD000629030
Shipment Date:	19991102
Creation Date:	1/11/2000 0:00:00
Receipt Date:	19991112
Manifest ID:	99327239
Trans EPA ID:	CAR000047613
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080022148
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	551 - Laboratory waste chemicals 561 Detergent and soap
RCRA Code:	D002
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0083

DIABLO SERVICE CORP. (Continued) **S112998824**

Waste Quantity:	2
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19991102
Creation Date:	1/11/2000 0:00:00
Receipt Date:	19991112
Manifest ID:	99327239
Trans EPA ID:	CAR000047613
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080022148
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	541 - Photochemicals / photo processing waste
RCRA Code:	D011
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0625
Waste Quantity:	15
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19991102
Creation Date:	1/11/2000 0:00:00
Receipt Date:	19991112
Manifest ID:	99327239
Trans EPA ID:	CAR000047613
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080022148
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0495
Waste Quantity:	15
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19991102

DIABLO SERVICE CORP. (Continued) **S112998824**

Creation Date:	1/11/2000 0:00:00
Receipt Date:	19991112
Manifest ID:	99327239
Trans EPA ID:	CAR000047613
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080022148
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	551 - Laboratory waste chemicals 561 Detergent and soap
RCRA Code:	D002
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.025
Waste Quantity:	50
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2001
Gen EPA ID:	CAD000629030
Shipment Date:	20010525
Creation Date:	7/30/2001 0:00:00
Receipt Date:	20010531
Manifest ID:	20643323
Trans EPA ID:	SCR000075150
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CA0000084517
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	D039
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.1092
Waste Quantity:	26
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20010319
Creation Date:	4/30/2001 0:00:00
Receipt Date:	20010320
Manifest ID:	20617167
Trans EPA ID:	SCR000075150
Trans Name:	Not reported

DIABLO SERVICE CORP. (Continued) **S112998824**

Trans 2 EPA ID:	SCR000074591
Trans 2 Name:	Not reported
TSDF EPA ID:	CA0000084517
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	D039
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.1092
Waste Quantity:	26
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20010119
Creation Date:	3/22/2001 0:00:00
Receipt Date:	20010125
Manifest ID:	20384344
Trans EPA ID:	SCR000075150
Trans Name:	Not reported
Trans 2 EPA ID:	SCR000074591
Trans 2 Name:	Not reported
TSDF EPA ID:	CA0000084517
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	D039
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.042
Waste Quantity:	10
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	1993
Gen EPA ID:	CAD000629030

Shipment Date:	19930227
Creation Date:	9/7/1995 0:00:00
Receipt Date:	19930303
Manifest ID:	92284122
Trans EPA ID:	CAD009466392
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD009466392
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD009466392

DIABLO SERVICE CORP. (Continued) **S112998824**

TSDF Alt Name: Not reported
Waste Code Description: 512 - Other empty containers 30 gallons or more
RCRA Code: Not reported
Meth Code: R01 - Recycler
Quantity Tons: 7.5
Waste Quantity: 15000
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

CERS:
Name: DIABLO SERVICE CORP.
Address: 595 THIRD
City,State,Zip: PITTSBURG, CA 94565
Site ID: 263760
CERS ID: 220133
CERS Description: Unregulated

Violations:
Site ID: 263760
Site Name: Diablo Service Corp.
Violation Date: 09-29-1999
Citation: California Water Code
Violation Description: Not reported
Violation Notes: Per Enf. Report.
Violation Division: Water Boards
Violation Program: DISCHSW
Violation Source: CIWQS

Enforcement Action:
Site ID: 263760
Site Name: Diablo Service Corp.
Site Address: 595 THIRD
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 09-29-1999
Enf Action Type: Clean-up and Abatement Order
Enf Action Description: Clean-up and Abatement Order
Enf Action Notes: Not reported
Enf Action Division: Water Boards
Enf Action Program: DISCHSW
Enf Action Source: CIWQS

HWTS:
Name: TOSCO CORPORATION, DIABLO TERMINAL
Address: 595 EAST THIRD ST
Address 2: Not reported
City,State,Zip: PITTSBURG, CA 945650000
EPA ID: CAD000629030
Inactive Date: 06/30/2002
Create Date: 07/23/1982
Last Act Date: 09/14/2004

DIABLO SERVICE CORP. (Continued) **S112998824**

Mailing Name:	Not reported
Mailing Address:	595 EAST THIRD ST
Mailing Address 2:	Not reported
Mailing City,State,Zip:	PITTSBURG, CA 945650000
Owner Name:	TOSCO CORPORATION
Owner Address:	595 EAST THIRD ST
Owner Address 2:	Not reported
Owner City,State,Zip:	PITTSBURG, CA 945650000
Contact Name:	GIDGET KELSEY
Contact Address:	595 EAST THIRD ST
Contact Address 2:	Not reported
City,State,Zip:	PITTSBURG, CA 945650000

B22 **TESORO REFINING & MARKETING CO/PITTSBURG TERMINAL** **CA AST** **S105455356**
NE **595 3RD ST E** **N/A**
< 1/8 **PITTSBURG, CA**
0.032 mi.
167 ft. **Site 10 of 12 in cluster B**

Relative: AST:
Lower

Actual:
10 ft.

Name:	TESORO REFINING & MARKETING CO/PITTSBURG TERMINAL
Address:	595 3RD ST E
City/Zip:	PITTSBURG,
Certified Unified Program Agencies:	Contra Costa
Owner:	Not reported
Total Gallons:	5,000
CERSID:	Not reported
Facility ID:	Not reported
Business Name:	Not reported
Phone:	Not reported
Fax:	Not reported
Mailing Address:	Not reported
Mailing Address City:	Not reported
Mailing Address State:	Not reported
Mailing Address Zip Code:	Not reported
Operator Name:	Not reported
Operator Phone:	Not reported
Owner Phone:	Not reported
Owner Mail Address:	Not reported
Owner State:	Not reported
Owner Zip Code:	Not reported
Owner Country:	Not reported
Property Owner Name:	Not reported
Property Owner Phone:	Not reported
Property Owner Mailing Address:	Not reported
Property Owner City:	Not reported
Property Owner Stat :	Not reported
Property Owner Zip Code:	Not reported
Property Owner Country:	Not reported
EPAID:	Not reported

B23
NE
< 1/8
0.032 mi.
167 ft.

TESORO PITTSBURG TERMINAL
595 E 3RD ST
PITTSBURG, CA 94565
Site 11 of 12 in cluster B

CA CHMIRS **S105659104**
CA CONTRA COSTA CO. SITE LIST **N/A**
CA WDS
CA CIWQS

Relative:
Lower

Actual:
10 ft.

CHMIRS:

Name:	Not reported
Address:	595 E 3RD ST
City,State,Zip:	PITTSBURG, CA 94565
OES Incident Number:	9-4801
OES notification:	11/11/1999
OES Date:	Not reported
OES Time:	Not reported
Date Completed:	**Not reported**
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA DOT PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	Yes
Waterway:	New York Slough
Spill Site:	Not reported
Cleanup By:	Reporting Party
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	1999
Agency:	Tosco
Incident Date:	11/11/199912:00:00 AM
Admin Agency:	Contra Costa County Health Services Dept.
Amount:	Not reported
Contained:	Yes
Site Type:	Ship/Harbor/Port
E Date:	Not reported
Substance:	Petroleum Coke
Pounds:	1

TESORO PITTSBURG TERMINAL (Continued) **S105659104**

Unknown:	0
Substance #2:	Not reported
Substance #3:	Not reported
Evacuations:	0
Number of Injuries:	0
Number of Fatalities:	0
#1 Pipeline:	Not reported
#2 Pipeline:	Not reported
#3 Pipeline:	Not reported
#1 Vessel >= 300 Tons:	Not reported
#2 Vessel >= 300 Tons:	Not reported
#3 Vessel >= 300 Tons:	Not reported
Evacs:	Not reported
Injuries:	Not reported
Fatals:	Not reported
Comments:	Not reported
Description:	Loading onto ship when cloud of substance came out of cargo hole and landed on water, per R/P it has dissipated, also per R/P no hazard to fish or wildlife.

CONTRA COSTA CO. SITE LIST:

Name:	TESORO REFINING & MARKETING CO/PITTS TERMINAL
Address:	595 E 3RD ST
City:	PITTSBURG
Facility ID:	FA0032877
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	APSA: <10K GALLONS
Region:	CONTRA COSTA
Cupa Number:	770346

Name:	TESORO REFINING & MARKETING CO/PITTS TERMINAL
Address:	595 E 3RD ST
City:	PITTSBURG
Facility ID:	FA0032877
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	HMBP: >100K-250K LBS, 0-19 EMPLOYEES
Region:	CONTRA COSTA
Cupa Number:	770346

Name:	TESORO REFINING & MARKETING CO/PITTS TERMINAL
Address:	595 E 3RD ST
City:	PITTSBURG
Facility ID:	FA0032877
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	HWG: LESS THAN 5 TONS/YEAR
Region:	CONTRA COSTA
Cupa Number:	770346

WDS:

Name:	TESORO PITTSBURG TERMINAL
Address:	595 E 3rd St
City:	PITTSBURG

TESORO PITTSBURG TERMINAL (Continued) **S105659104**

Facility ID:	San Francisco Bay 07I017202
Facility Type:	Industrial - Facility that treats and/or disposes of liquid or semisolid wastes from any servicing, producing, manufacturing or processing operation of whatever nature, including mining, gravel washing, geothermal operations, air conditioning, ship building and repairing, oil production, storage and disposal operations, water pumping.
Facility Status:	Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
NPDES Number:	CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board
Subregion:	2
Facility Telephone:	9253703265
Facility Contact:	MARCUS COLE
Agency Name:	TESORO REFINING & MARKETING
Agency Address:	3450 S 344th Way Ste 100
Agency City,St,Zip:	Federal Way 980015931
Agency Contact:	ROB GRONEWOLD
Agency Telephone:	2538968700
Agency Type:	Private
SIC Code:	0
SIC Code 2:	Not reported
Primary Waste Type:	Not reported
Primary Waste:	Not reported
Waste Type2:	Not reported
Waste2:	Not reported
Primary Waste Type:	Not reported
Secondary Waste:	Not reported
Secondary Waste Type:	Not reported
Design Flow:	0
Baseline Flow:	0
Reclamation:	Not reported
POTW:	Not reported
Treat To Water:	Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.
Complexity:	Category C - Facilities having no waste treatment systems, such as cooling water dischargers or thosewho must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds.

CIWQS:

Name:	TESORO PITTSBURG TERMINAL
Address:	595 E 3RD ST
City,State,Zip:	PITTSBURG, CA 94565
Agency:	Tesoro Pittsburg Terminal
Agency Address:	595 E 3rd St, Pittsburg Terminal, CA 94565
Place/Project Type:	Industrial - Marine Cargo Handling
SIC/NAICS:	4491
Region:	2
Program:	INDSTW
Regulatory Measure Status:	Terminated

TESORO PITTSBURG TERMINAL (Continued) **S105659104**

Regulatory Measure Type:	Storm water industrial
Order Number:	2014-0057-DWQ
WDID:	2 07I017202
NPDES Number:	CAS000001
Adoption Date:	01/01/1900
Effective Date:	04/23/2002
Termination Date:	08/12/2010
Expiration/Review Date:	01/01/1900
Design Flow:	Not reported
Major/Minor:	Not reported
Complexity:	Not reported
TTWQ:	Not reported
Enforcement Actions within 5 years:	0
Violations within 5 years:	0
Latitude:	38.03192
Longitude:	-121.87708

B24 **DIABLO SERVICE CORP CHEM DIV** **SEMS-ARCHIVE** **1003877998**
NE **595 E 3RD** **CAD982357956**
< 1/8 **PITTSBURG, CA 94565**
0.032 mi.
167 ft. **Site 12 of 12 in cluster B**

Relative: **Lower**
Actual: **10 ft.**

SEMS Archive:

Site ID:	0900137
EPA ID:	CAD982357956
Name:	DIABLO SERVICE CORP CHEM DIV
Address:	595 E 3RD
Address 2:	Not reported
City,State,Zip:	PITTSBURG, CA 94565
Cong District:	07
FIPS Code:	06013
FF:	N
NPL:	Not on the NPL
Non NPL Status:	NFRAP-Site does not qualify for the NPL based on existing information

SEMS Archive Detail:

Region:	09
Site ID:	0900137
EPA ID:	CAD982357956
Site Name:	DIABLO SERVICE CORP CHEM DIV
NPL:	N
FF:	N
OU:	00
Action Code:	VS
Action Name:	ARCH SITE
SEQ:	1
Start Date:	Not reported
Finish Date:	1990-09-11 04:00:00
Qual:	Not reported
Current Action Lead:	EPA Perf In-Hse

Region:	09
Site ID:	0900137
EPA ID:	CAD982357956
Site Name:	DIABLO SERVICE CORP CHEM DIV
NPL:	N
FF:	N

DIABLO SERVICE CORP CHEM DIV (Continued) **1003877998**

OU:	00
Action Code:	PA
Action Name:	PA
SEQ:	1
Start Date:	Not reported
Finish Date:	1990-09-11 04:00:00
Qual:	N
Current Action Lead:	EPA Perf
Region:	09
Site ID:	0900137
EPA ID:	CAD982357956
Site Name:	DIABLO SERVICE CORP CHEM DIV
NPL:	N
FF:	N
OU:	00
Action Code:	DS
Action Name:	DISCVRY
SEQ:	1
Start Date:	1987-12-01 05:00:00
Finish Date:	1987-12-01 05:00:00
Qual:	Not reported
Current Action Lead:	St Perf

C25 **AUTO TRUCK & MARINE SERVICE INC** **RCRA NonGen / NLR** **1024789386**
East **601 INDUSTRY RD** **CAL000064404**
< 1/8 **PITTSBURG, CA 94565**
0.041 mi.
216 ft. **Site 1 of 4 in cluster C**

Relative: **Lower**

Actual: **13 ft.**

RCRA NonGen / NLR:

Date Form Received by Agency:	1992-02-24 00:00:00.0
Handler Name:	AUTO TRUCK & MARINE SERVICE INC
Handler Address:	601 INDUSTRY RD
Handler City,State,Zip:	PITTSBURG, CA 94565-0000
EPA ID:	CAL000064404
Contact Name:	JOHN ROSSINI JR/PRES
Contact Address:	601 INDUSTRY RD
Contact City,State,Zip:	PITTSBURG, CA 94565
Contact Telephone:	925-432-7917
Contact Fax:	925-432-7332
Contact Email:	ATMS1@SBCGLOBAL.NET
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	601 INDUSTRY RD
Mailing City,State,Zip:	PITTSBURG, CA 94565-0000
Owner Name:	AUTO TRUCK & MARINE SERVICE IN
Owner Type:	Other
Operator Name:	JOHN ROSSINI JR/PRES

AUTO TRUCK & MARINE SERVICE INC (Continued) **1024789386**

Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	Yes
Universal Waste Destination Facility:	Yes
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2018-09-05 15:41:53.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

AUTO TRUCK & MARINE SERVICE INC (Continued) **1024789386**

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	JOHN ROSSINI JR/PRES
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	601 INDUSTRY RD
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	925-432-7917
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	AUTO TRUCK & MARINE SERVICE IN
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	601 INDUSTRY RD
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565-0000
Owner/Operator Telephone:	925-432-7917
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	1992-02-24 00:00:00.0
Handler Name:	AUTO TRUCK & MARINE SERVICE INC
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	811111
NAICS Description:	GENERAL AUTOMOTIVE REPAIR

Facility Has Received Notices of Violations:

Violations:	No Violations Found

Evaluation Action Summary:

Evaluations:	No Evaluations Found

C26 **AUTO TRUCK & MARINE SERVICE INC** **CA CERS HAZ WASTE** **S113046596**
East **601 INDUSTRY RD** **CA HAZNET** **N/A**
< 1/8 **PITTSBURG, CA 94565** **CA CERS**
0.041 mi. **CA HWTS**
216 ft. **Site 2 of 4 in cluster C**

Relative:
Lower

Actual:
13 ft.

CERS HAZ WASTE:
Name: AUTO TRUCK & MARINE SERVICE INC
Address: 601 INDUSTRY RD
City,State,Zip: PITTSBURG, CA 94565
Site ID: 9692
CERS ID: 10018516
CERS Description: Hazardous Waste Generator

HAZNET:
Name: AUTO TRUCK & MARINE SERVICE INC
Address: 601 INDUSTRY RD
Address 2: Not reported
City,State,Zip: PITTSBURG, CA 945650000
Contact: JOHN ROSSINI JR/PRES
Telephone: 9254327917
Mailing Name: Not reported
Mailing Address: 601 INDUSTRY RD

Year: 2019
Gepaid: CAL000064404
TSD EPA ID: AZR000515924
CA Waste Code: 352 - Other organic solids
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.10000

Year: 2018
Gepaid: CAL000064404
TSD EPA ID: AZR000515924
CA Waste Code: 352 - Other organic solids
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.10000

Year: 2000
Gepaid: CAL000064404
TSD EPA ID: CAL000161743
CA Waste Code: 134 - Aqueous solution with total organic residues less than 10 percent
Disposal Method: R01 - Recycler
Tons: 0.21

Year: 1998
Gepaid: CAL000064404
TSD EPA ID: CAT080013352
CA Waste Code: 343 - Unspecified organic liquid mixture
Disposal Method: R01 - Recycler
Tons: 0.17

Year: 1996
Gepaid: CAL000064404
TSD EPA ID: CAD980818645
CA Waste Code: 134 - Aqueous solution with total organic residues less than 10

AUTO TRUCK & MARINE SERVICE INC (Continued) **S113046596**

	percent
Disposal Method:	H01 - Transfer Station
Tons:	0.336
Year:	1995
Gepaid:	CAL000064404
TSD EPA ID:	CAT080013352
CA Waste Code:	135 - Unspecified aqueous solution
Disposal Method:	R01 - Recycler
Tons:	0.252
Year:	1994
Gepaid:	CAL000064404
TSD EPA ID:	CAD009452657
CA Waste Code:	134 - Aqueous solution with total organic residues less than 10 percent
Disposal Method:	R01 - Recycler
Tons:	0.252

Additional Info:

Year:	1996
Gen EPA ID:	CAL000064404
Shipment Date:	19960619
Creation Date:	5/30/1997 0:00:00
Receipt Date:	19960620
Manifest ID:	95712397
Trans EPA ID:	CAT080011059
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980818645
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.336
Waste Quantity:	80
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2000
Gen EPA ID:	CAL000064404
Shipment Date:	20000417
Creation Date:	6/7/2000 0:00:00
Receipt Date:	20000418
Manifest ID:	99472962

AUTO TRUCK & MARINE SERVICE INC (Continued) **S113046596**

Trans EPA ID:	CAR000007013
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAL000161743
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.21
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	1994
Gen EPA ID:	CAL000064404
Shipment Date:	19940720
Creation Date:	10/16/1995 0:00:00
Receipt Date:	19940727
Manifest ID:	93194414
Trans EPA ID:	CAT080011059
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD009452657
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.252
Waste Quantity:	60
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	1995
Gen EPA ID:	CAL000064404
Shipment Date:	19950314
Creation Date:	10/24/1995 0:00:00
Receipt Date:	19950502
Manifest ID:	93698212

AUTO TRUCK & MARINE SERVICE INC (Continued) **S113046596**

Trans EPA ID:	CAD028277036
Trans Name:	Not reported
Trans 2 EPA ID:	CAD028277036
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.252
Waste Quantity:	60
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	1998
Gen EPA ID:	CAL000064404
Shipment Date:	19980910
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	96603786
Trans EPA ID:	CAL000100828
Trans Name:	Not reported
Trans 2 EPA ID:	CAD044003556
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	Not reported
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	- Not reported
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	0.2085
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19980910
Creation Date:	12/7/1998 0:00:00
Receipt Date:	19980914
Manifest ID:	96603786
Trans EPA ID:	CAL000100828
Trans Name:	Not reported
Trans 2 EPA ID:	CAD044003556
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352

AUTO TRUCK & MARINE SERVICE INC (Continued) **S113046596**

Trans Name:	Not reported
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.17
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

CERS:

Name:	AUTO TRUCK & MARINE SERVICE INC
Address:	601 INDUSTRY RD
City,State,Zip:	PITTSBURG, CA 94565
Site ID:	9692
CERS ID:	10018516
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	9692
Site Name:	AUTO TRUCK & MARINE SERVICE INC
Violation Date:	10-07-2016
Citation:	HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description:	Hazardous Waste Generator Program - Operations/Maintenance - General
Violation Notes:	Returned to compliance on 11/02/2016.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HW
Violation Source:	CERS

Site ID:	9692
Site Name:	AUTO TRUCK & MARINE SERVICE INC
Violation Date:	10-07-2016
Citation:	HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description:	Hazardous Waste Generator Program - Operations/Maintenance - General
Violation Notes:	Returned to compliance on 10/07/2016.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HW
Violation Source:	CERS

Site ID:	9692
Site Name:	AUTO TRUCK & MARINE SERVICE INC
Violation Date:	10-07-2016
Citation:	HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description:	Hazardous Waste Generator Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 10/27/2016.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HW
Violation Source:	CERS

AUTO TRUCK & MARINE SERVICE INC (Continued) **S113046596**

Site ID: 9692
Site Name: AUTO TRUCK & MARINE SERVICE INC
Violation Date: 10-07-2016
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 11/09/2016.
Violation Division: Contra Costa County Health Services Department
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-24-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-24-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-07-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-07-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-09-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

AUTO TRUCK & MARINE SERVICE INC (Continued) **S113046596**

Eval General Type:	Other/Unknown
Eval Date:	11-09-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HW
Eval Source:	CERS

Enforcement Action:

Site ID:	9692
Site Name:	AUTO TRUCK & MARINE SERVICE INC
Site Address:	601 INDUSTRY RD
Site City:	PITTSBURG
Site Zip:	94565
Enf Action Date:	10-07-2016
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Contra Costa County Health Services Department
Enf Action Program:	HMRRP
Enf Action Source:	CERS

Site ID:	9692
Site Name:	AUTO TRUCK & MARINE SERVICE INC
Site Address:	601 INDUSTRY RD
Site City:	PITTSBURG
Site Zip:	94565
Enf Action Date:	10-07-2016
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Contra Costa County Health Services Department
Enf Action Program:	HW
Enf Action Source:	CERS

Coordinates:

Site ID:	9692
Facility Name:	AUTO TRUCK & MARINE SERVICE INC
Env Int Type Code:	HWG
Program ID:	10018516
Coord Name:	Not reported
Ref Point Type Desc:	Unknown
Latitude:	38.030220
Longitude:	-121.876930

Affiliation:

Affiliation Type Desc:	CUPA District
Entity Name:	Contra Costa County Health Services Department
Entity Title:	Not reported
Affiliation Address:	4585 Pacheco BlvdSuite 100
Affiliation City:	Martinez
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94553
Affiliation Phone:	(925) 655-3200

AUTO TRUCK & MARINE SERVICE INC (Continued) **S113046596**

Affiliation Type Desc:	Environmental Contact
Entity Name:	JOHN ROSSINI, JR
Entity Title:	Not reported
Affiliation Address:	601 INDUSTRY RD
Affiliation City:	PITTSBURG
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94565
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	AUTO TRUCK & MARINE SERVICE INC
Entity Title:	Not reported
Affiliation Address:	601 Industry Rd
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	94565
Affiliation Phone:	(925) 432-7917

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	601 Industry Road
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94565
Affiliation Phone:	Not reported

Affiliation Type Desc:	Operator
Entity Name:	Auto Truck & Marine Service Inc.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(925) 432-7917

Affiliation Type Desc:	Parent Corporation
Entity Name:	AUTO TRUCK & MARINE SERVICE INC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Identification Signer
Entity Name:	John Rossini, Jr.
Entity Title:	President
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported

AUTO TRUCK & MARINE SERVICE INC (Continued) **S113046596**

Affiliation Zip: Not reported
Affiliation Phone: Not reported

HWTS:
Name: AUTO TRUCK & MARINE SERVICE INC
Address: 601 INDUSTRY RD
Address 2: Not reported
City,State,Zip: PITTSBURG, CA 945650000
EPA ID: CAL000064404
Inactive Date: Not reported
Create Date: 02/24/1992
Last Act Date: 08/13/2020
Mailing Name: Not reported
Mailing Address: 601 INDUSTRY RD
Mailing Address 2: Not reported
Mailing City,State,Zip: PITTSBURG, CA 945652770
Owner Name: AUTO TRUCK & MARINE SERVICE IN
Owner Address: 601 INDUSTRY RD
Owner Address 2: Not reported
Owner City,State,Zip: PITTSBURG, CA 945652770
Contact Name: JOHN ROSSINI JR/PRES
Contact Address: 601 INDUSTRY RD
Contact Address 2: Not reported
City,State,Zip: PITTSBURG, CA 94565

NAICS:
EPA ID: CAL000064404
Create Date: 2002-03-14 16:36:27.000
NAICS Code: 811111
NAICS Description: General Automotive Repair
Issued EPA ID Date: 1992-02-24 00:00:00
Inactive Date: Not reported
Facility Name: AUTO TRUCK & MARINE SERVICE INC
Facility Address: 601 INDUSTRY RD
Facility Address 2: Not reported
Facility City: PITTSBURG
Facility County: Not reported
Facility State: CA
Facility Zip: 945650000

C27 **AUTO TRUCK & MARINE SERVICE INC** **CA CONTRA COSTA CO. SITE LIST** **S102814356**
East **601 INDUSTRY RD** **N/A**
< 1/8 **PITTSBURG, CA 94565**
0.041 mi.
216 ft. **Site 3 of 4 in cluster C**

Relative:
Lower

Actual:
13 ft.

CONTRA COSTA CO. SITE LIST:
Name: AUTO TRUCK & MARINE SERVICE INC
Address: 601 INDUSTRY RD
City: PITTSBURG
Facility ID: FA0030266
Billing Status: ACTIVE, BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HMBP: 1K-10K LBS, 0-19 EMPLOYEES
Region: CONTRA COSTA
Cupa Number: 773597

AUTO TRUCK & MARINE SERVICE INC (Continued) **S102814356**

Name: AUTO TRUCK & MARINE SERVICE INC
Address: 601 INDUSTRY RD
City: PITTSBURG
Facility ID: FA0030266
Billing Status: ACTIVE, BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HWG: LESS THAN 5 TONS/YEAR
Region: CONTRA COSTA
Cupa Number: 773597

28
SW
< 1/8
0.050 mi.
262 ft.

VETERAN'S BUILDING PITTSBURG **CA CONTRA COSTA CO. SITE LIST** **S104566687**
855 EAST ST **N/A**
PITTSBURG, CA 94565

Relative:
Higher

Actual:
32 ft.

CONTRA COSTA CO. SITE LIST:
Name: VETERAN'S BUILDING PITTSBURG
Address: 855 EAST ST
City: PITTSBURG
Facility ID: FA0029455
Billing Status: INACTIVE, NON-BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: UNDERGROUND STORAGE TANK SITE
Region: CONTRA COSTA
Cupa Number: 772777

D29
ENE
< 1/8
0.064 mi.
340 ft.

D & L TRANSMISSION **EDR Hist Auto** **1020451411**
598 EAST 3RD ST **N/A**
PITTSBURG, CA 94565

Site 1 of 3 in cluster D

Relative:
Lower

Actual:
12 ft.

EDR Hist Auto

Year:	Name:	Type:
1988	D & L AUTO REPAIR	General Automotive Repair Shops
1989	D & L AUTO REPAIR	General Automotive Repair Shops
1989	D & L TRANSMISSION	Automotive Transmission Repair Shops
1990	D & L AUTO REPAIR	General Automotive Repair Shops
1990	D & L TRANSMISSION	Automotive Transmission Repair Shops
1991	D & L AUTO REPAIR	General Automotive Repair Shops
1991	D & L TRANSMISSION	Automotive Transmission Repair Shops
1992	D & L TRANSMISSION	Automotive Transmission Repair Shops
1993	D & L TRANSMISSION	Automotive Transmission Repair Shops
1994	D & L TRANSMISSION	Automotive Transmission Repair Shops
1995	D & L TRANSMISSION	Automotive Transmission Repair Shops
2003	MORALES ADOLFO	General Automotive Repair Shops
2004	MORALES ADOLFO	General Automotive Repair Shops
2005	MORALES ADOLFO	General Automotive Repair Shops
2006	MORALES ADOLFO	General Automotive Repair Shops
2007	MORALES ADOLFO	General Automotive Repair Shops
2008	MORALES ADOLFO	General Automotive Repair Shops
2009	MORALES ADOLFO	General Automotive Repair Shops
2010	MORALES ADOLFO	General Automotive Repair Shops
2011	MORALES ADOLFO	General Automotive Repair Shops

D & L TRANSMISSION (Continued) **1020451411**

2012	MORALES ADOLFO	General Automotive Repair Shops
2013	MORALES ADOLFO	General Automotive Repair Shops
2014	MORALES ADOLFO	General Automotive Repair Shops

D30 **K AND S BODY SHOP** **RCRA-SQG** **1000985117**
ENE **598 E 3RD ST** **CA CERS HAZ WASTE** **CAR000002287**
< 1/8 **PITTSBURG, CA 94565** **CA EMI**
0.064 mi. **CA CONTRA COSTA CO. SITE LIST**
340 ft. **Site 2 of 3 in cluster D** **CA CERS**
CA HWTS

Relative:
Lower

Actual:
12 ft.

RCRA-SQG:

Date Form Received by Agency:		1996-09-01 00:00:00.0
Handler Name:	K AND S BODY SHOP	
Handler Address:		598 E 3RD ST
Handler City,State,Zip:		PITTSBURG, CA 94565
EPA ID:		CAR000002287
Contact Name:		Not reported
Contact Address:		Not reported
Contact City,State,Zip:		Not reported
Contact Telephone:		Not reported
Contact Fax:		Not reported
Contact Email:		Not reported
Contact Title:		Not reported
EPA Region:		09
Land Type:		Private
Federal Waste Generator Description:		Small Quantity Generator
Non-Notifier:		Not reported
Biennial Report Cycle:		Not reported
Accessibility:		Not reported
Active Site Indicator:		Handler Activities
State District Owner:		Not reported
State District:		Not reported
Mailing Address:		SIINO W AVE
Mailing City,State,Zip:		BAY POINT, CA 94565
Owner Name:		KHADIM SHAH
Owner Type:		Private
Operator Name:		Not reported
Operator Type:		Not reported
Short-Term Generator Activity:		No
Importer Activity:		No
Mixed Waste Generator:		No
Transporter Activity:		No
Transfer Facility Activity:		No
Recycler Activity with Storage:		No
Small Quantity On-Site Burner Exemption:		No
Smelting Melting and Refining Furnace Exemption:		No
Underground Injection Control:		No
Off-Site Waste Receipt:		No
Universal Waste Indicator:		No
Universal Waste Destination Facility:		No
Federal Universal Waste:		No
Active Site Fed-Reg Treatment Storage and Disposal Facility:		Not reported
Active Site Converter Treatment storage and Disposal Facility:		Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:		Not reported
Active Site State-Reg Handler:		---
Federal Facility Indicator:		Not reported
Hazardous Secondary Material Indicator:		NN

K AND S BODY SHOP (Continued) **1000985117**

Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2000-09-15 17:30:52.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	Not reported
Manifest Broker:	Not reported
Sub-Part P Indicator:	Not reported

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	KHADIM SHAH
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	116 SIINO W AVE
Owner/Operator City,State,Zip:	BAY POINT, CA 94565
Owner/Operator Telephone:	510-439-2839
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	1996-09-01 00:00:00.0
Handler Name: K AND S BODY SHOP	
Federal Waste Generator Description:	Small Quantity Generator
State District Owner:	Not reported

K AND S BODY SHOP (Continued) **1000985117**

Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Codes:	No NAICS Codes Found

Facility Has Received Notices of Violations:

Violations:	No Violations Found

Evaluation Action Summary:

Evaluations:	No Evaluations Found

CERS HAZ WASTE:

Name:	TECH AUTO CENTER
Address:	598 E 3RD ST
City,State,Zip:	PITTSBURG, CA 94565
Site ID:	159943
CERS ID:	10012297
CERS Description:	Hazardous Waste Generator

EMI:

Name:	K & S BODY SHOP
Address:	598 E 3RD STREET
City,State,Zip:	PITTSBURG, CA 945650000
Year:	1996
County Code:	7
Air Basin:	SF
Facility ID:	10187
Air District Name:	BA
SIC Code:	7532
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	K & S BODY SHOP
Address:	598 E 3RD STREET
City,State,Zip:	PITTSBURG, CA 945650000
Year:	1997
County Code:	7
Air Basin:	SF
Facility ID:	10187

K AND S BODY SHOP (Continued) **1000985117**

Air District Name:	BA
SIC Code:	7532
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	K & S BODY SHOP
Address:	598 E 3RD STREET
City,State,Zip:	PITTSBURG, CA 945650000
Year:	1998
County Code:	7
Air Basin:	SF
Facility ID:	10187
Air District Name:	BA
SIC Code:	7532
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	K & S BODY SHOP
Address:	598 E 3RD STREET
City,State,Zip:	PITTSBURG, CA 945650000
Year:	1999
County Code:	7
Air Basin:	SF
Facility ID:	10187
Air District Name:	BA
SIC Code:	7532
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	K & S BODY SHOP
Address:	598 E 3RD STREET
City,State,Zip:	PITTSBURG, CA 945650000
Year:	2000

K AND S BODY SHOP (Continued) **1000985117**

County Code:	7
Air Basin:	SF
Facility ID:	10187
Air District Name:	BA
SIC Code:	7532
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	K & S BODY SHOP
Address:	598 E 3RD STREET
City,State,Zip:	PITTSBURG, CA 945650000
Year:	2001
County Code:	7
Air Basin:	SF
Facility ID:	10187
Air District Name:	BA
SIC Code:	7532
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	TECH AUTO CENTER
Address:	598 E 3RD STREET
City,State,Zip:	PITTSBURG, CA 945650000
Year:	2002
County Code:	7
Air Basin:	SF
Facility ID:	15050
Air District Name:	BA
SIC Code:	7538
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	TECH AUTO CENTER

K AND S BODY SHOP (Continued) **1000985117**

Address:	598 E 3RD STREET
City,State,Zip:	PITTSBURG, CA 945650000
Year:	2003
County Code:	7
Air Basin:	SF
Facility ID:	15050
Air District Name:	BA
SIC Code:	7538
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	TECH AUTO CENTER
Address:	598 E 3RD STREET
City,State,Zip:	PITTSBURG, CA 945650000
Year:	2004
County Code:	7
Air Basin:	SF
Facility ID:	15050
Air District Name:	BA
SIC Code:	7538
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.02
Reactive Organic Gases Tons/Yr:	0.016762
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

CONTRA COSTA CO. SITE LIST:

Name:	TECH AUTO CENTER
Address:	598 E 3RD ST
City:	PITTSBURG
Facility ID:	FA0028194
Billing Status:	ACTIVE, BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	HMBP: 1K-10K LBS, 0-19 EMPLOYEES
Region:	CONTRA COSTA
Cupa Number:	771435

Name:	TECH AUTO CENTER
Address:	598 E 3RD ST
City:	PITTSBURG
Facility ID:	FA0028194
Billing Status:	ACTIVE, BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	HWG: LESS THAN 5 TONS/YEAR

K AND S BODY SHOP (Continued) **1000985117**

Region: CONTRA COSTA
Cupa Number: 771435

CERS:
Name: TECH AUTO CENTER
Address: 598 E 3RD ST
City,State,Zip: PITTSBURG, CA 94565
Site ID: 159943
CERS ID: 10012297
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 159943
Site Name: TECH AUTO CENTER
Violation Date: 06-24-2014
Citation: HSC 6.67 Multiple - California Health and Safety Code, Chapter 6.67, Section(s) Multiple
Violation Description: Haz Waste Generator Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 09/26/2014.
Violation Division: Contra Costa County Health Services Department
Violation Program: HW
Violation Source: CERS

Site ID: 159943
Site Name: TECH AUTO CENTER
Violation Date: 09-17-2014
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 09/26/2014.
Violation Division: Contra Costa County Health Services Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 159943
Site Name: TECH AUTO CENTER
Violation Date: 06-24-2014
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 09/26/2014.
Violation Division: Contra Costa County Health Services Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 159943
Site Name: TECH AUTO CENTER
Violation Date: 04-14-2017
Citation: HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description: Tiered Permitting - Administration/Documentation - General
Violation Notes: Returned to compliance on 05/11/2017.
Violation Division: Contra Costa County Health Services Department
Violation Program: HW
Violation Source: CERS

Site ID: 159943

K AND S BODY SHOP (Continued) **1000985117**

Site Name: TECH AUTO CENTER
Violation Date: 09-17-2014
Citation: HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description: Haz Waste Generator Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 09/26/2014.
Violation Division: Contra Costa County Health Services Department
Violation Program: HW
Violation Source: CERS

Site ID: 159943
Site Name: TECH AUTO CENTER
Violation Date: 05-03-2016
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 05/03/2016.
Violation Division: Contra Costa County Health Services Department
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-03-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-03-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-24-2014
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-24-2014
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

K AND S BODY SHOP (Continued) **1000985117**

Eval General Type: Other/Unknown
Eval Date: 09-17-2014
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 09-17-2014
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-20-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-20-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-14-2017
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Enforcement Action:
Site ID: 159943
Site Name: TECH AUTO CENTER
Site Address: 598 E 3RD ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 04-14-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW

K AND S BODY SHOP (Continued) **1000985117**

Enf Action Source: CERS

Site ID: 159943
Site Name: TECH AUTO CENTER
Site Address: 598 E 3RD ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 05-03-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 159943
Site Name: TECH AUTO CENTER
Site Address: 598 E 3RD ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 06-24-2014
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 159943
Site Name: TECH AUTO CENTER
Site Address: 598 E 3RD ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 06-24-2014
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

Site ID: 159943
Site Name: TECH AUTO CENTER
Site Address: 598 E 3RD ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 09-17-2014
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 159943
Site Name: TECH AUTO CENTER
Site Address: 598 E 3RD ST

K AND S BODY SHOP (Continued) **1000985117**

Site City:	PITTSBURG
Site Zip:	94565
Enf Action Date:	09-17-2014
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Contra Costa County Health Services Department
Enf Action Program:	HW
Enf Action Source:	CERS

Coordinates:

Site ID:	159943
Facility Name:	TECH AUTO CENTER
Env Int Type Code:	HWG
Program ID:	10012297
Coord Name:	Not reported
Ref Point Type Desc:	Unknown
Latitude:	38.031360
Longitude:	-121.876120

Affiliation:

Affiliation Type Desc:	Environmental Contact
Entity Name:	ADOLFO MORALES
Entity Title:	Not reported
Affiliation Address:	598 E 3rd St
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94565
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	598 E 3rd St
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94565
Affiliation Phone:	Not reported

Affiliation Type Desc:	Identification Signer
Entity Name:	ADOLFO MORALES
Entity Title:	OWNER
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Property Owner
Entity Name:	ADOLFO MORALES
Entity Title:	Not reported
Affiliation Address:	598 E 3rd St
Affiliation City:	Pittsburg

K AND S BODY SHOP (Continued) **1000985117**

Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	94565
Affiliation Phone:	(925) 427-0457
Affiliation Type Desc:	Document Preparer
Entity Name:	ADOLFO MORALES
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	ADOLFO MORALES
Entity Title:	Not reported
Affiliation Address:	598 E 3rd St
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	94565
Affiliation Phone:	(925) 427-0457
Affiliation Type Desc:	Operator
Entity Name:	ADOLFO MORALES
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(925) 427-0457
Affiliation Type Desc:	Parent Corporation
Entity Name:	TECH AUTO CENTER
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	Contra Costa County Health Services Department
Entity Title:	Not reported
Affiliation Address:	4585 Pacheco BlvdSuite 100
Affiliation City:	Martinez
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94553
Affiliation Phone:	(925) 655-3200
Name:	K & S BODY SHOP

K AND S BODY SHOP (Continued) **1000985117**

Address: 598 E 3RD STREET
City,State,Zip: PITTSBURG, CA 94565-2226
Site ID: 475181
CERS ID: 110002428070
CERS Description: US EPA Air Emission Inventory System (EIS)

HWTS:
Name: TECH AUTO CENTER
Address: 598 E 3RD ST
Address 2: Not reported
City,State,Zip: PITTSBURG, CA 945652226
EPA ID: CAL000258488
Inactive Date: 06/30/2012
Create Date: 08/29/2002
Last Act Date: 04/02/2013
Mailing Name: Not reported
Mailing Address: 598 E 3RD ST
Mailing Address 2: Not reported
Mailing City,State,Zip: PITTSBURG, CA 945652226
Owner Name: ADOLFO MORALES JR
Owner Address: 598 E 3RD ST
Owner Address 2: Not reported
Owner City,State,Zip: PITTSBURG, CA 945652226
Contact Name: ADOLFO MORALES JR
Contact Address: 598 E 3RD ST
Contact Address 2: Not reported
City,State,Zip: PITTSBURG, CA 945652226

NAICS:
EPA ID: CAL000258488
Create Date: 2002-08-29 16:03:53.077
NAICS Code: 811111
NAICS Description: General Automotive Repair
Issued EPA ID Date: 2002-08-29 16:03:53.04700
Inactive Date: 2012-06-30 00:00:00
Facility Name: TECH AUTO CENTER
Facility Address: 598 E 3RD ST
Facility Address 2: Not reported
Facility City: PITTSBURG
Facility County: Not reported
Facility State: CA
Facility Zip: 945652226

D31 **K AND S BODY SHOP** **SEMS-ARCHIVE** **1001491867**
ENE **600 E. 3RD STREET** **CA ENVIROSTOR** **CASFN0905524**
< 1/8 **PITTSBURG, CA 94565**
0.066 mi.
346 ft. **Site 3 of 3 in cluster D**

Relative:
Lower

Actual:
12 ft.

SEMS Archive:
Site ID: 0905524
EPA ID: CASFN0905524
Name: K AND S BODY SHOP
Address: 600 E. 3RD STREET
Address 2: Not reported
City,State,Zip: PITTSBURG, CA 94565
Cong District: Not reported

K AND S BODY SHOP (Continued) **1001491867**

FIPS Code: 06013
FF: N
NPL: Not on the NPL
Non NPL Status: NFRAP-Site does not qualify for the NPL based on existing information

SEMS Archive Detail:

Region: 09
Site ID: 0905524
EPA ID: CASFN0905524
Site Name: K AND S BODY SHOP
NPL: N
FF: N
OU: 00
Action Code: VS
Action Name: ARCH SITE
SEQ: 1
Start Date: Not reported
Finish Date: 2003-06-12 04:00:00
Qual: Not reported
Current Action Lead: EPA Perf In-Hse

Region: 09
Site ID: 0905524
EPA ID: CASFN0905524
Site Name: K AND S BODY SHOP
NPL: N
FF: N
OU: 00
Action Code: DS
Action Name: DISCVRY
SEQ: 1
Start Date: 1998-12-01 05:00:00
Finish Date: 1998-12-01 05:00:00
Qual: Not reported
Current Action Lead: EPA Perf

Region: 09
Site ID: 0905524
EPA ID: CASFN0905524
Site Name: K AND S BODY SHOP
NPL: N
FF: N
OU: 00
Action Code: PA
Action Name: PA
SEQ: 1
Start Date: 2001-10-29 05:00:00
Finish Date: 2003-01-29 05:00:00
Qual: N
Current Action Lead: St Perf

ENVIROSTOR:

Name: K AND S BODY SHOP
Address: 600 E. 3RD STREET
City,State,Zip: PITTSBURG, CA 94565
Facility ID: 07750025

K AND S BODY SHOP (Continued) **1001491867**

Status: No Further Action
Status Date: 03/20/2002
Site Code: 201407
Site Type: Evaluation
Site Type Detailed: Evaluation
Acres: 0.59
NPL: NO
Regulatory Agencies: SMBRP, CONTRA COSTA COUNTY
Lead Agency: CONTRA COSTA COUNTY
Program Manager: Not reported
Supervisor: Denise Tsuji
Division Branch: Cleanup Berkeley
Assembly: 14
Senate: 07
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: Responsible Party
Latitude: 38.03138
Longitude: -121.8741
APN: NONE SPECIFIED
Past Use: MACHINE SHOP, PHOTOGRAPHIC PROCESSING, VEHICLE MAINTENANCE
Potential COC: Lead TPH-gas TPH-MOTOR OIL Trichloroethylene (TCE
Confirmed COC: 30025-NO 30027-NO 30013-NO 3002502-NO
Potential Description: SOIL
Alias Name: 201407
Alias Type: Project Code (Site Code)
Alias Name: 07750025
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 01/29/2003
Comments: Completed PA/SI which recommended that a Preliminary Endangerment Assessment be conducted. Hazardous substances believed to be used are most likely the common chemicals used in the auto repair industry. These chemicals include solvent, paint and paint thinners, lacquers, oils and degreasers.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 05/10/1997
Comments: Site screening conclujded further action required.

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

C32 **B G'S MARINE CENTER, INC** **CA CONTRA COSTA CO. SITE LIST** **S102261681**
East **3 INDUSTRY RD** **N/A**
< 1/8 **PITTSBURG, CA 94565**
0.072 mi.
380 ft. **Site 4 of 4 in cluster C**

Relative: **Lower**

Actual: **13 ft.**

CONTRA COSTA CO. SITE LIST:

Name:	B G'S MARINE CENTER, INC
Address:	3 INDUSTRY RD
City:	PITTSBURG
Facility ID:	FA0028262
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	HMBP: LESS THAN 1000 LBS
Region:	CONTRA COSTA
Cupa Number:	771505

Name:	B G'S MARINE CENTER, INC
Address:	3 INDUSTRY RD
City:	PITTSBURG
Facility ID:	FA0028262
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	HWG: LESS THAN 5 TONS/YEAR
Region:	CONTRA COSTA
Cupa Number:	771505

E33 **PITTSBURG PLUMBING** **CA LUST** **S101294164**
South **441 10TH ST E** **CA Cortese** **N/A**
< 1/8 **PITTSBURG, CA 94565** **CA ENF**
0.083 mi. **CA HIST CORTESE**
439 ft. **Site 1 of 2 in cluster E** **CA CERS**

Relative: **Higher**

Actual: **18 ft.**

LUST REG 2:

Region:	2
Facility Id:	07-0478
Facility Status:	Preliminary site assessment underway
Case Number:	71224
How Discovered:	OM
Leak Cause:	UNK
Leak Source:	UNK
Date Leak Confirmed:	9/25/1986
Oversight Program:	LUST
Prelim. Site Assesment Wokplan Submitted:	Not reported
Preliminary Site Assesment Began:	5/9/1994
Pollution Characterization Began:	Not reported
Pollution Remediation Plan Submitted:	Not reported
Date Remediation Action Underway:	Not reported
Date Post Remedial Action Monitoring Began:	Not reported

CORTESE:

Name:	PITTSBURG PLUMBING
Address:	441 10TH ST E
City,State,Zip:	PITTSBURG, CA 94565
Region:	CORTESE
Envirostor Id:	Not reported
Global ID:	T0601300442
Site/Facility Type:	LUST CLEANUP SITE
Cleanup Status:	COMPLETED - CASE CLOSED

PITTSBURG PLUMBING (Continued) **S101294164**

Status Date:	Not reported
Site Code:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Owner:	Not reported
Enf Type:	Not reported
Swat R:	Not reported
Flag:	active
Order No:	Not reported
Waste Discharge System No:	Not reported
Effective Date:	Not reported
Region 2:	Not reported
WID Id:	Not reported
Solid Waste Id No:	Not reported
Waste Management Uit Name:	Not reported
File Name:	Active Open

ENF:

Name:	PITTSBURG PLUMBING
Address:	441 10TH
City,State,Zip:	PITTSBURG, CA 94565
Region:	2
Facility Id:	250471
Agency Name:	Pittsburg Plumbing
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	All other facilities
Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	38.029427
Place Longitude:	-121.892325
SIC Code 1:	Not reported
SIC Desc 1:	Not reported
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	UST
Program Category1:	TANKS
Program Category2:	TANKS
# Of Programs:	1

PITTSBURG PLUMBING (Continued) **S101294164**

WDID:	2 07-0478
Reg Measure Id:	168785
Reg Measure Type:	Unregulated
Region:	2
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Never Active
Status Date:	02/20/2013
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	236642
Region:	2
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	13267 Letter
Effective Date:	07/16/1999
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 2 07-0478
Description:	Not reported
Program:	UST
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Name:	PITTSBURG PLUMBING
Address:	441 10TH
City,State,Zip:	PITTSBURG, CA 94565
Region:	2
Facility Id:	250471
Agency Name:	Pittsburg Plumbing

PITTSBURG PLUMBING (Continued) **S101294164**

Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	All other facilities
Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	38.029427
Place Longitude:	-121.892325
SIC Code 1:	Not reported
SIC Desc 1:	Not reported
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	UST
Program Category1:	TANKS
Program Category2:	TANKS
# Of Programs:	1
WDID:	2 07-0478
Reg Measure Id:	168785
Reg Measure Type:	Unregulated
Region:	2
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Never Active
Status Date:	02/20/2013
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N

PITTSBURG PLUMBING (Continued) **S101294164**

Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	236641
Region:	2
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	13267 Letter
Effective Date:	09/29/2000
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 2 07-0478
Description:	Not reported
Program:	UST
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

HIST CORTESE:

edr_fname:	PITTSBURG PLUMBING
edr_fadd1:	441 10TH
City,State,Zip:	PITTSBURG, CA 94565
Region:	CORTESE
Facility County Code:	7
Reg By:	LTNKA
Reg Id:	07-0478

CERS:

Name:	PITTSBURG PLUMBING
Address:	441 10TH ST E
City,State,Zip:	PITTSBURG, CA 94565
Site ID:	222267
CERS ID:	T0601300442
CERS Description:	Leaking Underground Storage Tank Cleanup Site

Affiliation:

Affiliation Type Desc:	Local Agency Caseworker
Entity Name:	SUE LOYD - CONTRA COSTA COUNTY
Entity Title:	Not reported
Affiliation Address:	4333 PACHECO BLVD.
Affiliation City:	MARTINEZ
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Regional Board Caseworker
Entity Name:	MARTIN MUSONGE - SAN FRANCISCO BAY RWQCB (REGION 2)

PITTSBURG PLUMBING (Continued) **S101294164**

Entity Title:	Not reported
Affiliation Address:	1515 CLAY STREET
Affiliation City:	OAKLAND
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

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34 **H & B SEASIDE** **EDR Hist Auto** **1022240237**
NNW **301 3RD ST** **N/A**
< 1/8 **PITTSBURG, CA 94565**
0.084 mi.
441 ft.

Relative: EDR Hist Auto
Lower

Actual:
14 ft.

Year:	Name:	Type:
1969	H & B SEASIDE	Gasoline Service Stations
1970	H & B SEASIDE	Gasoline Service Stations

F35 **8 & 12 INDUSTRY ROAD** **US BROWNFIELDS** **1026109938**
East **8-12 INDUSTRY ROAD** **N/A**
< 1/8 **PITTSBURG, CA 94565**
0.095 mi.
501 ft. **Site 1 of 6 in cluster F**

Relative: US BROWNFIELDS:
Lower

Actual:
14 ft.

Name:	8 & 12 INDUSTRY ROAD
Address:	8-12 INDUSTRY ROAD
City,State,Zip:	PITTSBURG, CA 94565
Recipient Name:	City of Pittsburg (California)
Grant Type:	Assessment
Property Number:	-
Parcel size:	1.6
Latitude:	38.0299274
Longitude:	-121.8758535
HCM Label:	-
Map Scale:	-
Point of Reference:	-
Highlights:	-
Datum:	-
Acres Property ID:	240328
IC Data Access:	-
Start Date:	-
Redev Completition Date:	-
Completed Date:	-
Acres Cleaned Up:	-
Cleanup Funding:	-
Cleanup Funding Source:	-
Assessment Funding:	-
Assessment Funding Source:	-
Redevelopment Funding:	-
Redev. Funding Source:	-
Redev. Funding Entity Name:	-
Redevelopment Start Date:	-

8 & 12 INDUSTRY ROAD (Continued) **1026109938**

Assessment Funding Entity:	-
Cleanup Funding Entity:	-
Grant Type:	Hazardous & Petroleum
Accomplishment Type:	-
Accomplishment Count:	-
Cooperative Agreement Number:	99T62601
Start Date:	-
Ownership Entity:	Private
Completion Date:	-
Current Owner:	Sam Baugh
Did Owner Change:	N
Cleanup Required:	N
Video Available:	N
Photo Available:	Y
Institutional Controls Required:	N
IC Category Proprietary Controls:	-
IC Cat. Info. Devices:	-
IC Cat. Gov. Controls:	-
IC Cat. Enforcement Permit Tools:	-
IC in place date:	-
IC in place:	N
State/tribal program date:	-
State/tribal program ID:	-
State/tribal NFA date:	-
Air cleaned:	-
Asbestos found:	-
Asbestos cleaned:	-
Controled substance found:	-
Controled substance cleaned:	-
Drinking water affected:	-
Drinking water cleaned:	-
Groundwater affected:	Y
Groundwater cleaned:	-
Lead contaminant found:	-
Lead cleaned up:	-
No media affected:	Not reported
Unknown media affected:	-
Other cleaned up:	-
Other metals found:	-
Other metals cleaned:	-
Other contaminants found:	-
Other contams found description:	-
PAHs found:	-
PAHs cleaned up:	-
PCBs found:	-
PCBs cleaned up:	-
Petro products found:	Y
Petro products cleaned:	-
Sediments found:	-
Sediments cleaned:	-
Soil affected:	Y
Soil cleaned up:	-
Surface water cleaned:	-
VOCs found:	Y
VOCs cleaned:	-
Cleanup other description:	-
Num. of cleanup and re-dev. jobs:	-

8 & 12 INDUSTRY ROAD (Continued) **1026109938**

Past use greenspace acreage:	-
Past use residential acreage:	-
Surface Water:	-
Past use commercial acreage:	-
Past use industrial acreage:	1.6
Future use greenspace acreage:	-
Future use residential acreage:	-
Future use commercial acreage:	-
Future use industrial acreage:	-
Superfund Fed. landowner flag:	-
Arsenic cleaned up:	-
Cadmium cleaned up:	-
Chromium cleaned up:	-
Copper cleaned up:	-
Iron cleaned up:	-
mercury cleaned up:	-
Nickel Cleaned Up:	-
No clean up:	-
Pesticides cleaned up:	-
Selenium cleaned up:	-
SVOCs cleaned up:	-
Unknown clean up:	-
Arsenic contaminant found:	-
Cadmium contaminant found:	-
Chromium contaminant found:	-
Copper contaminant found:	-
Iron contaminant found:	-
Mercury contaminant found:	-
Nickel contaminant found:	-
No contaminant found:	-
Pesticides contaminant found:	-
Selenium contaminant found:	-
SVOCs contaminant found:	-
Unknown contaminant found:	-
Future Use: Multistory	-
Media affected Bluiding Material:	-
Media affected indoor air:	-
Building material media cleaned up:	-
Indoor air media cleaned up:	-
Unknown media cleaned up:	-
Past Use: Multistory	Not reported
Property Description:	-
Below Poverty Number:	-
Below Poverty Percent:	-
Meidan Income:	-
Meidan Income Number:	-
Meidan Income Percent:	-
Vacant Housing Number:	-
Vacant Housing Percent:	-
Unemployed Number:	-
Unemployed Percent:	-

F36
East
< 1/8
0.098 mi.
515 ft.

Relative:
Lower

Actual:
14 ft.

DELTA AUTO WRECKER
6 INDUSTRY ROAD
PITTSBURG, CA 94565

Site 2 of 6 in cluster F

SEMS-ARCHIVE **1001491861**
CA RESPONSE **CASFN0905518**
CA ENVIROSTOR
CA Cortese
CA CONTRA COSTA CO. SITE LIST
CA CERS

SEMS Archive:

Site ID:	0905518
EPA ID:	CASFN0905518
Name:	DELTA AUTO WRECKER
Address:	6 INDUSTRY ROAD
Address 2:	Not reported
City,State,Zip:	PITTSBURG, CA 94565
Cong District:	Not reported
FIPS Code:	06013
FF:	N
NPL:	Not on the NPL
Non NPL Status:	NFRAP-Site does not qualify for the NPL based on existing information

SEMS Archive Detail:

Region:	09
Site ID:	0905518
EPA ID:	CASFN0905518
Site Name:	DELTA AUTO WRECKER
NPL:	N
FF:	N
OU:	00
Action Code:	DS
Action Name:	DISCVRY
SEQ:	1
Start Date:	1999-06-22 04:00:00
Finish Date:	1999-06-22 04:00:00
Qual:	Not reported
Current Action Lead:	EPA Perf

Region:	09
Site ID:	0905518
EPA ID:	CASFN0905518
Site Name:	DELTA AUTO WRECKER
NPL:	N
FF:	N
OU:	00
Action Code:	HX
Action Name:	PRE-CERC
SEQ:	1
Start Date:	1999-06-22 04:00:00
Finish Date:	1999-06-22 04:00:00
Qual:	Not reported
Current Action Lead:	EPA Perf

Region:	09
Site ID:	0905518
EPA ID:	CASFN0905518
Site Name:	DELTA AUTO WRECKER
NPL:	N
FF:	N
OU:	00
Action Code:	PA
Action Name:	PA

DELTA AUTO WRECKER (Continued) **1001491861**

SEQ:	1
Start Date:	2014-07-01 04:00:00
Finish Date:	2014-11-26 05:00:00
Qual:	N
Current Action Lead:	St Perf

RESPONSE:

Name:	DELTA AUTO WRECKERS
Address:	6 INDUSTRY ROAD
City,State,Zip:	PITTSBURG, CA 94565
Facility ID:	07750026
Site Type:	State Response
Site Type Detail:	State Response or NPL
Acres:	2
National Priorities List:	NO
Cleanup Oversight Agencies:	HWMP, SMBRP
Lead Agency Description:	DTSC - Hazardous Waste Management Program
Project Manager:	Parag Shah
Supervisor:	Whitney Smith
Division Branch:	Cleanup Berkeley
Site Code:	202209
Site Mgmt. Req.:	NONE SPECIFIED
Assembly:	14
Senate:	07
Special Program Status:	Not reported
Status:	Active
Status Date:	06/05/2009
Restricted Use:	NO
Funding:	Not reported
Latitude:	38.02988
Longitude:	-121.8760
APN:	073042003, 073042003, 073042004
Past Use:	JUNKYARD
Potential COC :	Lead TPH-MOTOR OIL
Confirmed COC:	Lead TPH-MOTOR OIL
Potential Description:	SOIL
Alias Name:	073042003
Alias Type:	APN
Alias Name:	073042003
Alias Type:	APN
Alias Name:	073042004
Alias Type:	APN
Alias Name:	CASFN0905518
Alias Type:	EPA Identification Number
Alias Name:	110009349801
Alias Type:	EPA (FRS #)
Alias Name:	201333
Alias Type:	Project Code (Site Code)
Alias Name:	201981
Alias Type:	Project Code (Site Code)
Alias Name:	202208
Alias Type:	Project Code (Site Code)
Alias Name:	202209
Alias Type:	Project Code (Site Code)
Alias Name:	07750026
Alias Type:	Envirostor ID Number

DELTA AUTO WRECKER (Continued) **1001491861**

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Screening
Completed Date:	05/10/1999
Comments:	Screening checklist prepared by DTSC on April 23, 1999 and concurred by EPA on May 10, 1999. Document recomends no further action under CERCLA and continued action by DTSC.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Assessment Work Plan
Completed Date:	10/20/2000
Comments:	Sampling Plan prepared at the behest of USEPA.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Assessment Work Plan
Completed Date:	10/27/2016
Comments:	.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Assessment Work Plan
Completed Date:	03/06/2019
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Assessment Work Plan
Completed Date:	03/06/2019
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Consent Agreement
Completed Date:	04/09/2007
Comments:	The Consent Order supercedes the Enforcement Order and First Amended Enforcement Order.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Unilateral Order (I/SE, RAO, CAO, EPA AO)
Completed Date:	02/26/2007
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Unilateral Order (I/SE, RAO, CAO, EPA AO)
Completed Date:	10/03/2006
Comments:	Enforcement Order identifies hazardous waste management violations and actions required to correct them. Additionally, the Enforcement Order requires that a Preliminary Endangerment Assessment workplan be prepared, submitted to DTSC for review, and implemented. A PEA report with the results and findings of the PEA is also to be submitted to DTSC.

DELTA AUTO WRECKER (Continued) **1001491861**

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Inspections/Visit (Non LUR)
Completed Date:	08/15/2002
Comments:	Report documents concentration of lead and petroleum hydrocarbons in soils, debris and containers throughout the property. Hazardous Waste management activities identified include illegal disposal into adjacent property (POSCO), ilegal storage, open containers, unlabeled drums and containers, no contingency plan of any kind.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Annual Oversight Cost Estimate
Completed Date:	11/15/2010
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Letter - Demand
Completed Date:	08/03/2011
Comments:	Letter #1

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Letter - Demand
Completed Date:	09/19/2011
Comments:	Third and Final Collection Letter

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Letter - Demand
Completed Date:	08/31/2011
Comments:	Letter #2

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Proposed Determination of non-compliance
Completed Date:	10/23/2009
Comments:	Notice prepared after RP Consultant submitted defficient documents months behind the deadline to submit a PEA Workplan.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Correspondence
Completed Date:	01/18/2012
Comments:	Statement explains that DTSC has never approved any investigation workplans for DDEE

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Consent Order
Completed Date:	08/13/2013
Comments:	Signed by Property Owner, RP Director Omo Fagbohungbe

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Correspondence

DELTA AUTO WRECKER (Continued) **1001491861**

Completed Date: 01/18/2013
Comments: Letter was also carbon copied to other regulatory agencies with oversight over the project

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Form 1479 - Site and Collections Summary
Completed Date: 06/12/2012
Comments: Sonia Feldstein is the assigned attorney.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Proposed Determination of non-compliance
Completed Date: 12/17/2013
Comments: Letter resent to residential address after return from DBA Address at 6 Industry Road

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: PA/SI Reassessment
Completed Date: 11/26/2014
Comments: Reassessment conducted by DTSC on EPA's behalf to determine if the site should be considered for listing on National Priorities List.
DTSC concluded that no further federal assessment under CERCLA was necessary as DTSC is actively overseeing environmental investigation and remediation at the site under a consent agreement.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Post HARP Form
Completed Date: 05/03/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Letter - Notice
Completed Date: 08/10/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 02/10/2017
Comments: Letter of notification introducing new DTSC Project Manager.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Pre-HARP Form
Completed Date: 05/03/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Pre-HARP Form
Completed Date: 11/16/2016
Comments: Not reported

DELTA AUTO WRECKER (Continued) **1001491861**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Post HARP Form
Completed Date: 12/12/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Consent Agreement
Completed Date: 03/06/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Consent Agreement
Completed Date: 01/23/2019
Comments: signed VCA

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Pre-HARP Form
Completed Date: 03/13/2019
Comments: final draft

Future Area Name: PROJECT WIDE
Future Sub Area Name: Not reported
Future Document Type: Site Characterization Report
Future Due Date: 2021
Future Area Name: PROJECT WIDE
Future Sub Area Name: Not reported
Future Document Type: Removal Action Workplan
Future Due Date: 2022
Future Area Name: PROJECT WIDE
Future Sub Area Name: Not reported
Future Document Type: Site Characterization Report
Future Due Date: 2021
Future Area Name: PROJECT WIDE
Future Sub Area Name: Not reported
Future Document Type: Land Use Restriction
Future Due Date: 2023
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

ENVIROSTOR:
Name: DELTA AUTO WRECKERS
Address: 6 INDUSTRY ROAD
City,State,Zip: PITTSBURG, CA 94565
Facility ID: 07750026
Status: Active
Status Date: 06/05/2009
Site Code: 202209
Site Type: State Response
Site Type Detailed: State Response or NPL
Acres: 2

DELTA AUTO WRECKER (Continued) **1001491861**

NPL:	NO
Regulatory Agencies:	HWMP, SMBRP
Lead Agency:	HWMP
Program Manager:	Parag Shah
Supervisor:	Whitney Smith
Division Branch:	Cleanup Berkeley
Assembly:	14
Senate:	07
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	Not reported
Latitude:	38.02988
Longitude:	-121.8760
APN:	073042003, 073042003, 073042004
Past Use:	JUNKYARD
Potential COC:	Lead TPH-MOTOR OIL
Confirmed COC:	Lead TPH-MOTOR OIL
Potential Description:	SOIL
Alias Name:	073042003
Alias Type:	APN
Alias Name:	073042003
Alias Type:	APN
Alias Name:	073042004
Alias Type:	APN
Alias Name:	CASFN0905518
Alias Type:	EPA Identification Number
Alias Name:	110009349801
Alias Type:	EPA (FRS #)
Alias Name:	201333
Alias Type:	Project Code (Site Code)
Alias Name:	201981
Alias Type:	Project Code (Site Code)
Alias Name:	202208
Alias Type:	Project Code (Site Code)
Alias Name:	202209
Alias Type:	Project Code (Site Code)
Alias Name:	07750026
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Screening
Completed Date:	05/10/1999
Comments:	Screening checklist prepared by DTSC on April 23, 1999 and concurred by EPA on May 10, 1999. Document recomends no further action under CERCLA and continued action by DTSC.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Assessment Work Plan
Completed Date:	10/20/2000
Comments:	Sampling Plan prepared at the behest of USEPA.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Assessment Work Plan

DELTA AUTO WRECKER (Continued) **1001491861**

Completed Date: 10/27/2016
Comments: .

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Assessment Work Plan
Completed Date: 03/06/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Assessment Work Plan
Completed Date: 03/06/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Consent Agreement
Completed Date: 04/09/2007
Comments: The Consent Order supercedes the Enforcement Order and First Amended Enforcement Order.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Unilateral Order (I/SE, RAO, CAO, EPA AO)
Completed Date: 02/26/2007
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Unilateral Order (I/SE, RAO, CAO, EPA AO)
Completed Date: 10/03/2006
Comments: Enforcement Order identifies hazardous waste management violations and actions required to correct them. Additionally, the Enforcement Order requires that a Preliminary Endangerment Assessment workplan be prepared, submitted to DTSC for review, and implemented. A PEA report with the results and findings of the PEA is also to be submitted to DTSC.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 08/15/2002
Comments: Report documents concentration of lead and petroleum hydrocarbons in soils, debris and containers throughout the property. Hazardous Waste management activities identified include illegal disposal into adjacent property (POSCO), ilegal storage, open containers, unlabeled drums and containers, no contingency plan of any kind.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 11/15/2010
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

DELTA AUTO WRECKER (Continued) **1001491861**

Completed Document Type: Letter - Demand
Completed Date: 08/03/2011
Comments: Letter #1

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Letter - Demand
Completed Date: 09/19/2011
Comments: Third and Final Collection Letter

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Letter - Demand
Completed Date: 08/31/2011
Comments: Letter #2

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Proposed Determination of non-compliance
Completed Date: 10/23/2009
Comments: Notice prepared after RP Consultant submitted defficient documents months behind the deadline to submit a PEA Workplan.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 01/18/2012
Comments: Statement explains that DTSC has never approved any investigation workplans for DDEE

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Consent Order
Completed Date: 08/13/2013
Comments: Signed by Property Owner, RP Director Omo Fagbohungbe

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 01/18/2013
Comments: Letter was also carbon copied to other regulatory agencies with oversight over the project

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Form 1479 - Site and Collections Summary
Completed Date: 06/12/2012
Comments: Sonia Feldstein is the assigned attorney.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Proposed Determination of non-compliance
Completed Date: 12/17/2013
Comments: Letter resent to residential address after return from DBA Address at 6 Industry Road

Completed Area Name: PROJECT WIDE

DELTA AUTO WRECKER (Continued) **1001491861**

Completed Sub Area Name: Not reported
Completed Document Type: PA/SI Reassessment
Completed Date: 11/26/2014
Comments: Reassessment conducted by DTSC on EPA's behalf to determine if the site should be considered for listing on National Priorities List.
DTSC concluded that no further federal assessment under CERCLA was necessary as DTSC is actively overseeing environmental investigation and remediation at the site under a consent agreement.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Post HARP Form
Completed Date: 05/03/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Letter - Notice
Completed Date: 08/10/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 02/10/2017
Comments: Letter of notification introducing new DTSC Project Manager.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Pre-HARP Form
Completed Date: 05/03/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Pre-HARP Form
Completed Date: 11/16/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Post HARP Form
Completed Date: 12/12/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Consent Agreement
Completed Date: 03/06/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Consent Agreement
Completed Date: 01/23/2019
Comments: signed VCA

DELTA AUTO WRECKER (Continued) **1001491861**

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Pre-HARP Form
Completed Date:	03/13/2019
Comments:	final draft
Future Area Name:	PROJECT WIDE
Future Sub Area Name:	Not reported
Future Document Type:	Site Characterization Report
Future Due Date:	2021
Future Area Name:	PROJECT WIDE
Future Sub Area Name:	Not reported
Future Document Type:	Removal Action Workplan
Future Due Date:	2022
Future Area Name:	PROJECT WIDE
Future Sub Area Name:	Not reported
Future Document Type:	Site Characterization Report
Future Due Date:	2021
Future Area Name:	PROJECT WIDE
Future Sub Area Name:	Not reported
Future Document Type:	Land Use Restriction
Future Due Date:	2023
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

CORTESE:

Name:	DELTA AUTO WRECKERS
Address:	6 INDUSTRY ROAD
City,State,Zip:	PITTSBURG, CA 94565
Region:	CORTESE
Envirostor Id:	7750026
Global ID:	Not reported
Site/Facility Type:	STATE RESPONSE
Cleanup Status:	ACTIVE
Status Date:	06/05/2009
Site Code:	201333, 201981, 202208, 202209
Latitude:	38.029881
Longitude:	-121.87607
Owner:	Not reported
Enf Type:	Not reported
Swat R:	Not reported
Flag:	envirostor
Order No:	Not reported
Waste Discharge System No:	Not reported
Effective Date:	Not reported
Region 2:	Not reported
WID Id:	Not reported
Solid Waste Id No:	Not reported
Waste Management Uit Name:	Not reported
File Name:	Haz Waste & Substances Sites

CONTRA COSTA CO. SITE LIST:

Name:	DAVE DRILLING ENVIRONMENTAL ENGINEERING, INC.

DELTA AUTO WRECKER (Continued) **1001491861**

Address: 6 INDUSTRY RD
City: PITTSBURG
Facility ID: FA0028212
Billing Status: INACTIVE, NON-BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HWG: REPORTED ZERO
Region: CONTRA COSTA
Cupa Number: 771453

CERS:
Name: DELTA AUTO WRECKERS
Address: 6 INDUSTRY ROAD
City,State,Zip: PITTSBURG, CA 94565
Site ID: 336674
CERS ID: 07750026
CERS Description: State Response

Affiliation:
Affiliation Type Desc: Lead Project Manager
Entity Name: PARAG SHAH
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: BERKELEY
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Supervisor
Entity Name: DANIEL MURPHY
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

37
WSW
< 1/8
0.098 mi.
516 ft.

BAYOU TRANSPORTATION SOLUTIONS LLC **RCRA NonGen / NLR** **1014465514**
10 SANTA CRUZ CT **CAR000219956**
PITTSBURG, CA 94565

Relative:
Higher

Actual:
33 ft.

RCRA NonGen / NLR:
Date Form Received by Agency: 2011-05-31 00:00:00.0
Handler Name: BAYOU TRANSPORTATION SOLUTIONS LLC
Handler Address: 10 SANTA CRUZ CT
Handler City,State,Zip: PITTSBURG, CA 94565
EPA ID: CAR000219956
Contact Name: CLARENCE M BODELY SR
Contact Address: 10 SANTA CRUZ CT
Contact City,State,Zip: PITTSBURG, CA 94565
Contact Telephone: 925-439-9575
Contact Fax: 925-439-3577
Contact Email: CMBODELY@YAHOO.COM
Contact Title: SINGLE MEMBER

BAYOU TRANSPORTATION SOLUTIONS LLC (Continued) **1014465514**

EPA Region:	09
Land Type:	Private
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	10 SANTA CRUZ CT
Mailing City,State,Zip:	PITTSBURG, CA 94565
Owner Name:	CLARENCE M BODELY SR
Owner Type:	Private
Operator Name:	CLARENCE M BODELY SR
Operator Type:	Private
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	Yes
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	NN
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported

BAYOU TRANSPORTATION SOLUTIONS LLC (Continued) **1014465514**

Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2011-06-13 13:09:05.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	Not reported
Manifest Broker:	Not reported
Sub-Part P Indicator:	Not reported

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	CLARENCE M BODELY SR
Legal Status:	Private
Date Became Current:	2011-03-07 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	10 SANTA CRUZ CT
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	925-439-9575
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	CLARENCE M BODELY SR
Legal Status:	Private
Date Became Current:	2011-03-07 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	2011-05-31 00:00:00.0
Handler Name:	BAYOU TRANSPORTATION SOLUTIONS LLC
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	48412

BAYOU TRANSPORTATION SOLUTIONS LLC (Continued) **1014465514**

NAICS Description: GENERAL FREIGHT TRUCKING, LONG-DISTANCE

NAICS Code: 48423
NAICS Description: SPECIALIZED FREIGHT (EXCEPT USED GOODS) TRUCKING, LONG-DISTANCE

NAICS Code: 56211
NAICS Description: WASTE COLLECTION

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

F38 **PITTSBURG DISPOSAL SERVICE** **CA SWEEPS UST** **S106930743**
East **12 INDUSTRY WAY** **N/A**
< 1/8 **PITTSBURG, CA 94565**
0.101 mi.
533 ft. **Site 3 of 6 in cluster F**

Relative: SWEEPS UST:
Lower
Actual: Name: PITTSBURG DISPOSAL SERVICE
13 ft. Address: 12 INDUSTRY WAY
City: PITTSBURG
Status: Not reported
Comp Number: 70075
Number: Not reported
Board Of Equalization: Not reported
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 07-000-070075-000001
Tank Status: Not reported
Capacity: 6000
Active Date: Not reported
Tank Use: CHEMICAL
STG: PRODUCT
Content: UNKNOWN
Number Of Tanks: 3

Name: PITTSBURG DISPOSAL SERVICE
Address: 12 INDUSTRY WAY
City: PITTSBURG
Status: Not reported
Comp Number: 70075
Number: Not reported
Board Of Equalization: Not reported
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 07-000-070075-000002
Tank Status: Not reported
Capacity: 4000
Active Date: Not reported

PITTSBURG DISPOSAL SERVICE (Continued) **S106930743**

Tank Use: CHEMICAL
STG: PRODUCT
Content: UNKNOWN
Number Of Tanks: Not reported

Name: PITTSBURG DISPOSAL SERVICE
Address: 12 INDUSTRY WAY
City: PITTSBURG
Status: Not reported
Comp Number: 70075
Number: Not reported
Board Of Equalization: Not reported
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 07-000-070075-000003
Tank Status: Not reported
Capacity: 1000
Active Date: Not reported
Tank Use: CHEMICAL
STG: PRODUCT
Content: UNKNOWN
Number Of Tanks: Not reported

F39 **PITTSBURG DISPOSL DBRS BOX SV#** **CA CERS HAZ WASTE** **1000420826**
East **12 INDUSTRY RD** **CA CERS TANKS** **CAD006814958**
< 1/8 **PITTSBURG, CA 94565** **RCRA NonGen / NLR**
0.101 mi. **FINDS**
533 ft. **Site 4 of 6 in cluster F** **ECHO**
CA CONTRA COSTA CO. SITE LIST
Relative: **CA CERS**
Lower

Actual: **13 ft.**

CERS HAZ WASTE:
Name: PACIFIC COAST GENERAL ENGINEERING, INC.
Address: 12 INDUSTRY RD
City,State,Zip: PITTSBURG, CA 94565
Site ID: 411977
CERS ID: 10714117
CERS Description: Hazardous Waste Generator

CERS TANKS:
Name: PACIFIC COAST GENERAL ENGINEERING, INC.
Address: 12 INDUSTRY RD
City,State,Zip: PITTSBURG, CA 94565
Site ID: 411977
CERS ID: 10714117
CERS Description: Aboveground Petroleum Storage

RCRA NonGen / NLR:
Date Form Received by Agency: 1980-06-24 00:00:00.0
Handler Name: PITTSBURG DISPOSL DBRS BOX SV#
Handler Address: 12 INDUSTRY RD
Handler City,State,Zip: PITTSBURG, CA 94565
EPA ID: CAD006814958
Contact Name: ENVIRONMENTAL MANAGER
Contact Address: 12 INDUSTRY RD

PITTSBURG DISPOSL DBRS BOX SV# (Continued) **1000420826**

Contact City,State,Zip:	PITTSBURG, CA 94565
Contact Telephone:	415-432-6262
Contact Fax:	Not reported
Contact Email:	Not reported
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	CA
State District:	2
Mailing Address:	INDUSTRY RD
Mailing City,State,Zip:	PITTSBURG, CA 94565
Owner Name:	LOUIS MASCHERONI
Owner Type:	Private
Operator Name:	NOT REQUIRED
Operator Type:	Private
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	Yes
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	NN
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No

PITTSBURG DISPOSL DBRS BOX SV# (Continued) **1000420826**

Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2000-09-15 17:29:10.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	Not reported
Manifest Broker:	Not reported
Sub-Part P Indicator:	Not reported

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	LOUIS MASCHERONI
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	NOT REQUIRED
Owner/Operator City,State,Zip:	NOT REQUIRED, ME 99999
Owner/Operator Telephone:	415-555-1212
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	NOT REQUIRED
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	NOT REQUIRED
Owner/Operator City,State,Zip:	NOT REQUIRED, ME 99999
Owner/Operator Telephone:	415-555-1212
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	1980-06-24 00:00:00.0
Handler Name:	PITTSBURG DISPOSL DBRS BOX SV#
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	CA
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes

PITTSBURG DISPOSL DBRS BOX SV# (Continued) **1000420826**

Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 562
NAICS Description: WASTE MANAGEMENT AND REMEDIATION SERVICES

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

FINDS:
Registry ID: 110002629861

Click Here:

Environmental Interest/Information System:
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000420826
Registry ID: 110002629861
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110002629861
Name: PITTSBURG DISPOSL DBRS BOX SV#
Address: 12 INDUSTRY RD
City,State,Zip: PITTSBURG, CA 94565

CONTRA COSTA CO. SITE LIST:
Name: PACIFIC COAST GENERAL ENGINEERING, INC.
Address: 12 INDUSTRY RD
City: PITTSBURG
Facility ID: FA0032630
Billing Status: ACTIVE, BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: APSA: <10K GALLONS
Region: CONTRA COSTA
Cupa Number: 770075

Name: PACIFIC COAST GENERAL ENGINEERING, INC.
Address: 12 INDUSTRY RD
City: PITTSBURG
Facility ID: FA0032630
Billing Status: ACTIVE, BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HMBP: >10K-100K LBS, 20+ EMPLOYEES

PITTSBURG DISPOSL DBRS BOX SV# (Continued) **1000420826**

Region: CONTRA COSTA
Cupa Number: 770075

Name: PACIFIC COAST GENERAL ENGINEERING, INC.
Address: 12 INDUSTRY RD
City: PITTSBURG
Facility ID: FA0032630
Billing Status: ACTIVE, BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HWG: LESS THAN 5 TONS/YEAR
Region: CONTRA COSTA
Cupa Number: 770075

Name: PACIFIC COAST GENERAL ENGINEERING, INC.
Address: 12 INDUSTRY RD
City: PITTSBURG
Facility ID: FA0032630
Billing Status: INACTIVE, NON-BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: UNDERGROUND STORAGE TANK SITE
Region: CONTRA COSTA
Cupa Number: 770075

CERS:
Name: PACIFIC COAST GENERAL ENGINEERING, INC.
Address: 12 INDUSTRY RD
City,State,Zip: PITTSBURG, CA 94565
Site ID: 411977
CERS ID: 10714117
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 411977
Site Name: Pacific Coast General Engineering, Inc.
Violation Date: 11-03-2016
Citation: HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description: Hazardous Waste Generator Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 11/30/2016.
Violation Division: Contra Costa County Health Services Department
Violation Program: HW
Violation Source: CERS

Site ID: 411977
Site Name: Pacific Coast General Engineering, Inc.
Violation Date: 11-03-2016
Citation: HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description: Hazardous Waste Generator Program - Abandonment/Illegal Disposal/Unauthorized Treatment - General
Violation Notes: Returned to compliance on 11/30/2016.
Violation Division: Contra Costa County Health Services Department
Violation Program: HW
Violation Source: CERS

Site ID: 411977

PITTSBURG DISPOSL DBRS BOX SV# (Continued) **1000420826**

Site Name:	Pacific Coast General Engineering, Inc.
Violation Date:	11-03-2016
Citation:	HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description:	Business Plan Program - Training - General
Violation Notes:	Returned to compliance on 01/04/2017.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	411977
Site Name:	Pacific Coast General Engineering, Inc.
Violation Date:	11-03-2016
Citation:	HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description:	Not reported
Violation Notes:	Returned to compliance on 11/30/2016.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	APSA
Violation Source:	CERS
Site ID:	411977
Site Name:	Pacific Coast General Engineering, Inc.
Violation Date:	11-03-2016
Citation:	HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description:	Hazardous Waste Generator Program - Training - General
Violation Notes:	Returned to compliance on 12/08/2016.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HW
Violation Source:	CERS
Site ID:	411977
Site Name:	Pacific Coast General Engineering, Inc.
Violation Date:	05-24-2019
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes:	Returned to compliance on 06/17/2019. OBSERVATION: ON APRIL 1, 2019, CCHSHMP SENT A NOTICE OF VIOLATION (ATTACHED) TO THE SUBJECT FACILITY FOR FAILURE TO SUBMIT A COMPLETE AND CORRECT CALIFORNIA ENVIRONMENTAL REPORTING SYSTEM (CERS) SUBMITTAL FOR THE FOLLOWING SUBMITTAL ELEMENT(S):- FACILITY INFORMATION AND/OR HAZARDOUS MATERIALS INVENTORY AND/OR EMERGENCY RESPONSE/TRAINING PLANS. AS OF MAY 24, 2019, THE VIOLATION REMAINS OUTSTANDING.- - CORRECTIVE ACTION: IMMEDIATELY LOG ONTO CERS (HTTPS://CERS.CALEPA.CA.GOV/) AND SUBMIT COMPLETE/CORRECT FACILITY INFORMATION AND/OR HAZARDOUS MATERIALS INVENTORY AND/OR EMERGENCY RESPONSE/TRAINING PLANS.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	411977
Site Name:	Pacific Coast General Engineering, Inc.
Violation Date:	11-30-2016

PITTSBURG DISPOSL DBRS BOX SV# (Continued) **1000420826**

Citation:	HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description:	"Failure to amend the SPCC Plan within 6 months: 1. When the facility has had a change in design, construction, operation, or maintenance which affects the facilityG s discharge potential. AND/OR 2. To include more effective proven technology at the time of the 5-year SPCC Plan review and evaluation."
Violation Notes:	Returned to compliance on 12/09/2016.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	APSA
Violation Source:	CERS
Site ID:	411977
Site Name:	Pacific Coast General Engineering, Inc.
Violation Date:	11-30-2016
Citation:	HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description:	Business Plan Program - Training - General
Violation Notes:	Returned to compliance on 01/04/2017.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	411977
Site Name:	Pacific Coast General Engineering, Inc.
Violation Date:	11-30-2016
Citation:	HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description:	Hazardous Waste Generator Program - Training - General
Violation Notes:	Returned to compliance on 12/08/2016.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HW
Violation Source:	CERS
Site ID:	411977
Site Name:	Pacific Coast General Engineering, Inc.
Violation Date:	11-03-2016
Citation:	HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description:	Business Plan Program - Release/Leaks/Spills - General
Violation Notes:	Returned to compliance on 11/30/2016.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	411977
Site Name:	Pacific Coast General Engineering, Inc.
Violation Date:	11-03-2016
Citation:	HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description:	Failure to prepare and implement a Spill Prevention Control and Countermeasure (SPCC) Plan.
Violation Notes:	Returned to compliance on 12/09/2016.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	APSA
Violation Source:	CERS

PITTSBURG DISPOSL DBRS BOX SV# (Continued) **1000420826**

Site ID:	411977
Site Name:	Pacific Coast General Engineering, Inc.
Violation Date:	11-03-2016
Citation:	HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description:	Hazardous Waste Generator Program - Operations/Maintenance - General
Violation Notes:	Returned to compliance on 11/28/2016.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HW
Violation Source:	CERS

Site ID:	411977
Site Name:	Pacific Coast General Engineering, Inc.
Violation Date:	11-03-2016
Citation:	HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description:	Failure to provide the following training to all oil-handling personnel: 1. Operation and maintenance of equipment to prevent discharges. 2. Discharge procedure protocols. 3. Applicable pollution control laws, rules, and regulations. 4. General facility operations. 5. Contents of the SPCC Plan.
Violation Notes:	Returned to compliance on 12/09/2016.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	APSA
Violation Source:	CERS

Site ID:	411977
Site Name:	Pacific Coast General Engineering, Inc.
Violation Date:	04-01-2019
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes:	Returned to compliance on 06/17/2019. OBSERVATION: AS OF APRIL 1, 2019, CCHSHMP HAS NOT RECEIVED/ACCEPTED A COMPLETE AND CORRECT CALIFORNIA ENVIRONMENTAL REPORTING SYSTEM (CERS) SUBMITTAL FOR THE FOLLOWING SUBMITTAL ELEMENT(S): Facility Information AND/OR Hazardous Materials Inventory AND/OR Emergency Response/Training Plans CORRECTIVE ACTION: IMMEDIATELY LOG ONTO CERS (https://cers.calepa.ca.gov/) AND SUBMIT COMPLETE/CORRECT Facility Information AND OR Hazardous Materials Inventory AND/OR Emergency Response/Training Plans.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HMRRP
Violation Source:	CERS

Site ID:	411977
Site Name:	Pacific Coast General Engineering, Inc.
Violation Date:	08-30-2019
Citation:	HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description:	Failure to address in the SPCC Plan the type of oil and storage capacity for each fixed container, and either the type of oil and storage capacity for each mobile or portable container, or an estimate of the potential number of mobile or portable containers, the types of oil, and anticipated storage capacities.

PITTSBURG DISPOSL DBRS BOX SV# (Continued) **1000420826**

Violation Notes:	OBSERVATION: Failure to address in the SPCC Plan the type of oil and storage capacity for each fixed, portable and/or mobile container], including an estimate of the number of portable or mobile containers. Update plan to iclude 55 gallons of new oil and 500 gallons of waste oil.CORRECTIVE ACTION: Amend the SPCC Plan to properly address the type and storage capacity of all fixed, portable and/or mobile containers, including an estimate of the number of portable or mobile containers.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	APSA
Violation Source:	CERS
Site ID:	411977
Site Name:	Pacific Coast General Engineering, Inc.
Violation Date:	08-30-2019
Citation:	HSC 6.95 25508(a)(3) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(3)
Violation Description:	Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes:	OBSERVATION: Update inventory to include 55 gallon new oil, increase waste oil capacity to 500 gallons, increase quantity of LPG to over 100 gallons CORRECTIVE ACTION: Update inventory on CERS to reflect above changes.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	411977
Site Name:	Pacific Coast General Engineering, Inc.
Violation Date:	11-30-2016
Citation:	HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description:	Business Plan Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 01/04/2017.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	411977
Site Name:	Pacific Coast General Engineering, Inc.
Violation Date:	11-03-2016
Citation:	HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description:	Business Plan Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 01/04/2017.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	411977
Site Name:	Pacific Coast General Engineering, Inc.
Violation Date:	05-24-2019
Citation:	HSC 6.11 25404(e)(4) - California Health and Safety Code, Chapter 6.11, Section(s) 25404(e)(4)
Violation Description:	Failure to report program data electronically.
Violation Notes:	Returned to compliance on 06/17/2019. OBSERVATION: ON APRIL 1, 2019,

PITTSBURG DISPOSL DBRS BOX SV# (Continued) **1000420826**

CCHSHMP SENT A NOTICE OF VIOLATION (ATTACHED) TO THE SUBJECT FACILITY FOR FAILURE TO SUBMIT A COMPLETE AND CORRECT CALIFORNIA ENVIRONMENTAL REPORTING SYSTEM (CERS) FACILITY INFORMATION SUBMITTAL ELEMENT TO CCHSHMP. AS OF MAY 24, 2019, THE VIOLATION REMAINS OUTSTANDING.- - CORRECTIVE ACTION: IMMEDIATELY LOG ONTO CERS (https://cers.calepa.ca.gov/) AND SUBMIT COMPLETE/CORRECT FACILITY INFORMATION SUBMITTAL ELEMENT.

Violation Division: Contra Costa County Health Services Department
Violation Program: HW
Violation Source: CERS

Site ID: 411977
Site Name: Pacific Coast General Engineering, Inc.
Violation Date: 04-01-2019
Citation: HSC 6.11 25404(e)(4) - California Health and Safety Code, Chapter 6.11, Section(s) 25404(e)(4)
Violation Description: Failure to report program data electronically.
Violation Notes: Returned to compliance on 06/17/2019. OBSERVATION: AS OF APRIL 1, 2019, A COMPLETE AND CORRECT CALIFORNIA ENVIRONMENTAL REPORTING SYSTEM (CERS) FACILITY INFORMATION SUBMITTAL ELEMENT HAS NOT BEEN RECEIVED/ACCEPTED BY CCHSHMP. CORRECTIVE ACTION: IMMEDIATELY LOG ONTO CERS (https://cers.calepa.ca.gov/) AND SUBMIT COMPLETE/CORRECT FACILITY INFORMATION SUBMITTAL ELEMENT.
Violation Division: Contra Costa County Health Services Department
Violation Program: HW
Violation Source: CERS

Site ID: 411977
Site Name: Pacific Coast General Engineering, Inc.
Violation Date: 11-30-2016
Citation: HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description: Failure to provide the following training to all oil-handling personnel: 1. Operation and maintenance of equipment to prevent discharges. 2. Discharge procedure protocols. 3. Applicable pollution control laws, rules, and regulations. 4. General facility operations. 5. Contents of the SPCC Plan.
Violation Notes: Returned to compliance on 12/09/2016.
Violation Division: Contra Costa County Health Services Department
Violation Program: APSA
Violation Source: CERS

Site ID: 411977
Site Name: Pacific Coast General Engineering, Inc.
Violation Date: 11-03-2016
Citation: HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description: Hazardous Waste Generator Program - Operations/Maintenance - General
Violation Notes: Returned to compliance on 11/30/2016.
Violation Division: Contra Costa County Health Services Department
Violation Program: HW
Violation Source: CERS

Evaluation:
Eval General Type: Other/Unknown
Eval Date: 01-04-2017
Violations Found: No

PITTSBURG DISPOSL DBRS BOX SV# (Continued) **1000420826**

Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: APSA
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-04-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-04-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-01-2019
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-01-2019
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-24-2019
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-24-2019
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department

PITTSBURG DISPOSL DBRS BOX SV# (Continued) **1000420826**

Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-30-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-30-2019
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-30-2019
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-03-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-03-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-03-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

PITTSBURG DISPOSL DBRS BOX SV# (Continued) **1000420826**

Eval General Type: Other/Unknown
Eval Date: 11-30-2016
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: APSA
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-30-2016
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-30-2016
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Enforcement Action:
Site ID: 411977
Site Name: Pacific Coast General Engineering, Inc.
Site Address: 12 INDUSTRY RD
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 04-01-2019
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 411977
Site Name: Pacific Coast General Engineering, Inc.
Site Address: 12 INDUSTRY RD
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 04-01-2019
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

Site ID: 411977
Site Name: Pacific Coast General Engineering, Inc.
Site Address: 12 INDUSTRY RD

PITTSBURG DISPOSL DBRS BOX SV# (Continued) **1000420826**

Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 05-24-2019
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 411977
Site Name: Pacific Coast General Engineering, Inc.
Site Address: 12 INDUSTRY RD
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 05-24-2019
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

Site ID: 411977
Site Name: Pacific Coast General Engineering, Inc.
Site Address: 12 INDUSTRY RD
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 08-30-2019
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: APSA
Enf Action Source: CERS

Site ID: 411977
Site Name: Pacific Coast General Engineering, Inc.
Site Address: 12 INDUSTRY RD
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 08-30-2019
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 411977
Site Name: Pacific Coast General Engineering, Inc.
Site Address: 12 INDUSTRY RD
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 11-03-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection

PITTSBURG DISPOSL DBRS BOX SV# (Continued) **1000420826**

Enf Action Notes:	Not reported
Enf Action Division:	Contra Costa County Health Services Department
Enf Action Program:	APSA
Enf Action Source:	CERS
Site ID:	411977
Site Name:	Pacific Coast General Engineering, Inc.
Site Address:	12 INDUSTRY RD
Site City:	PITTSBURG
Site Zip:	94565
Enf Action Date:	11-03-2016
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Contra Costa County Health Services Department
Enf Action Program:	HMRRP
Enf Action Source:	CERS
Site ID:	411977
Site Name:	Pacific Coast General Engineering, Inc.
Site Address:	12 INDUSTRY RD
Site City:	PITTSBURG
Site Zip:	94565
Enf Action Date:	11-03-2016
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Contra Costa County Health Services Department
Enf Action Program:	HW
Enf Action Source:	CERS
Site ID:	411977
Site Name:	Pacific Coast General Engineering, Inc.
Site Address:	12 INDUSTRY RD
Site City:	PITTSBURG
Site Zip:	94565
Enf Action Date:	11-30-2016
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Contra Costa County Health Services Department
Enf Action Program:	APSA
Enf Action Source:	CERS
Site ID:	411977
Site Name:	Pacific Coast General Engineering, Inc.
Site Address:	12 INDUSTRY RD
Site City:	PITTSBURG
Site Zip:	94565
Enf Action Date:	11-30-2016
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Contra Costa County Health Services Department
Enf Action Program:	HMRRP
Enf Action Source:	CERS

PITTSBURG DISPOSL DBRS BOX SV# (Continued) **1000420826**

Site ID: 411977
Site Name: Pacific Coast General Engineering, Inc.
Site Address: 12 INDUSTRY RD
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 11-30-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

Coordinates:
Site ID: 411977
Facility Name: Pacific Coast General Engineering, Inc.
Env Int Type Code: APSA
Program ID: 10714117
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 38.030730
Longitude: -121.875590

Affiliation:
Affiliation Type Desc: CUPA District
Entity Name: Contra Costa County Health Services Department
Entity Title: Not reported
Affiliation Address: 4585 Pacheco BlvdSuite 100
Affiliation City: Martinez
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 94553
Affiliation Phone: (925) 655-3200

Affiliation Type Desc: Legal Owner
Entity Name: Henry Sam Baugh III
Entity Title: Not reported
Affiliation Address: 12 Industry Road
Affiliation City: Pittsburg
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 94565
Affiliation Phone: (925) 250-0768

Affiliation Type Desc: Operator
Entity Name: Pacific Coast General Engineering, Inc.
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (925) 250-0768

Affiliation Type Desc: Parent Corporation
Entity Name: Pacific Coast General Engineering, Inc.

PITTSBURG DISPOSL DBRS BOX SV# (Continued) **1000420826**

Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Document Preparer
Entity Name:	Sam Baugh
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Sam Baugh
Entity Title:	Owner/President
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Property Owner
Entity Name:	Pacco Properties
Entity Title:	Not reported
Affiliation Address:	12 Industry Road
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	94565
Affiliation Phone:	(925) 252-0214
Affiliation Type Desc:	Environmental Contact
Entity Name:	Sam Baugh
Entity Title:	Not reported
Affiliation Address:	12 Industry Rd
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94565
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	12 Industry Road
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94565
Affiliation Phone:	Not reported

F40 **12 INDUSTRY ROAD** **US BROWNFIELDS** **1025961942**
East **12 INDUSTRY ROAD** **FINDS** **N/A**
< 1/8 **PITTSBURG, CA 94565**
0.101 mi.
533 ft. **Site 5 of 6 in cluster F**

Relative: **Lower**

Actual: **13 ft.**

US BROWNFIELDS:

Name:	12 INDUSTRY ROAD
Address:	12 INDUSTRY ROAD
City,State,Zip:	PITTSBURG, CA 94565
Recipient Name:	-
Grant Type:	-
Property Number:	-
Parcel size:	1
Latitude:	38.0305757
Longitude:	-121.8756066
HCM Label:	-
Map Scale:	-
Point of Reference:	-
Highlights:	-
Datum:	-
Acres Property ID:	240329
IC Data Access:	-
Start Date:	-
Redev Completition Date:	-
Completed Date:	-
Acres Cleaned Up:	-
Cleanup Funding:	-
Cleanup Funding Source:	-
Assessment Funding:	-
Assessment Funding Source:	-
Redevelopment Funding:	-
Redev. Funding Source:	-
Redev. Funding Entity Name:	-
Redevelopment Start Date:	-
Assessment Funding Entity:	-
Cleanup Funding Entity:	-
Grant Type:	Hazardous & Petroleum
Accomplishment Type:	-
Accomplishment Count:	-
Cooperative Agreement Number:	-
Start Date:	-
Ownership Entity:	-
Completion Date:	-
Current Owner:	-
Did Owner Change:	-
Cleanup Required:	U
Video Available:	-
Photo Available:	-
Institutional Controls Required:	U
IC Category Proprietary Controls:	-
IC Cat. Info. Devices:	-
IC Cat. Gov. Controls:	-
IC Cat. Enforcement Permit Tools:	-
IC in place date:	-
IC in place:	-
State/tribal program date:	-
State/tribal program ID:	-
State/tribal NFA date:	-

12 INDUSTRY ROAD (Continued) **1025961942**

Air cleaned:	-
Asbestos found:	-
Asbestos cleaned:	-
Controled substance found:	-
Controled substance cleaned:	-
Drinking water affected:	-
Drinking water cleaned:	-
Groundwater affected:	-
Groundwater cleaned:	-
Lead contaminant found:	-
Lead cleaned up:	-
No media affected:	Not reported
Unknown media affected:	-
Other cleaned up:	-
Other metals found:	-
Other metals cleaned:	-
Other contaminants found:	-
Other contams found description:	-
PAHs found:	-
PAHs cleaned up:	-
PCBs found:	-
PCBs cleaned up:	-
Petro products found:	-
Petro products cleaned:	-
Sediments found:	-
Sediments cleaned:	-
Soil affected:	-
Soil cleaned up:	-
Surface water cleaned:	-
VOCs found:	-
VOCs cleaned:	-
Cleanup other description:	-
Num. of cleanup and re-dev. jobs:	-
Past use greenspace acreage:	-
Past use residential acreage:	-
Surface Water:	-
Past use commercial acreage:	-
Past use industrial acreage:	-
Future use greenspace acreage:	-
Future use residential acreage:	-
Future use commercial acreage:	-
Future use industrial acreage:	-
Superfund Fed. landowner flag:	-
Arsenic cleaned up:	-
Cadmium cleaned up:	-
Chromium cleaned up:	-
Copper cleaned up:	-
Iron cleaned up:	-
mercury cleaned up:	-
Nickel Cleaned Up:	-
No clean up:	-
Pesticides cleaned up:	-
Selenium cleaned up:	-
SVOCs cleaned up:	-
Unknown clean up:	-
Arsenic contaminant found:	-
Cadmium contaminant found:	-

12 INDUSTRY ROAD (Continued) **1025961942**

Chromium contaminant found:	-
Copper contaminant found:	-
Iron contaminant found:	-
Mercury contaminant found:	-
Nickel contaminant found:	-
No contaminant found:	-
Pesticides contaminant found:	-
Selenium contaminant found:	-
SVOCs contaminant found:	-
Unknown contaminant found:	-
Future Use: Multistory	-
Media affected Bluiding Material:	-
Media affected indoor air:	-
Building material media cleaned up:	-
Indoor air media cleaned up:	-
Unknown media cleaned up:	-
Past Use: Multistory	Not reported
Property Description:	-
Below Poverty Number:	-
Below Poverty Percent:	-
Meidan Income:	-
Meidan Income Number:	-
Meidan Income Percent:	-
Vacant Housing Number:	-
Vacant Housing Percent:	-
Unemployed Number:	-
Unemployed Percent:	-

FINDS:
Registry ID: 110070570420

Click Here:

Environmental Interest/Information System:
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

F41 **PACIFIC COAST GENERAL ENGINEERING INC** **RCRA NonGen / NLR** **1024824939**
East **12 INDUSTRY RD** **CAL000349653**
< 1/8 **PITTSBURG, CA 94565**
0.101 mi.
533 ft. **Site 6 of 6 in cluster F**

Relative: **Lower**
Actual: **13 ft.**

RCRA NonGen / NLR:

Date Form Received by Agency:	2010-02-01 00:00:00.0
Handler Name:	PACIFIC COAST GENERAL ENGINEERING INC
Handler Address:	12 INDUSTRY RD
Handler City,State,Zip:	PITTSBURG, CA 94565
EPA ID:	CAL000349653
Contact Name:	ANN DIDIO
Contact Address:	12 INDUSTRY RD
Contact City,State,Zip:	PITTSBURG, CA 94565
Contact Telephone:	925-252-0214
Contact Fax:	925-252-0215
Contact Email:	SAM@PCGE.BIZ

PACIFIC COAST GENERAL ENGINEERING INC (Continued) **1024824939**

Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	12 INDUSTRY RD
Mailing City,State,Zip:	PITTSBURG, CA 94565
Owner Name:	PCGE INC
Owner Type:	Other
Operator Name:	ANN DIDIO
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	Yes
Universal Waste Destination Facility:	Yes
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported

PACIFIC COAST GENERAL ENGINEERING INC (Continued) **1024824939**

Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2018-11-20 16:31:34.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	PCGE INC
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	12 INDUSTRY RD
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565-2700
Owner/Operator Telephone:	925-252-0214
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	ANN DIDIO
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	12 INDUSTRY RD
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	925-252-0214
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	2010-02-01 00:00:00.0
Handler Name:	PACIFIC COAST GENERAL ENGINEERING INC
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	Not reported
Recognized Trader Exporter:	Not reported
Spent Lead Acid Battery Importer:	Not reported
Spent Lead Acid Battery Exporter:	Not reported
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

PACIFIC COAST GENERAL ENGINEERING INC (Continued) **1024824939**

List of NAICS Codes and Descriptions:
NAICS Code: 56299
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

E42 **PITTSBURG PLUMBING** **CA CONTRA COSTA CO. SITE LIST** **S106093014**
SSW **441 E 10TH ST** **N/A**
< 1/8 **PITTSBURG, CA 94565**
0.107 mi.
567 ft. **Site 2 of 2 in cluster E**

Relative:
Higher

Actual:
19 ft.

CONTRA COSTA CO. SITE LIST:
Name: PITTSBURG PLUMBING
Address: 441 E 10TH ST
City: PITTSBURG
Facility ID: FA0027995
Billing Status: INACTIVE, NON-BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: UNDERGROUND STORAGE TANK SITE
Region: CONTRA COSTA
Cupa Number: 771224

G43 **FAUTLESS CLEANERS** **RCRA-SQG** **1000414630**
SSW **427 E 10TH ST** **CA EMI** **CAD981617491**
< 1/8 **PITTSBURG, CA 94565** **CA HAZNET**
0.107 mi. **CA CONTRA COSTA CO. SITE LIST**
567 ft. **Site 1 of 8 in cluster G** **CA CERS**
CA HWTS

Relative:
Higher

Actual:
18 ft.

RCRA-SQG:
Date Form Received by Agency: 1986-12-08 00:00:00.0
Handler Name: FAUTLESS CLEANERS
Handler Address: 427 E 10TH ST
Handler City,State,Zip: PITTSBURG, CA 94565
EPA ID: CAD981617491
Contact Name: ENVIRONMENTAL MANAGER
Contact Address: 427 E 10TH ST
Contact City,State,Zip: PITTSBURG, CA 94001
Contact Telephone: 415-423-2800
Contact Fax: Not reported
Contact Email: Not reported
Contact Title: Not reported
EPA Region: 09
Land Type: Other
Federal Waste Generator Description: Small Quantity Generator
Non-Notifier: Not reported
Biennial Report Cycle: Not reported
Accessibility: Not reported
Active Site Indicator: Handler Activities

FAUTLESS CLEANERS (Continued) **1000414630**

State District Owner:	CA
State District:	2
Mailing Address:	427 E 10TH ST
Mailing City,State,Zip:	PITTSBURG, CA 94565
Owner Name:	BILL DOUVILLE
Owner Type:	Private
Operator Name:	NOT REQUIRED
Operator Type:	Private
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	NN
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2002-06-27 03:26:43.0
Recognized Trader-Importer:	No

FAUTLESS CLEANERS (Continued) **1000414630**

Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	Not reported
Manifest Broker:	Not reported
Sub-Part P Indicator:	Not reported

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	NOT REQUIRED
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	NOT REQUIRED
Owner/Operator City,State,Zip:	NOT REQUIRED, ME 99999
Owner/Operator Telephone:	415-555-1212
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	BILL DOUVILLE
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	NOT REQUIRED
Owner/Operator City,State,Zip:	NOT REQUIRED, ME 99999
Owner/Operator Telephone:	415-555-1212
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	1986-12-08 00:00:00.0
Handler Name: FAUTLESS CLEANERS	
Federal Waste Generator Description:	Small Quantity Generator
State District Owner:	CA
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	81232
NAICS Description:	DRYCLEANING AND LAUNDRY SERVICES (EXCEPT COIN-OPERATED)

Facility Has Received Notices of Violations:

Violations:	No Violations Found

FAUTLESS CLEANERS (Continued) **1000414630**

Evaluation Action Summary:
Evaluations: No Evaluations Found

EMI:

Name:	FAULTLESS CLEANERS
Address:	427 E 10TH
City,State,Zip:	PITTSBURG, CA 940010000
Year:	1990
County Code:	7
Air Basin:	SF
Facility ID:	4249
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	FAULTLESS CLEANERS
Address:	427 E 10TH
City,State,Zip:	PITTSBURG, CA 940010000
Year:	1995
County Code:	7
Air Basin:	SF
Facility ID:	4249
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	FAULTLESS CLEANERS
Address:	427 E 10TH
City,State,Zip:	PITTSBURG, CA 940010000
Year:	1996
County Code:	7
Air Basin:	SF
Facility ID:	4249
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported

FAULTLESS CLEANERS (Continued) **1000414630**

Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	FAULTLESS CLEANERS
Address:	427 E 10TH
City,State,Zip:	PITTSBURG, CA 940010000
Year:	1997
County Code:	7
Air Basin:	SF
Facility ID:	4249
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	FAULTLESS CLEANERS
Address:	427 E 10TH
City,State,Zip:	PITTSBURG, CA 940010000
Year:	1998
County Code:	7
Air Basin:	SF
Facility ID:	4249
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	FAULTLESS CLEANERS
Address:	427 E 10TH
City,State,Zip:	PITTSBURG, CA 940010000
Year:	1999
County Code:	7
Air Basin:	SF
Facility ID:	4249
Air District Name:	BA

FAUTLESS CLEANERS (Continued) **1000414630**

SIC Code: 7216
Air District Name: BAY AREA AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Name: FAULTLESS CLEANERS
Address: 427 E 10TH
City,State,Zip: PITTSBURG, CA 940010000
Year: 2000
County Code: 7
Air Basin: SF
Facility ID: 4249
Air District Name: BA
SIC Code: 7216
Air District Name: BAY AREA AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Name: FAULTLESS CLEANERS
Address: 427 E 10TH
City,State,Zip: PITTSBURG, CA 940010000
Year: 2001
County Code: 7
Air Basin: SF
Facility ID: 4249
Air District Name: BA
SIC Code: 7216
Air District Name: BAY AREA AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Name: FAULTLESS CLEANERS
Address: 427 E 10TH
City,State,Zip: PITTSBURG, CA 940010000
Year: 2002
County Code: 7

FAULTLESS CLEANERS (Continued) **1000414630**

Air Basin:	SF
Facility ID:	4249
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	FAULTLESS CLEANERS
Address:	427 E 10TH
City,State,Zip:	PITTSBURG, CA 940010000
Year:	2003
County Code:	7
Air Basin:	SF
Facility ID:	4249
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	FAULTLESS CLEANERS
Address:	427 E 10TH
City,State,Zip:	PITTSBURG, CA 940010000
Year:	2004
County Code:	7
Air Basin:	SF
Facility ID:	4249
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.067
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	FAULTLESS CLEANERS
Address:	427 E 10TH

FAUTLESS CLEANERS (Continued) **1000414630**

City,State,Zip:	PITTSBURG, CA 940010000
Year:	2005
County Code:	7
Air Basin:	SF
Facility ID:	4249
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	FAULTLESS CLEANERS
Address:	427 E 10TH
City,State,Zip:	PITTSBURG, CA 940010000
Year:	2006
County Code:	7
Air Basin:	SF
Facility ID:	4249
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.206
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	FAULTLESS CLEANERS
Address:	427 E 10TH
City,State,Zip:	PITTSBURG, CA 940010000
Year:	2007
County Code:	7
Air Basin:	SF
Facility ID:	4249
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.266
Reactive Organic Gases Tons/Yr:	.1858276
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

FAUTLESS CLEANERS (Continued) **1000414630**

Name:	FAULTLESS CLEANERS
Address:	427 E 10TH
City,State,Zip:	PITTSBURG, CA 94565
Year:	2008
County Code:	7
Air Basin:	SF
Facility ID:	4249
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.27
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	FAULTLESS CLEANERS
Address:	427 E 10TH
City,State,Zip:	PITTSBURG, CA 94565
Year:	2009
County Code:	7
Air Basin:	SF
Facility ID:	4249
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.27000000000000002
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	FAULTLESS CLEANERS
Address:	427 E 10TH
City,State,Zip:	PITTSBURG, CA 94565
Year:	2010
County Code:	7
Air Basin:	SF
Facility ID:	4249
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.27000000000000002
Reactive Organic Gases Tons/Yr:	0.18862200000000001
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0

FAUTLESS CLEANERS (Continued) **1000414630**

Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr:0

HAZNET:

Name:	FAUTLESS CLEANERS
Address:	427 E 10TH ST
Address 2:	Not reported
City,State,Zip:	PITTSBURG, CA 940010000
Contact:	INACTIVE PER 94/95 FEE BILL
Telephone:	5104322802
Mailing Name:	Not reported
Mailing Address:	427 E 10TH ST
Year:	1995
Gepaid:	CAD981617491
TSD EPA ID:	CAD053044053
CA Waste Code:	741 - Liquids with halogenated organic compounds >= 1,000 Mg./L
Disposal Method:	H01 - Transfer Station
Tons:	0.195
Year:	1994
Gepaid:	CAD981617491
TSD EPA ID:	CAD053044053
CA Waste Code:	741 - Liquids with halogenated organic compounds >= 1,000 Mg./L
Disposal Method:	H01 - Transfer Station
Tons:	0.4725
Year:	1994
Gepaid:	CAD981617491
TSD EPA ID:	CAD053044053
CA Waste Code:	741 - Liquids with halogenated organic compounds >= 1,000 Mg./L
Disposal Method:	-
Tons:	0.135
Year:	1993
Gepaid:	CAD981617491
TSD EPA ID:	CAD053044053
CA Waste Code:	741 - Liquids with halogenated organic compounds >= 1,000 Mg./L
Disposal Method:	-
Tons:	0.135
Year:	1993
Gepaid:	CAD981617491
TSD EPA ID:	CAD053044053
CA Waste Code:	741 - Liquids with halogenated organic compounds >= 1,000 Mg./L
Disposal Method:	H01 - Transfer Station
Tons:	0.435
Year:	1987
Gepaid:	CAD981617491
TSD EPA ID:	CAD980737584
CA Waste Code:	211 - Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc)
Disposal Method:	14 -
Tons:	0.2025

FAUTLESS CLEANERS (Continued) **1000414630**

Additional Info:

Year:	1993
Gen EPA ID:	CAD981617491
Shipment Date:	19931215
Creation Date:	9/14/1995 0:00:00
Receipt Date:	19931215
Manifest ID:	93029349
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD053044053
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	F002
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0675
Waste Quantity:	135
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19931118
Creation Date:	9/14/1995 0:00:00
Receipt Date:	19931118
Manifest ID:	93134292
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	F002
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0675
Waste Quantity:	135
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19931021
Creation Date:	9/12/1995 0:00:00
Receipt Date:	Not reported
Manifest ID:	93095225
Trans EPA ID:	ILD984908202

FAUTLESS CLEANERS (Continued) **1000414630**

Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	F002
Meth Code:	- Not reported
Quantity Tons:	0.0675
Waste Quantity:	135
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19930921
Creation Date:	9/12/1995 0:00:00
Receipt Date:	Not reported
Manifest ID:	93082620
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	F002
Meth Code:	- Not reported
Quantity Tons:	0.0675
Waste Quantity:	135
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19930825
Creation Date:	9/12/1995 0:00:00
Receipt Date:	19930825
Manifest ID:	93037173
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD053044053
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	F002

FAUTLESS CLEANERS (Continued) **1000414630**

Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0975
Waste Quantity:	195
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19930629
Creation Date:	9/9/1995 0:00:00
Receipt Date:	19930629
Manifest ID:	92568171
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD053044053
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	F002
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0675
Waste Quantity:	135
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19930603
Creation Date:	9/8/1995 0:00:00
Receipt Date:	19930603
Manifest ID:	92609140
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	F002
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.135
Waste Quantity:	270
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

FAUTLESS CLEANERS (Continued) **1000414630**

Additional Info:

Year:	1994
Gen EPA ID:	CAD981617491
Shipment Date:	19940822
Creation Date:	3/26/1996 0:00:00
Receipt Date:	19940822
Manifest ID:	93466503
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD053044053
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	F002
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0675
Waste Quantity:	135
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19940725
Creation Date:	3/26/1996 0:00:00
Receipt Date:	19940725
Manifest ID:	93676949
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD053044053
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	F002
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0675
Waste Quantity:	135
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19940630
Creation Date:	3/26/1996 0:00:00
Receipt Date:	19940630
Manifest ID:	93513496
Trans EPA ID:	ILD984908202

FAUTLESS CLEANERS (Continued) **1000414630**

Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD053044053
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	F002
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0675
Waste Quantity:	135
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19940602
Creation Date:	3/26/1996 0:00:00
Receipt Date:	19940602
Manifest ID:	93646499
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD053044053
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	F002
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0675
Waste Quantity:	135
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19940503
Creation Date:	3/25/1996 0:00:00
Receipt Date:	19940503
Manifest ID:	93549664
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	F002

FAUTLESS CLEANERS (Continued) **1000414630**

Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0675
Waste Quantity:	135
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19940407
Creation Date:	3/25/1996 0:00:00
Receipt Date:	Not reported
Manifest ID:	93425218
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	F002
Meth Code:	- Not reported
Quantity Tons:	0.0675
Waste Quantity:	135
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19940309
Creation Date:	10/5/1995 0:00:00
Receipt Date:	19940309
Manifest ID:	93545420
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	F002
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0675
Waste Quantity:	135
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

FAUTLESS CLEANERS (Continued) **1000414630**

Shipment Date:	19940209
Creation Date:	9/15/1995 0:00:00
Receipt Date:	19940209
Manifest ID:	93199350
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD053044053
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	F002
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0675
Waste Quantity:	135
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19940112
Creation Date:	9/14/1995 0:00:00
Receipt Date:	Not reported
Manifest ID:	93119851
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	F002
Meth Code:	- Not reported
Quantity Tons:	0.0675
Waste Quantity:	135
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	1995
Gen EPA ID:	CAD981617491

Shipment Date:	19950629
Creation Date:	4/2/1996 0:00:00
Receipt Date:	19950629
Manifest ID:	95430886
Trans EPA ID:	ILD984908202

FAUTLESS CLEANERS (Continued) **1000414630**

Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD053044053
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	F002
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0975
Waste Quantity:	195
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19950209
Creation Date:	3/29/1996 0:00:00
Receipt Date:	19950209
Manifest ID:	95050424
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD053044053
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	F002
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0975
Waste Quantity:	195
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

CONTRA COSTA CO. SITE LIST:

Name:	FAULTLESS CLEANERS
Address:	427 E 10TH ST
City:	PITTSBURG
Facility ID:	FA0033393
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	HMBP: 1K-10K LBS, 0-19 EMPLOYEES
Region:	CONTRA COSTA
Cupa Number:	770881

Name:	FAULTLESS CLEANERS
Address:	427 E 10TH ST
City:	PITTSBURG

FAUTLESS CLEANERS (Continued) **1000414630**

Facility ID: FA0033393
Billing Status: INACTIVE, NON-BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HWG: LESS THAN 5 TONS/YEAR
Region: CONTRA COSTA
Cupa Number: 770881

Name: FAULTLESS CLEANERS
Address: 427 E 10TH ST
City: PITTSBURG
Facility ID: FA0033393
Billing Status: INACTIVE, NON-BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: UNDERGROUND STORAGE TANK SITE
Region: CONTRA COSTA
Cupa Number: 770881

CERS:
Name: FAULTLESS CLEANERS
Address: 427 E 10TH
City,State,Zip: PITTSBURG, CA 94565-2652
Site ID: 467616
CERS ID: 110001194895
CERS Description: US EPA Air Emission Inventory System (EIS)

Affiliation:
Affiliation Type Desc: Environmental Contact
Entity Name: ENVIR MGMT
Entity Title: Not reported
Affiliation Address: 427 E 10TH ST
Affiliation City: PITTSBURG
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Local Agency Caseworker
Entity Name: SUE LOYD CONTRA COSTA CNTY
Entity Title: Not reported
Affiliation Address: 4333 PACHECO BLVD
Affiliation City: MARTINEZ
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Owner and Operator
Entity Name: MARY ANN DOUVILLE
Entity Title: OWNER/OPERATOR
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact

FAUTLESS CLEANERS (Continued) **1000414630**

Entity Name:	MARC DOUVILLE
Entity Title:	OWNER'S SON
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	MARY ANNE DOUVILLE
Entity Title:	ENVIRONMENTAL CONTACT
Affiliation Address:	4013 RIMROCK DR
Affiliation City:	ANTIOCH
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Owner
Entity Name:	FAULTLESS CLNR
Entity Title:	OWNER
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

HWTS:

Name:	FAUTLESS CLEANERS
Address:	427 E 10TH ST
Address 2:	Not reported
City,State,Zip:	PITTSBURG, CA 940010000
EPA ID:	CAD981617491
Inactive Date:	06/30/1995
Create Date:	04/10/1987
Last Act Date:	08/10/2004
Mailing Name:	Not reported
Mailing Address:	427 E 10TH ST
Mailing Address 2:	Not reported
Mailing City,State,Zip:	PITTSBURG, CA 940010000
Owner Name:	--
Owner Address:	--
Owner Address 2:	Not reported
Owner City,State,Zip:	--, 99 --
Contact Name:	INACTIVE PER 94/95 FEE BILL
Contact Address:	SIGNED BY BILL DOUVILLE
Contact Address 2:	Not reported
City,State,Zip:	--, 99 --

G44 **FAULTLESS CLEANERS** **EDR Hist Cleaner** **1018933027**
SSW **427 E 10TH ST** **N/A**
< 1/8 **PITTSBURG, CA 94565**
0.107 mi.
567 ft. **Site 2 of 8 in cluster G**

Relative: EDR Hist Cleaner
Higher

Actual:
18 ft.

Year:	Name:	Type:
1969	DE HAVEN DON	Drycleaning Plants, Except Rugs
1970	DE HAVEN DON	Drycleaning Plants, Except Rugs
1974	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
1975	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
1976	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
1977	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
1978	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
1979	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
1979	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
1980	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
1982	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
1983	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
1985	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
1986	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
1987	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
1988	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
1989	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
1990	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
1991	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
1992	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
1993	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
1994	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
1995	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
1996	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
1997	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
1998	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
1999	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
2000	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
2001	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
2002	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
2003	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
2004	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
2005	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
2006	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
2007	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
2008	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
2009	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
2010	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
2011	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
2012	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
2013	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs
2014	FAULTLESS CLEANERS	Drycleaning Plants, Except Rugs

H45 **UNIVERSAL AUTO REPAIR** **CA CERS HAZ WASTE** **S106841766**
South **499 E 10TH STREET** **CA EMI** **N/A**
< 1/8 **PITTSBURG, CA 94565** **CA CONTRA COSTA CO. SITE LIST**
0.108 mi. **CA CERS**
570 ft. **Site 1 of 10 in cluster H** **CA HWTS**

Relative:
Higher

Actual:
20 ft.

CERS HAZ WASTE:

Name:	UNIVERSAL AUTO REPAIR
Address:	499 E 10TH ST
City,State,Zip:	PITTSBURG, CA 94565
Site ID:	164802
CERS ID:	10010680
CERS Description:	Hazardous Waste Generator

EMI:

Name:	UNIVERSAL AUTO REPAIR
Address:	499 E 10TH STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	2002
County Code:	7
Air Basin:	SF
Facility ID:	12950
Air District Name:	BA
SIC Code:	7532
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	UNIVERSAL AUTO REPAIR
Address:	499 E 10TH STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	2003
County Code:	7
Air Basin:	SF
Facility ID:	12950
Air District Name:	BA
SIC Code:	7532
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	UNIVERSAL AUTO REPAIR
Address:	499 E 10TH STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	2004

UNIVERSAL AUTO REPAIR (Continued) **S106841766**

County Code:	7
Air Basin:	SF
Facility ID:	12950
Air District Name:	BA
SIC Code:	7532
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.075
Reactive Organic Gases Tons/Yr:	0.0622396
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	UNIVERSAL AUTO REPAIR
Address:	499 E 10TH STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	2005
County Code:	7
Air Basin:	SF
Facility ID:	12950
Air District Name:	BA
SIC Code:	7532
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.154
Reactive Organic Gases Tons/Yr:	.1399794
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	UNIVERSAL AUTO REPAIR
Address:	499 E 10TH STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	2006
County Code:	7
Air Basin:	SF
Facility ID:	12950
Air District Name:	BA
SIC Code:	7532
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.154
Reactive Organic Gases Tons/Yr:	.1399794
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	UNIVERSAL AUTO REPAIR

UNIVERSAL AUTO REPAIR (Continued) **S106841766**

Address:	499 E 10TH STREET
City,State,Zip:	PITTSBURG, CA 90045
Year:	2007
County Code:	7
Air Basin:	SF
Facility ID:	12950
Air District Name:	BA
SIC Code:	7532
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.154
Reactive Organic Gases Tons/Yr:	.1399794
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	UNIVERSAL AUTO REPAIR
Address:	499 E 10TH STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	2008
County Code:	7
Air Basin:	SF
Facility ID:	12950
Air District Name:	BA
SIC Code:	7532
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.154
Reactive Organic Gases Tons/Yr:	.1399794
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	UNIVERSAL AUTO REPAIR
Address:	499 E 10TH STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	2009
County Code:	7
Air Basin:	SF
Facility ID:	12950
Air District Name:	BA
SIC Code:	7532
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.039
Reactive Organic Gases Tons/Yr:	0.0291632
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0

UNIVERSAL AUTO REPAIR (Continued) **S106841766**

Part. Matter 10 Micrometers and Smllr Tons/Yr:0

Name:	UNIVERSAL AUTO REPAIR
Address:	499 E 10TH STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	2010
County Code:	7
Air Basin:	SF
Facility ID:	12950
Air District Name:	BA
SIC Code:	7532
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.039
Reactive Organic Gases Tons/Yr:	0.0291632
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	UNIVERSAL AUTO REPAIR
Address:	499 E 10TH STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	2011
County Code:	7
Air Basin:	SF
Facility ID:	12950
Air District Name:	BA
SIC Code:	7532
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.039
Reactive Organic Gases Tons/Yr:	0.0291632
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	UNIVERSAL AUTO REPAIR
Address:	499 E 10TH STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	2012
County Code:	7
Air Basin:	SF
Facility ID:	12950
Air District Name:	BA
SIC Code:	7532
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.039
Reactive Organic Gases Tons/Yr:	0.0291632
Carbon Monoxide Emissions Tons/Yr:	0

UNIVERSAL AUTO REPAIR (Continued) **S106841766**

NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Name: UNIVERSAL AUTO REPAIR
Address: 499 E 10TH STREET
City,State,Zip: PITTSBURG, CA 94565
Year: 2013
County Code: 7
Air Basin: SF
Facility ID: 12950
Air District Name: BA
SIC Code: 7532
Air District Name: BAY AREA AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0.067
Reactive Organic Gases Tons/Yr: 0.056027
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Name: UNIVERSAL AUTO REPAIR
Address: 499 E 10TH STREET
City,State,Zip: PITTSBURG, CA 94565
Year: 2014
County Code: 7
Air Basin: SF
Facility ID: 12950
Air District Name: BA
SIC Code: 7532
Air District Name: BAY AREA AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0.067649989
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Name: UNIVERSAL AUTO REPAIR
Address: 499 E 10TH STREET
City,State,Zip: PITTSBURG, CA 94565
Year: 2015
County Code: 7
Air Basin: SF
Facility ID: 12950
Air District Name: BA
SIC Code: 7532
Air District Name: BAY AREA AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported

UNIVERSAL AUTO REPAIR (Continued) **S106841766**

Total Organic Hydrocarbon Gases Tons/Yr:	0.067649997
Reactive Organic Gases Tons/Yr:	0.067517117
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	UNIVERSAL AUTO REPAIR
Address:	499 E 10TH ST
City,State,Zip:	PITTSBURG, CA 94565
Year:	2018
County Code:	7
Air Basin:	SF
Facility ID:	12950
Air District Name:	BA
SIC Code:	7532
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.072000003
Reactive Organic Gases Tons/Yr:	0.071128802964
Carbon Monoxide Emissions Tons/Yr:	Not reported
NOX - Oxides of Nitrogen Tons/Yr:	Not reported
SOX - Oxides of Sulphur Tons/Yr:	Not reported
Particulate Matter Tons/Yr:	Not reported
Part. Matter 10 Micrometers and Smllr Tons/Yr:	Not reported

CONTRA COSTA CO. SITE LIST:

Name:	UNIVERSAL AUTO REPAIR
Address:	499 E 10TH ST
City:	PITTSBURG
Facility ID:	FA0033384
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	HMBP: LESS THAN 1000 LBS
Region:	CONTRA COSTA
Cupa Number:	770872

Name:	UNIVERSAL AUTO REPAIR
Address:	499 E 10TH ST
City:	PITTSBURG
Facility ID:	FA0033384
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	HWG: LESS THAN 5 TONS/YEAR
Region:	CONTRA COSTA
Cupa Number:	770872

Name:	UNIVERSAL AUTO REPAIR
Address:	499 E 10TH ST
City:	PITTSBURG
Facility ID:	FA0033384
Billing Status:	ACTIVE, BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	HMBP: 1K-10K LBS, 0-19 EMPLOYEES
Region:	CONTRA COSTA

UNIVERSAL AUTO REPAIR (Continued) **S106841766**

Cupa Number: 770872

Name: UNIVERSAL AUTO REPAIR
Address: 499 E 10TH ST
City: PITTSBURG
Facility ID: FA0033384
Billing Status: ACTIVE, BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HWG: LESS THAN 5 TONS/YEAR
Region: CONTRA COSTA
Cupa Number: 770872

CERS:
Name: UNIVERSAL AUTO REPAIR
Address: 499 E 10TH STREET
City,State,Zip: PITTSBURG, CA 94565-2652
Site ID: 501311
CERS ID: 110037998245
CERS Description: US EPA Air Emission Inventory System (EIS)

Affiliation:
Affiliation Type Desc: Facility Owner
Entity Name: ALEXANDER MITKOV
Entity Title: OWNER
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Property Owner
Entity Name: ALEX MITKOV
Entity Title: Not reported
Affiliation Address: 499 E 10TH ST
Affiliation City: PITTSBURG
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: ANGELA NAYDENOVA
Entity Title: ENVIRONMENTAL CONTACT
Affiliation Address: 499 10TH ST E
Affiliation City: PITTSBURG
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Owner
Entity Name: UNIVERSAL AUTO REPAIR
Entity Title: OWNER
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported

UNIVERSAL AUTO REPAIR (Continued) **S106841766**

Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Name: UNIVERSAL AUTO REPAIR
Address: 499 E 10TH ST
City,State,Zip: PITTSBURG, CA 94565
Site ID: 164802
CERS ID: 10010680
CERS Description: Chemical Storage Facilities

Violations:

Site ID: 164802
Site Name: UNIVERSAL AUTO REPAIR
Violation Date: 11-09-2016
Citation: HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description: Hazardous Waste Generator Program - Operations/Maintenance - General
Violation Notes: Returned to compliance on 02/28/2017.
Violation Division: Contra Costa County Health Services Department
Violation Program: HW
Violation Source: CERS

Site ID: 164802
Site Name: UNIVERSAL AUTO REPAIR
Violation Date: 12-19-2019
Citation: 22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Description: Failure to obtain an Identification Number prior to treating, storing, disposing of, transporting or offering for transportation any hazardous waste.
Violation Notes: OBSERVATION: The generator’s EPA ID number is inactive. A hazardous waste generator shall not treat, store, dispose of, transport or offer for transportation, hazardous waste without an active EPA ID number.The facility EPA ID Number, CAL000419783 was inactive at time of inspection. CORRECTIVE ACTION: Fill out and submit form 1358 to DTSC to reactivate the facility epa id number. Contact CCHS-HMP when the form has been filed with DTSC.
Violation Division: Contra Costa County Health Services Department
Violation Program: HW
Violation Source: CERS

Site ID: 164802
Site Name: UNIVERSAL AUTO REPAIR
Violation Date: 05-09-2016
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 05/12/2016.
Violation Division: Contra Costa County Health Services Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 164802
Site Name: UNIVERSAL AUTO REPAIR
Violation Date: 07-30-2013
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95,

UNIVERSAL AUTO REPAIR (Continued) **S106841766**

Section(s) Multiple
Violation Description: Business Plan Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 08/08/2013.
Violation Division: Contra Costa County Health Services Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 164802
Site Name: UNIVERSAL AUTO REPAIR
Violation Date: 11-09-2016
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 04/07/2017. H&SC 25508(a)(4) / H&SC 25505(a)(2) / H&SC 25507
Violation Division: Contra Costa County Health Services Department
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Other/Unknown
Eval Date: 04-10-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-10-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-09-2016
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-30-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection

UNIVERSAL AUTO REPAIR (Continued) **S106841766**

Eval Date: 07-30-2013
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 08-08-2013
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 09-30-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-09-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-09-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-19-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-19-2019
Violations Found: Yes
Eval Type: Routine done by local agency

UNIVERSAL AUTO REPAIR (Continued) **S106841766**

Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Enforcement Action:
Site ID: 164802
Site Name: UNIVERSAL AUTO REPAIR
Site Address: 499 E 10TH ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 05-09-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 164802
Site Name: UNIVERSAL AUTO REPAIR
Site Address: 499 E 10TH ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 07-30-2013
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 164802
Site Name: UNIVERSAL AUTO REPAIR
Site Address: 499 E 10TH ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 11-09-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 164802
Site Name: UNIVERSAL AUTO REPAIR
Site Address: 499 E 10TH ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 11-09-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

UNIVERSAL AUTO REPAIR (Continued) **S106841766**

Site ID: 164802
Site Name: UNIVERSAL AUTO REPAIR
Site Address: 499 E 10TH ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 12-19-2019
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

Coordinates:
Site ID: 164802
Facility Name: UNIVERSAL AUTO REPAIR
Env Int Type Code: HWG
Program ID: 10010680
Coord Name: Not reported
Ref Point Type Desc: Unknown
Latitude: 38.026630
Longitude: -121.878810

Affiliation:
Affiliation Type Desc: Environmental Contact
Entity Name: Ahmed Nazar
Entity Title: Not reported
Affiliation Address: 499 E 10th St
Affiliation City: Pittsburg
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 94565
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: Ahmed Nazar
Entity Title: Owner
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Parent Corporation
Entity Name: UNIVERSAL AUTO REPAIR
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: Ahmed Nazar

UNIVERSAL AUTO REPAIR (Continued) **S106841766**

Entity Title: Not reported
Affiliation Address: 499 E 10th St
Affiliation City: Pittsburg
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 94565
Affiliation Phone: (916) 317-6420

Affiliation Type Desc: CUPA District
Entity Name: Contra Costa County Health Services Department
Entity Title: Not reported
Affiliation Address: 4585 Pacheco BlvdSuite 100
Affiliation City: Martinez
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 94553
Affiliation Phone: (925) 655-3200

Affiliation Type Desc: Document Preparer
Entity Name: Ahmed Nazar
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 499 E 10th St
Affiliation City: Pittsburg
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 94565
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: Ahmed Nazar
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (916) 317-6420

HWTS:
Name: UNIVERSAL AUTO REPAIR
Address: 499 E 10TH ST
Address 2: Not reported
City,State,Zip: PITTSBURG, CA 945652652
EPA ID: CAL000263517
Inactive Date: 06/30/2008
Create Date: 12/11/2002

UNIVERSAL AUTO REPAIR (Continued) **S106841766**

Last Act Date: 04/23/2009
Mailing Name: Not reported
Mailing Address: 499 E 10TH ST
Mailing Address 2: Not reported
Mailing City,State,Zip: PITTSBURG, CA 945652652
Owner Name: ANGELA NAYDENOVA
Owner Address: 499 E 10TH ST
Owner Address 2: Not reported
Owner City,State,Zip: PITTSBURG, CA 945650000
Contact Name: ANGELA NAYDENOVA
Contact Address: 499 E 10TH ST
Contact Address 2: Not reported
City,State,Zip: PITTSBURG, CA 945652652

NAICS:
EPA ID: CAL000263517
Create Date: 2002-12-11 10:45:17.060
NAICS Code: 811111
NAICS Description: General Automotive Repair
Issued EPA ID Date: 2002-12-11 10:45:16.99700
Inactive Date: 2008-06-30 00:00:00
Facility Name: UNIVERSAL AUTO REPAIR
Facility Address: 499 E 10TH ST
Facility Address 2: Not reported
Facility City: PITTSBURG
Facility County: Not reported
Facility State: CA
Facility Zip: 945652652

Name: UNIVERSAL AUTO REPAIR
Address: 499 E 10TH ST
Address 2: Not reported
City,State,Zip: PITTSBURG, CA 945652652
EPA ID: CAL000419783
Inactive Date: 06/30/2017
Create Date: 08/23/2016
Last Act Date: 08/24/2016
Mailing Name: Not reported
Mailing Address: 499 E 10TH ST
Mailing Address 2: Not reported
Mailing City,State,Zip: PITTSBURG, CA 945652652
Owner Name: AHMED NAZAR
Owner Address: 3742 INNOVATOR DR
Owner Address 2: Not reported
Owner City,State,Zip: PITTSBURG, CA 94565
Contact Name: AHMED NAZAR
Contact Address: 3742 INNOVATOR DR
Contact Address 2: Not reported
City,State,Zip: PITTSBURG, CA 94565

NAICS:
EPA ID: CAL000419783
Create Date: 2016-08-23 16:55:55.660
NAICS Code: 811111
NAICS Description: General Automotive Repair
Issued EPA ID Date: 2016-08-23 16:55:55.63700
Inactive Date: 2017-06-30 00:00:00

UNIVERSAL AUTO REPAIR (Continued) **S106841766**

Facility Name:	UNIVERSAL AUTO REPAIR
Facility Address:	499 E 10TH ST
Facility Address 2:	Not reported
Facility City:	PITTSBURG
Facility County:	Not reported
Facility State:	CA
Facility Zip:	945652652

G46 **DULCERIA ARCO IRIS** **EDR Hist Auto** **1021205097**
SSW **409 E 10TH ST** **N/A**
< 1/8 **PITTSBURG, CA 94565**
0.110 mi.
583 ft. **Site 3 of 8 in cluster G**

Relative: EDR Hist Auto
Higher

Actual:
20 ft.

Year:	Name:	Type:
2004	DULCERIA ARCO IRIS	Gasoline Service Stations
2005	DULCERIA ARCO IRIS	Gasoline Service Stations
2006	DULCERIA ARCO IRIS	Gasoline Service Stations
2007	DULCERIA ARCO IRIS	Gasoline Service Stations
2008	DULCERIA ARCO IRIS	Gasoline Service Stations
2010	DULCERIA ARCO IRIS	Gasoline Service Stations
2011	DULCERIA ARCO IRIS	Gasoline Service Stations
2012	DULCERIA ARCO IRIS	Gasoline Service Stations

G47 **FAULTLESS CLEANERS** **CA LUST** **S101324215**
SSW **427 10TH ST E** **CA Cortese** **N/A**
< 1/8 **PITTSBURG, CA 94565** **CA HIST CORTESE**
0.117 mi. **CA CERS**
618 ft. **Site 4 of 8 in cluster G**

Relative: LUST REG 2:
Higher

Actual:
18 ft.

Region:	2
Facility Id:	07-0574
Facility Status:	Case Closed
Case Number:	70881
How Discovered:	Tank Closure
Leak Cause:	UNK
Leak Source:	UNK
Date Leak Confirmed:	7/27/1994
Oversight Program:	LUST
Prelim. Site Assesment Wokplan Submitted:	Not reported
Preliminary Site Assesment Began:	Not reported
Pollution Characterization Began:	Not reported
Pollution Remediation Plan Submitted:	Not reported
Date Remediation Action Underway:	Not reported
Date Post Remedial Action Monitoring Began:	Not reported

LUST:

Name:	FAULTLESS CLEANERS
Address:	427 10TH ST E
City,State,Zip:	PITTSBURG, CA 94565
Lead Agency:	SAN FRANCISCO BAY RWQCB (REGION 2)
Case Type:	LUST Cleanup Site

FAULTLESS CLEANERS (Continued) **S101324215**

Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0601300530
Global Id:	T0601300530
Latitude:	38.027094
Longitude:	-121.88068
Status:	Completed - Case Closed
Status Date:	02/22/1999
Case Worker:	Not reported
RB Case Number:	07-0574
Local Agency:	CONTRA COSTA COUNTY
File Location:	Not reported
Local Case Number:	70881
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

LUST:

Global Id:	T0601300530
Contact Type:	Local Agency Caseworker
Contact Name:	SUE LOYD
Organization Name:	CONTRA COSTA COUNTY
Address:	4333 PACHECO BLVD.
City:	MARTINEZ
Email:	sloyd@hsd.co.contra-costa.ca.us
Phone Number:	Not reported

LUST:

Global Id:	T0601300530
Action Type:	ENFORCEMENT
Date:	07/20/1998
Action:	13267 Requirement
Global Id:	T0601300530
Action Type:	ENFORCEMENT
Date:	01/26/1999
Action:	Closure/No Further Action Letter
Global Id:	T0601300530
Action Type:	Other
Date:	07/30/1993
Action:	Leak Discovery
Global Id:	T0601300530
Action Type:	Other
Date:	07/30/1993
Action:	Leak Stopped
Global Id:	T0601300530
Action Type:	Other
Date:	07/30/1993
Action:	Leak Reported

LUST:

Global Id:	T0601300530
Status:	Open - Case Begin Date
Status Date:	07/30/1993
Global Id:	T0601300530

FAULTLESS CLEANERS (Continued) **S101324215**

Status: Open - Site Assessment
Status Date: 07/27/1994

Global Id: T0601300530
Status: Completed - Case Closed
Status Date: 02/22/1999

CORTESE:
Name: FAULTLESS CLEANERS
Address: 427 10TH ST E
City,State,Zip: PITTSBURG, CA 94565
Region: CORTESE
Envirostor Id: Not reported
Global ID: T0601300530
Site/Facility Type: LUST CLEANUP SITE
Cleanup Status: COMPLETED - CASE CLOSED
Status Date: Not reported
Site Code: Not reported
Latitude: Not reported
Longitude: Not reported
Owner: Not reported
Enf Type: Not reported
Swat R: Not reported
Flag: active
Order No: Not reported
Waste Discharge System No: Not reported
Effective Date: Not reported
Region 2: Not reported
WID Id: Not reported
Solid Waste Id No: Not reported
Waste Management Uit Name: Not reported
File Name: Active Open

HIST CORTESE:
edr_fname: FAULTLESS CLEANERS
edr_fadd1: 427 10TH
City,State,Zip: PITTSBURG, CA 94565
Region: CORTESE
Facility County Code: 7
Reg By: LTNKA
Reg Id: 07-0574

CERS:
Name: FAULTLESS CLEANERS
Address: 427 10TH ST E
City,State,Zip: PITTSBURG, CA 94565
Site ID: 258767
CERS ID: T0601300530
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: SUE LOYD - CONTRA COSTA COUNTY
Entity Title: Not reported
Affiliation Address: 4333 PACHECO BLVD.

FAULTLESS CLEANERS (Continued) **S101324215**

Affiliation City: MARTINEZ
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

G48 **PITTSBURG PLUMBING** **CA LUST** **S106516842**
SSW **441 10TH ST E** **N/A**
< 1/8 **PITTSBURG, CA 94565**
0.120 mi.
632 ft. **Site 5 of 8 in cluster G**

Relative:
Higher

Actual:
19 ft.

LUST:
Name: PITTSBURG PLUMBING
Address: 441 10TH ST E
City,State,Zip: PITTSBURG, CA 94565
Lead Agency: SAN FRANCISCO BAY RWQCB (REGION 2)
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0601300442
Global Id: T0601300442
Latitude: 38.02712
Longitude: -121.879572
Status: Completed - Case Closed
Status Date: 04/30/2009
Case Worker: MYM
RB Case Number: 07-0478
Local Agency: CONTRA COSTA COUNTY
File Location: Regional Board
Local Case Number: 71224
Potential Media Affect: Soil
Potential Contaminants of Concern: Waste Oil / Motor / Hydraulic / Lubricating
Site History: Samples taken following over-excavation, yielded nondetectable levels of hydrocarbon contamination, therefore, the site generally meets the criteria for low risk closure.

LUST:
Global Id: T0601300442
Contact Type: Regional Board Caseworker
Contact Name: MARTIN MUSONGE
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)
Address: 1515 CLAY STREET
City: OAKLAND
Email: martin.musonge@waterboards.ca.gov
Phone Number: Not reported

Global Id: T0601300442
Contact Type: Local Agency Caseworker
Contact Name: SUE LOYD
Organization Name: CONTRA COSTA COUNTY
Address: 4333 PACHECO BLVD.
City: MARTINEZ
Email: sloyd@hsd.co.contra-costa.ca.us
Phone Number: Not reported

LUST:
Global Id: T0601300442
Action Type: Other

PITTSBURG PLUMBING (Continued) **S106516842**

Date: 09/25/1986
Action: Leak Discovery

Global Id: T0601300442
Action Type: Other
Date: 09/26/1986
Action: Leak Stopped

Global Id: T0601300442
Action Type: Other
Date: 09/25/1986
Action: Leak Reported

Global Id: T0601300442
Action Type: REMEDIATION
Date: 09/06/1990
Action: Excavation

Global Id: T0601300442
Action Type: ENFORCEMENT
Date: 04/30/2009
Action: Closure/No Further Action Letter

Global Id: T0601300442
Action Type: ENFORCEMENT
Date: 09/29/2000
Action: * Historical Enforcement

LUST:
Global Id: T0601300442
Status: Open - Case Begin Date
Status Date: 09/25/1986

Global Id: T0601300442
Status: Open - Site Assessment
Status Date: 09/25/1986

Global Id: T0601300442
Status: Open - Site Assessment
Status Date: 05/09/1994

Global Id: T0601300442
Status: Completed - Case Closed
Status Date: 04/30/2009

I49 **D & F AUTO SALES** **CA CONTRA COSTA CO. SITE LIST** **S102261577**
SW **327 E 10TH ST** **N/A**
1/8-1/4 **PITTSBURG, CA 94565**
0.129 mi.
681 ft. **Site 1 of 6 in cluster I**

Relative:
Higher

Actual:
27 ft.

CONTRA COSTA CO. SITE LIST:
Name: D & F AUTO SALES
Address: 327 E 10TH ST
City: PITTSBURG
Facility ID: FA0028086

D & F AUTO SALES (Continued) **S102261577**

Billing Status: INACTIVE, NON-BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HWG: LESS THAN 5 TONS/YEAR
Region: CONTRA COSTA
Cupa Number: 771319

I50 **JOHN STANLEY AUTO BODY** **CA CONTRA COSTA CO. SITE LIST** **S104532805**
SW **325 E 10TH ST B** **N/A**
1/8-1/4 **PITTSBURG, CA 94565**
0.130 mi.
686 ft. **Site 2 of 6 in cluster I**

Relative: Higher
Actual: 27 ft.

CONTRA COSTA CO. SITE LIST:
Name: JOHN STANLEY AUTO BODY
Address: 325 E 10TH ST B
City: PITTSBURG
Facility ID: FA0029610
Billing Status: INACTIVE, NON-BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HWG: LESS THAN 5 TONS/YEAR
Region: CONTRA COSTA
Cupa Number: 772937

H51 **BANISTER ELECTRIC, INC** **CA CERS HAZ WASTE** **U001597892**
South **498 E 10TH ST** **CA HIST UST** **N/A**
1/8-1/4 **PITTSBURG, CA 94565** **CA CONTRA COSTA CO. SITE LIST**
0.130 mi.
689 ft. **Site 2 of 10 in cluster H**

Relative: Higher
Actual: 21 ft.

CERS HAZ WASTE:
Name: BAY SAW & TOOL REPAIR
Address: 498 E 10TH ST
City,State,Zip: PITTSBURG, CA 94565
Site ID: 97689
CERS ID: 10005811
CERS Description: Hazardous Waste Generator

Violations:
Site ID: 97689
Site Name: BAY SAW & TOOL REPAIR
Violation Date: 01-11-2017
Citation: HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description: Hazardous Waste Generator Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 01/13/2017.
Violation Division: Contra Costa County Health Services Department
Violation Program: HW
Violation Source: CERS

Site ID: 97689
Site Name: BAY SAW & TOOL REPAIR
Violation Date: 04-14-2017
Citation: HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description: Tiered Permitting - Administration/Documentation - General
Violation Notes: Returned to compliance on 04/17/2017.

BANISTER ELECTRIC, INC (Continued) **U001597892**

Violation Division: Contra Costa County Health Services Department
Violation Program: HW
Violation Source: CERS

Site ID: 97689
Site Name: BAY SAW & TOOL REPAIR
Violation Date: 06-24-2014
Citation: HSC 6.67 Multiple - California Health and Safety Code, Chapter 6.67, Section(s) Multiple
Violation Description: Haz Waste Generator Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 09/19/2014.
Violation Division: Contra Costa County Health Services Department
Violation Program: HW
Violation Source: CERS

Site ID: 97689
Site Name: BAY SAW & TOOL REPAIR
Violation Date: 12-02-2016
Citation: HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description: Hazardous Waste Generator Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 01/13/2017.
Violation Division: Contra Costa County Health Services Department
Violation Program: HW
Violation Source: CERS

Site ID: 97689
Site Name: BAY SAW & TOOL REPAIR
Violation Date: 01-11-2017
Citation: HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description: Hazardous Waste Generator Program - Operations/Maintenance - General
Violation Notes: Returned to compliance on 01/13/2017.
Violation Division: Contra Costa County Health Services Department
Violation Program: HW
Violation Source: CERS

Site ID: 97689
Site Name: BAY SAW & TOOL REPAIR
Violation Date: 12-02-2016
Citation: HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description: Hazardous Waste Generator Program - Operations/Maintenance - General
Violation Notes: Returned to compliance on 12/02/2016.
Violation Division: Contra Costa County Health Services Department
Violation Program: HW
Violation Source: CERS

Site ID: 97689
Site Name: BAY SAW & TOOL REPAIR
Violation Date: 09-17-2014
Citation: HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description: Haz Waste Generator Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 09/19/2014.
Violation Division: Contra Costa County Health Services Department

BANISTER ELECTRIC, INC (Continued) **U001597892**

Violation Program: HW
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-03-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-11-2017
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-13-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-13-2020
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-14-2017
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-24-2014
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

BANISTER ELECTRIC, INC (Continued) **U001597892**

Eval General Type: Other/Unknown
Eval Date: 09-17-2014
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-02-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Enforcement Action:
Site ID: 97689
Site Name: BAY SAW & TOOL REPAIR
Site Address: 498 E 10TH ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 01-11-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

Site ID: 97689
Site Name: BAY SAW & TOOL REPAIR
Site Address: 498 E 10TH ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 04-14-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

Site ID: 97689
Site Name: BAY SAW & TOOL REPAIR
Site Address: 498 E 10TH ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 06-24-2014
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

BANISTER ELECTRIC, INC (Continued) **U001597892**

Site ID: 97689
Site Name: BAY SAW & TOOL REPAIR
Site Address: 498 E 10TH ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 09-17-2014
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

Site ID: 97689
Site Name: BAY SAW & TOOL REPAIR
Site Address: 498 E 10TH ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 12-02-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

Coordinates:
Site ID: 97689
Facility Name: BAY SAW & TOOL REPAIR
Env Int Type Code: HWG
Program ID: 10005811
Coord Name: Not reported
Ref Point Type Desc: Unknown
Latitude: 38.026337
Longitude: -121.878793

Affiliation:
Affiliation Type Desc: CUPA District
Entity Name: Contra Costa County Health Services Department
Entity Title: Not reported
Affiliation Address: 4585 Pacheco BlvdSuite 100
Affiliation City: Martinez
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 94553
Affiliation Phone: (925) 655-3200

Affiliation Type Desc: Identification Signer
Entity Name: Duane Williams
Entity Title: Bookkeeper
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

BANISTER ELECTRIC, INC (Continued) **U001597892**

Affiliation Type Desc:	Parent Corporation
Entity Name:	BAY SAW & TOOL REPAIR
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Document Preparer
Entity Name:	Duane Williams
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Environmental Contact
Entity Name:	GREG COCOTIS
Entity Title:	Not reported
Affiliation Address:	498 E. 10th St.
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94565
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	498 E. 10th St
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94565
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	GREG COCOTIS
Entity Title:	Not reported
Affiliation Address:	498 E. 10th St
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	94565
Affiliation Phone:	(925) 432-6241

Affiliation Type Desc:	Operator
Entity Name:	GREG COCOTIS
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported

BANISTER ELECTRIC, INC (Continued) **U001597892**

Affiliation Zip: Not reported
Affiliation Phone: (925) 432-6291

HIST UST:
Name: BANISTER ELECTRIC, INC
Address: 498 E 10TH ST
City,State,Zip: PITTSBURG, CA 94565
File Number: Not reported
URL: Not reported
Region: STATE
Facility ID: 00000013084
Facility Type: Other
Other Type: CONTRACTOR
Contact Name: Not reported
Telephone: 4154327357
Owner Name: BANISTER ELECTRIC, INC
Owner Address: 498 E. 10TH ST.
Owner City,St,Zip: PITTSBURG, CA 94565
Total Tanks: 0001

Tank Num: 001
Container Num: 1
Year Installed: 1974
Tank Capacity: 00001000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

CONTRA COSTA CO. SITE LIST:
Name: BAY SAW & TOOL REPAIR
Address: 498 E 10TH ST
City: PITTSBURG
Facility ID: FA0031643
Billing Status: ACTIVE, BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HWG: REPORTED ZERO
Region: CONTRA COSTA
Cupa Number: 713084

Name: BAY SAW & TOOL REPAIR
Address: 498 E 10TH ST
City: PITTSBURG
Facility ID: FA0031643
Billing Status: INACTIVE, NON-BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: UNDERGROUND STORAGE TANK SITE
Region: CONTRA COSTA
Cupa Number: 713084

H52 **BAY SAW AND TOOL** **RCRA NonGen / NLR** **1024794656**
South **498 E 10TH ST** **CAL000152460**
1/8-1/4 **PITTSBURG, CA 94565**
0.130 mi.
689 ft. **Site 3 of 10 in cluster H**

Relative: **Higher**
Actual: **21 ft.**

RCRA NonGen / NLR:

Date Form Received by Agency:		1996-01-24 00:00:00.0
Handler Name:	BAY SAW AND TOOL	
Handler Address:		498 E 10TH ST
Handler City,State,Zip:		PITTSBURG, CA 94565-0000
EPA ID:		CAL000152460
Contact Name:		GREG COCOTIS
Contact Address:		498 E 10TH ST
Contact City,State,Zip:		PITTSBURG, CA 94565
Contact Telephone:		925-432-6291
Contact Fax:		925-432-1990
Contact Email:		GREG@BAYSAW.COM
Contact Title:		Not reported
EPA Region:		09
Land Type:		Not reported
Federal Waste Generator Description:		Not a generator, verified
Non-Notifier:		Not reported
Biennial Report Cycle:		Not reported
Accessibility:		Not reported
Active Site Indicator:		Handler Activities
State District Owner:		Not reported
State District:		Not reported
Mailing Address:		498 E 10TH ST
Mailing City,State,Zip:		PITTSBURG, CA 94565-2653
Owner Name:		BOTTOM LINE SERVICE CO.
Owner Type:		Other
Operator Name:		GREG COCOTIS
Operator Type:		Other
Short-Term Generator Activity:		No
Importer Activity:		No
Mixed Waste Generator:		No
Transporter Activity:		No
Transfer Facility Activity:		No
Recycler Activity with Storage:		No
Small Quantity On-Site Burner Exemption:		No
Smelting Melting and Refining Furnace Exemption:		No
Underground Injection Control:		No
Off-Site Waste Receipt:		No
Universal Waste Indicator:		Yes
Universal Waste Destination Facility:		Yes
Federal Universal Waste:		No
Active Site Fed-Reg Treatment Storage and Disposal Facility:		Not reported
Active Site Converter Treatment storage and Disposal Facility:		Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:		Not reported
Active Site State-Reg Handler:		---
Federal Facility Indicator:		Not reported
Hazardous Secondary Material Indicator:		N
Sub-Part K Indicator:		Not reported
Commercial TSD Indicator:		No
Treatment Storage and Disposal Type:		Not reported
2018 GPRA Permit Baseline:		Not on the Baseline
2018 GPRA Renewals Baseline:		Not on the Baseline
Permit Renewals Workload Universe:		Not reported

BAY SAW AND TOOL (Continued) **1024794656**

Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2018-09-05 15:43:25.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	BOTTOM LINE SERVICE CO.
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	498 E 10TH ST
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565-2653
Owner/Operator Telephone:	925-432-6291
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	GREG COCOTIS
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	498 E 10TH ST
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	925-432-6291
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

BAY SAW AND TOOL (Continued) **1024794656**

Historic Generators:
Receive Date: 1996-01-24 00:00:00.0
Handler Name: BAY SAW AND TOOL
Federal Waste Generator Description: Not a generator, verified
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 56299
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

H53 **MY GENERATOR GUY** **RCRA NonGen / NLR** **1026056978**
South **498 E 10TH ST** **CAL000453170**
1/8-1/4 **PITTSBURG, CA 94565**
0.130 mi.
689 ft. **Site 4 of 10 in cluster H**

Relative: **Higher**
Actual: **21 ft.**

RCRA NonGen / NLR:
Date Form Received by Agency: 2020-03-03 00:00:00.0
Handler Name: MY GENERATOR GUY
Handler Address: 498 E 10TH ST
Handler City,State,Zip: PITTSBURG, CA 94565
EPA ID: CAL000453170
Contact Name: ERIC VERACRUZ
Contact Address: 498 E 10TH ST
Contact City,State,Zip: PITTSBURG, CA 94565
Contact Telephone: 925-432-6291
Contact Fax: 925-432-1990
Contact Email: ERIC@BAYSAW.COM
Contact Title: Not reported
EPA Region: 09
Land Type: Not reported
Federal Waste Generator Description: Not a generator, verified
Non-Notifier: Not reported
Biennial Report Cycle: Not reported
Accessibility: Not reported
Active Site Indicator: Not reported
State District Owner: Not reported
State District: Not reported
Mailing Address: 498 E 10TH ST
Mailing City,State,Zip: PITTSBURG, CA 94565
Owner Name: GREG COCOTIS

MY GENERATOR GUY (Continued) **1026056978**

Owner Type:	Other
Operator Name:	ERIC VERACRUZ
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2020-03-06 18:11:48.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No

MY GENERATOR GUY (Continued) **1026056978**

Sub-Part P Indicator: No

Handler - Owner Operator:
Owner/Operator Indicator: Owner
Owner/Operator Name: GREG COCOTIS
Legal Status: Other
Date Became Current: Not reported
Date Ended Current: Not reported
Owner/Operator Address: 3494 HAMLIN LN
Owner/Operator City,State,Zip: LA FAYETTE, CA 94565
Owner/Operator Telephone: 925-497-7038
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: ERIC VERACRUZ
Legal Status: Other
Date Became Current: Not reported
Date Ended Current: Not reported
Owner/Operator Address: 498 E 10TH ST
Owner/Operator City,State,Zip: PITTSBURG, CA 94565
Owner/Operator Telephone: 925-432-6291
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Historic Generators:
Receive Date: 2020-03-03 00:00:00.0
Handler Name: MY GENERATOR GUY
Federal Waste Generator Description: Not a generator, verified
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 811198
NAICS Description: ALL OTHER AUTOMOTIVE REPAIR AND MAINTENANCE

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

G54 **LAS PALMAS AUTO REPAIR** **CA CERS HAZ WASTE** **S105455342**
SSW **418 E 10TH ST** **CA CONTRA COSTA CO. SITE LIST** **N/A**
1/8-1/4 **PITTSBURG, CA 94565** **CA CERS**
0.132 mi. **CA HWTS**
698 ft. **Site 6 of 8 in cluster G**

Relative:
Higher

Actual:
20 ft.

CERS HAZ WASTE:
Name: LAS PALMAS AUTO REPAIR
Address: 418 E 10TH ST
City,State,Zip: PITTSBURG, CA 94565
Site ID: 276084
CERS ID: 10629919
CERS Description: Hazardous Waste Generator

CONTRA COSTA CO. SITE LIST:
Name: LAS PALMAS AUTO REPAIR
Address: 418 E 10TH ST
City: PITTSBURG
Facility ID: FA0027886
Billing Status: ACTIVE, BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HMBP: 1K-10K LBS, 0-19 EMPLOYEES
Region: CONTRA COSTA
Cupa Number: 771110

Name: LAS PALMAS AUTO REPAIR
Address: 418 E 10TH ST
City: PITTSBURG
Facility ID: FA0027886
Billing Status: ACTIVE, BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HWG: LESS THAN 5 TONS/YEAR
Region: CONTRA COSTA
Cupa Number: 771110

CERS:
Name: LAS PALMAS AUTO REPAIR
Address: 418 E 10TH ST
City,State,Zip: PITTSBURG, CA 94565
Site ID: 276084
CERS ID: 10629919
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 276084
Site Name: Las Palmas Auto Repair
Violation Date: 05-09-2016
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 07/25/2016.
Violation Division: Contra Costa County Health Services Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 276084
Site Name: Las Palmas Auto Repair
Violation Date: 04-01-2019
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter

LAS PALMAS AUTO REPAIR (Continued) **S105455342**

	6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes:	Returned to compliance on 04/18/2019. OBSERVATION: AS OF APRIL 1, 2019, CCHSHMP HAS NOT RECEIVED/ACCEPTED A COMPLETE AND CORRECT CALIFORNIA ENVIRONMENTAL REPORTING SYSTEM (CERS) SUBMITTAL FOR THE FOLLOWING SUBMITTAL ELEMENT(S): Facility Information AND/OR Hazardous Materials Inventory AND/OR Emergency Response/Training Plans CORRECTIVE ACTION: IMMEDIATELY LOG ONTO CERS (https://cers.calepa.ca.gov/) AND SUBMIT COMPLETE/CORRECT Facility Information AND OR Hazardous Materials Inventory AND/OR Emergency Response/Training Plans.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	276084
Site Name:	Las Palmas Auto Repair
Violation Date:	06-25-2018
Citation:	HSC 6.95 25508(a)(3) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(3)
Violation Description:	Failure to complete and electronically submit a site map with all required content.
Violation Notes:	Returned to compliance on 07/17/2018. OBSERVATION: The business failed to complete and electronically submit a site map with all required content. Site map is missing antifreeze, electrical shut down CORRECTIVE ACTION: Complete and electronically submit a site map with all required content.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	276084
Site Name:	Las Palmas Auto Repair
Violation Date:	04-14-2017
Citation:	HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description:	Business Plan Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 04/17/2017.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	276084
Site Name:	Las Palmas Auto Repair
Violation Date:	06-25-2018
Citation:	HSC 6.5 25123.3(h)(1) - California Health and Safety Code, Chapter 6.5, Section(s) 25123.3(h)(1)
Violation Description:	Failure to send hazardous waste offsite for treatment, storage, or disposal within 180 days (or 270 days if waste is transported over 200 miles) for a generator who generates less than 1000 kilogram per month if all of the following conditions are met: (1) The quantity of hazardous waste accumulated onsite never exceeds 6,000 kilograms. (2) The generator complies with the requirements of 40 Code of Federal Regulations section 262.34(d), (e) and (f). (3) The generator does not hold acutely hazardous waste or extremely hazardous waste in an amount

LAS PALMAS AUTO REPAIR (Continued) **S105455342**

	greater than one kilogram for more than 90 days.
Violation Notes:	Returned to compliance on 07/18/2018. OBSERVATION: 55 gallon drum of dirty water located in parking lot has been on site per managers statement for over 6 months. CORRECTIVE ACTION: Dispose of 55 gallond dirty water drum located in the parking lot within 30 days and submit a copy of the manifest/receipt to the CUPA.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HW
Violation Source:	CERS
Site ID:	276084
Site Name:	Las Palmas Auto Repair
Violation Date:	04-14-2017
Citation:	HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description:	Tiered Permitting - Administration/Documentation - General
Violation Notes:	Returned to compliance on 05/11/2017.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HW
Violation Source:	CERS
Site ID:	276084
Site Name:	Las Palmas Auto Repair
Violation Date:	06-23-2016
Citation:	HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description:	Business Plan Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 07/25/2016.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	276084
Site Name:	Las Palmas Auto Repair
Violation Date:	06-25-2018
Citation:	22 CCR 12 66262.40(a) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.40(a)
Violation Description:	Failure to keep a copy of each properly signed manifest for at least three years from the date the waste was accepted by the initial transporter. The manifest signed at the time the waste was accepted for transport shall be kept until receiving a signed copy from the designated facility which received the waste.
Violation Notes:	Returned to compliance on 07/25/2018. OBSERVATION: Uniform Hazardous Waste Manifests for used oil and used antifreeze were not available at the time of inspection. CORRECTIVE ACTION: Locate a copy of all manifests for used oil and used antifreeze and submit copies to the CUPA.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HW
Violation Source:	CERS
Site ID:	276084
Site Name:	Las Palmas Auto Repair
Violation Date:	05-26-2015
Citation:	HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description:	Haz Waste Generator Program - Administration/Documentation - General

LAS PALMAS AUTO REPAIR (Continued) **S105455342**

Violation Notes: Returned to compliance on 06/01/2015.
Violation Division: Contra Costa County Health Services Department
Violation Program: HW
Violation Source: CERS

Site ID: 276084
Site Name: Las Palmas Auto Repair
Violation Date: 04-01-2019
Citation: HSC 6.11 25404(e)(4) - California Health and Safety Code, Chapter 6.11, Section(s) 25404(e)(4)
Violation Description: Failure to report program data electronically.
Violation Notes: Returned to compliance on 04/18/2019. OBSERVATION: AS OF APRIL 1, 2019, A COMPLETE AND CORRECT CALIFORNIA ENVIRONMENTAL REPORTING SYSTEM (CERS) FACILITY INFORMATION SUBMITTAL ELEMENT HAS NOT BEEN RECEIVED/ACCEPTED BY CCHSHMP. CORRECTIVE ACTION: IMMEDIATELY LOG ONTO CERS (https://cers.calepa.ca.gov/) AND SUBMIT COMPLETE/CORRECT FACILITY INFORMATION SUBMITTAL ELEMENT.
Violation Division: Contra Costa County Health Services Department
Violation Program: HW
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-25-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-25-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-24-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 08-23-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

LAS PALMAS AUTO REPAIR (Continued) **S105455342**

Eval General Type: Other/Unknown
Eval Date: 04-01-2019
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-01-2019
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-14-2017
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-14-2017
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-09-2016
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-26-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-26-2015
Violations Found: Yes

LAS PALMAS AUTO REPAIR (Continued) **S105455342**

Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-01-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-23-2016
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Enforcement Action:
Site ID: 276084
Site Name: Las Palmas Auto Repair
Site Address: 418 E 10TH ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 04-01-2019
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 276084
Site Name: Las Palmas Auto Repair
Site Address: 418 E 10TH ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 04-01-2019
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

Site ID: 276084
Site Name: Las Palmas Auto Repair
Site Address: 418 E 10TH ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 04-14-2017

LAS PALMAS AUTO REPAIR (Continued) **S105455342**

Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 276084
Site Name: Las Palmas Auto Repair
Site Address: 418 E 10TH ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 04-14-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

Site ID: 276084
Site Name: Las Palmas Auto Repair
Site Address: 418 E 10TH ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 05-09-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 276084
Site Name: Las Palmas Auto Repair
Site Address: 418 E 10TH ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 05-26-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

Site ID: 276084
Site Name: Las Palmas Auto Repair
Site Address: 418 E 10TH ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 06-23-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP

LAS PALMAS AUTO REPAIR (Continued) **S105455342**

Enf Action Source: CERS

Site ID: 276084
Site Name: Las Palmas Auto Repair
Site Address: 418 E 10TH ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 06-25-2018
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 276084
Site Name: Las Palmas Auto Repair
Site Address: 418 E 10TH ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 06-25-2018
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

Coordinates:
Site ID: 276084
Facility Name: Las Palmas Auto Repair
Env Int Type Code: HWG
Program ID: 10629919
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 38.026510
Longitude: -121.880720

Affiliation:
Affiliation Type Desc: CUPA District
Entity Name: Contra Costa County Health Services Department
Entity Title: Not reported
Affiliation Address: 4585 Pacheco BlvdSuite 100
Affiliation City: Martinez
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 94553
Affiliation Phone: (925) 655-3200

Affiliation Type Desc: Identification Signer
Entity Name: Armando Becerra
Entity Title: Manager
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported

LAS PALMAS AUTO REPAIR (Continued) **S105455342**

Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: Elizabeth Roman
Entity Title: Not reported
Affiliation Address: 418 E 10th St
Affiliation City: Pittsburg
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 94565
Affiliation Phone: (925) 354-2419

Affiliation Type Desc: Parent Corporation
Entity Name: Las Palmas Auto Repair
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Document Preparer
Entity Name: Armando Becerra
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: Las Palmas Auto Repair
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (925) 354-2419

Affiliation Type Desc: Environmental Contact
Entity Name: Armando Becerra
Entity Title: Not reported
Affiliation Address: 418 E 10th St
Affiliation City: Pittsburg
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 94565
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 418 E 10th St

LAS PALMAS AUTO REPAIR (Continued) **S105455342**

Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94565
Affiliation Phone:	Not reported

HWTS:

Name:	LAS PALMAS AUTO REPAIR
Address:	418 E 10TH ST
Address 2:	Not reported
City,State,Zip:	PITTSBURG, CA 94565
EPA ID:	CAL000407341
Inactive Date:	06/30/2015
Create Date:	06/01/2015
Last Act Date:	01/27/2016
Mailing Name:	Not reported
Mailing Address:	418 E 10TH ST
Mailing Address 2:	Not reported
Mailing City,State,Zip:	PITTSBURG, CA 94565
Owner Name:	ELIZABETHER ROMAN
Owner Address:	2647 JAGUAR WAY
Owner Address 2:	Not reported
Owner City,State,Zip:	ANTIOCH, CA 94531
Contact Name:	ARMANDO BECERRA
Contact Address:	2647 JAGUAR WAY
Contact Address 2:	Not reported
City,State,Zip:	ANTIOCH, CA 94531

NAICS:

EPA ID:	CAL000407341
Create Date:	2015-06-01 08:30:30.363
NAICS Code:	811111
NAICS Description:	General Automotive Repair
Issued EPA ID Date:	2015-06-01 08:30:30.33700
Inactive Date:	2015-06-30 00:00:00
Facility Name:	LAS PALMAS AUTO REPAIR
Facility Address:	418 E 10TH ST
Facility Address 2:	Not reported
Facility City:	PITTSBURG
Facility County:	Not reported
Facility State:	CA
Facility Zip:	94565

G55 **WEST COAST AUTO BODY & PAINT** **CA CERS HAZ WASTE** **S110041709**
SSW **430 E 10TH ST** **CA CONTRA COSTA CO. SITE LIST** **N/A**
1/8-1/4 **PITTSBURG, CA 94565** **CA HWTS**
0.132 mi.
698 ft. **Site 7 of 8 in cluster G**

Relative:
Higher

Actual:
21 ft.

CERS HAZ WASTE:

Name:	WEST COAST AUTO BODY & PAINT
Address:	430 E 10TH ST
City,State,Zip:	PITTSBURG, CA 94565
Site ID:	57734
CERS ID:	10604161
CERS Description:	Hazardous Waste Generator

WEST COAST AUTO BODY & PAINT (Continued) **S110041709**

Violations:

Site ID:	57734
Site Name:	West Coast Auto Body & Paint
Violation Date:	05-09-2016
Citation:	HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description:	Tiered Permitting Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 05/12/2016.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HW
Violation Source:	CERS

Site ID:	57734
Site Name:	West Coast Auto Body & Paint
Violation Date:	05-26-2015
Citation:	HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description:	Haz Waste Generator Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 06/05/2015.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HW
Violation Source:	CERS

Site ID:	57734
Site Name:	West Coast Auto Body & Paint
Violation Date:	06-24-2014
Citation:	HSC 6.67 Multiple - California Health and Safety Code, Chapter 6.67, Section(s) Multiple
Violation Description:	Haz Waste Generator Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 10/23/2014.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HW
Violation Source:	CERS

Site ID:	57734
Site Name:	West Coast Auto Body & Paint
Violation Date:	04-14-2017
Citation:	HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description:	Tiered Permitting - Administration/Documentation - General
Violation Notes:	Returned to compliance on 05/08/2017.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HW
Violation Source:	CERS

Site ID:	57734
Site Name:	West Coast Auto Body & Paint
Violation Date:	09-17-2014
Citation:	HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description:	Haz Waste Generator Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 10/23/2014.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HW
Violation Source:	CERS

Site ID:	57734

WEST COAST AUTO BODY & PAINT (Continued) **S110041709**

Site Name: West Coast Auto Body & Paint
Violation Date: 05-01-2015
Citation: HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description: Haz Waste Generator Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 06/06/2015.
Violation Division: Contra Costa County Health Services Department
Violation Program: HW
Violation Source: CERS

Site ID: 57734
Site Name: West Coast Auto Body & Paint
Violation Date: 04-20-2018
Citation: 40 CFR 1 265.173 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.173
Violation Description: Failure to meet the following container management requirements: (a) A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste. (b) A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.
Violation Notes: Returned to compliance on 01/18/2019. OBSERVATION: Hazardous waste Used thinner and paint gun sludge is kept in open plastic containers. Hazardous Waste shall be accumulated in a container that is closed, structurally sound and compatible with the contents and show no leakage, spillage, or damage that could cause leakage. CORRECTIVE ACTION: transfer to hazardous waste to compatible container and keep closed and labeled with hazardous waste label.
Violation Division: Contra Costa County Health Services Department
Violation Program: HW
Violation Source: CERS

Evaluation:
Eval General Type: Other/Unknown
Eval Date: 01-18-2019
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-27-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-14-2017
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department

WEST COAST AUTO BODY & PAINT (Continued) **S110041709**

Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-20-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-01-2015
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-09-2016
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-26-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-05-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-24-2014
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

WEST COAST AUTO BODY & PAINT (Continued) **S110041709**

Eval General Type: Other/Unknown
Eval Date: 09-17-2014
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-23-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Enforcement Action:
Site ID: 57734
Site Name: West Coast Auto Body & Paint
Site Address: 430 E 10TH ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 03-27-2018
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: UNSPEC
Enf Action Source: CERS

Site ID: 57734
Site Name: West Coast Auto Body & Paint
Site Address: 430 E 10TH ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 04-14-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

Site ID: 57734
Site Name: West Coast Auto Body & Paint
Site Address: 430 E 10TH ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 04-20-2018
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

WEST COAST AUTO BODY & PAINT (Continued) **S110041709**

Site ID:	57734
Site Name:	West Coast Auto Body & Paint
Site Address:	430 E 10TH ST
Site City:	PITTSBURG
Site Zip:	94565
Enf Action Date:	05-01-2015
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Contra Costa County Health Services Department
Enf Action Program:	HW
Enf Action Source:	CERS

Site ID:	57734
Site Name:	West Coast Auto Body & Paint
Site Address:	430 E 10TH ST
Site City:	PITTSBURG
Site Zip:	94565
Enf Action Date:	05-09-2016
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Contra Costa County Health Services Department
Enf Action Program:	HW
Enf Action Source:	CERS

Site ID:	57734
Site Name:	West Coast Auto Body & Paint
Site Address:	430 E 10TH ST
Site City:	PITTSBURG
Site Zip:	94565
Enf Action Date:	05-26-2015
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Contra Costa County Health Services Department
Enf Action Program:	HW
Enf Action Source:	CERS

Site ID:	57734
Site Name:	West Coast Auto Body & Paint
Site Address:	430 E 10TH ST
Site City:	PITTSBURG
Site Zip:	94565
Enf Action Date:	06-24-2014
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Contra Costa County Health Services Department
Enf Action Program:	HW
Enf Action Source:	CERS

Site ID:	57734
Site Name:	West Coast Auto Body & Paint
Site Address:	430 E 10TH ST
Site City:	PITTSBURG
Site Zip:	94565

WEST COAST AUTO BODY & PAINT (Continued) **S110041709**

Enf Action Date:	09-17-2014
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Contra Costa County Health Services Department
Enf Action Program:	HW
Enf Action Source:	CERS

Coordinates:

Site ID:	57734
Facility Name:	West Coast Auto Body & Paint
Env Int Type Code:	HWG
Program ID:	10604161
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	38.026420
Longitude:	-121.880300

Affiliation:

Affiliation Type Desc:	Document Preparer
Entity Name:	Hassib hatefi
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Environmental Contact
Entity Name:	Mezghan Sayedi
Entity Title:	Not reported
Affiliation Address:	430 E. 10th st
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94565
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	Hassib Hatefi
Entity Title:	Not reported
Affiliation Address:	430 E. 10th ST.
Affiliation City:	PITTSBURG
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	94565
Affiliation Phone:	(925) 642-3876

Affiliation Type Desc:	Parent Corporation
Entity Name:	West Coast Auto Body & Paint
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported

WEST COAST AUTO BODY & PAINT (Continued) **S110041709**

Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	Contra Costa County Health Services Department
Entity Title:	Not reported
Affiliation Address:	4585 Pacheco BlvdSuite 100
Affiliation City:	Martinez
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94553
Affiliation Phone:	(925) 655-3200
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	430 E. 10th st
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94565
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Hassib hatefi
Entity Title:	owner
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	Hassib
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(925) 642-3876

CONTRA COSTA CO. SITE LIST:

Name:	WEST COAST AUTO BODY & PAINT
Address:	430 E 10TH ST
City:	PITTSBURG
Facility ID:	FA0031033
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	HWG: REPORTED ZERO
Region:	CONTRA COSTA
Cupa Number:	774144
Name:	WEST COAST AUTO BODY & PAINT
Address:	430 E 10TH ST

WEST COAST AUTO BODY & PAINT (Continued) **S110041709**

City: PITTSBURG
Facility ID: FA0031033
Billing Status: ACTIVE, BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HWG: REPORTED ZERO
Region: CONTRA COSTA
Cupa Number: 774144

HWTS:
Name: WEST COAST AUTO BODY & PAINT
Address: 430 E 10TH ST
Address 2: Not reported
City,State,Zip: PITTSBURG, CA 94565
EPA ID: CAL000431161
Inactive Date: Not reported
Create Date: 10/02/2017
Last Act Date: 08/24/2020
Mailing Name: Not reported
Mailing Address: 430 E 10TH ST
Mailing Address 2: Not reported
Mailing City,State,Zip: PITTSBURG, CA 94565
Owner Name: ALEXANDER HASSIB HATEFI
Owner Address: 833 CHIANTI WAY
Owner Address 2: Not reported
Owner City,State,Zip: OAKLEY, CA 94561
Contact Name: HASSIB HATEFI
Contact Address: 430 E 10 ST
Contact Address 2: Not reported
City,State,Zip: PITTSBURG, CA 94565

NAICS:
EPA ID: CAL000431161
Create Date: 2017-10-02 15:55:46.380
NAICS Code: 811121
NAICS Description: Automotive Body, Paint, and Interior Repair and Maintenance
Issued EPA ID Date: 2017-10-02 15:55:46.37000
Inactive Date: Not reported
Facility Name: WEST COAST AUTO BODY & PAINT
Facility Address: 430 E 10TH ST
Facility Address 2: Not reported
Facility City: PITTSBURG
Facility County: Not reported
Facility State: CA
Facility Zip: 94565

Name: WEST COAST AUTO BODY & PAINT
Address: 430 E 10TH ST
Address 2: Not reported
City,State,Zip: PITTSBURG, CA 94565
EPA ID: CAL000377214
Inactive Date: 06/30/2013
Create Date: 08/13/2012
Last Act Date: 03/26/2014
Mailing Name: Not reported
Mailing Address: 430 E 10TH ST
Mailing Address 2: Not reported

WEST COAST AUTO BODY & PAINT (Continued) **S110041709**

Mailing City,State,Zip:	PITTSBURG, CA 94565
Owner Name:	DINA SAYEDI
Owner Address:	430 E 10TH ST
Owner Address 2:	Not reported
Owner City,State,Zip:	PITTSBURG, CA 94565
Contact Name:	OMAR SAYEDI
Contact Address:	430 E 10TH ST
Contact Address 2:	Not reported
City,State,Zip:	PITTSBURG, CA 94565

NAICS:

EPA ID:	CAL000377214
Create Date:	2012-08-13 12:40:36.737
NAICS Code:	811121
NAICS Description:	Automotive Body, Paint, and Interior Repair and Maintenance
Issued EPA ID Date:	2012-08-13 12:40:36.64300
Inactive Date:	2013-06-30 00:00:00
Facility Name:	WEST COAST AUTO BODY & PAINT
Facility Address:	430 E 10TH ST
Facility Address 2:	Not reported
Facility City:	PITTSBURG
Facility County:	Not reported
Facility State:	CA
Facility Zip:	94565

G56 **WEST COAST AUTO BODY & PAINT** **RCRA NonGen / NLR** **1024862641**
SSW **430 E 10TH ST** **CAL000431161**
1/8-1/4 **PITTSBURG, CA 94565**
0.132 mi.
698 ft. **Site 8 of 8 in cluster G**

Relative:
Higher

Actual:
21 ft.

RCRA NonGen / NLR:

Date Form Received by Agency:	2017-10-02 00:00:00.0
Handler Name:	WEST COAST AUTO BODY & PAINT
Handler Address:	430 E 10TH ST
Handler City,State,Zip:	PITTSBURG, CA 94565
EPA ID:	CAL000431161
Contact Name:	HASSIB HATEFI OWNER
Contact Address:	430 E 10TH ST
Contact City,State,Zip:	PITTSBURG, CA 94565
Contact Telephone:	925-439-3600
Contact Fax:	925-439-5425
Contact Email:	WESTCOASTAUTOBODY925@GMAIL.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	430 E 10TH ST
Mailing City,State,Zip:	PITTSBURG, CA 94565
Owner Name:	ALEXANDER HASSIB HATEFI
Owner Type:	Other

WEST COAST AUTO BODY & PAINT (Continued) **1024862641**

Operator Name:	HASSIB HATEFI OWNER
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	Yes
Universal Waste Destination Facility:	Yes
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2018-09-07 19:36:44.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

WEST COAST AUTO BODY & PAINT (Continued) **1024862641**

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	HASSIB HATEFI OWNER
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	430 E 10TH ST
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	925-439-3600
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	ALEXANDER HASSIB HATEFI
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	3526 MARINER RD
Owner/Operator City,State,Zip:	OAKLEY, CA 94561
Owner/Operator Telephone:	925-642-3876
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	2017-10-02 00:00:00.0
Handler Name:	WEST COAST AUTO BODY & PAINT
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	811121
NAICS Description:	AUTOMOTIVE BODY, PAINT, AND INTERIOR REPAIR AND MAINTENANCE

Facility Has Received Notices of Violations:

Violations:	No Violations Found

Evaluation Action Summary:

Evaluations:	No Evaluations Found

H57 **ELECTRO MFG CO** **CA CONTRA COSTA CO. SITE LIST** **S103661978**
South **494 E 10TH ST** **N/A**
1/8-1/4 **PITTSBURG, CA 94565**
0.132 mi.
699 ft. **Site 5 of 10 in cluster H**

Relative: **Higher**
Actual: **22 ft.**

CONTRA COSTA CO. SITE LIST:

Name:	ELECTRO MFG CO
Address:	494 E 10TH ST
City:	PITTSBURG
Facility ID:	FA0028206
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	HWG: LESS THAN 5 TONS/YEAR
Region:	CONTRA COSTA
Cupa Number:	771447

I58 **FRANK DEROSA AND SON** **CA CONTRA COSTA CO. SITE LIST** **S102261578**
SW **340 E 10TH ST** **N/A**
1/8-1/4 **PITTSBURG, CA 94565**
0.140 mi.
738 ft. **Site 3 of 6 in cluster I**

Relative: **Higher**
Actual: **26 ft.**

CONTRA COSTA CO. SITE LIST:

Name:	FRANK DEROSA AND SON
Address:	340 E 10TH ST
City:	PITTSBURG
Facility ID:	FA0028203
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	HWG: LESS THAN 5 TONS/YEAR
Region:	CONTRA COSTA
Cupa Number:	771444

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59 **KOCH CARBON INC.** **SEMS-ARCHIVE** **1001491868**
East **700-707 E. 3RD STREET** **CASFN0905525**
1/8-1/4 **PITTSBURG, CA 94565**
0.142 mi.
749 ft.

Relative: **Lower**
Actual: **13 ft.**

SEMS Archive:

Site ID:	0905525
EPA ID:	CASFN0905525
Name:	KOCH CARBON INC.
Address:	700-707 E. 3RD STREET
Address 2:	Not reported
City,State,Zip:	PITTSBURG, CA 94565
Cong District:	Not reported
FIPS Code:	06013
FF:	N
NPL:	Not on the NPL
Non NPL Status:	NFRAP-Site does not qualify for the NPL based on existing information

SEMS Archive Detail:

Region:	09
Site ID:	0905525
EPA ID:	CASFN0905525
Site Name:	KOCH CARBON INC.
NPL:	N

KOCH CARBON INC. (Continued) **1001491868**

FF:	N
OU:	00
Action Code:	VS
Action Name:	ARCH SITE
SEQ:	1
Start Date:	Not reported
Finish Date:	2002-10-16 04:00:00
Qual:	Not reported
Current Action Lead:	EPA Perf In-Hse
Region:	09
Site ID:	0905525
EPA ID:	CASFN0905525
Site Name:	KOCH CARBON INC.
NPL:	N
FF:	N
OU:	00
Action Code:	DS
Action Name:	DISCVRY
SEQ:	1
Start Date:	1998-12-01 05:00:00
Finish Date:	1998-12-01 05:00:00
Qual:	Not reported
Current Action Lead:	EPA Perf
Region:	09
Site ID:	0905525
EPA ID:	CASFN0905525
Site Name:	KOCH CARBON INC.
NPL:	N
FF:	N
OU:	00
Action Code:	PA
Action Name:	PA
SEQ:	1
Start Date:	Not reported
Finish Date:	2002-09-13 04:00:00
Qual:	N
Current Action Lead:	EPA Perf

I60 **PITTSBURG MOTOR PARTS, INC** **CA CERS HAZ WASTE** **S121788447**
SW **360 10TH ST E** **N/A**
1/8-1/4 **PITTSBURG, CA 94565**
0.146 mi.
772 ft. **Site 4 of 6 in cluster I**

Relative:
Higher

Actual:
24 ft.

CERS HAZ WASTE:

Name:	PITTSBURG MOTOR PARTS, INC
Address:	360 10TH ST E
City,State,Zip:	PITTSBURG, CA 94565
Site ID:	57737
CERS ID:	10010794
CERS Description:	Hazardous Waste Generator

Violations:

Site ID:	57737
Site Name:	PITTSBURG MOTOR PARTS, INC

PITTSBURG MOTOR PARTS, INC (Continued) **S121788447**

Violation Date:	06-24-2014
Citation:	HSC 6.67 Multiple - California Health and Safety Code, Chapter 6.67, Section(s) Multiple
Violation Description:	Haz Waste Generator Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 09/23/2014.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HW
Violation Source:	CERS

Evaluation:

Eval General Type:	Other/Unknown
Eval Date:	06-24-2014
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-11-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-07-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HW
Eval Source:	CERS

Enforcement Action:

Site ID:	57737
Site Name:	PITTSBURG MOTOR PARTS, INC
Site Address:	360 10TH ST E
Site City:	PITTSBURG
Site Zip:	94565
Enf Action Date:	06-24-2014
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Contra Costa County Health Services Department
Enf Action Program:	HW
Enf Action Source:	CERS

Affiliation:

Affiliation Type Desc:	CUPA District
Entity Name:	Contra Costa County Health Services Department
Entity Title:	Not reported
Affiliation Address:	4585 Pacheco BlvdSuite 100

PITTSBURG MOTOR PARTS, INC (Continued) **S121788447**

Affiliation City:	Martinez
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94553
Affiliation Phone:	(925) 655-3200
Affiliation Type Desc:	Document Preparer
Entity Name:	JOHN Longacre
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	PITTSBURG MOTOR PARTS, INC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	JOHN Longacre
Entity Title:	CO OWNER
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Property Owner
Entity Name:	JOHN Longacre
Entity Title:	Not reported
Affiliation Address:	360 10TH ST E
Affiliation City:	PITTSBURG
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	94565
Affiliation Phone:	(925) 432-4765
Affiliation Type Desc:	Environmental Contact
Entity Name:	JOHN LONGACRE
Entity Title:	Not reported
Affiliation Address:	360 10TH ST E
Affiliation City:	PITTSBURG
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94565
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator

PITTSBURG MOTOR PARTS, INC (Continued) **S121788447**

Entity Name:	JOHN LONGACRE
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(925) 432-4765
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	360 10TH ST E
Affiliation City:	PITTSBURG
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94565
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	JOHN LONGACRE
Entity Title:	Not reported
Affiliation Address:	360 10TH ST E
Affiliation City:	PITTSBURG
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	94565
Affiliation Phone:	(925) 432-4765

I61 **PITTSBURG MOTOR PARTS INC** **RCRA NonGen / NLR** **1024785721**
SW **360 E 10TH ST** **CAL000005785**
1/8-1/4 **PITTSBURG, CA 94565**
0.146 mi.
773 ft. **Site 5 of 6 in cluster I**

Relative: **Higher**
Actual: **24 ft.**

RCRA NonGen / NLR:

Date Form Received by Agency:		1993-08-04 00:00:00.0
Handler Name:	PITTSBURG MOTOR PARTS INC	
Handler Address:		360 E 10TH ST
Handler City,State,Zip:		PITTSBURG, CA 94565-0000
EPA ID:		CAL000005785
Contact Name:		LAWRENCE R LONGACRE/MGR
Contact Address:		360 E 10TH ST
Contact City,State,Zip:		PITTSBURG, CA 94565
Contact Telephone:		925-432-4765
Contact Fax:		925-432-9940
Contact Email:		LJLONGACRE@SBCGLOBAL.NET
Contact Title:		Not reported
EPA Region:		09
Land Type:		Not reported
Federal Waste Generator Description:		Not a generator, verified
Non-Notifier:		Not reported
Biennial Report Cycle:		Not reported
Accessibility:		Not reported
Active Site Indicator:		Handler Activities
State District Owner:		Not reported
State District:		Not reported

PITTSBURG MOTOR PARTS INC (Continued) **1024785721**

Mailing Address:	360 E 10TH ST
Mailing City,State,Zip:	PITTSBURG, CA 94565-2509
Owner Name:	LAWRENCE R AND JOHN K LONGACRE
Owner Type:	Other
Operator Name:	LAWRENCE R LONGACRE/MGR
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	Yes
Universal Waste Destination Facility:	Yes
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2018-09-05 15:40:49.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No

PITTSBURG MOTOR PARTS INC (Continued) **1024785721**

Exporter of Spent Lead Acid Batteries: No
Recycler Activity Without Storage: No
Manifest Broker: No
Sub-Part P Indicator: No

Handler - Owner Operator:
Owner/Operator Indicator: Owner
Owner/Operator Name: LAWRENCE R AND JOHN K LONGACRE
Legal Status: Other
Date Became Current: Not reported
Date Ended Current: Not reported
Owner/Operator Address: 360 E 10TH ST
Owner/Operator City,State,Zip: PITTSBURG, CA 94565-2509
Owner/Operator Telephone: 925-432-4765
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: LAWRENCE R LONGACRE/MGR
Legal Status: Other
Date Became Current: Not reported
Date Ended Current: Not reported
Owner/Operator Address: 360 E 10TH ST
Owner/Operator City,State,Zip: PITTSBURG, CA 94565
Owner/Operator Telephone: 925-432-4765
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Historic Generators:
Receive Date: 1993-08-04 00:00:00.0
Handler Name: PITTSBURG MOTOR PARTS INC
Federal Waste Generator Description: Not a generator, verified
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 44611
NAICS Description: PHARMACIES AND DRUG STORES

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

I62 **PITTSBURG MOTOR PARTS, INC** **CA CONTRA COSTA CO. SITE LIST** **S103982028**
SW **360 E 10TH ST** **N/A**
1/8-1/4 **PITTSBURG, CA 94565**
0.146 mi.
773 ft. **Site 6 of 6 in cluster I**

Relative:
Higher

Actual:
24 ft.

CONTRA COSTA CO. SITE LIST:

Name:	PITTSBURG MOTOR PARTS, INC
Address:	360 E 10TH ST
City:	PITTSBURG
Facility ID:	FA0033422
Billing Status:	ACTIVE, BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	HWG: LESS THAN 5 TONS/YEAR
Region:	CONTRA COSTA
Cupa Number:	770910

J63 **MARINE EXPRESS PITTSBURG** **CA CERS HAZ WASTE** **S113460025**
ENE **695 E 3RD ST** **CA HIST UST** **N/A**
1/8-1/4 **PITTSBURG, CA 94565** **CA HAZNET**
0.147 mi. **CA CONTRA COSTA CO. SITE LIST**
777 ft. **Site 1 of 4 in cluster J** **CA CERS**
CA HWTS

Relative:
Lower

Actual:
7 ft.

CERS HAZ WASTE:

Name:	MARINE EXPRESS PITTSBURG
Address:	695 E 3RD ST
City,State,Zip:	PITTSBURG, CA 94565
Site ID:	424498
CERS ID:	10506232
CERS Description:	Hazardous Waste Generator

HIST UST:

Name:	JERICO DREDGING INC
Address:	695 EAST 3RD
City,State,Zip:	PITTSBURG, CA 94565
File Number:	00022BD5
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00022BD5.pdf
Region:	Not reported
Facility ID:	Not reported
Facility Type:	Not reported
Other Type:	Not reported
Contact Name:	Not reported
Telephone:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City,St,Zip:	Not reported
Total Tanks:	Not reported
Tank Num:	Not reported
Container Num:	Not reported
Year Installed:	Not reported
Tank Capacity:	Not reported
Tank Used for:	Not reported
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Not reported

MARINE EXPRESS PITTSBURG (Continued) **S113460025**

Click here for Geo Tracker PDF:

HAZNET:

Name:	MARINE EXPRESS INC
Address:	695 E 3RD ST
Address 2:	Not reported
City,State,Zip:	PITTSBURG, CA 945650000
Contact:	RANDALL ESCH
Telephone:	5105238900
Mailing Name:	Not reported
Mailing Address:	2900 MAIN ST STE 3200
Year:	2010
Gepaid:	CAC002653077
TSD EPA ID:	CAT000646117
CA Waste Code:	352 - Other organic solids
Disposal Method:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons:	133.1624

Additional Info:

Year:	2010
Gen EPA ID:	CAC002653077
Shipment Date:	20101006
Creation Date:	12/16/2010 18:30:19
Receipt Date:	20101006
Manifest ID:	004056840JJK
Trans EPA ID:	CAL000126290
Trans Name:	MARINE EXPRESS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT000646117
Trans Name:	CHEMICAL WASTE MANAGEMENT INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	13.4848
Waste Quantity:	16
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20101001
Creation Date:	12/3/2010 18:31:04
Receipt Date:	20101001
Manifest ID:	004056822JJK
Trans EPA ID:	CAR000165274
Trans Name:	INTRINSIC TRANSPORTATION INC

MARINE EXPRESS PITTSBURG (Continued) **S113460025**

Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT000646117
Trans Name:	CHEMICAL WASTE MANAGEMENT INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	15.1704
Waste Quantity:	18
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20101001
Creation Date:	12/3/2010 18:31:04
Receipt Date:	20101001
Manifest ID:	004056828JJK
Trans EPA ID:	CAR000185207
Trans Name:	ME TRUCKING
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT000646117
Trans Name:	CHEMICAL WASTE MANAGEMENT INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	15.1704
Waste Quantity:	18
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20100930
Creation Date:	12/3/2010 18:30:49
Receipt Date:	20100930
Manifest ID:	004056825JJK
Trans EPA ID:	CAL000126290
Trans Name:	MARINE EXPRESS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT000646117
Trans Name:	CHEMICAL WASTE MANAGEMENT INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids

MARINE EXPRESS PITTSBURG (Continued) **S113460025**

RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	13.4848
Waste Quantity:	16
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20100930
Creation Date:	12/3/2010 18:30:49
Receipt Date:	20100930
Manifest ID:	004056832JJK
Trans EPA ID:	CAR000185207
Trans Name:	ME TRUCKING
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT000646117
Trans Name:	CHEMICAL WASTE MANAGEMENT INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	15.1704
Waste Quantity:	18
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20100929
Creation Date:	12/3/2010 18:30:57
Receipt Date:	20100929
Manifest ID:	004056830JJK
Trans EPA ID:	CAR000185207
Trans Name:	M E TRUCKING
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT000646117
Trans Name:	CHEMICAL WASTE MANAGEMENT INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	15.1704
Waste Quantity:	18
Quantity Unit:	Y
Additional Code 1:	Not reported

MARINE EXPRESS PITTSBURG (Continued) **S113460025**

Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20100929
Creation Date:	12/3/2010 18:30:57
Receipt Date:	20100929
Manifest ID:	004056838JJK
Trans EPA ID:	CAR000171454
Trans Name:	WEST COAST TRANSPORT
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT000646117
Trans Name:	CHEMICAL WASTE MANAGEMENT INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	15.1704
Waste Quantity:	18
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20100928
Creation Date:	12/3/2010 18:30:42
Receipt Date:	20100928
Manifest ID:	004056823JJK
Trans EPA ID:	CAR000185207
Trans Name:	M E TRUCKING
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT000646117
Trans Name:	CHEMICAL WASTE MANAGEMENT INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	15.1704
Waste Quantity:	18
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20100927
Creation Date:	12/3/2010 18:30:42

MARINE EXPRESS PITTSBURG (Continued) **S113460025**

Receipt Date:	20100927
Manifest ID:	004056824JJK
Trans EPA ID:	CAR000185207
Trans Name:	ME TRUCKING
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT000646117
Trans Name:	CHEMICAL WASTE MANAGEMENT INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	15.1704
Waste Quantity:	18
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

CONTRA COSTA CO. SITE LIST:

Name:	MARINE EXPRESS PITTSBURG
Address:	695 E 3RD ST
City:	PITTSBURG
Facility ID:	FA0039855
Billing Status:	ACTIVE, BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	HMBP: LESS THAN 1000 LBS
Region:	CONTRA COSTA
Cupa Number:	775494

Name:	MARINE EXPRESS PITTSBURG
Address:	695 E 3RD ST
City:	PITTSBURG
Facility ID:	FA0039855
Billing Status:	ACTIVE, BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	HWG: LESS THAN 5 TONS/YEAR
Region:	CONTRA COSTA
Cupa Number:	775494

CERS:

Name:	MARINE EXPRESS PITTSBURG
Address:	695 E 3RD ST
City,State,Zip:	PITTSBURG, CA 94565
Site ID:	424498
CERS ID:	10506232
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	424498
Site Name:	Marine Express Pittsburg
Violation Date:	04-01-2019
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter

MARINE EXPRESS PITTSBURG (Continued) **S113460025**

6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes: Returned to compliance on 04/09/2019. OBSERVATION: AS OF APRIL 1, 2019, CCHSHMP HAS NOT RECEIVED/ACCEPTED A COMPLETE AND CORRECT CALIFORNIA ENVIRONMENTAL REPORTING SYSTEM (CERS) SUBMITTAL FOR THE FOLLOWING SUBMITTAL ELEMENT(S): Facility Information AND/OR Hazardous Materials Inventory AND/OR Emergency Response/Training Plans CORRECTIVE ACTION: IMMEDIATELY LOG ONTO CERS (https://cers.calepa.ca.gov/) AND SUBMIT COMPLETE/CORRECT Facility Information AND OR Hazardous Materials Inventory AND/OR Emergency Response/Training Plans.
Violation Division: Contra Costa County Health Services Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 424498
Site Name: Marine Express Pittsburg
Violation Date: 04-01-2019
Citation: HSC 6.11 25404(e)(4) - California Health and Safety Code, Chapter 6.11, Section(s) 25404(e)(4)
Violation Description: Failure to report program data electronically.
Violation Notes: Returned to compliance on 04/09/2019. OBSERVATION: AS OF APRIL 1, 2019, A COMPLETE AND CORRECT CALIFORNIA ENVIRONMENTAL REPORTING SYSTEM (CERS) FACILITY INFORMATION SUBMITTAL ELEMENT HAS NOT BEEN RECEIVED/ACCEPTED BY CCHSHMP. CORRECTIVE ACTION: IMMEDIATELY LOG ONTO CERS (https://cers.calepa.ca.gov/) AND SUBMIT COMPLETE/CORRECT FACILITY INFORMATION SUBMITTAL ELEMENT.
Violation Division: Contra Costa County Health Services Department
Violation Program: HW
Violation Source: CERS

Evaluation:
Eval General Type: Other/Unknown
Eval Date: 04-01-2019
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-01-2019
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-29-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported

MARINE EXPRESS PITTSBURG (Continued) **S113460025**

Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-29-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Enforcement Action:
Site ID: 424498
Site Name: Marine Express Pittsburg
Site Address: 695 E 3RD ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 04-01-2019
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 424498
Site Name: Marine Express Pittsburg
Site Address: 695 E 3RD ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 04-01-2019
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

Coordinates:
Site ID: 424498
Facility Name: Marine Express Pittsburg
Env Int Type Code: HMBP
Program ID: 10506232
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 38.032190
Longitude: -121.874440

Affiliation:
Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 2102 Kelley Ct.
Affiliation City: Pittsburg

MARINE EXPRESS PITTSBURG (Continued) **S113460025**

Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94565
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	Marine Express Pittsburg
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(510) 523-8900
Affiliation Type Desc:	CUPA District
Entity Name:	Contra Costa County Health Services Department
Entity Title:	Not reported
Affiliation Address:	4585 Pacheco BlvdSuite 100
Affiliation City:	Martinez
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94553
Affiliation Phone:	(925) 655-3200
Affiliation Type Desc:	Document Preparer
Entity Name:	Troy Esch
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	Troy Esch
Entity Title:	Not reported
Affiliation Address:	2102 Kelley Ct.
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94565
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Troy Esch
Entity Title:	VP
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Marine Express

MARINE EXPRESS PITTSBURG (Continued) **S113460025**

Entity Title:	Not reported
Affiliation Address:	2102 Kelley Ct.
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	94565
Affiliation Phone:	(510) 523-8900
Affiliation Type Desc:	Parent Corporation
Entity Name:	Marine Express Pittsburg
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Property Owner
Entity Name:	Marine Express
Entity Title:	Not reported
Affiliation Address:	2102 Kelley Ct.
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	94565
Affiliation Phone:	(510) 523-8900

HWTS:

Name:	MARINE EXPRESS INC
Address:	695 E 3RD ST
Address 2:	Not reported
City,State,Zip:	PITTSBURG, CA 945650000
EPA ID:	CAC002653077
Inactive Date:	10/26/2010
Create Date:	04/28/2010
Last Act Date:	12/01/2010
Mailing Name:	Not reported
Mailing Address:	2900 MAIN ST STE 3200
Mailing Address 2:	Not reported
Mailing City,State,Zip:	ALAMEDA, CA 94501
Owner Name:	MARINE EXPRESS INC
Owner Address:	2900 MAIN ST STE 3200
Owner Address 2:	Not reported
Owner City,State,Zip:	ALAMEDA, CA 94501
Contact Name:	RANDALL ESCH
Contact Address:	2900 MAIN ST STE 3200
Contact Address 2:	Not reported
City,State,Zip:	ALAMEDA, CA 94501

J64 **MARINE EXPRESS, INC** **RCRA NonGen / NLR** **1024865986**
ENE **695 E. THIRD STREET** **CAL000434568**
1/8-1/4 **PITTSBURG, CA 94565**
0.147 mi.
777 ft. **Site 2 of 4 in cluster J**

Relative: **Lower**
Actual: **7 ft.**

RCRA NonGen / NLR:

Date Form Received by Agency:		2018-03-26 00:00:00.0
Handler Name:	MARINE EXPRESS, INC	
Handler Address:		695 E. THIRD STREET
Handler City,State,Zip:		PITTSBURG, CA 94565
EPA ID:		CAL000434568
Contact Name:		RANDALL ESCH
Contact Address:		2102 KELLEY COURT
Contact City,State,Zip:		PITTSBURG, CA 94565
Contact Telephone:		510-523-8900
Contact Fax:		925-296-0543
Contact Email:		RMESCH@MARINEEXPRESS.US
Contact Title:		Not reported
EPA Region:		09
Land Type:		Not reported
Federal Waste Generator Description:		Not a generator, verified
Non-Notifier:		Not reported
Biennial Report Cycle:		Not reported
Accessibility:		Not reported
Active Site Indicator:		Handler Activities
State District Owner:		Not reported
State District:		Not reported
Mailing Address:		2102 KELLEY COURT
Mailing City,State,Zip:		PITTSBURG, CA 94565
Owner Name:		RANDALL ESCH
Owner Type:		Other
Operator Name:		RANDALL ESCH
Operator Type:		Other
Short-Term Generator Activity:		No
Importer Activity:		No
Mixed Waste Generator:		No
Transporter Activity:		No
Transfer Facility Activity:		No
Recycler Activity with Storage:		No
Small Quantity On-Site Burner Exemption:		No
Smelting Melting and Refining Furnace Exemption:		No
Underground Injection Control:		No
Off-Site Waste Receipt:		No
Universal Waste Indicator:		Yes
Universal Waste Destination Facility:		Yes
Federal Universal Waste:		No
Active Site Fed-Reg Treatment Storage and Disposal Facility:		Not reported
Active Site Converter Treatment storage and Disposal Facility:		Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:		Not reported
Active Site State-Reg Handler:		---
Federal Facility Indicator:		Not reported
Hazardous Secondary Material Indicator:		N
Sub-Part K Indicator:		Not reported
Commercial TSD Indicator:		No
Treatment Storage and Disposal Type:		Not reported
2018 GPRA Permit Baseline:		Not on the Baseline
2018 GPRA Renewals Baseline:		Not on the Baseline
Permit Renewals Workload Universe:		Not reported

MARINE EXPRESS, INC (Continued) **1024865986**

Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2018-09-07 19:37:45.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	RANDALL ESCH
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	2102 KELLEY COURT
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	510-523-8900
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	RANDALL ESCH
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	2102 KELLEY COURT
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	510-523-8900
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

MARINE EXPRESS, INC (Continued) **1024865986**

Historic Generators:
- Receive Date: 2018-03-26 00:00:00.0
- Handler Name: MARINE EXPRESS, INC
- Federal Waste Generator Description: Not a generator, verified
- State District Owner: Not reported
- Large Quantity Handler of Universal Waste: No
- Recognized Trader Importer: No
- Recognized Trader Exporter: No
- Spent Lead Acid Battery Importer: No
- Spent Lead Acid Battery Exporter: No
- Current Record: Yes
- Non Storage Recycler Activity: Not reported
- Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
- NAICS Code: 541990
- NAICS Description: ALL OTHER PROFESSIONAL, SCIENTIFIC, AND TECHNICAL SERVICES

Facility Has Received Notices of Violations:
- Violations: No Violations Found

Evaluation Action Summary:
- Evaluations: No Evaluations Found

J65 **695 EAST THIRD STREET** **CA CPS-SLIC** **S108724686**
ENE **695 EAST THIRD STREET** **CA BROWNFIELDS** **N/A**
1/8-1/4 **PITTSBURG, CA 94565** **CA CERS**
0.147 mi.
777 ft. **Site 3 of 4 in cluster J**

Relative: **Lower**

Actual: **7 ft.**

CPS-SLIC:
- Name: 695 EAST THIRD STREET
- Address: 695 EAST THIRD STREET
- City,State,Zip: PITTSBURG, CA 94565
- Region: STATE
- **Facility Status:** **Completed - Case Closed**
- Status Date: 09/07/2011
- Global Id: SL0601397790
- Lead Agency: SAN FRANCISCO BAY RWQCB (REGION 2)
- Lead Agency Case Number: Not reported
- Latitude: 38.032237
- Longitude: -121.874421
- Case Type: Cleanup Program Site
- Case Worker: MYM
- Local Agency: CONTRA COSTA COUNTY
- RB Case Number: 07S0189
- File Location: Regional Board
- Potential Media Affected: Soil
- Potential Contaminants of Concern: Other Solvent or Non-Petroleum Hydrocarbon, Chromium
- Site History: 695 East Third Street will be cleaned up under the Polanco Redevelopment Act (California Health and Safety Code Section 33459 et seq.). The Site is currently vacant and has been included ina unified development area names :Block 073 UDA". The proposed future use of Site may include a public use such as a port authority facility.

695 EAST THIRD STREET (Continued) **S108724686**

Click here to access the California GeoTracker records for this facility:

BROWNFIELDS:

Name:	695 EAST THIRD STREET
Address:	695 EAST THIRD STREET
City,State,Zip:	PITTSBURG, CA 94565
Global ID:	SL0601397790
Latitude:	38.032237
Longitude:	-121.874421
Project Type:	Cleanup Program Site
Status:	Completed - Case Closed
Status Date:	09/07/2011
Lead Agency:	SAN FRANCISCO BAY RWQCB (REGION 2)
Last Correspondence Date:	09/07/2011
Release Type:	Above Ground Storage Tank System - AGT
Contaminant(s) of Concern:	Other Solvent or Non-Petroleum Hydrocarbon, Chromium
Media of Concern:	Soil
Past Use(s) that Caused Contamination:	UNKNOWN
Human Health Exposure Controlled:	YES
Human Health Exposure Controlled Date:	01/02/2008
Groundwater Migration Controlled:	YES
Groundwater Migration Controlled Date:	01/02/2008
Primary Caseworker Name:	MARTIN MUSONGE
Primary Caseworker Organization Name:	SAN FRANCISCO BAY RWQCB (REGION 2)
Primary Caseworker Phone Number:	510-622-2396
Primary Caseworker Address:	1515 CLAY STREET
Primary Caseworker Address:	OAKLAND
Primary Caseworker Address:	CA
Primary Caseworker Email:	martin.musonge@waterboards.ca.gov

CERS:

Name:	695 EAST THIRD STREET
Address:	695 EAST THIRD STREET
City,State,Zip:	PITTSBURG, CA 94565
Site ID:	204630
CERS ID:	SL0601397790
CERS Description:	Cleanup Program Site

Affiliation:

Affiliation Type Desc:	Regional Board Caseworker
Entity Name:	MARTIN MUSONGE - SAN FRANCISCO BAY RWQCB (REGION 2)
Entity Title:	Not reported
Affiliation Address:	1515 CLAY STREET
Affiliation City:	OAKLAND
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Local Agency Caseworker
Entity Name:	MARIA ALIOTTI - REDEVELOPMENT AGENCY OF THE CITY OF PITT
Entity Title:	Not reported
Affiliation Address:	65 CIVIC AVENUE
Affiliation City:	PITTSBURG
Affiliation State:	CA
Affiliation Country:	Not reported

695 EAST THIRD STREET (Continued) **S108724686**

Affiliation Zip: Not reported
Affiliation Phone: Not reported

J66 **JERICO DREDGING INC.** **CA HIST UST** **U001597915**
ENE **695 E 3RD ST** **N/A**
1/8-1/4 **PITTSBURG, CA 94565**
0.147 mi.
777 ft. **Site 4 of 4 in cluster J**

Relative: **Lower**
Actual: **7 ft.**

HIST UST:

Name:	JERICO DREDGING INC.
Address:	695 E 3RD ST
City,State,Zip:	PITTSBURG, CA 94565
File Number:	Not reported
URL:	Not reported
Region:	STATE
Facility ID:	00000019252
Facility Type:	Other
Other Type:	SAND YARD
Contact Name:	Not reported
Telephone:	4154321202
Owner Name:	JERICO DREDGING INC.
Owner Address:	100 EAST D ST
Owner City,St,Zip:	PETALUMA, CA 94952
Total Tanks:	0001
Tank Num:	001
Container Num:	0000000001
Year Installed:	1980
Tank Capacity:	00010000
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor

H67 **JCS AUTO BODY** **RCRA NonGen / NLR** **1024867927**
South **999 HARBOR ST STE C** **CAL000436526**
1/8-1/4 **PITTSBURG, CA 94565**
0.148 mi.
780 ft. **Site 6 of 10 in cluster H**

Relative: **Higher**
Actual: **18 ft.**

RCRA NonGen / NLR:

Date Form Received by Agency:		2018-05-24 00:00:00.0
Handler Name:	JCS AUTO BODY	
Handler Address:		999 HARBOR ST STE C
Handler City,State,Zip:		PITTSBURG, CA 94565
EPA ID:		CAL000436526
Contact Name:		HOSAI MEHR
Contact Address:		622 W 15TH ST
Contact City,State,Zip:		ANITOCH, CA 94509
Contact Telephone:		925-214-1820
Contact Fax:		Not reported
Contact Email:		HOSAIMEHR@YAHOO.COM
Contact Title:		Not reported
EPA Region:		09

JCS AUTO BODY (Continued) **1024867927**

Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	999 HARBOR ST STE C
Mailing City,State,Zip:	PITTSBURG, CA 94565
Owner Name:	JULIO VALDEZ
Owner Type:	Other
Operator Name:	HOSAI MEHR
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	Yes
Universal Waste Destination Facility:	Yes
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No

JCS AUTO BODY (Continued) **1024867927**

Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2018-09-07 19:38:18.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	JULIO VALDEZ
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	622 W 15TH ST
Owner/Operator City,State,Zip:	ANITOCH, CA 94509
Owner/Operator Telephone:	925-338-6707
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	HOSAI MEHR
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	622 W 15TH ST
Owner/Operator City,State,Zip:	ANITOCH, CA 94509
Owner/Operator Telephone:	925-214-1820
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	2018-05-24 00:00:00.0
Handler Name: JCS AUTO BODY	
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	811121
NAICS Description:	AUTOMOTIVE BODY, PAINT, AND INTERIOR REPAIR AND MAINTENANCE

JCS AUTO BODY (Continued) **1024867927**

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

H68 **OBRIENS AUTO REPAIR** **RCRA NonGen / NLR** **1024839596**
South **999 HARBOR ST STE D** **CAL000387777**
1/8-1/4 **PITTSBURG, CA 94565**
0.148 mi.
780 ft. **Site 7 of 10 in cluster H**

Relative: **Higher**
Actual: **18 ft.**

RCRA NonGen / NLR:

Date Form Received by Agency:		2013-07-26 00:00:00.0
Handler Name:	OBRIENS AUTO REPAIR	
Handler Address:		999 HARBOR ST STE D
Handler City,State,Zip:		PITTSBURG, CA 94565
EPA ID:		CAL000387777
Contact Name:		SHANE OBRIEN
Contact Address:		40 LAKESPRING CT
Contact City,State,Zip:		OAKLEY, CA 94561
Contact Telephone:		925-439-1765
Contact Fax:		925-776-4439
Contact Email:		OBRIENAUTOREPAIR@YAHOO.COM
Contact Title:		Not reported
EPA Region:		09
Land Type:		Not reported
Federal Waste Generator Description:		Not a generator, verified
Non-Notifier:		Not reported
Biennial Report Cycle:		Not reported
Accessibility:		Not reported
Active Site Indicator:		Handler Activities
State District Owner:		Not reported
State District:		Not reported
Mailing Address:		999 HARBOR ST STE A
Mailing City,State,Zip:		PITTSBURG, CA 94565
Owner Name:		SHANE OBRIEN
Owner Type:		Other
Operator Name:		SHANE OBRIEN
Operator Type:		Other
Short-Term Generator Activity:		No
Importer Activity:		No
Mixed Waste Generator:		No
Transporter Activity:		No
Transfer Facility Activity:		No
Recycler Activity with Storage:		No
Small Quantity On-Site Burner Exemption:		No
Smelting Melting and Refining Furnace Exemption:		No
Underground Injection Control:		No
Off-Site Waste Receipt:		No
Universal Waste Indicator:		Yes
Universal Waste Destination Facility:		Yes
Federal Universal Waste:		No
Active Site Fed-Reg Treatment Storage and Disposal Facility:		Not reported
Active Site Converter Treatment storage and Disposal Facility:		Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:		Not reported

OBRIENS AUTO REPAIR (Continued) **1024839596**

Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2018-09-06 17:02:47.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	SHANE OBRIEN
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	40 LAKESPRING CT
Owner/Operator City,State,Zip:	OAKLEY, CA 94561
Owner/Operator Telephone:	925-439-1765
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	SHANE OBRIEN
Legal Status:	Other

OBRIENS AUTO REPAIR (Continued) **1024839596**

Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	40 LAKESPRING CT
Owner/Operator City,State,Zip:	OAKLEY, CA 94561
Owner/Operator Telephone:	925-439-1765
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	2013-07-26 00:00:00.0
Handler Name:	OBRIENS AUTO REPAIR
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	811111
NAICS Description:	GENERAL AUTOMOTIVE REPAIR

Facility Has Received Notices of Violations:

Violations:	No Violations Found

Evaluation Action Summary:

Evaluations:	No Evaluations Found

H69 **O'BRIENS AUTOMOTIVE REPAIR** **CA CONTRA COSTA CO. SITE LIST** **S117352960**
South **999 HARBOR ST A** **N/A**
1/8-1/4 **PITTSBURG, CA 94565**
0.148 mi.
780 ft. **Site 8 of 10 in cluster H**

Relative: **Higher**

Actual: **18 ft.**

CONTRA COSTA CO. SITE LIST:

Name:	O'BRIENS AUTOMOTIVE REPAIR
Address:	999 HARBOR ST A
City:	PITTSBURG
Facility ID:	FA0029489
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	UNDERGROUND STORAGE TANK SITE
Region:	CONTRA COSTA
Cupa Number:	772811

Name:	O'BRIENS AUTOMOTIVE REPAIR
Address:	999 HARBOR ST A
City:	PITTSBURG
Facility ID:	FA0029489
Billing Status:	ACTIVE, BILLABLE

O'BRIENS AUTOMOTIVE REPAIR (Continued) **S117352960**

Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HMBP: 1K-10K LBS, 0-19 EMPLOYEES
Region: CONTRA COSTA
Cupa Number: 772811

Name: O'BRIENS AUTOMOTIVE REPAIR
Address: 999 HARBOR ST A
City: PITTSBURG
Facility ID: FA0029489
Billing Status: ACTIVE, BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HWG: LESS THAN 5 TONS/YEAR
Region: CONTRA COSTA
Cupa Number: 772811

H70
South
1/8-1/4
0.148 mi.
780 ft.

JC'S AUTO BODY
999 HARBOR ST STE C
PITTSBURG, CA 94565

CA CERS HAZ WASTE **S112866411**
CA CONTRA COSTA CO. SITE LIST **N/A**

Site 9 of 10 in cluster H

Relative:
Higher

Actual:
18 ft.

CERS HAZ WASTE:
Name: JC'S AUTO BODY
Address: 999 HARBOR ST STE C
City,State,Zip: PITTSBURG, CA 94565
Site ID: 436568
CERS ID: 10760929
CERS Description: Hazardous Waste Generator

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-26-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Affiliation:
Affiliation Type Desc: CUPA District
Entity Name: Contra Costa County Health Services Department
Entity Title: Not reported
Affiliation Address: 4585 Pacheco BlvdSuite 100
Affiliation City: Martinez
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 94553
Affiliation Phone: (925) 655-3200

Affiliation Type Desc: Operator
Entity Name: Julio Valdez
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported

JC'S AUTO BODY (Continued) **S112866411**

Affiliation Phone:	(925) 252-8411
Affiliation Type Desc:	Parent Corporation
Entity Name:	Jc's Auto Body
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	Vanessa Hosai Mehr
Entity Title:	Not reported
Affiliation Address:	999 Harbor St suit C
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94565
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Julio Valdez
Entity Title:	owner
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Document Preparer
Entity Name:	Julio Valdez
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	999 Harbor St suit C
Affiliation City:	Pittsuburg
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94565
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Julio Valdez
Entity Title:	Not reported
Affiliation Address:	999 Harbor St suit C
Affiliation City:	Pittsburg

JC'S AUTO BODY (Continued) **S112866411**

Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 94565
Affiliation Phone: (925) 338-6707

CONTRA COSTA CO. SITE LIST:
Name: JC'S AUTO BODY
Address: 999 HARBOR ST C
City: PITTSBURG
Facility ID: FA0041169
Billing Status: ACTIVE, BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HWG: REPORTED ZERO
Region: CONTRA COSTA
Cupa Number: 776054

H71 **O'BRIENS AUTOMOTIVE REPAIR** **CA CERS HAZ WASTE** **S121744324**
South **999 HARBOR ST STE A** **CA CERS** **N/A**
1/8-1/4 **PITTSBURG, CA 94565**
0.148 mi.
780 ft. **Site 10 of 10 in cluster H**

Relative:
Higher

Actual:
18 ft.

CERS HAZ WASTE:
Name: O'BRIENS AUTOMOTIVE REPAIR
Address: 999 HARBOR ST STE A
City,State,Zip: PITTSBURG, CA 94565
Site ID: 139569
CERS ID: 10599460
CERS Description: Hazardous Waste Generator

CERS:
Name: O'BRIENS AUTOMOTIVE REPAIR
Address: 999 HARBOR ST STE A
City,State,Zip: PITTSBURG, CA 94565
Site ID: 139569
CERS ID: 10599460
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 139569
Site Name: O'Briens Automotive Repair
Violation Date: 04-02-2019
Citation: 40 CFR 1 265.173 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.173
Violation Description: Failure to meet the following container management requirements: (a) A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste. (b) A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.
Violation Notes: Returned to compliance on 04/04/2019. OBSERVATION: The drum for the drained used filters did not have a lid. CORRECTIVE ACTION: By May 2, 2019, provide documentation, such as a photo, to CCHSHMP showing the drum storing drained used filters is closed.
Violation Division: Contra Costa County Health Services Department
Violation Program: HW

O'BRIENS AUTOMOTIVE REPAIR (Continued) **S121744324**

Violation Source:	CERS
Site ID:	139569
Site Name:	O'Briens Automotive Repair
Violation Date:	05-26-2017
Citation:	HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description:	Business Plan Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 06/26/2017.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	139569
Site Name:	O'Briens Automotive Repair
Violation Date:	04-14-2017
Citation:	22 CCR 45 67450.2(b)(2) - California Code of Regulations, Title 22, Chapter 45, Section(s) 67450.2(b)(2)
Violation Description:	Failure to submit the signature page for the onsite treatment notification.
Violation Notes:	Returned to compliance on 04/02/2019.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HW
Violation Source:	CERS
Site ID:	139569
Site Name:	O'Briens Automotive Repair
Violation Date:	05-09-2016
Citation:	HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description:	Business Plan Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 10/10/2016.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	139569
Site Name:	O'Briens Automotive Repair
Violation Date:	04-01-2019
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes:	Returned to compliance on 04/02/2019. OBSERVATION: AS OF APRIL 1, 2019, CCHSHMP HAS NOT RECEIVED/ACCEPTED A COMPLETE AND CORRECT CALIFORNIA ENVIRONMENTAL REPORTING SYSTEM (CERS) SUBMITTAL FOR THE FOLLOWING SUBMITTAL ELEMENT(S): Facility Information AND/OR Hazardous Materials Inventory AND/OR Emergency Response/Training Plans CORRECTIVE ACTION: IMMEDIATELY LOG ONTO CERS (https://cers.calepa.ca.gov/) AND SUBMIT COMPLETE/CORRECT Facility Information AND OR Hazardous Materials Inventory AND/OR Emergency Response/Training Plans.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HMRRP
Violation Source:	CERS

O'BRIENS AUTOMOTIVE REPAIR (Continued) **S121744324**

Site ID: 139569
Site Name: O'Briens Automotive Repair
Violation Date: 05-26-2017
Citation: 22 CCR 45 67450.2(b)(2) - California Code of Regulations, Title 22, Chapter 45, Section(s) 67450.2(b)(2)
Violation Description: Failure to submit the signature page for the onsite treatment notification.
Violation Notes: Returned to compliance on 04/02/2019.
Violation Division: Contra Costa County Health Services Department
Violation Program: HW
Violation Source: CERS

Site ID: 139569
Site Name: O'Briens Automotive Repair
Violation Date: 04-15-2016
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 10/10/2016. H&SC 25508 (a)(1)(A) cers submittal
Violation Division: Contra Costa County Health Services Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 139569
Site Name: O'Briens Automotive Repair
Violation Date: 04-15-2016
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 10/10/2016.
Violation Division: Contra Costa County Health Services Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 139569
Site Name: O'Briens Automotive Repair
Violation Date: 03-27-2018
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes: Returned to compliance on 04/06/2018.
Violation Division: Contra Costa County Health Services Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 139569
Site Name: O'Briens Automotive Repair
Violation Date: 04-15-2016
Citation: HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description: Haz Waste Generator Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 10/10/2016.
Violation Division: Contra Costa County Health Services Department
Violation Program: HW

O'BRIENS AUTOMOTIVE REPAIR (Continued) **S121744324**

Violation Source: CERS

Site ID: 139569
Site Name: O'Briens Automotive Repair
Violation Date: 06-23-2016
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 10/10/2016.
Violation Division: Contra Costa County Health Services Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 139569
Site Name: O'Briens Automotive Repair
Violation Date: 04-14-2017
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 06/26/2017.
Violation Division: Contra Costa County Health Services Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 139569
Site Name: O'Briens Automotive Repair
Violation Date: 04-01-2019
Citation: HSC 6.11 25404(e)(4) - California Health and Safety Code, Chapter 6.11, Section(s) 25404(e)(4)
Violation Description: Failure to report program data electronically.
Violation Notes: Returned to compliance on 04/02/2019. OBSERVATION: AS OF APRIL 1, 2019, A COMPLETE AND CORRECT CALIFORNIA ENVIRONMENTAL REPORTING SYSTEM (CERS) FACILITY INFORMATION SUBMITTAL ELEMENT HAS NOT BEEN RECEIVED/ACCEPTED BY CCHSHMP. CORRECTIVE ACTION: IMMEDIATELY LOG ONTO CERS (https://cers.calepa.ca.gov/) AND SUBMIT COMPLETE/CORRECT FACILITY INFORMATION SUBMITTAL ELEMENT.
Violation Division: Contra Costa County Health Services Department
Violation Program: HW
Violation Source: CERS

Site ID: 139569
Site Name: O'Briens Automotive Repair
Violation Date: 04-02-2019
Citation: HSC 6.5 25160.2 - California Health and Safety Code, Chapter 6.5, Section(s) 25160.2
Violation Description: Failure of a generator of hazardous waste that meets the conditions to be transported on a consolidated manifest to comply with one or more of the required consolidated manifesting procedures and retain copies of receipts for three years.
Violation Notes: Returned to compliance on 04/04/2019. OBSERVATION: The facility states the hazardous waste disposal documentation was taken home for tax preparation purposes. Documentation of hazardous waste disposal documentation was not available at the time of inspection. CORRECTIVE ACTION: By May 2, 2019, provide copies of all 2016 - 2019 hazardous waste disposal documentation to CCHSHMP.
Violation Division: Contra Costa County Health Services Department
Violation Program: HW

O'BRIENS AUTOMOTIVE REPAIR (Continued) **S121744324**

Violation Source: CERS

Evaluation:

Eval General Type: Other/Unknown
Eval Date: 03-27-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-27-2018
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-01-2019
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-01-2019
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-02-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-02-2019
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

O'BRIENS AUTOMOTIVE REPAIR (Continued) **S121744324**

Eval General Type:	Other/Unknown
Eval Date:	04-04-2019
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	04-14-2017
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	04-14-2017
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-15-2016
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-15-2016
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	05-09-2016
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	05-23-2018
Violations Found:	No

O'BRIENS AUTOMOTIVE REPAIR (Continued) **S121744324**

Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-26-2017
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-26-2017
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-23-2016
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-12-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-13-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Enforcement Action:
Site ID: 139569
Site Name: O'Briens Automotive Repair
Site Address: 999 HARBOR ST STE A
Site City: PITTSBURG
Site Zip: 94565

O'BRIENS AUTOMOTIVE REPAIR (Continued) **S121744324**

Enf Action Date: 03-27-2018
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 139569
Site Name: O'Briens Automotive Repair
Site Address: 999 HARBOR ST STE A
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 03-27-2018
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: UNSPEC
Enf Action Source: CERS

Site ID: 139569
Site Name: O'Briens Automotive Repair
Site Address: 999 HARBOR ST STE A
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 04-01-2019
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 139569
Site Name: O'Briens Automotive Repair
Site Address: 999 HARBOR ST STE A
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 04-01-2019
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

Site ID: 139569
Site Name: O'Briens Automotive Repair
Site Address: 999 HARBOR ST STE A
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 04-02-2019
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department

O'BRIENS AUTOMOTIVE REPAIR (Continued) **S121744324**

Enf Action Program: HW
Enf Action Source: CERS

Site ID: 139569
Site Name: O'Briens Automotive Repair
Site Address: 999 HARBOR ST STE A
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 04-14-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 139569
Site Name: O'Briens Automotive Repair
Site Address: 999 HARBOR ST STE A
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 04-14-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

Site ID: 139569
Site Name: O'Briens Automotive Repair
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Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

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Enf Action Date: 04-15-2016
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Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

Site ID: 139569
Site Name: O'Briens Automotive Repair

O'BRIENS AUTOMOTIVE REPAIR (Continued) **S121744324**

Site Address: 999 HARBOR ST STE A
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 05-09-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 139569
Site Name: O'Briens Automotive Repair
Site Address: 999 HARBOR ST STE A
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 05-23-2018
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: UNSPEC
Enf Action Source: CERS

Site ID: 139569
Site Name: O'Briens Automotive Repair
Site Address: 999 HARBOR ST STE A
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 05-26-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 139569
Site Name: O'Briens Automotive Repair
Site Address: 999 HARBOR ST STE A
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 05-26-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

Site ID: 139569
Site Name: O'Briens Automotive Repair
Site Address: 999 HARBOR ST STE A
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 06-23-2016
Enf Action Type: Notice of Violation (Unified Program)

O'BRIENS AUTOMOTIVE REPAIR (Continued) **S121744324**

Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Affiliation:
Affiliation Type Desc: Identification Signer
Entity Name: Shane O'Brien
Entity Title: Owner
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: Shane O'Brien
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (925) 446-5830

Affiliation Type Desc: Document Preparer
Entity Name: Shane O'Brien
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 999 Harbor St Ste A
Affiliation City: Pittsburg
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 94565
Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: Shane O'Brien
Entity Title: Not reported
Affiliation Address: 999 Harbor St Ste A
Affiliation City: Pittsburg
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 94565
Affiliation Phone: Not reported

O'BRIENS AUTOMOTIVE REPAIR (Continued) **S121744324**

Affiliation Type Desc:	CUPA District
Entity Name:	Contra Costa County Health Services Department
Entity Title:	Not reported
Affiliation Address:	4585 Pacheco BlvdSuite 100
Affiliation City:	Martinez
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94553
Affiliation Phone:	(925) 655-3200
Affiliation Type Desc:	Legal Owner
Entity Name:	Shane O'Brien
Entity Title:	Not reported
Affiliation Address:	999 Harbor St Ste A
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	94565
Affiliation Phone:	(925) 446-5830
Affiliation Type Desc:	Parent Corporation
Entity Name:	Obriens Automotive Repair
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

K72 **RIVERVIEW FIRE STATION 84** **CA HIST UST** **U001597941**
West **200 E 6TH ST** **CA CONTRA COSTA CO. SITE LIST** **N/A**
1/8-1/4 **PITTSBURG, CA 94565**
0.156 mi.
824 ft. **Site 1 of 2 in cluster K**

Relative:
Higher

Actual:
30 ft.

HIST UST:

Name:	RIVERVIEW FIRE STATION 84
Address:	200 E 6TH ST
City,State,Zip:	PITTSBURG, CA 94565
File Number:	00022E7B
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00022E7B.pdf
Region:	STATE
Facility ID:	00000022333
Facility Type:	Not reported
Other Type:	FIRE STATION
Contact Name:	PITTSBURG
Telephone:	4154324773
Owner Name:	RIVERVIEW FIRE PROTECTION DIST
Owner Address:	1500 WEST FOURTH STREET
Owner City,St,Zip:	ANTIOCH, CA 94509
Total Tanks:	0002
Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00000500

RIVERVIEW FIRE STATION 84 (Continued) **U001597941**

Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Container Construction Thickness:	Not reported
Leak Detection:	Visual

Tank Num:	002
Container Num:	2
Year Installed:	Not reported
Tank Capacity:	00001000
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Container Construction Thickness:	Not reported
Leak Detection:	Visual

Click here for Geo Tracker PDF:

CONTRA COSTA CO. SITE LIST:

Name:	CONTRA COSTA FIRE INVESTIGATION UNIT
Address:	200 E 6TH ST
City:	PITTSBURG
Facility ID:	FA0031935
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	HMBP: 1K-10K LBS, 0-19 EMPLOYEES
Region:	CONTRA COSTA
Cupa Number:	722333

Name:	CONTRA COSTA FIRE INVESTIGATION UNIT
Address:	200 E 6TH ST
City:	PITTSBURG
Facility ID:	FA0031935
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	UNDERGROUND STORAGE TANK SITE
Region:	CONTRA COSTA
Cupa Number:	722333

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73 **RIVERSIDE REDEVELOPMENT** **CA CONTRA COSTA CO. SITE LIST** **S102261646**
WNW **500 CUMBERLAND ST** **N/A**
1/8-1/4 **PITTSBURG, CA 94565**
0.177 mi.
934 ft.

Relative:
Higher

Actual:
25 ft.

CONTRA COSTA CO. SITE LIST:

Name:	RIVERSIDE REDEVELOPMENT
Address:	500 CUMBERLAND ST
City:	PITTSBURG
Facility ID:	FA0028461
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	UNDERGROUND STORAGE TANK SITE
Region:	CONTRA COSTA
Cupa Number:	771711

K74 **MAGNOLI, ED** **CA CONTRA COSTA CO. SITE LIST** **S102261607**
West **192 7TH ST** **N/A**
1/8-1/4 **PITTSBURG, CA 94565**
0.180 mi.
950 ft. **Site 2 of 2 in cluster K**

Relative:
Higher

Actual:
31 ft.

CONTRA COSTA CO. SITE LIST:

Name:	MAGNOLI, ED
Address:	192 7TH ST
City:	PITTSBURG
Facility ID:	FA0033253
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	UNDERGROUND STORAGE TANK SITE
Region:	CONTRA COSTA
Cupa Number:	770740

L75 **LAST CHANCE CLUB** **CA CONTRA COSTA CO. SITE LIST** **S102261645**
NW **340 CUMBERLAND ST** **N/A**
1/8-1/4 **PITTSBURG, CA 94565**
0.184 mi.
970 ft. **Site 1 of 3 in cluster L**

Relative:
Higher

Actual:
18 ft.

CONTRA COSTA CO. SITE LIST:

Name:	LAST CHANCE CLUB
Address:	340 CUMBERLAND ST
City:	PITTSBURG
Facility ID:	FA0033466
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	UNDERGROUND STORAGE TANK SITE
Region:	CONTRA COSTA
Cupa Number:	770955

M76 **GRANBERG PUMPS METER LTD DBA GRANBERG INTERNATIONA** **RCRA NonGen / NLR** **1024851996**
SW **1051 LOS MEDANOS ST** **CAL000410872**
1/8-1/4 **PITTSBURG, CA 94565**
0.185 mi.
976 ft. **Site 1 of 4 in cluster M**

Relative:
Higher

Actual:
27 ft.

RCRA NonGen / NLR:

Date Form Received by Agency:	2015-10-02 00:00:00.0
Handler Name:	GRANBERG PUMPS METER LTD DBA GRANBERG INTERNATIONAL
Handler Address:	1051 LOS MEDANOS ST
Handler City,State,Zip:	PITTSBURG, CA 94565
EPA ID:	CAL000410872
Contact Name:	SYLVIA MAHLEY
Contact Address:	1051 LOS MEDANOS ST
Contact City,State,Zip:	PITTSBURG, CA 94565
Contact Telephone:	325-380-9393
Contact Fax:	Not reported
Contact Email:	SYLVIAMAHLEY@GRANBERG.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported

GRANBERG PUMPS METER LTD DBA GRANBERG INTERNATIONAL (Continued) **1024851996**

Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	1051 LOS MEDANOS ST
Mailing City,State,Zip:	PITTSBURG, CA 94565
Owner Name:	ERIK GRANBERG
Owner Type:	Other
Operator Name:	SYLVIA MAHLEY
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	Yes
Universal Waste Destination Facility:	Yes
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported

GRANBERG PUMPS METER LTD DBA GRANBERG INTERNATIONAL (Continued) **1024851996**

Handler Date of Last Change:	2018-09-06 17:06:50.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	SYLVIA MAHLEY
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	1051 LOS MEDANOS ST
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	325-380-9393
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	ERIK GRANBERG
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	1051 LOS MEDANOS ST
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	925-380-9400
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	2015-10-02 00:00:00.0
Handler Name:	GRANBERG PUMPS METER LTD DBA GRANBERG INTERNATIONAL
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	56299
NAICS Description:	ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations:	No Violations Found

GRANBERG PUMPS METER LTD DBA GRANBERG INTERNATIONAL (Continued) **1024851996**

Evaluation Action Summary:
Evaluations: No Evaluations Found

M77 **GRANBERG PUMP & METER** **CA CERS HAZ WASTE** **S120629638**
SW **1051 LOS MEDANOS ST** **CA HAZNET** **N/A**
1/8-1/4 **PITTSBURG, CA 94565** **CA CONTRA COSTA CO. SITE LIST**
0.185 mi. **CA CERS**
976 ft. **Site 2 of 4 in cluster M** **CA HWTS**

Relative:
Higher

Actual:
27 ft.

CERS HAZ WASTE:
Name: GRANBERG PUMP & METER
Address: 1051 LOS MEDANOS ST
City,State,Zip: PITTSBURG, CA 94565
Site ID: 423867
CERS ID: 10739050
CERS Description: Hazardous Waste Generator

HAZNET:
Name: GRANBERG PUMPS METER LTD DBA GRANBERG INTERNATIONAL
Address: 1051 LOS MEDANOS ST
Address 2: Not reported
City,State,Zip: PITTSBURG, CA 94565
Contact: SYLVIA MAHLEY
Telephone: 3253809393
Mailing Name: Not reported
Mailing Address: 1051 LOS MEDANOS ST

Year: 2019
Gepaid: CAL000410872
TSD EPA ID: AZR000515924
CA Waste Code: 343 - Unspecified organic liquid mixture
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 1.27500

Year: 2018
Gepaid: CAL000410872
TSD EPA ID: AZR000515924
CA Waste Code: 343 - Unspecified organic liquid mixture
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 3.31500

Year: 2017
Gepaid: CAL000410872
TSD EPA ID: AZR000515924
CA Waste Code: 343 - Unspecified organic liquid mixture
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 5.219

Year: 2016
Gepaid: CAL000410872
TSD EPA ID: AZR000515924
CA Waste Code: 343 - Unspecified organic liquid mixture
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No

GRANBERG PUMP & METER (Continued) **S120629638**

	Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.935
Year:	2016
Gepaid:	CAL000410872
TSD EPA ID:	AZR000515924
CA Waste Code:	223 - Unspecified oil-containing waste
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.97995

Additional Info:

Year:	2017
Gen EPA ID:	CAL000410872
Shipment Date:	20170925
Creation Date:	7/17/2018 18:30:34
Receipt Date:	20171006
Manifest ID:	016710556JJK
Trans EPA ID:	CAR000171017
Trans Name:	FREMOUW ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	CAR000175422
Trans 2 Name:	WORLDWIDE RECOVERY SYSTEM INC
TSDF EPA ID:	AZR000515924
Trans Name:	YUMA YES LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	1.785
Waste Quantity:	525
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20170804
Creation Date:	7/25/2018 18:30:29
Receipt Date:	20170811
Manifest ID:	010689258JJK
Trans EPA ID:	CAR000171017
Trans Name:	FREMOUW ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	CAR000175422
Trans 2 Name:	WORLDWIDE RECOVERY SYSTEM INC
TSDF EPA ID:	AZR000515924
Trans Name:	YUMA YES LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)

GRANBERG PUMP & METER (Continued) **S120629638**

Quantity Tons:	1.36
Waste Quantity:	400
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20170531
Creation Date:	8/2/2018 18:30:37
Receipt Date:	20170613
Manifest ID:	016711324JJK
Trans EPA ID:	CAR000171017
Trans Name:	FREMOUW ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	CAR000175422
Trans 2 Name:	WORLDWIDE RECOVERY SYSTEM INC
TSDF EPA ID:	AZR000515924
Trans Name:	YUMA YES LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.374
Waste Quantity:	110
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20170531
Creation Date:	8/2/2018 18:30:37
Receipt Date:	20170613
Manifest ID:	016711324JJK
Trans EPA ID:	CAR000171017
Trans Name:	FREMOUW ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	CAR000175422
Trans 2 Name:	WORLDWIDE RECOVERY SYSTEM INC
TSDF EPA ID:	AZR000515924
Trans Name:	YUMA YES LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	1.7
Waste Quantity:	500
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported

GRANBERG PUMP & METER (Continued) **S120629638**

Additional Code 5: Not reported

CONTRA COSTA CO. SITE LIST:
Name: GRANBERG PUMP & METER
Address: 1051 LOS MEDANOS ST
City: PITTSBURG
Facility ID: FA0039573
Billing Status: ACTIVE, BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HMBP: 1K-10K LBS, 20+ EMPLOYEES
Region: CONTRA COSTA
Cupa Number: 775465

Name: GRANBERG PUMP & METER
Address: 1051 LOS MEDANOS ST
City: PITTSBURG
Facility ID: FA0039573
Billing Status: ACTIVE, BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HWG: LESS THAN 5 TONS/YEAR
Region: CONTRA COSTA
Cupa Number: 775465

CERS:
Name: GRANBERG PUMP & METER
Address: 1051 LOS MEDANOS ST
City,State,Zip: PITTSBURG, CA 94565
Site ID: 423867
CERS ID: 10739050
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 423867
Site Name: Granberg Pump & Meter
Violation Date: 06-29-2017
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Training - General
Violation Notes: Returned to compliance on 07/21/2017.
Violation Division: Contra Costa County Health Services Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 423867
Site Name: Granberg Pump & Meter
Violation Date: 08-02-2019
Citation: 22 CCR 12 66262.11 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.11
Violation Description: Failure to determine if wastes generated are hazardous waste by using generator knowledge or applying testing method.
Violation Notes: OBSERVATION: It has not been determined if grinding dust is hazardous. CORRECTIVE ACTION: Make a hazardous waste determination on grinding dust. Test for metals (CAM 17) submit results to CCHSHMP. If hazardous dispose of grinding dust as hazardous waste.
Violation Division: Contra Costa County Health Services Department
Violation Program: HW
Violation Source: CERS

GRANBERG PUMP & METER (Continued) **S120629638**

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-29-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-29-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	07-24-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-02-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-02-2019
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HW
Eval Source:	CERS

Enforcement Action:

Site ID:	423867
Site Name:	Granberg Pump & Meter
Site Address:	1051 LOS MEDANOS ST
Site City:	PITTSBURG
Site Zip:	94565
Enf Action Date:	06-29-2017
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported

GRANBERG PUMP & METER (Continued) **S120629638**

Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 423867
Site Name: Granberg Pump & Meter
Site Address: 1051 LOS MEDANOS ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 08-02-2019
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

Coordinates:
Site ID: 423867
Facility Name: Granberg Pump & Meter
Env Int Type Code: HMBP
Program ID: 10739050
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 38.026740
Longitude: -121.882890

Affiliation:
Affiliation Type Desc: Operator
Entity Name: Granberg Pump & Meter
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (925) 380-9393

Affiliation Type Desc: Property Owner
Entity Name: Thehotel Holdings
Entity Title: Not reported
Affiliation Address: 1051 lOs Medanos St
Affiliation City: Pittburg
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 94565
Affiliation Phone: (707) 310-0952

Affiliation Type Desc: Document Preparer
Entity Name: Sylvia Mahley
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported

GRANBERG PUMP & METER (Continued) **S120629638**

Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	1051 Los Medanos St
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94565
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	Sylvia Mahley
Entity Title:	Not reported
Affiliation Address:	1051 Los Medanos St
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94565
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Sylvia Mahley
Entity Title:	Office Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Erik Granberg
Entity Title:	Not reported
Affiliation Address:	1051 Los Medanos St
Affiliation City:	Pittburg
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	94565
Affiliation Phone:	(925) 380-9400
Affiliation Type Desc:	Parent Corporation
Entity Name:	Granberg Pump & Meter
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	Contra Costa County Health Services Department
Entity Title:	Not reported
Affiliation Address:	4585 Pacheco BlvdSuite 100
Affiliation City:	Martinez

GRANBERG PUMP & METER (Continued) **S120629638**

Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 94553
Affiliation Phone: (925) 655-3200

HWTS:
Name: GRANBERG PUMPS METER LTD DBA GRANBERG INTERNATIONAL
Address: 1051 LOS MEDANOS ST
Address 2: Not reported
City,State,Zip: PITTSBURG, CA 94565
EPA ID: CAL000410872
Inactive Date: Not reported
Create Date: 10/02/2015
Last Act Date: 08/21/2020
Mailing Name: Not reported
Mailing Address: 1051 LOS MEDANOS ST
Mailing Address 2: Not reported
Mailing City,State,Zip: PITTSBURG, CA 94565
Owner Name: ERIK GRANBERG
Owner Address: 1051 LOS MEDANOS ST
Owner Address 2: Not reported
Owner City,State,Zip: PITTSBURG, CA 94565
Contact Name: SYLVIA MAHLEY
Contact Address: 1051 LOS MEDANOS ST
Contact Address 2: Not reported
City,State,Zip: PITTSBURG, CA 94565

NAICS:
EPA ID: CAL000410872
Create Date: 2015-10-02 09:32:25.337
NAICS Code: 336399
NAICS Description: All Other Motor Vehicle Parts Manufacturing
Issued EPA ID Date: 2015-10-02 09:32:25.29000
Inactive Date: Not reported
Facility Name: GRANBERG PUMPS METER LTD DBA GRANBERG INTERNATIONAL
Facility Address: 1051 LOS MEDANOS ST
Facility Address 2: Not reported
Facility City: PITTSBURG
Facility County: Not reported
Facility State: CA
Facility Zip: 94565

N78 **DEROSA AUTO BODY** **CA HAZNET** **S109821434**
South **1090 HARBOR ST** **CA CONTRA COSTA CO. SITE LIST** **N/A**
1/8-1/4 **PITTSBURG, CA 94565** **CA HWTS**
0.185 mi.
977 ft. **Site 1 of 3 in cluster N**

Relative:
Higher

Actual:
22 ft.

HAZNET:
Name: DEROSA AUTO BODY
Address: 1090 HARBOR ST
Address 2: Not reported
City,State,Zip: PITTSBURG, CA 945652663
Contact: FRANK DEROSA
Telephone: 9254395115
Mailing Name: Not reported

DEROSA AUTO BODY (Continued) **S109821434**

Mailing Address: 1090 HARBOR ST

Year: 2009
Gepaid: CAL000345895
TSD EPA ID: CAD008252405
CA Waste Code: 214 - Unspecified solvent mixture
Disposal Method: H020 - Solvents Recovery
Tons: 0.018

Additional Info:
Year: 2009
Gen EPA ID: CAL000345895

Shipment Date: 20091103
Creation Date: 5/27/2010 18:31:00
Receipt Date: 20091106
Manifest ID: 004992310JJK
Trans EPA ID: CAR000194837
Trans Name: PACIFIC COAST LACQUER
Trans 2 EPA ID: CAD008252405
Trans 2 Name: PACIFIC RESOURCE RECOVERY
TSDF EPA ID: CAD008252405
Trans Name: PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 214 - Unspecified solvent mixture
RCRA Code: F005
Meth Code: H020 - Solvents Recovery
Quantity Tons: 0.018
Waste Quantity: 5
Quantity Unit: G
Additional Code 1: F003
Additional Code 2: D001
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

CONTRA COSTA CO. SITE LIST:
Name: DEROSA AUTO BODY
Address: 1090 HARBOR ST
City: PITTSBURG
Facility ID: FA0031017
Billing Status: INACTIVE, NON-BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HWG: REPORTED ZERO
Region: CONTRA COSTA
Cupa Number: 774128

HWTS:
Name: DEROSA AUTO BODY
Address: 1090 HARBOR ST
Address 2: Not reported
City,State,Zip: PITTSBURG, CA 945652663
EPA ID: CAL000345895
Inactive Date: 06/30/2012

DEROSA AUTO BODY (Continued) **S109821434**

Create Date:	08/19/2009
Last Act Date:	04/02/2013
Mailing Name:	Not reported
Mailing Address:	1090 HARBOR ST
Mailing Address 2:	Not reported
Mailing City,State,Zip:	PITTSBURG, CA 945652663
Owner Name:	FRANK DEROSA
Owner Address:	1090 HARBOR ST
Owner Address 2:	Not reported
Owner City,State,Zip:	PITTSBURG, CA 945652663
Contact Name:	FRANK DEROSA
Contact Address:	1090 HARBOR ST
Contact Address 2:	Not reported
City,State,Zip:	PITTSBURG, CA 945652663

NAICS:

EPA ID:	CAL000345895
Create Date:	2009-08-19 08:09:53.360
NAICS Code:	811121
NAICS Description:	Automotive Body, Paint, and Interior Repair and Maintenance
Issued EPA ID Date:	2009-08-19 08:09:53.26300
Inactive Date:	2012-06-30 00:00:00
Facility Name:	DEROSA AUTO BODY
Facility Address:	1090 HARBOR ST
Facility Address 2:	Not reported
Facility City:	PITTSBURG
Facility County:	Not reported
Facility State:	CA
Facility Zip:	945652663

M79 **CATALINE BUILT HOMES INC** **CA SWEEPS UST** **U001597897**
SW **1050 LOS MEDANOS STREET** **CA HIST UST** **N/A**
1/8-1/4 **PITTSBURG, CA 94565**
0.185 mi.
979 ft. **Site 3 of 4 in cluster M**

Relative:
Higher

Actual:
27 ft.

SWEEPS UST:

Name:	CATALINE BUILT HOMES, INC.
Address:	1050 LOS MEDANOS ST
City:	PITTSBURG
Status:	Not reported
Comp Number:	12590
Number:	Not reported
Board Of Equalization:	Not reported
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	07-000-012590-000001
Tank Status:	Not reported
Capacity:	1000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	PRODUCT
Content:	REG UNLEADED
Number Of Tanks:	2

CATALINE BUILT HOMES INC (Continued) **U001597897**

Name:	CATALINE BUILT HOMES, INC.
Address:	1050 LOS MEDANOS ST
City:	PITTSBURG
Status:	Not reported
Comp Number:	12590
Number:	Not reported
Board Of Equalization:	Not reported
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	07-000-012590-000002
Tank Status:	Not reported
Capacity:	550
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	PRODUCT
Content:	REG UNLEADED
Number Of Tanks:	Not reported

HIST UST:

Name:	CATALINE BUILT HOMES INC
Address:	1050 LOS MEDANOS STREET
City,State,Zip:	PITTSBURG, CA 94565
File Number:	0002287B
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002287B.pdf
Region:	STATE
Facility ID:	00000012590
Facility Type:	Other
Other Type:	CONSTRUCTION YARD
Contact Name:	PHILLIP J. TERRANOVA
Telephone:	4154324754
Owner Name:	CATALINE BUILT HOMES, INC.
Owner Address:	1050 LOS MEDANOS STREET
Owner City,St,Zip:	PITTSBURG, CA 94565
Total Tanks:	0002
Tank Num:	001
Container Num:	2
Year Installed:	1979
Tank Capacity:	00001000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Container Construction Thickness:	10
Leak Detection:	Stock Inventor
Tank Num:	002
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00000550
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor

CATALINE BUILT HOMES INC (Continued) **U001597897**

Click here for Geo Tracker PDF:

M80 **CATALINE BUILT HOMES INC** **CA LUST** **S104162248**
SW **1050 LOS MEDANOS ST** **CA Cortese** **N/A**
1/8-1/4 **PITTSBURG, CA 94565** **CA HIST CORTESE**
0.185 mi. **CA CONTRA COSTA CO. SITE LIST**
979 ft. **Site 4 of 4 in cluster M** **CA CERS**

Relative:
Higher

Actual:
27 ft.

LUST REG 2:

Region:	2
Facility Id:	07-0516
Facility Status:	Case Closed
Case Number:	12590
How Discovered:	Tank Closure
Leak Cause:	Structure Failure
Leak Source:	Tank
Date Leak Confirmed:	5/5/1994
Oversight Program:	LUST
Prelim. Site Assesment Wokplan Submitted:	Not reported
Preliminary Site Assesment Began:	Not reported
Pollution Characterization Began:	Not reported
Pollution Remediation Plan Submitted:	Not reported
Date Remediation Action Underway:	Not reported
Date Post Remedial Action Monitoring Began:	Not reported

LUST:

Name:	CATALINE BUILT HOMES INC
Address:	1050 LOS MEDANOS ST
City,State,Zip:	PITTSBURG, CA 94565
Lead Agency:	SAN FRANCISCO BAY RWQCB (REGION 2)
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0601300477
Global Id:	T0601300477
Latitude:	38.0270501
Longitude:	-121.8832143
Status:	Completed - Case Closed
Status Date:	03/21/1997
Case Worker:	Not reported
RB Case Number:	07-0516
Local Agency:	CONTRA COSTA COUNTY
File Location:	Not reported
Local Case Number:	12590
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

LUST:

Global Id:	T0601300477
Contact Type:	Local Agency Caseworker
Contact Name:	SUE LOYD
Organization Name:	CONTRA COSTA COUNTY
Address:	4333 PACHECO BLVD.
City:	MARTINEZ
Email:	sloyd@hsd.co.contra-costa.ca.us
Phone Number:	Not reported

LUST:

CATALINE BUILT HOMES INC (Continued) **S104162248**

Global Id: T0601300477
Action Type: Other
Date: 11/18/1986
Action: Leak Discovery

Global Id: T0601300477
Action Type: ENFORCEMENT
Date: 03/21/1997
Action: Closure/No Further Action Letter

Global Id: T0601300477
Action Type: Other
Date: 11/18/1986
Action: Leak Stopped

Global Id: T0601300477
Action Type: Other
Date: 02/07/1990
Action: Leak Reported

LUST:
Global Id: T0601300477
Status: Open - Case Begin Date
Status Date: 11/18/1986

Global Id: T0601300477
Status: Open - Site Assessment
Status Date: 05/05/1994

Global Id: T0601300477
Status: Completed - Case Closed
Status Date: 03/21/1997

CORTESE:
Name: CATALINE BUILT HOMES INC
Address: 1050 LOS MEDANOS ST
City,State,Zip: PITTSBURG, CA 94565
Region: CORTESE
Envirostor Id: Not reported
Global ID: T0601300477
Site/Facility Type: LUST CLEANUP SITE
Cleanup Status: COMPLETED - CASE CLOSED
Status Date: Not reported
Site Code: Not reported
Latitude: Not reported
Longitude: Not reported
Owner: Not reported
Enf Type: Not reported
Swat R: Not reported
Flag: active
Order No: Not reported
Waste Discharge System No: Not reported
Effective Date: Not reported
Region 2: Not reported
WID Id: Not reported

CATALINE BUILT HOMES INC (Continued) **S104162248**

Solid Waste Id No: Not reported
Waste Management Uit Name: Not reported
File Name: Active Open

HIST CORTESE:
edr_fname: CATALINE BUILT HOMES INC
edr_fadd1: 1050 LOS MEDANOS
City,State,Zip: PITTSBURG, CA 94565
Region: CORTESE
Facility County Code: 7
Reg By: LTNKA
Reg Id: 07-0516

CONTRA COSTA CO. SITE LIST:
Name: CATALINE BUILT HOMES, INC
Address: 1050 LOS MEDANOS ST
City: PITTSBURG
Facility ID: FA0031629
Billing Status: INACTIVE, NON-BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: UNDERGROUND STORAGE TANK SITE
Region: CONTRA COSTA
Cupa Number: 712590

CERS:
Name: CATALINE BUILT HOMES INC
Address: 1050 LOS MEDANOS ST
City,State,Zip: PITTSBURG, CA 94565
Site ID: 222165
CERS ID: T0601300477
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: SUE LOYD - CONTRA COSTA COUNTY
Entity Title: Not reported
Affiliation Address: 4333 PACHECO BLVD.
Affiliation City: MARTINEZ
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

N81 **CALIFORNIA EXPANDED METAL PRODUCTS CO.** **CA CONTRA COSTA CO. SITE LIST** **S111293292**
South **1001 PITTSBURG-ANTIOCH HWY A** **N/A**
1/8-1/4 **PITTSBURG, CA 94565**
0.206 mi.
1086 ft. **Site 2 of 3 in cluster N**

Relative: **Higher**

Actual: **22 ft.**

CONTRA COSTA CO. SITE LIST:
Name: CALIFORNIA EXPANDED METAL PRODUCTS CO.
Address: 1001 PITTSBURG-ANTIOCH HWY A
City: PITTSBURG
Facility ID: FA0031484
Billing Status: ACTIVE, BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST

CALIFORNIA EXPANDED METAL PRODUCTS CO. (Continued) **S111293292**

Program/Elements: HMBP: 1K-10K LBS, 20+ EMPLOYEES
Region: CONTRA COSTA
Cupa Number: 774384

Name: CALIFORNIA EXPANDED METAL PRODUCTS CO.
Address: 1001 PITTSBURG-ANTIOCH HWY A
City: PITTSBURG
Facility ID: FA0031484
Billing Status: ACTIVE, BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HWG: LESS THAN 5 TONS/YEAR
Region: CONTRA COSTA
Cupa Number: 774384

N82 **CALIFORNIA EXPANDED METAL PRODUCTS CO.** **CA CERS HAZ WASTE** **S121737179**
South **1001A PITTSBURG ANTIOCH HWY** **CA CERS** **N/A**
1/8-1/4 **PITTSBURG, CA 94565**
0.206 mi.
1086 ft. **Site 3 of 3 in cluster N**

Relative:
Higher

Actual:
22 ft.

CERS HAZ WASTE:
Name: CALIFORNIA EXPANDED METAL PRODUCTS CO.
Address: 1001A PITTSBURG ANTIOCH HWY
City,State,Zip: PITTSBURG, CA 94565
Site ID: 101912
CERS ID: 10482175
CERS Description: Hazardous Waste Generator

CERS:
Name: CALIFORNIA EXPANDED METAL PRODUCTS CO.
Address: 1001A PITTSBURG ANTIOCH HWY
City,State,Zip: PITTSBURG, CA 94565
Site ID: 101912
CERS ID: 10482175
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 101912
Site Name: California Expanded Metal Products Co.
Violation Date: 03-14-2017
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 03/14/2017.
Violation Division: Contra Costa County Health Services Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 101912
Site Name: California Expanded Metal Products Co.
Violation Date: 01-30-2013
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 04/30/2013.
Violation Division: Contra Costa County Health Services Department
Violation Program: HMRRP
Violation Source: CERS

CALIFORNIA EXPANDED METAL PRODUCTS CO. (Continued) **S121737179**

Site ID: 101912
Site Name: California Expanded Metal Products Co.
Violation Date: 03-14-2017
Citation: HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description: Hazardous Waste Generator Program - Operations/Maintenance - General
Violation Notes: Returned to compliance on 04/21/2017.
Violation Division: Contra Costa County Health Services Department
Violation Program: HW
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-30-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-30-2013
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-14-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-14-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-27-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

CALIFORNIA EXPANDED METAL PRODUCTS CO. (Continued) **S121737179**

Eval General Type: Other/Unknown
Eval Date: 04-27-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-30-2013
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-29-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-29-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Enforcement Action:
Site ID: 101912
Site Name: California Expanded Metal Products Co.
Site Address: 1001A PITTSBURG ANTIOCH HWY
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 01-30-2013
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 101912
Site Name: California Expanded Metal Products Co.
Site Address: 1001A PITTSBURG ANTIOCH HWY
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 03-14-2017
Enf Action Type: Notice of Violation (Unified Program)

CALIFORNIA EXPANDED METAL PRODUCTS CO. (Continued) **S121737179**

Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 101912
Site Name: California Expanded Metal Products Co.
Site Address: 1001A PITTSBURG ANTIOCH HWY
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 03-14-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

Affiliation:
Affiliation Type Desc: CUPA District
Entity Name: Contra Costa County Health Services Department
Entity Title: Not reported
Affiliation Address: 4585 Pacheco BlvdSuite 100
Affiliation City: Martinez
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 94553
Affiliation Phone: (925) 655-3200

Affiliation Type Desc: Environmental Contact
Entity Name: Todd McCrite
Entity Title: Not reported
Affiliation Address: 1001A Pittsburg Antioch Hwy
Affiliation City: Pittsburg
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 94565
Affiliation Phone: Not reported

Affiliation Type Desc: Document Preparer
Entity Name: Todd McCrite
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: Raymond Poliquin
Entity Title: Not reported
Affiliation Address: 263 N. Covina Lane
Affiliation City: City of Industry
Affiliation State: CA
Affiliation Country: United States

CALIFORNIA EXPANDED METAL PRODUCTS CO. (Continued) **S121737179**

Affiliation Zip:	91744
Affiliation Phone:	(626) 369-3564
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	1001-A Pittsburg Antioch Highway
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94565
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	California Expanded Metal Products Co.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Todd McCrite
Entity Title:	Operations Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	California Expanded Metal Products Co
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(925) 473-9340

83
West
1/8-1/4
0.211 mi.
1112 ft.

IMPULSE TECHNOLOGY
695 RAILROAD AVE
PITTSBURG, CA 94565

CA CONTRA COSTA CO. SITE LIST **S102261768**
N/A

Relative:
Higher

Actual:
29 ft.

CONTRA COSTA CO. SITE LIST:

Name:	IMPULSE TECHNOLOGY
Address:	695 RAILROAD AVE
City:	PITTSBURG
Facility ID:	FA0028204
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	HWG: LESS THAN 5 TONS/YEAR

IMPULSE TECHNOLOGY (Continued) **S102261768**

Region: CONTRA COSTA
Cupa Number: 771445

O84 **PITTSBURG, CA MAIN POST OFFICE** **RCRA NonGen / NLR** **1026166255**
WSW **835 RAILROAD AVENUE** **CAC003066287**
1/8-1/4 **PITTSBURG, CA 94565**
0.214 mi.
1131 ft. **Site 1 of 3 in cluster O**

Relative:
Higher

Actual:
26 ft.

RCRA NonGen / NLR:

Date Form Received by Agency:	2020-05-11 00:00:00.0
Handler Name:	PITTSBURG, CA MAIN POST OFFICE
Handler Address:	835 RAILROAD AVENUE
Handler City,State,Zip:	PITTSBURG, CA 94565
EPA ID:	CAC003066287
Contact Name:	WESTERN ABATEMENT
Contact Address:	530 BOULDER CT
Contact City,State,Zip:	PLEASANTON, CA 94566-8318
Contact Telephone:	925-485-3660
Contact Fax:	Not reported
Contact Email:	THURLEY@WESTERNABATEMENT.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	835 RAILROAD AVENUE
Mailing City,State,Zip:	PITTSBURG, CA 94565
Owner Name:	NILE TROELSTRUP
Owner Type:	Other
Operator Name:	WESTERN ABATEMENT
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No

PITTSBURG, CA MAIN POST OFFICE (Continued) **1026166255**

Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2020-05-15 19:43:44.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	WESTERN ABATEMENT
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	530 BOULDER CT
Owner/Operator City,State,Zip:	PLEASANTON, CA 94566-8318
Owner/Operator Telephone:	925-485-3660
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	NILE TROELSTRUP
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	835 RAILROAD AVENUE
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	925-432-8858

PITTSBURG, CA MAIN POST OFFICE (Continued) **1026166255**

Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Historic Generators:
Receive Date: 2020-05-11 00:00:00.0
Handler Name: PITTSBURG, CA MAIN POST OFFICE
Federal Waste Generator Description: Not a generator, verified
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 56291
NAICS Description: REMEDIATION SERVICES

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

L85 **CALIFORNIA THEATER** **CA CONTRA COSTA CO. SITE LIST** **S110653082**
NW **351 RAILROAD AVE** **N/A**
1/8-1/4 **PITTSBURG, CA 94565**
0.215 mi.
1137 ft. **Site 2 of 3 in cluster L**

Relative:
Higher

Actual:
19 ft.

CONTRA COSTA CO. SITE LIST:
Name: CALIFORNIA THEATER
Address: 351 RAILROAD AVE
City: PITTSBURG
Facility ID: FA0031114
Billing Status: INACTIVE, NON-BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: UNDERGROUND STORAGE TANK SITE
Region: CONTRA COSTA
Cupa Number: 774257

L86 **VACANIT LOTS** **CA HIST UST** **U001597949**
NW **085-222-014-4TH LOT NUMBER** **N/A**
1/8-1/4 **PITTSBURG, CA 94565**
0.218 mi.
1149 ft. **Site 3 of 3 in cluster L**

Relative: **Higher**
Actual: **20 ft.**

HIST UST:

Name:	VACANIT LOTS
Address:	085-222-014-4TH LOT NUMBER
City,State,Zip:	PITTSBURG, CA 94565
File Number:	00022EB7
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00022EB7.pdf
Region:	STATE
Facility ID:	00000056919
Facility Type:	Gas Station
Other Type:	Not reported
Contact Name:	Not reported
Telephone:	4154392323
Owner Name:	SALEH SHAIBI & YAHIA KASSIM
Owner Address:	290 W. 10TH ST.
Owner City,St,Zip:	PITTSBURG, CA 94565
Total Tanks:	0001
Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00000000
Tank Used for:	PRODUCT
Type of Fuel:	06
Container Construction Thickness:	Not reported
Leak Detection:	None

Click here for Geo Tracker PDF:

O87 **CITY OF PITTSBURG** **CA LUST** **S107448101**
WSW **985 RAILROAD AVE** **CA CONTRA COSTA CO. SITE LIST** **N/A**
1/8-1/4 **PITTSBURG, CA 94565** **CA CERS**
0.220 mi.
1161 ft. **Site 2 of 3 in cluster O**

Relative: **Higher**
Actual: **25 ft.**

LUST:

Name:	CITY OF PITTSBURG
Address:	985 RAILROAD AVE
City,State,Zip:	PITTSBURG, CA 94565
Lead Agency:	SAN FRANCISCO BAY RWQCB (REGION 2)
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0601359176
Global Id:	T0601359176
Latitude:	38.028043003
Longitude:	-121.8849151
Status:	Completed - Case Closed
Status Date:	07/15/2010
Case Worker:	Not reported
RB Case Number:	07-0859
Local Agency:	CONTRA COSTA COUNTY
File Location:	Regional Board
Local Case Number:	Not reported
Potential Media Affect:	Aquifer used for drinking water supply, Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Waste Oil / Motor / Hydraulic / Lubricating, Gasoline, Diesel

CITY OF PITTSBURG (Continued) **S107448101**

Site History: Not reported

LUST:
Global Id: T0601359176
Contact Type: Local Agency Caseworker
Contact Name: MELISSA HAGEN
Organization Name: CONTRA COSTA COUNTY
Address: 4333 PACHECO BOULEVARD
City: MARTINEZ
Email: melissa.hagen@hsd.cccounty.us
Phone Number: 9256462286

LUST:
Global Id: T0601359176
Action Type: ENFORCEMENT
Date: 04/17/2006
Action: 13267 Requirement

Global Id: T0601359176
Action Type: ENFORCEMENT
Date: 03/06/2006
Action: Site Visit / Inspection / Sampling

Global Id: T0601359176
Action Type: RESPONSE
Date: 05/20/2006
Action: CAP/RAP - Other Report

Global Id: T0601359176
Action Type: ENFORCEMENT
Date: 09/21/2006
Action: Site Visit / Inspection / Sampling

Global Id: T0601359176
Action Type: ENFORCEMENT
Date: 07/14/2006
Action: 13267 Requirement

Global Id: T0601359176
Action Type: ENFORCEMENT
Date: 10/15/2007
Action: Site Visit / Inspection / Sampling

Global Id: T0601359176
Action Type: ENFORCEMENT
Date: 07/15/2010
Action: Closure/No Further Action Letter

Global Id: T0601359176
Action Type: RESPONSE
Date: 08/30/2006
Action: Final Remedial Action Report / Corrective Action Report

Global Id: T0601359176
Action Type: ENFORCEMENT
Date: 05/24/2007
Action: 13267 Requirement

CITY OF PITTSBURG (Continued) **S107448101**

Global Id:	T0601359176
Action Type:	RESPONSE
Date:	08/23/2007
Action:	Well Installation Report
Global Id:	T0601359176
Action Type:	RESPONSE
Date:	10/30/2007
Action:	Monitoring Report - Quarterly
Global Id:	T0601359176
Action Type:	REMEDIATION
Date:	09/01/2005
Action:	Excavation
Global Id:	T0601359176
Action Type:	REMEDIATION
Date:	04/19/2006
Action:	In Situ Physical/Chemical Treatment (other than SVE)
Global Id:	T0601359176
Action Type:	Other
Date:	05/31/2005
Action:	Leak Discovery
Global Id:	T0601359176
Action Type:	RESPONSE
Date:	04/08/2010
Action:	Other Report / Document
Global Id:	T0601359176
Action Type:	RESPONSE
Date:	04/08/2010
Action:	Other Report / Document
Global Id:	T0601359176
Action Type:	RESPONSE
Date:	04/08/2010
Action:	Correspondence
Global Id:	T0601359176
Action Type:	RESPONSE
Date:	07/15/2010
Action:	Well Destruction Report
Global Id:	T0601359176
Action Type:	Other
Date:	12/02/2005
Action:	Leak Reported
Global Id:	T0601359176
Action Type:	RESPONSE
Date:	10/30/2008
Action:	Monitoring Report - Quarterly
Global Id:	T0601359176
Action Type:	RESPONSE

CITY OF PITTSBURG (Continued) **S107448101**

Date: 10/29/2009
Action: Correspondence

Global Id: T0601359176
Action Type: RESPONSE
Date: 01/30/2009
Action: Monitoring Report - Quarterly

Global Id: T0601359176
Action Type: RESPONSE
Date: 04/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0601359176
Action Type: RESPONSE
Date: 07/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0601359176
Action Type: RESPONSE
Date: 04/30/2009
Action: Monitoring Report - Quarterly

Global Id: T0601359176
Action Type: RESPONSE
Date: 09/30/2009
Action: Monitoring Report - Quarterly

Global Id: T0601359176
Action Type: ENFORCEMENT
Date: 07/21/2009
Action: File review

LUST:
Global Id: T0601359176
Status: Open - Case Begin Date
Status Date: 05/31/2005

Global Id: T0601359176
Status: Open - Site Assessment
Status Date: 05/31/2005

Global Id: T0601359176
Status: Open - Site Assessment
Status Date: 02/17/2006

Global Id: T0601359176
Status: Open - Site Assessment
Status Date: 03/06/2006

Global Id: T0601359176
Status: Open - Remediation
Status Date: 04/17/2006

Global Id: T0601359176
Status: Open - Remediation
Status Date: 07/03/2006

CITY OF PITTSBURG (Continued) **S107448101**

Global Id: T0601359176
Status: Open - Remediation
Status Date: 01/26/2007

Global Id: T0601359176
Status: Open - Verification Monitoring
Status Date: 08/03/2007

Global Id: T0601359176
Status: Completed - Case Closed
Status Date: 07/15/2010

CONTRA COSTA CO. SITE LIST:
Name: CITY OF PITTSBURG
Address: 985 RAILROAD AVE
City: PITTSBURG
Facility ID: FA0030255
Billing Status: INACTIVE, NON-BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HWG GENERAL
Region: CONTRA COSTA
Cupa Number: 773586

Name: CITY OF PITTSBURG
Address: 985 RAILROAD AVE
City: PITTSBURG
Facility ID: FA0030255
Billing Status: INACTIVE, NON-BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: UNDERGROUND STORAGE TANK SITE
Region: CONTRA COSTA
Cupa Number: 773586

CERS:
Name: CITY OF PITTSBURG
Address: 985 RAILROAD AVE
City,State,Zip: PITTSBURG, CA 94565
Site ID: 232575
CERS ID: T0601359176
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: MELISSA HAGEN - CONTRA COSTA COUNTY
Entity Title: Not reported
Affiliation Address: 4333 PACHECO BOULEVARD
Affiliation City: MARTINEZ
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: 9256462286

Affiliation Type Desc: Regional Board Caseworker
Entity Name: BARBARA SIEMINSKI - SAN FRANCISCO BAY RWQCB (REGION 2)
Entity Title: Not reported
Affiliation Address: 1515 CLAY STREET, SUITE 1400

CITY OF PITTSBURG (Continued) **S107448101**

Affiliation City:	OAKLAND
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

O88 **CITY OF PITTSBURG** **CA Cortese** **S112943762**
WSW **985 RAILROAD AVE** **CA HAZNET** **N/A**
1/8-1/4 **PITTSBURG, CA 94565** **CA HWTS**
0.220 mi.
1161 ft. **Site 3 of 3 in cluster O**

Relative:
Higher

Actual:
25 ft.

CORTESE:

Name:	CITY OF PITTSBURG
Address:	985 RAILROAD AVE
City,State,Zip:	PITTSBURG, CA 94565
Region:	CORTESE
Envirostor Id:	Not reported
Global ID:	T0601359176
Site/Facility Type:	LUST CLEANUP SITE
Cleanup Status:	COMPLETED - CASE CLOSED
Status Date:	Not reported
Site Code:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Owner:	Not reported
Enf Type:	Not reported
Swat R:	Not reported
Flag:	active
Order No:	Not reported
Waste Discharge System No:	Not reported
Effective Date:	Not reported
Region 2:	Not reported
WID Id:	Not reported
Solid Waste Id No:	Not reported
Waste Management Uit Name:	Not reported
File Name:	Active Open

HAZNET:

Name:	CITY OF PITTSBURG
Address:	985 RAILROAD AVE
Address 2:	Not reported
City,State,Zip:	PITTSBURG, CA 94565
Contact:	SHA AZAR
Telephone:	9252524820
Mailing Name:	Not reported
Mailing Address:	65 CIVIC AVE
Year:	2005
Gepaid:	CAC002587530
TSD EPA ID:	CAD981382132
CA Waste Code:	151 - Asbestos containing waste
Disposal Method:	D80 - Disposal, Land Fill
Tons:	33.712

CITY OF PITTSBURG (Continued) **S112943762**

Additional Info:

Year:	2005
Gen EPA ID:	CAC002587530
Shipment Date:	20050314
Creation Date:	6/2/2005 18:30:59
Receipt Date:	20050314
Manifest ID:	22851267
Trans EPA ID:	CAD982513632
Trans Name:	DENBESTE TRANS
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD981382132
Trans Name:	ALTAMONT LAND FILL
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	151 - Asbestos-containing waste
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	16.856
Waste Quantity:	20
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20050302
Creation Date:	4/29/2005 8:38:49
Receipt Date:	20050302
Manifest ID:	22691775
Trans EPA ID:	CAD982513632
Trans Name:	DENBESTE
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD981382132
Trans Name:	ALTAMONT
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	151 - Asbestos-containing waste
RCRA Code:	NONE
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	16.856
Waste Quantity:	20
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

HWTS:

Name:	CITY OF PITTSBURG
Address:	985 RAILROAD AVE
Address 2:	Not reported

CITY OF PITTSBURG (Continued) **S112943762**

City,State,Zip:	PITTSBURG, CA 94565
EPA ID:	CAC002587530
Inactive Date:	08/29/2005
Create Date:	03/01/2005
Last Act Date:	11/01/2005
Mailing Name:	Not reported
Mailing Address:	65 CIVIC AVE
Mailing Address 2:	Not reported
Mailing City,State,Zip:	PITTSBURG, CA 94565
Owner Name:	CITY OF PITTSBURG
Owner Address:	65 CIVIC AVE
Owner Address 2:	Not reported
Owner City,State,Zip:	PITTSBURG, CA 94565
Contact Name:	SHA AZAR
Contact Address:	65 CIVIC AVE
Contact Address 2:	Not reported
City,State,Zip:	PITTSBURG, CA 94565

89
WNW
1/8-1/4
0.234 mi.
1235 ft.

PITTSBURG REDEVELOPMENT **CA CONTRA COSTA CO. SITE LIST** **S102261605**
4TH ST & RAILROAD AVE **N/A**
PITTSBURG, CA 94565

Relative:
Higher

Actual:
21 ft.

CONTRA COSTA CO. SITE LIST:

Name:	PITTSBURG REDEVELOPMENT
Address:	4TH ST & RAILROAD AVE
City:	PITTSBURG
Facility ID:	FA0033362
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	HWG GENERAL
Region:	CONTRA COSTA
Cupa Number:	770850

Name:	PITTSBURG REDEVELOPMENT
Address:	4TH ST & RAILROAD AVE
City:	PITTSBURG
Facility ID:	FA0033362
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	UNDERGROUND STORAGE TANK SITE
Region:	CONTRA COSTA
Cupa Number:	770850

P90
WSW
1/8-1/4
0.241 mi.
1270 ft.

RAMOS OIL **RCRA NonGen / NLR** **1024803792**
1001 RAILROAD AVE **CAL000254760**
PITTSBURG, CA 94520

Site 1 of 7 in cluster P

Relative:
Higher

Actual:
24 ft.

RCRA NonGen / NLR:

Date Form Received by Agency:		2002-06-27 00:00:00.0
Handler Name:	RAMOS OIL	
Handler Address:		1001 RAILROAD AVE
Handler City,State,Zip:		PITTSBURG, CA 94520

RAMOS OIL (Continued) **1024803792**

EPA ID:	CAL000254760
Contact Name:	JOY KACHADORIAN
Contact Address:	1515 SOUTH RIVER ROAD
Contact City,State,Zip:	WEST SACRAMENTO, CA 95691-0401
Contact Telephone:	916-371-2570
Contact Fax:	916-371-3028
Contact Email:	JOYK@RAMOSOIL.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	PO BOX 401
Mailing City,State,Zip:	WEST SACRAMENTO, CA 95691
Owner Name:	RAMOS OIL CO
Owner Type:	Other
Operator Name:	JOY KACHADORIAN
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	Yes
Universal Waste Destination Facility:	Yes
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No

RAMOS OIL (Continued) **1024803792**

TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2018-09-05 15:46:12.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	JOY KACHADORIAN
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	1515 SOUTH RIVER ROAD
Owner/Operator City,State,Zip:	WEST SACRAMENTO, CA 95691-0401
Owner/Operator Telephone:	916-371-2570
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	RAMOS OIL CO
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	PO BOX 401
Owner/Operator City,State,Zip:	WEST SACRAMENTO, CA 95691
Owner/Operator Telephone:	916-371-2570
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	2002-06-27 00:00:00.0
Handler Name: RAMOS OIL	
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No

RAMOS OIL (Continued) **1024803792**

Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 23492
NAICS Description: POWER AND COMMUNICATION TRANSMISSION LINE CONSTRUCTION

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

P91 **REDDING PETROLEUM INC** **CA LUST** **U001597893**
WSW **1001 RAILROAD AVE** **CA SWEEPS UST** **N/A**
1/8-1/4 **PITTSBURG, CA 94565** **CA HIST UST**
0.241 mi. **CA CERS**
1270 ft. **Site 2 of 7 in cluster P**

Relative:
Higher

Actual:
24 ft.

LUST:
Name: REDDING PETROLEUM
Address: 1001 RAILROAD AVENUE
City,State,Zip: PITTSBURG, CA 94565
Lead Agency: SAN FRANCISCO BAY RWQCB (REGION 2)
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0601382732
Global Id: T0601382732
Latitude: 38.0275259970001
Longitude: -121.884933756667
Status: Open - Eligible for Closure
Status Date: 07/10/2019
Case Worker: SGG
RB Case Number: 07-0832
Local Agency: CONTRA COSTA COUNTY
File Location: Regional Board
Local Case Number: Not reported
Potential Media Affect: Aquifer used for drinking water supply
Potential Contaminants of Concern: Gasoline
Site History: The subject property (Site) is located in the central portion of the city of Pittsburg, California, on the corner of Railroad Avenue and Tenth Street, in an area of commercial and light industrial land use. The site is presently occupied by a Redding Petroleum gasoline station consisting of a one-story structure housing a cashiers booth, one canopy-covered dispenser island with six fuel dispensers, and three 12,000-gallon underground storage tanks (USTs). Two USTs are used for gasoline and one is split as a 6,000-gallon diesel and 6,000-gallon gasoline UST. In August and September 1998, one 10,000-gallon and two 8,000-gallon gasoline USTs, one 6,000-gallon diesel UST, and one 2,000-gallon kerosene UST were removed from the site by Fahy Construction; in addition, a waste oil UST also may have been removed. The gasoline UST excavation site was utilized for the placement of new USTs to meet the December 1998 upgrade requirements;

REDDING PETROLEUM INC (Continued) **U001597893**

the piping and dispensers were also upgraded at this time. Environmental analysis detected total petroleum hydrocarbons quantified as gasoline (TPH-g) and volatile aromatic compounds benzene, toluene, ethylbenzene, and xylenes (BTEX) in soil samples collected from beneath the former gasoline USTs at maximum concentrations of 64 milligrams per kilogram (mg/kg) TPH-g, 17 mg/kg benzene, 87 mg/kg toluene, 61 mg/kg ethylbenzene, and 170 mg/kg xylenes; total petroleum hydrocarbons quantified as diesel (TPH-d) in the diesel and kerosene USTs were detected at a maximum concentration of 25 mg/kg; total petroleum hydrocarbons quantified as oil and grease (TPH-og) in the waste oil UST were detected at a concentration of 11 mg/kg. TPH-g, TPH-d, and BTEX were detected in one of the former piping trenches at maximum concentrations of 26 mg/kg TPH-g, 31 mg/kg TPH-d, 18 mg/kg benzene, 16 mg/kg toluene, 38 mg/kg ethylbenzene, and 79 mg/kg xylenes. Concentrations of TPH-g, TPH-d, and BTEX compounds were also detected in samples collected from the excavated (stockpiled) soil. Methyl tertiary-butyl ether (MTBE) was not found at or above detection limits in any of the samples analyzed.
Not reported

LUST:

Global Id:	T0601382732
Contact Type:	Local Agency Caseworker
Contact Name:	MELISSA HAGEN
Organization Name:	CONTRA COSTA COUNTY
Address:	4333 PACHECO BOULEVARD
City:	MARTINEZ
Email:	melissa.hagen@hsd.cccounty.us
Phone Number:	9256462286

Global Id:	T0601382732
Contact Type:	Regional Board Caseworker
Contact Name:	SUNNY GRUNLOH
Organization Name:	SAN FRANCISCO BAY RWQCB (REGION 2)
Address:	1515 Clay Street, Suite 1400
City:	OAKLAND
Email:	sunny.grunloh@waterboards.ca.gov
Phone Number:	5106222350

LUST:

Global Id:	T0601382732
Action Type:	RESPONSE
Date:	07/05/2011
Action:	Pilot Study/ Treatability Report

Global Id:	T0601382732
Action Type:	RESPONSE
Date:	04/30/2011
Action:	Monitoring Report - Quarterly

Global Id:	T0601382732
Action Type:	RESPONSE
Date:	07/31/2011
Action:	Monitoring Report - Quarterly

Global Id:	T0601382732
Action Type:	RESPONSE

REDDING PETROLEUM INC (Continued) **U001597893**

Date: 10/30/2016
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 01/30/2016
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 07/30/2016
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 07/30/2015
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 10/30/2015
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 01/30/2017
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 02/24/2003
Action: Staff Letter

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 05/09/2003
Action: File review

Global Id: T0601382732
Action Type: RESPONSE
Date: 07/30/2012
Action: Monitoring Report - Semi-Annually

Global Id: T0601382732
Action Type: RESPONSE
Date: 10/30/2011
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 01/30/2012
Action: Monitoring Report - Semi-Annually

Global Id: T0601382732
Action Type: RESPONSE
Date: 04/30/2019
Action: Monitoring Report - Semi-Annually

REDDING PETROLEUM INC (Continued) **U001597893**

Global Id: T0601382732
Action Type: RESPONSE
Date: 02/06/2020
Action: Email Correspondence

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 05/12/2010
Action: 13267 Requirement

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 07/07/2011
Action: File review

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 06/13/2014
Action: File review

Global Id: T0601382732
Action Type: RESPONSE
Date: 07/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 10/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 06/19/2020
Action: Email Correspondence

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 05/09/2003
Action: 13267 Monitoring Program

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 10/15/2007
Action: Site Visit / Inspection / Sampling

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 10/25/2007
Action: 13267 Requirement

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 07/09/2014
Action: Staff Letter

Global Id: T0601382732
Action Type: RESPONSE

REDDING PETROLEUM INC (Continued) **U001597893**

Date: 04/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 01/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 01/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 10/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 10/30/2012
Action: Monitoring Report - Other

Global Id: T0601382732
Action Type: RESPONSE
Date: 06/18/2012
Action: CAP/RAP - Final Remediation / Design Plan - Regulator Responded

Global Id: T0601382732
Action Type: RESPONSE
Date: 05/26/2013
Action: Other Workplan - Regulator Responded

Global Id: T0601382732
Action Type: RESPONSE
Date: 04/05/2011
Action: Pilot Study / Treatability Workplan - Regulator Responded

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 12/18/2007
Action: 13267 Requirement

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 05/09/2007
Action: 13267 Requirement

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 04/08/2011
Action: 13267 Requirement

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 11/29/2016
Action: Staff Letter

REDDING PETROLEUM INC (Continued) **U001597893**

Global Id: T0601382732
Action Type: RESPONSE
Date: 03/17/2008
Action: Other Report / Document

Global Id: T0601382732
Action Type: RESPONSE
Date: 03/30/2007
Action: Other Workplan

Global Id: T0601382732
Action Type: RESPONSE
Date: 06/11/2007
Action: Other Workplan

Global Id: T0601382732
Action Type: RESPONSE
Date: 10/05/2007
Action: Other Report / Document

Global Id: T0601382732
Action Type: RESPONSE
Date: 01/30/2013
Action: Monitoring Report - Semi-Annually

Global Id: T0601382732
Action Type: RESPONSE
Date: 07/30/2013
Action: Monitoring Report - Semi-Annually

Global Id: T0601382732
Action Type: RESPONSE
Date: 01/30/2014
Action: Monitoring Report - Semi-Annually

Global Id: T0601382732
Action Type: RESPONSE
Date: 04/30/2013
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 04/24/2008
Action: 13267 Requirement

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 07/05/2007
Action: 13267 Requirement

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 02/20/2007
Action: 13267 Monitoring Program

Global Id: T0601382732
Action Type: ENFORCEMENT

REDDING PETROLEUM INC (Continued) **U001597893**

Date: 06/13/2008
Action: 13267 Requirement

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 05/14/2008
Action: 13267 Requirement

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 06/17/2008
Action: 13267 Requirement

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 05/09/2016
Action: Technical Correspondence / Assistance / Other

Global Id: T0601382732
Action Type: RESPONSE
Date: 04/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 01/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 05/30/2008
Action: Other Workplan

Global Id: T0601382732
Action Type: RESPONSE
Date: 10/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 01/30/2016
Action: Final Remedial Action Report / Corrective Action Report

Global Id: T0601382732
Action Type: RESPONSE
Date: 07/30/2014
Action: Monitoring Report - Semi-Annually

Global Id: T0601382732
Action Type: RESPONSE
Date: 07/30/2017
Action: Sensitive Receptor Survey Report

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 05/09/2003
Action: Staff Letter

REDDING PETROLEUM INC (Continued) **U001597893**

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 11/17/2017
Action: Staff Letter

Global Id: T0601382732
Action Type: RESPONSE
Date: 11/26/2007
Action: Other Workplan

Global Id: T0601382732
Action Type: RESPONSE
Date: 11/26/2007
Action: Sensitive Receptor Survey Report

Global Id: T0601382732
Action Type: RESPONSE
Date: 11/26/2007
Action: Other Report / Document

Global Id: T0601382732
Action Type: RESPONSE
Date: 08/15/2008
Action: Other Report / Document

Global Id: T0601382732
Action Type: RESPONSE
Date: 05/30/2008
Action: Other Workplan

Global Id: T0601382732
Action Type: RESPONSE
Date: 03/17/2008
Action: Other Report / Document

Global Id: T0601382732
Action Type: RESPONSE
Date: 07/21/2008
Action: CAP/RAP - Feasibility Study Report

Global Id: T0601382732
Action Type: RESPONSE
Date: 04/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 10/31/2019
Action: Email Correspondence

Global Id: T0601382732
Action Type: RESPONSE
Date: 08/19/2019
Action: Other Report / Document

Global Id: T0601382732
Action Type: REMEDIATION

REDDING PETROLEUM INC (Continued) **U001597893**

Date: 09/01/1998
Action: Excavation

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 11/30/2012
Action: File Review - Closure

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 09/07/2017
Action: Staff Letter

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 05/02/2018
Action: Technical Correspondence / Assistance / Other

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 07/09/2018
Action: 13267 Requirement

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 06/25/2018
Action: File review

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 05/16/2016
Action: Clean Up Fund - Case Closure Review Summary Report (RSR)

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 06/19/2017
Action: Technical Correspondence / Assistance / Other

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 04/24/2018
Action: Technical Correspondence / Assistance / Other

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 05/02/2018
Action: Staff Letter

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 06/12/2017
Action: Staff Letter

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 11/08/2019
Action: 13267 Requirement

REDDING PETROLEUM INC (Continued) **U001597893**

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 07/22/2019
Action: Site Visit / Inspection / Sampling

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 07/03/2019
Action: Technical Correspondence / Assistance / Other

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 07/10/2019
Action: Staff Letter

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 09/06/2019
Action: Notification - Preclosure

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 06/18/2020
Action: Staff Letter

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 01/28/2014
Action: Clean Up Fund - Case Closure Review Summary Report (RSR)

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 11/05/2019
Action: Email Correspondence

Global Id: T0601382732
Action Type: Other
Date: 05/24/2002
Action: Leak Discovery

Global Id: T0601382732
Action Type: RESPONSE
Date: 01/30/2010
Action: Monitoring Report - Other

Global Id: T0601382732
Action Type: RESPONSE
Date: 03/31/2010
Action: Other Report / Document

Global Id: T0601382732
Action Type: RESPONSE
Date: 04/13/2010
Action: Other Report / Document

Global Id: T0601382732
Action Type: RESPONSE

REDDING PETROLEUM INC (Continued) **U001597893**

Date: 01/30/2011
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 05/25/2010
Action: Correspondence

Global Id: T0601382732
Action Type: RESPONSE
Date: 08/13/2010
Action: Well Installation Report

Global Id: T0601382732
Action Type: RESPONSE
Date: 04/30/2010
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 07/30/2010
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 10/30/2010
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 01/30/2015
Action: Monitoring Report - Semi-Annually

Global Id: T0601382732
Action Type: RESPONSE
Date: 04/30/2014
Action: Remedial Progress Report

Global Id: T0601382732
Action Type: RESPONSE
Date: 02/14/2020
Action: Email Correspondence

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 07/16/2008
Action: 13267 Requirement

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 12/11/2008
Action: 13267 Requirement

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 09/22/2008
Action: 13267 Requirement

REDDING PETROLEUM INC (Continued) **U001597893**

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 03/28/2013
Action: 13267 Requirement

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 04/20/2012
Action: 13267 Requirement

Global Id: T0601382732
Action Type: Other
Date: 01/30/2003
Action: Leak Reported

Global Id: T0601382732
Action Type: RESPONSE
Date: 07/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 01/30/2009
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 11/21/2008
Action: CAP/RAP - Other Report

Global Id: T0601382732
Action Type: RESPONSE
Date: 11/21/2008
Action: Fact Sheets - Public Participation

Global Id: T0601382732
Action Type: RESPONSE
Date: 07/31/2009
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 11/21/2008
Action: Well Installation Workplan

Global Id: T0601382732
Action Type: RESPONSE
Date: 04/30/2016
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 07/31/2018
Action: Monitoring Report - Semi-Annually

Global Id: T0601382732
Action Type: ENFORCEMENT

REDDING PETROLEUM INC (Continued) **U001597893**

Date: 07/23/2009
Action: File review

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 10/29/2013
Action: 13267 Requirement

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 02/13/2013
Action: Notification - Public Notice of ROD/RAP/CAP

Global Id: T0601382732
Action Type: RESPONSE
Date: 01/30/2010
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 04/30/2009
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 07/11/2003
Action: Other Report / Document

Global Id: T0601382732
Action Type: RESPONSE
Date: 08/01/2004
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 05/12/2003
Action: Other Report / Document

Global Id: T0601382732
Action Type: RESPONSE
Date: 03/01/2004
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 07/31/2004
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 10/31/2004
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 10/30/2007
Action: Monitoring Report - Quarterly

REDDING PETROLEUM INC (Continued) **U001597893**

Global Id: T0601382732
Action Type: RESPONSE
Date: 04/01/2008
Action: Other Report / Document

Global Id: T0601382732
Action Type: RESPONSE
Date: 01/31/2005
Action: Monitoring Report - Quarterly

Global Id: T0601382732
Action Type: RESPONSE
Date: 11/21/2008
Action: Fact Sheets - Public Participation

Global Id: T0601382732
Action Type: RESPONSE
Date: 09/03/2010
Action: Other Report / Document

Global Id: T0601382732
Action Type: RESPONSE
Date: 07/30/2019
Action: Monitoring Report - Semi-Annually

Global Id: T0601382732
Action Type: RESPONSE
Date: 01/15/2018
Action: Monitoring Report - Semi-Annually

Global Id: T0601382732
Action Type: RESPONSE
Date: 02/07/2020
Action: Well Destruction Report

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 07/30/2008
Action: 13267 Requirement

Global Id: T0601382732
Action Type: ENFORCEMENT
Date: 10/30/2014
Action: Staff Letter

LUST:
Global Id: T0601382732
Status: Open - Case Begin Date
Status Date: 05/24/2002

Global Id: T0601382732
Status: Open - Site Assessment
Status Date: 01/31/2003

Global Id: T0601382732
Status: Open - Site Assessment
Status Date: 07/03/2003

REDDING PETROLEUM INC (Continued) **U001597893**

Global Id: T0601382732
Status: Open - Remediation
Status Date: 09/22/2008

Global Id: T0601382732
Status: Open - Eligible for Closure
Status Date: 07/10/2019

SWEEPS UST:
Name: REDDING PETROLEUM INC
Address: 1001 RAILROAD AVE
City: PITTSBURG
Status: Active
Comp Number: 1647
Number: 1
Board Of Equalization: 44-002178
Referral Date: 01-30-92
Action Date: 01-30-92
Created Date: 07-22-88
Owner Tank Id: 2
SWRCB Tank Id: 07-000-001647-000002
Tank Status: A
Capacity: 10000
Active Date: 01-30-92
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: 4

Name: REDDING PETROLEUM INC
Address: 1001 RAILROAD AVE
City: PITTSBURG
Status: Active
Comp Number: 1647
Number: 1
Board Of Equalization: 44-002178
Referral Date: 01-30-92
Action Date: 01-30-92
Created Date: 07-22-88
Owner Tank Id: 1
SWRCB Tank Id: 07-000-001647-000003
Tank Status: A
Capacity: 8000
Active Date: 01-30-92
Tank Use: M.V. FUEL
STG: P
Content: LEADED
Number Of Tanks: Not reported

Name: REDDING PETROLEUM INC
Address: 1001 RAILROAD AVE
City: PITTSBURG
Status: Active
Comp Number: 1647
Number: 1
Board Of Equalization: 44-002178

REDDING PETROLEUM INC (Continued) **U001597893**

Referral Date: 01-30-92
Action Date: 01-30-92
Created Date: 07-22-88
Owner Tank Id: 3
SWRCB Tank Id: 07-000-001647-000004
Tank Status: A
Capacity: 8000
Active Date: 01-30-92
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Name: REDDING PETROLEUM INC
Address: 1001 RAILROAD AVE
City: PITTSBURG
Status: Active
Comp Number: 1647
Number: 1
Board Of Equalization: 44-002178
Referral Date: 01-30-92
Action Date: 01-30-92
Created Date: 07-22-88
Owner Tank Id: 20
SWRCB Tank Id: 07-000-001647-000005
Tank Status: A
Capacity: 8000
Active Date: 01-30-92
Tank Use: PETROLEUM
STG: P
Content: KEROSENE
Number Of Tanks: Not reported

HIST UST:
Name: BEACON SERVICE STATION
Address: 1001 RAILROAD AVENUE
City,State,Zip: PITTSBURG, CA 94565
File Number: 00022E4D
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00022E4D.pdf
Region: STATE
Facility ID: 00000001647
Facility Type: Gas Station
Other Type: Not reported
Contact Name: GEORGE E. REDDING
Telephone: 4156827800
Owner Name: REDDING PETROLEUM INC
Owner Address: 2560 B ATES AVENUE
Owner City,St,Zip: CONCORD, CA 94520
Total Tanks: 0009

Tank Num: 001
Container Num: 1
Year Installed: Not reported
Tank Capacity: 00008000
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Container Construction Thickness: Not reported

REDDING PETROLEUM INC (Continued) **U001597893**

Leak Detection:	Stock Inventor
Tank Num:	002
Container Num:	2
Year Installed:	Not reported
Tank Capacity:	00010000
Tank Used for:	PRODUCT
Type of Fuel:	PREMIUM
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor
Tank Num:	003
Container Num:	3
Year Installed:	Not reported
Tank Capacity:	00008000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor
Tank Num:	004
Container Num:	4
Year Installed:	Not reported
Tank Capacity:	00006000
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor
Tank Num:	005
Container Num:	5
Year Installed:	1983
Tank Capacity:	00001000
Tank Used for:	PRODUCT
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor
Tank Num:	006
Container Num:	1
Year Installed:	1976
Tank Capacity:	00012000
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Container Construction Thickness:	1/4
Leak Detection:	Stock Inventor
Tank Num:	007
Container Num:	2
Year Installed:	1976
Tank Capacity:	00012000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Container Construction Thickness:	1/4
Leak Detection:	Stock Inventor
Tank Num:	008

REDDING PETROLEUM INC (Continued) **U001597893**

Container Num: 3
Year Installed: Not reported
Tank Capacity: 00008000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

Tank Num: 009
Container Num: 4
Year Installed: Not reported
Tank Capacity: 00005000
Tank Used for: PRODUCT
Type of Fuel: PREMIUM
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

Click here for Geo Tracker PDF:

CERS:
Name: REDDING PETROLEUM
Address: 1001 RAILROAD AVENUE
City,State,Zip: PITTSBURG, CA 94565
Site ID: 194980
CERS ID: T0601382732
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Regional Board Caseworker
Entity Name: BARBARA SIEMINSKI - SAN FRANCISCO BAY RWQCB (REGION 2)
Entity Title: Not reported
Affiliation Address: 1515 CLAY STREET, SUITE 1400
Affiliation City: OAKLAND
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Local Agency Caseworker
Entity Name: MELISSA HAGEN - CONTRA COSTA COUNTY
Entity Title: Not reported
Affiliation Address: 4333 PACHECO BOULEVARD
Affiliation City: MARTINEZ
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: 9256462286

P92 **RAMOS OIL - PITTSBURG** **CA UST** **U004261458**
WSW **1001 RAILROAD AVE** **N/A**
1/8-1/4 **PITTSBURG, CA 94565**
0.241 mi.
1270 ft. **Site 3 of 7 in cluster P**

Relative:
Higher

Actual:
24 ft.

UST:

Name:	RAMOS OIL - PITTSBURG
Address:	1001 RAILROAD AVE
City,State,Zip:	PITTSBURG, CA 94565
Facility ID:	07-000-701647
Permitting Agency:	Contra Costa County Health Services Depa
Latitude:	38.02773
Longitude:	-121.885009

P93 **REDDING PETROLEUM** **CA LUST** **S105790747**
WSW **1001 RAILROAD AVENUE** **CA Cortese** **N/A**
1/8-1/4 **PITTSBURG, CA 94565**
0.241 mi.
1270 ft. **Site 4 of 7 in cluster P**

Relative:
Higher

Actual:
24 ft.

LUST REG 2:

Region:	2
Facility Id:	07-0832
Facility Status:	Preliminary site assessment workplan submitted
Case Number:	Not reported
How Discovered:	UM
Leak Cause:	UNK
Leak Source:	Tank
Date Leak Confirmed:	Not reported
Oversight Program:	LUST
Prelim. Site Assesment Wokplan Submitted:	1/31/2003
Preliminary Site Assesment Began:	Not reported
Pollution Characterization Began:	Not reported
Pollution Remediation Plan Submitted:	Not reported
Date Remediation Action Underway:	Not reported
Date Post Remedial Action Monitoring Began:	Not reported

CORTESE:

Name:	REDDING PETROLEUM
Address:	1001 RAILROAD AVENUE
City,State,Zip:	PITTSBURG, CA 94565
Region:	CORTESE
Envirostor Id:	Not reported
Global ID:	T0601382732
Site/Facility Type:	LUST CLEANUP SITE
Cleanup Status:	OPEN - ELIGIBLE FOR CLOSURE
Status Date:	Not reported
Site Code:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Owner:	Not reported
Enf Type:	Not reported
Swat R:	Not reported
Flag:	active
Order No:	Not reported
Waste Discharge System No:	Not reported
Effective Date:	Not reported
Region 2:	Not reported

REDDING PETROLEUM (Continued) **S105790747**

WID Id: Not reported
Solid Waste Id No: Not reported
Waste Management Uit Name: Not reported
File Name: Active Open

94
SSE
1/8-1/4
0.242 mi.
1278 ft.

BURLINGTON NORTHERN SANTA FE RAILWAY COMPANY
ADJOINING USS POSCO STEEL FACILITY
PITTSBURG, CA 94565

CA ENVIROSTOR **S107735974**
CA VCP **N/A**

Relative:
Higher

Actual:
23 ft.

ENVIROSTOR:
Name: BURLINGTON NORTHERN SANTA FE RAILWAY COMPANY
Address: ADJOINING USS POSCO STEEL FACILITY
City,State,Zip: PITTSBURG, CA 94565
Facility ID: 70000118
Status: Active
Status Date: 05/01/2005
Site Code: 201602
Site Type: Voluntary Cleanup
Site Type Detailed: Voluntary Cleanup
Acres: 1.9
NPL: NO
Regulatory Agencies: SMBRP
Lead Agency: SMBRP
Program Manager: Nicole Yuen
Supervisor: Cheryl Prowell
Division Branch: Cleanup Berkeley
Assembly: 14
Senate: 07
Special Program: Voluntary Cleanup Program
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: Responsible Party
Latitude: 38.02530
Longitude: -121.8759
APN: 804-07-14F, 804-07-14L
Past Use: RAILROAD RIGHT OF WAY
Potential COC: 1,1,1-Trichloroethane (TCA Trichloroethylene (TCE Carbon tetrachloride
Confirmed COC: 1,1,1-Trichloroethane (TCA Carbon tetrachloride Trichloroethylene (TCE
Potential Description: OTH, SOIL
Alias Name: BNSF Railway Company
Alias Type: Alternate Name
Alias Name: 804-07-14F
Alias Type: APN
Alias Name: 804-07-14L
Alias Type: APN
Alias Name: 110033617218
Alias Type: EPA (FRS #)
Alias Name: 201602
Alias Type: Project Code (Site Code)
Alias Name: 70000118
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE

BURLINGTON NORTHERN SANTA FE RAILWAY COMPANY (Continued) **S107735974**

Completed Sub Area Name: Not reported
Completed Document Type: Feasibility Study Workplan
Completed Date: 03/06/2006
Comments: RI/FS Workplan has been approved that covers activities necesssary to conduct an RI/FS of the Site. A soil vapor extraction (SVE) pilot test will be conducted as part of the workplan.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 06/18/2007
Comments: Fieldwork complete.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 03/06/2007
Comments: no comments on the report.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Report
Completed Date: 10/25/1999
Comments: Passive soil gas investigation found elevated levels of VOCs at the site. Highest concentration of Carbon Tetrachloride was found to be 438.07 ppb, Chloroform 97.23 ppb and trichloroethene 2.12 ppb.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Report
Completed Date: 05/16/2003
Comments: Soil and groundwater sampling results showed elevated levels of VOCs at the site. The predominant VOCs are carbon tetrachloride, 1,2-dichloroethane and 1,1,2 trichloroethane.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 05/07/2004
Comments: Maximum detected concentration of carbon tetrachloride in Site soil exceeded both residential and commercial PRG. Maximum concentration of carbon tetrachlorideand in groundwater exceeded MCL.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 12/14/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 02/10/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

BURLINGTON NORTHERN SANTA FE RAILWAY COMPANY (Continued) **S107735974**

Completed Document Type: Well Installation Workplan
Completed Date: 06/07/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 06/07/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 06/13/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 06/07/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 10/02/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 10/02/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 10/02/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 01/18/2018
Comments: Approval of Upgradaient Well Installation Report approved via email.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 01/18/2018
Comments: Approval submitted via email

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 04/09/2018
Comments: Not reported

BURLINGTON NORTHERN SANTA FE RAILWAY COMPANY (Continued) **S107735974**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 04/10/2018
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 06/27/2018
Comments: Acknowledgement of data submittal was given to consultant in email on 6/27/2018. Further analysis of data from this quarter will be provided during review of First Semi-Annual 2018 Monitoring Report review.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 02/07/2020
Comments: approved with comments.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 08/22/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 08/22/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 08/22/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 08/22/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Standard Voluntary Agreement
Completed Date: 10/31/2005
Comments: The VCA was signed by DTSC and BNSF Railway Company. The scope of work includes completion of a RI/FS workplan and RI/FS report.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Amendment - Order/Agreement
Completed Date: 03/28/2007
Comments: Amendment requires PDF submission of documents in addition to paper

BURLINGTON NORTHERN SANTA FE RAILWAY COMPANY (Continued) **S107735974**

copy.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/14/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Letter - Demand
Completed Date: 08/30/2011
Comments: Letter #2

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/13/2012
Comments: Estimate and Scheduled discussed and agreed to with consultant

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 07/20/2013
Comments: Correspondence containing discussion leading to significant expansion of project area

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 08/25/2015
Comments: .

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 03/29/2004
Comments: Site requires Chapter 6.8 cleanup Letter requests release information within 30 days

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 08/26/2015
Comments: .

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/01/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 08/09/2016
Comments: DTSC Project Manager changed from Jonathan Largent to Megan Indermill.

BURLINGTON NORTHERN SANTA FE RAILWAY COMPANY (Continued) **S107735974**

Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Pre-HARP Form
Completed Date: 11/10/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/27/2009
Comments: Estimate for 2009=2010 approved and discussed with RP and Consultant.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Letter - Demand
Completed Date: 07/28/2011
Comments: Letter #1

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 10/02/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 12/11/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 03/06/2007
Comments: No commments on the report.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 05/23/2007
Comments: Report summarizes data collected in January 2007. Volatile Organic Compounds were found in shallow, intermediate and deep zones. BTEX compounds were found which had not been detected previously.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 07/26/2007
Comments: Data is within historical ranges

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation Workplan
Completed Date: 11/19/2008
Comments: This workplan describes the procedures for additional soil and

BURLINGTON NORTHERN SANTA FE RAILWAY COMPANY (Continued) **S107735974**

groundwater sampling required to fully characterize contamination at the site.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 08/20/2009
Comments: Fieldwork completed. more extensive contamination was found than was previously reported. RP Requests extension until September 30, 2009 to submit RI/FS revised report

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation / Feasibility Study
Completed Date: 05/05/2011
Comments: GSU approves with conditions.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Pilot Study/Treatability Workplan
Completed Date: 10/07/2010
Comments: Workplan approved under conditions.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 09/15/2011
Comments: Work completed report to be submitted August 8, 2011

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Pilot Study/Treatability Workplan
Completed Date: 10/26/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Pilot/Treatability Study Report
Completed Date: 12/31/2012
Comments: Treatment approved for implementation RAP to be submitted February 2013

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Work Notice
Completed Date: 01/09/2015
Comments: Package had to be modified due to errors in mailing list.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Treatability Study Report
Completed Date: 09/06/2011
Comments: Study completed. A pilot study workplan based on the findings of the treatability study will be submitted by September 30th.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

BURLINGTON NORTHERN SANTA FE RAILWAY COMPANY (Continued) **S107735974**

Completed Document Type: Monitoring Report
Completed Date: 05/17/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 10/04/2016
Comments: .

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 06/23/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 09/10/2012
Comments: Final sampling conducted at the end of August. Pilot study deemed successful by RP and Contractor

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 08/28/2018
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 11/08/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 02/07/2020
Comments: approved with comments.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 07/29/2020
Comments: Approved via email.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Health & Safety Plan
Completed Date: 10/27/2011
Comments: Ready to implement.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Pilot/Treatability Study Report
Completed Date: 09/10/2012

BURLINGTON NORTHERN SANTA FE RAILWAY COMPANY (Continued) **S107735974**

Comments: Report indicates that pilot study is performing successfully

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Public Participation Plan / Community Relations Plan
Completed Date: 04/19/2013
Comments: PPS prepared for BNSF and USS-Posco's overlapping Sites. Includes results of community surveys

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Treatability Study Workplan
Completed Date: 05/01/2013
Comments: Workplan approved under conditions the RP imposed on himself. Work approved by phone.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation Workplan
Completed Date: 08/27/2013
Comments: Workplan and additional investigation required to address data becoming outdated and imminent release of contaminated groundwater into New York Slough

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 11/14/2013
Comments: Work completed without delay or unexpected incidents.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Report
Completed Date: 02/24/2014
Comments: Report documents full extent of GW contamination. Revised RAP will reflect new findings

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 05/04/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 11/16/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Community Profile
Completed Date: 04/24/2015
Comments: Community Survey Completed. According to PPS, Public Participation Plan will be completed by 5/15/2015.

Completed Area Name: PROJECT WIDE

BURLINGTON NORTHERN SANTA FE RAILWAY COMPANY (Continued) **S107735974**

Completed Sub Area Name: Not reported
Completed Document Type: Public Participation Plan / Community Relations Plan
Completed Date: 05/11/2015
Comments: Survey and plan completed

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Treatability Study Workplan
Completed Date: 03/06/2006
Comments: Pilot Study removed most of the source contaminants present in soil

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 08/05/2002
Comments: Investigation discovers concentrations of VOCs above residential health standards

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Report
Completed Date: 10/05/2001
Comments: Contaminants of Concern Identified include Carbon Tetrachloride, TCE, TCA, and degradation byproducts of these compounds including Chloroform, 1,2-DCA, etc.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 06/01/1997
Comments: Investigation conducted to ascertain source of groundwater contamination at UPI

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 06/30/1999
Comments: Activity consisted or installation and retrieval of Goresorber probes

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 05/16/2001
Comments: Investigation consisted of the drilling of a single hydropunch boring and the collection of soil and grab groundwater samples. Investigation also included minor trenching and the collection of localized field measurements.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation Workplan
Completed Date: 05/04/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Pilot Study/Treatability Workplan

BURLINGTON NORTHERN SANTA FE RAILWAY COMPANY (Continued) **S107735974**

Completed Date: 03/03/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 08/04/2016
Comments: Based on baseline sampling results, implementation of pilot study, not warranted at this time.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 10/22/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation Report
Completed Date: 04/28/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Workplan
Completed Date: 07/20/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Risk Assessment Report
Completed Date: 06/27/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 09/20/2016
Comments: .

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 11/07/2016
Comments: Email was sent to RP confirming receipt of and approving these results.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/07/2010
Comments: Reviewed by RP and sent out on 10/7/2010

Future Area Name: PROJECT WIDE
Future Sub Area Name: Not reported
Future Document Type: Remedial Action Completion Report
Future Due Date: 2022

BURLINGTON NORTHERN SANTA FE RAILWAY COMPANY (Continued) **S107735974**

Future Area Name:	PROJECT WIDE
Future Sub Area Name:	Not reported
Future Document Type:	5 Year Review Reports
Future Due Date:	2024
Future Area Name:	PROJECT WIDE
Future Sub Area Name:	Not reported
Future Document Type:	Remedial Action Plan
Future Due Date:	2021
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

VCP:

Name:	BURLINGTON NORTHERN SANTA FE RAILWAY COMPANY
Address:	ADJOINING USS POSCO STEEL FACILITY
City,State,Zip:	PITTSBURG, CA 94565
Facility ID:	70000118
Site Type:	Voluntary Cleanup
Site Type Detail:	Voluntary Cleanup
Site Mgmt. Req.:	NONE SPECIFIED
Acres:	1.9
National Priorities List:	NO
Cleanup Oversight Agencies:	SMBRP
Lead Agency:	SMBRP
Lead Agency Description:	DTSC - Site Cleanup Program
Project Manager:	Nicole Yuen
Supervisor:	Cheryl Prowell
Division Branch:	Cleanup Berkeley
Site Code:	201602
Assembly:	14
Senate:	07
Special Programs Code:	Voluntary Cleanup Program
Status:	Active
Status Date:	05/01/2005
Restricted Use:	NO
Funding:	Responsible Party
Lat/Long:	38.02530 / -121.8759
APN:	804-07-14F, 804-07-14L
Past Use:	RAILROAD RIGHT OF WAY
Potential COC:	30026, 30027, 30116
Confirmed COC:	30026,30116,30027
Potential Description:	OTH, SOIL
Alias Name:	BNSF Railway Company
Alias Type:	Alternate Name
Alias Name:	804-07-14F
Alias Type:	APN
Alias Name:	804-07-14L
Alias Type:	APN
Alias Name:	110033617218
Alias Type:	EPA (FRS #)
Alias Name:	201602
Alias Type:	Project Code (Site Code)
Alias Name:	70000118
Alias Type:	Envirostor ID Number

BURLINGTON NORTHERN SANTA FE RAILWAY COMPANY (Continued) **S107735974**

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Feasibility Study Workplan
Completed Date:	03/06/2006
Comments:	RI/FS Workplan has been approved that covers activities necesssary to conduct an RI/FS of the Site. A soil vapor extraction (SVE) pilot test will be conducted as part of the workplan.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Fieldwork
Completed Date:	06/18/2007
Comments:	Fieldwork complete.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Monitoring Report
Completed Date:	03/06/2007
Comments:	no comments on the report.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Characterization Report
Completed Date:	10/25/1999
Comments:	Passive soil gas investigation found elevated levels of VOCs at the site. Highest concentration of Carbon Tetrachloride was found to be 438.07 ppb, Chloroform 97.23 ppb and trichloroethene 2.12 ppb.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Characterization Report
Completed Date:	05/16/2003
Comments:	Soil and groundwater sampling results showed elevated levels of VOCs at the site. The predominant VOCs are carbon tetrachloride, 1,2-dichloroethane and 1,1,2 trichloroethane.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Report
Completed Date:	05/07/2004
Comments:	Maximum detected concentration of carbon tetrachloride in Site soil exceeded both residential and commercial PRG. Maximum concentration of carbon tetrachlorideand in groundwater exceeded MCL.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Technical Report
Completed Date:	12/14/2016
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Monitoring Report
Completed Date:	02/10/2017
Comments:	Not reported

BURLINGTON NORTHERN SANTA FE RAILWAY COMPANY (Continued) **S107735974**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Well Installation Workplan
Completed Date: 06/07/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 06/07/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 06/13/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 06/07/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 10/02/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 10/02/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 10/02/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 01/18/2018
Comments: Approval of Upgradaient Well Installation Report approved via email.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 01/18/2018
Comments: Approval submitted via email

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report

BURLINGTON NORTHERN SANTA FE RAILWAY COMPANY (Continued) **S107735974**

Completed Date: 04/09/2018
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 04/10/2018
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 06/27/2018
Comments: Acknowledgement of data submittal was given to consultant in email on 6/27/2018. Further analysis of data from this quarter will be provided during review of First Semi-Annual 2018 Monitoring Report review.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 02/07/2020
Comments: approved with comments.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 08/22/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 08/22/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 08/22/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 08/22/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Standard Voluntary Agreement
Completed Date: 10/31/2005
Comments: The VCA was signed by DTSC and BNSF Railway Company. The scope of work includes completion of a RI/FS workplan and RI/FS report.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

BURLINGTON NORTHERN SANTA FE RAILWAY COMPANY (Continued) **S107735974**

Completed Document Type: Amendment - Order/Agreement
Completed Date: 03/28/2007
Comments: Amendment requires PDF submission of documents in addition to paper copy.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/14/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Letter - Demand
Completed Date: 08/30/2011
Comments: Letter #2

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/13/2012
Comments: Estimate and Scheduled discussed and agreed to with consultant

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 07/20/2013
Comments: Correspondence containing discussion leading to significant expansion of project area

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 08/25/2015
Comments: .

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 03/29/2004
Comments: Site requires Chapter 6.8 cleanup Letter requests release information within 30 days

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 08/26/2015
Comments: .

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/01/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

BURLINGTON NORTHERN SANTA FE RAILWAY COMPANY (Continued) **S107735974**

Completed Document Type: Correspondence
Completed Date: 08/09/2016
Comments: DTSC Project Manager changed from Jonathan Largent to Megan Indermill.
Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Pre-HARP Form
Completed Date: 11/10/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/27/2009
Comments: Estimate for 2009=2010 approved and discussed with RP and Consultant.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Letter - Demand
Completed Date: 07/28/2011
Comments: Letter #1

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 10/02/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 12/11/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 03/06/2007
Comments: No commments on the report.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 05/23/2007
Comments: Report summarizes data collected in January 2007. Volatile Organic Compounds were found in shallow, intermediate and deep zones. BTEX compounds were found which had not been detected previously.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 07/26/2007
Comments: Data is within historical ranges

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

BURLINGTON NORTHERN SANTA FE RAILWAY COMPANY (Continued) **S107735974**

Completed Document Type: Remedial Investigation Workplan
Completed Date: 11/19/2008
Comments: This workplan describes the procedures for additional soil and groundwater sampling required to fully characterize contamination at the site.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 08/20/2009
Comments: Fieldwork completed. more extensive contamination was found than was previously reported. RP Requests extension until September 30, 2009 to submit RI/FS revised report

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation / Feasibility Study
Completed Date: 05/05/2011
Comments: GSU approves with conditions.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Pilot Study/Treatability Workplan
Completed Date: 10/07/2010
Comments: Workplan approved under conditions.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 09/15/2011
Comments: Work completed report to be submitted August 8, 2011

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Pilot Study/Treatability Workplan
Completed Date: 10/26/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Pilot/Treatability Study Report
Completed Date: 12/31/2012
Comments: Treatment approved for implementation RAP to be submitted February 2013

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Work Notice
Completed Date: 01/09/2015
Comments: Package had to be modified due to errors in mailing list.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Treatability Study Report
Completed Date: 09/06/2011
Comments: Study completed. A pilot study workplan based on the findings of the treatability study will be submitted by September 30th.

BURLINGTON NORTHERN SANTA FE RAILWAY COMPANY (Continued) **S107735974**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 05/17/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 10/04/2016
Comments: .

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 06/23/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 09/10/2012
Comments: Final sampling conducted at the end of August. Pilot study deemed successful by RP and Contractor

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 08/28/2018
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 11/08/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 02/07/2020
Comments: approved with comments.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 07/29/2020
Comments: Approved via email.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Health & Safety Plan
Completed Date: 10/27/2011
Comments: Ready to implement.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

BURLINGTON NORTHERN SANTA FE RAILWAY COMPANY (Continued) **S107735974**

Completed Document Type: Pilot/Treatability Study Report
Completed Date: 09/10/2012
Comments: Report indicates that pilot study is performing successfully

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Public Participation Plan / Community Relations Plan
Completed Date: 04/19/2013
Comments: PPS prepared for BNSF and USS-Posco's overlapping Sites. Includes results of community surveys

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Treatability Study Workplan
Completed Date: 05/01/2013
Comments: Workplan approved under conditions the RP imposed on himself. Work approved by phone.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation Workplan
Completed Date: 08/27/2013
Comments: Workplan and additional investigation required to address data becoming outdated and imminent release of contaminated groundwater into New York Slough

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 11/14/2013
Comments: Work completed without delay or unexpected incidents.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Report
Completed Date: 02/24/2014
Comments: Report documents full extent of GW contamination. Revised RAP will reflect new findings

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 05/04/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 11/16/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Community Profile
Completed Date: 04/24/2015
Comments: Community Survey Completed. According to PPS, Public Participation Plan will be completed by 5/15/2015.

BURLINGTON NORTHERN SANTA FE RAILWAY COMPANY (Continued) **S107735974**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Public Participation Plan / Community Relations Plan
Completed Date: 05/11/2015
Comments: Survey and plan completed

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Treatability Study Workplan
Completed Date: 03/06/2006
Comments: Pilot Study removed most of the source contaminants present in soil

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 08/05/2002
Comments: Investigation discovers concentrations of VOCs above residential health standards

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Report
Completed Date: 10/05/2001
Comments: Contaminants of Concern Identified include Carbon Tetrachloride, TCE, TCA, and degradation byproducts of these compounds including Chloroform, 1,2-DCA, etc.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 06/01/1997
Comments: Investigation conducted to ascertain source of groundwater contamination at UPI

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 06/30/1999
Comments: Activity consisted or installation and retrieval of Goresorber probes

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 05/16/2001
Comments: Investigation consisted of the drilling of a single hydropunch boring and the collection of soil and grab groundwater samples. Investigation also included minor trenching and the collection of localized field measurements.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation Workplan
Completed Date: 05/04/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

BURLINGTON NORTHERN SANTA FE RAILWAY COMPANY (Continued) **S107735974**

Completed Document Type: Pilot Study/Treatability Workplan
Completed Date: 03/03/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 08/04/2016
Comments: Based on baseline sampling results, implementation of pilot study, not warranted at this time.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 10/22/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation Report
Completed Date: 04/28/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Workplan
Completed Date: 07/20/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Risk Assessment Report
Completed Date: 06/27/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 09/20/2016
Comments: .

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 11/07/2016
Comments: Email was sent to RP confirming receipt of and approving these results.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/07/2010
Comments: Reviewed by RP and sent out on 10/7/2010

Future Area Name: PROJECT WIDE
Future Sub Area Name: Not reported
Future Document Type: Remedial Action Completion Report

BURLINGTON NORTHERN SANTA FE RAILWAY COMPANY (Continued) **S107735974**

Future Due Date:	2022
Future Area Name:	PROJECT WIDE
Future Sub Area Name:	Not reported
Future Document Type:	5 Year Review Reports
Future Due Date:	2024
Future Area Name:	PROJECT WIDE
Future Sub Area Name:	Not reported
Future Document Type:	Remedial Action Plan
Future Due Date:	2021
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

Q95 **KOCH CARBON LLC** **RCRA NonGen / NLR** **1024796018**
East **707 E 3RD ST** **CAL000172095**
1/8-1/4 **PITTSBURG, CA 94565**
0.242 mi.
1279 ft. **Site 1 of 5 in cluster Q**

Relative: **Lower**

Actual: **9 ft.**

RCRA NonGen / NLR:

Date Form Received by Agency:		1998-04-24 00:00:00.0
Handler Name:	KOCH CARBON LLC	
Handler Address:		707 E 3RD ST
Handler City,State,Zip:		PITTSBURG, CA 94565-0000
EPA ID:		CAL000172095
Contact Name:		CRAIG MAETZOLD
Contact Address:		4111 EAST 37TH ST N
Contact City,State,Zip:		WICHITA, KS 67220-0000
Contact Telephone:		316-828-4837
Contact Fax:		316-828-8947
Contact Email:		CRAIG.MAETZOLD@KOCHIND.COM
Contact Title:		Not reported
EPA Region:		09
Land Type:		Not reported
Federal Waste Generator Description:		Not a generator, verified
Non-Notifier:		Not reported
Biennial Report Cycle:		Not reported
Accessibility:		Not reported
Active Site Indicator:		Handler Activities
State District Owner:		Not reported
State District:		Not reported
Mailing Address:		4111 E 37TH ST N
Mailing City,State,Zip:		WICHITA, KS 67220-0000
Owner Name:		KOCH CARBON, LLC
Owner Type:		Other
Operator Name:		CRAIG MAETZOLD
Operator Type:		Other
Short-Term Generator Activity:		No
Importer Activity:		No
Mixed Waste Generator:		No
Transporter Activity:		No
Transfer Facility Activity:		No
Recycler Activity with Storage:		No
Small Quantity On-Site Burner Exemption:		No
Smelting Melting and Refining Furnace Exemption:		No
Underground Injection Control:		No

KOCH CARBON LLC (Continued) **1024796018**

Off-Site Waste Receipt:	No
Universal Waste Indicator:	Yes
Universal Waste Destination Facility:	Yes
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2018-09-05 15:43:49.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	KOCH CARBON, LLC
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	4111 E 37TH ST N
Owner/Operator City,State,Zip:	WICHITA, KS 67220-0000
Owner/Operator Telephone:	316-828-7812

KOCH CARBON LLC (Continued) **1024796018**

Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: CRAIG MAETZOLD
Legal Status: Other
Date Became Current: Not reported
Date Ended Current: Not reported
Owner/Operator Address: 4111 EAST 37TH ST N
Owner/Operator City,State,Zip: WICHITA, KS 67220-0000
Owner/Operator Telephone: 316-828-4837
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Historic Generators:
Receive Date: 1998-04-24 00:00:00.0
Handler Name: KOCH CARBON LLC
Federal Waste Generator Description: Not a generator, verified
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 48832
NAICS Description: MARINE CARGO HANDLING

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

Q96 **KOCH CARBON LLC** **CA CERS TANKS** **S113090440**
East **707 E 3RD ST** **CA HAZNET** **N/A**
1/8-1/4 **PITTSBURG, CA 94565** **CA HWTS**
0.242 mi.
1279 ft. **Site 2 of 5 in cluster Q**

Relative:
Lower

Actual:
9 ft.

CERS TANKS:
Name: KOCH CARBON LLC
Address: 707 E 3RD ST
City,State,Zip: PITTSBURG, CA 94565
Site ID: 42005
CERS ID: 10006177
CERS Description: Aboveground Petroleum Storage

Violations:

KOCH CARBON LLC (Continued) **S113090440**

Site ID: 42005
Site Name: KOCH CARBON LLC
Violation Date: 11-02-2017
Citation: HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description: Tiered Permitting - Administration/Documentation - General
Violation Notes: Returned to compliance on 11/02/2017.
Violation Division: Contra Costa County Health Services Department
Violation Program: CA
Violation Source: CERS

Site ID: 42005
Site Name: KOCH CARBON LLC
Violation Date: 11-02-2017
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 11/02/2017. OBSERVATION: The facility Chemical Inventory submitted in CERS in 2017 listed the on site Lead Acid Batteries quantity in pounds (lbs.). Lead Acid Batteries must be reported in gallons. CORRECTIVE ACTION: Corrected at time of inspection. The Lead Acid Battery inventory units were changed to gallons in a new CERS submittal during the inspection.
Violation Division: Contra Costa County Health Services Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 42005
Site Name: KOCH CARBON LLC
Violation Date: 12-17-2015
Citation: HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description: Tiered Permitting Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 01/12/2016.
Violation Division: Contra Costa County Health Services Department
Violation Program: CA
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-28-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-28-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: CA
Eval Source: CERS

KOCH CARBON LLC (Continued) **S113090440**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-28-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-28-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-02-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-02-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	CA
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-02-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	12-12-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	CA
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	12-12-2018
Violations Found:	No

KOCH CARBON LLC (Continued) **S113090440**

Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	12-12-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	12-17-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	12-17-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	12-17-2015
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	CA
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-12-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	CA
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	02-25-2020
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department

KOCH CARBON LLC (Continued) **S113090440**

Eval Program: CA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-25-2020
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-25-2020
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-02-2007
Violations Found: No
Eval Type: Industrial Storm Water Compliance Evaluation
Eval Notes: Not reported
Eval Division: Water Boards
Eval Program: INDSTW
Eval Source: SMARTS

Enforcement Action:
Site ID: 42005
Site Name: KOCH CARBON LLC
Site Address: 707 E 3RD ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 11-02-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: CA
Enf Action Source: CERS

Site ID: 42005
Site Name: KOCH CARBON LLC
Site Address: 707 E 3RD ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 11-02-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

KOCH CARBON LLC (Continued) **S113090440**

Site ID:	42005
Site Name:	KOCH CARBON LLC
Site Address:	707 E 3RD ST
Site City:	PITTSBURG
Site Zip:	94565
Enf Action Date:	12-17-2015
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Contra Costa County Health Services Department
Enf Action Program:	CA
Enf Action Source:	CERS

Coordinates:

Site ID:	42005
Facility Name:	KOCH CARBON LLC
Env Int Type Code:	SMSWIND
Program ID:	235168
Coord Name:	Not reported
Ref Point Type Desc:	Unknown
Latitude:	38.031180
Longitude:	-121.874080

Affiliation:

Affiliation Type Desc:	Identification Signer
Entity Name:	Joe Ray
Entity Title:	Facility Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	Koch Carbon LLC
Entity Title:	Not reported
Affiliation Address:	707 E 3rd St
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	94565
Affiliation Phone:	(925) 431-1090

Affiliation Type Desc:	Environmental Contact
Entity Name:	Joe Ray
Entity Title:	Not reported
Affiliation Address:	707 E 3rd St
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94565
Affiliation Phone:	Not reported

Affiliation Type Desc:	Onsite Treatment Unit Owner Operator
Entity Name:	Craig Maetzold

KOCH CARBON LLC (Continued) **S113090440**

Entity Title:	Environmental Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Onsite Treatment Unit Owner Operator
Entity Name:	Jordan Radin
Entity Title:	Compliance Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	Koch Carbon LLC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(925) 431-1090
Affiliation Type Desc:	Document Preparer
Entity Name:	Jordan Radin
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	707 E 3rd St
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94565
Affiliation Phone:	Not reported
Affiliation Type Desc:	Onsite Treatment Unit Owner Operator
Entity Name:	Terry Steinert
Entity Title:	SW Regional Environmental Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

KOCH CARBON LLC (Continued) **S113090440**

Affiliation Type Desc:	Owner/Operator
Entity Name:	Koch Carbon LLC
Entity Title:	Operator
Affiliation Address:	707 E 3rd St
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94565
Affiliation Phone:	Not reported

Affiliation Type Desc:	Parent Corporation
Entity Name:	Koch Carbon LLC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	CUPA District
Entity Name:	Contra Costa County Health Services Department
Entity Title:	Not reported
Affiliation Address:	4585 Pacheco BlvdSuite 100
Affiliation City:	Martinez
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94553
Affiliation Phone:	(925) 655-3200

HAZNET:

Name:	KOCH CARBON LLC
Address:	707 E 3RD ST
Address 2:	Not reported
City,State,Zip:	PITTSBURG, CA 672200000
Contact:	JORDAN RADIN
Telephone:	7202014941
Mailing Name:	Not reported
Mailing Address:	4111 E 37TH ST N
Year:	2019
Gepaid:	CAL000172095
TSD EPA ID:	MND981098478
CA Waste Code:	135 - Unspecified aqueous solution
Disposal Method:	H100 -
Tons:	17.95500
Year:	2019
Gepaid:	CAL000172095
TSD EPA ID:	CAD059494310
CA Waste Code:	352 - Other organic solids
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	3.23250
Year:	2019

KOCH CARBON LLC (Continued) **S113090440**

Gepaid: CAL000172095
TSD EPA ID: CAD059494310
CA Waste Code: 223 - Unspecified oil-containing waste
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.25000

Year: 2019
Gepaid: CAL000172095
TSD EPA ID: CAD044429835
CA Waste Code: 221 - Waste oil and mixed oil
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.00000

Year: 2019
Gepaid: CAL000172095
TSD EPA ID: AZR000003681
CA Waste Code: 223 - Unspecified oil-containing waste
Disposal Method: H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 0.10500

Year: 2018
Gepaid: CAL000172095
TSD EPA ID: AZR000003681
CA Waste Code: 223 - Unspecified oil-containing waste
Disposal Method: H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 0.01500

Year: 2018
Gepaid: CAL000172095
TSD EPA ID: CAD044429835
CA Waste Code: 223 - Unspecified oil-containing waste
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.53750

Year: 2018
Gepaid: CAL000172095
TSD EPA ID: CAD044429835
CA Waste Code: 221 - Waste oil and mixed oil
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.00000

Year: 2018
Gepaid: CAL000172095
TSD EPA ID: AZD049318009
CA Waste Code: 223 - Unspecified oil-containing waste
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.05000

Year: 2018
Gepaid: CAL000172095

KOCH CARBON LLC (Continued) **S113090440**

TSD EPA ID:	CAD059494310
CA Waste Code:	611 - Contaminated soil from site clean-up
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.80000

Click this hyperlink while viewing on your computer to access
179 additional CA HAZNET: record(s) in the EDR Site Report.

Additional Info:

Year:	2003
Gen EPA ID:	CAL000172095
Shipment Date:	Not reported
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	22232383
Trans EPA ID:	CAR000052803
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	WAD991281767
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.06255
Waste Quantity:	15
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	Not reported
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	22232383
Trans EPA ID:	CAR000052803
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	WAD991281767
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	0.025
Waste Quantity:	50
Quantity Unit:	P
Additional Code 1:	Not reported

KOCH CARBON LLC (Continued) **S113090440**

Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20031105
Creation Date:	8/20/2004 8:27:39
Receipt Date:	20031107
Manifest ID:	22974224
Trans EPA ID:	CAR000052803
Trans Name:	PHILIP TRANSPORTATION & REMEDIATION INC
Trans 2 EPA ID:	CAD063547996
Trans 2 Name:	PHILIP TRANSPORTATION & REMEDIATION INC
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY EMI
TSDF Alt EPA ID:	NVD980895338
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	0.171
Waste Quantity:	45
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20031105
Creation Date:	8/20/2004 8:27:39
Receipt Date:	20031107
Manifest ID:	22974224
Trans EPA ID:	CAR000052803
Trans Name:	PHILIP TRANSPORTATION & REMEDIATION INC
Trans 2 EPA ID:	CAD063547996
Trans 2 Name:	PHILIP TRANSPORTATION & REMEDIATION INC
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY EMI
TSDF Alt EPA ID:	NVD980895338
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20030923
Creation Date:	7/13/2004 10:48:19
Receipt Date:	20031002
Manifest ID:	22970202

KOCH CARBON LLC (Continued) **S113090440**

Trans EPA ID:	CAR000052803
Trans Name:	PHILIP TRANSPORTATION & REMEDIATION INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY EMI
TSDF Alt EPA ID:	NVD980895338
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	0.152
Waste Quantity:	40
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20030829
Creation Date:	7/29/2004 7:46:19
Receipt Date:	20030904
Manifest ID:	22974998
Trans EPA ID:	CAR000052803
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD980895338
Trans Name:	Not reported
TSDF Alt EPA ID:	NVD980895338
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	0.19
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20030829
Creation Date:	7/29/2004 7:46:19
Receipt Date:	20030904
Manifest ID:	22974998
Trans EPA ID:	CAR000052803
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD980895338
Trans Name:	Not reported
TSDF Alt EPA ID:	NVD980895338
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids

KOCH CARBON LLC (Continued) **S113090440**

RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20030428
Creation Date:	8/29/2003 18:31:02
Receipt Date:	20030512
Manifest ID:	22723872
Trans EPA ID:	CAR000052803
Trans Name:	Not reported
Trans 2 EPA ID:	UTD981552425
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD980895338
Trans Name:	Not reported
TSDF Alt EPA ID:	NVD980895338
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20030428
Creation Date:	8/29/2003 18:31:02
Receipt Date:	20030512
Manifest ID:	22723872
Trans EPA ID:	CAR000052803
Trans Name:	Not reported
Trans 2 EPA ID:	UTD981552425
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD980895338
Trans Name:	Not reported
TSDF Alt EPA ID:	NVD980895338
TSDF Alt Name:	Not reported
Waste Code Description:	- Not reported
RCRA Code:	D001
Meth Code:	T03 - Treatment, Incineration
Quantity Tons:	0.025
Waste Quantity:	50
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported

KOCH CARBON LLC (Continued) **S113090440**

Additional Code 5:	Not reported
Shipment Date:	20030428
Creation Date:	8/29/2003 18:31:02
Receipt Date:	20030512
Manifest ID:	22723872
Trans EPA ID:	CAR000052803
Trans Name:	Not reported
Trans 2 EPA ID:	UTD981552425
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD980895338
Trans Name:	Not reported
TSDF Alt EPA ID:	NVD980895338
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	0.19
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	1998
Gen EPA ID:	CAL000172095
Shipment Date:	19980827
Creation Date:	11/2/1998 0:00:00
Receipt Date:	Not reported
Manifest ID:	97205892
Trans EPA ID:	CAL000188071
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080012602
Trans Name:	Not reported
TSDF Alt EPA ID:	CAT080012602
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	0.6672
Waste Quantity:	160
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19980819
Creation Date:	11/2/1998 0:00:00
Receipt Date:	19980824

KOCH CARBON LLC (Continued) **S113090440**

Manifest ID:	98030829
Trans EPA ID:	CAL000188071
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080012602
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	1.0842
Waste Quantity:	260
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2012
Gen EPA ID:	CAL000172095
Shipment Date:	20121219
Creation Date:	3/4/2013 22:15:07
Receipt Date:	20121228
Manifest ID:	001172846FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEAN HARBORS
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	611 - Contaminated soil from site clean-ups
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.2
Waste Quantity:	400
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20121219
Creation Date:	3/4/2013 22:15:07
Receipt Date:	20121228
Manifest ID:	001172846FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	MAD039322250

KOCH CARBON LLC (Continued) **S113090440**

Trans 2 Name:	CLEAN HARBORS
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	611 - Contaminated soil from site clean-ups
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.8
Waste Quantity:	1600
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20121219
Creation Date:	3/4/2013 22:15:07
Receipt Date:	20121228
Manifest ID:	001172846FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEAN HARBORS
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20121219
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	001172846FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEAN HARBORS
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported

KOCH CARBON LLC (Continued) **S113090440**

Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20121219
Creation Date:	3/4/2013 22:15:07
Receipt Date:	20121228
Manifest ID:	001172846FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEAN HARBORS
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.8
Waste Quantity:	1600
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20121218
Creation Date:	5/8/2013 22:15:17
Receipt Date:	20130102
Manifest ID:	008421369JJK
Trans EPA ID:	CAR000163832
Trans Name:	J LOPEZ TRANSPORTATION
Trans 2 EPA ID:	MND044176113
Trans 2 Name:	PIONEER TANK LINES INC
TSDF EPA ID:	MND981098478
Trans Name:	SIEMENS INDUSTRY INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	2.94
Waste Quantity:	700
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported

KOCH CARBON LLC (Continued) **S113090440**

Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20121023
Creation Date:	4/4/2013 22:15:21
Receipt Date:	20121101
Manifest ID:	008421318JJK
Trans EPA ID:	CAR000163832
Trans Name:	J LOPEZ TRANSPORTATION
Trans 2 EPA ID:	MND044176113
Trans 2 Name:	PIONEER TANK LINES INC
TSDF EPA ID:	MND981098478
Trans Name:	SIEMENS INDUSTRY INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	2.835
Waste Quantity:	675
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20121023
Creation Date:	4/4/2013 22:15:21
Receipt Date:	20121101
Manifest ID:	008421318JJK
Trans EPA ID:	CAR000163832
Trans Name:	J LOPEZ TRANSPORTATION
Trans 2 EPA ID:	MND044176113
Trans 2 Name:	PIONEER TANK LINES INC
TSDF EPA ID:	MND981098478
Trans Name:	SIEMENS INDUSTRY INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	H129 - Other Treatment
Quantity Tons:	0.945
Waste Quantity:	225
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20121010
Creation Date:	4/2/2013 22:15:07
Receipt Date:	20121016
Manifest ID:	005299581FLE

KOCH CARBON LLC (Continued) **S113090440**

Trans EPA ID: MAD039322250
Trans Name: CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID: MAD039322250
Trans 2 Name: CLEAN HARBORS ENV SVC
TSDF EPA ID: NED981723513
Trans Name: CLEAN HARBORS ENV SERVICES INC
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 221 - Waste oil and mixed oil
RCRA Code: Not reported
Meth Code: H040 - Incineration--Thermal Destruction Other Than Use As A Fuel
Quantity Tons: 0.418
Waste Quantity: 110
Quantity Unit: G
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 20121010
Creation Date: 1/13/2013 22:15:06
Receipt Date: 20121015
Manifest ID: 005299582FLE
Trans EPA ID: MAD039322250
Trans Name: CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID: MAD039322250
Trans 2 Name: CLEAN HARBORS ENV SVC
TSDF EPA ID: CAD059494310
Trans Name: CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 352 - Other organic solids
RCRA Code: Not reported
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons: 0.3
Waste Quantity: 600
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Additional Info:
Year: 2011
Gen EPA ID: CAL000172095

Shipment Date: 20111114
Creation Date: 5/4/2013 22:16:06
Receipt Date: 20111201
Manifest ID: 004868799FLE
Trans EPA ID: MAD039322250
Trans Name: CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID: MAD039322250
Trans 2 Name: CLEAN HARBORS ENV SERVICES

KOCH CARBON LLC (Continued) **S113090440**

TSDF EPA ID:	NED981723513
Trans Name:	CLEAN HARBORS ENV SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H040 - Incineration--Thermal Destruction Other Than Use As A Fuel
Quantity Tons:	0.038
Waste Quantity:	10
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20111114
Creation Date:	7/19/2012 22:00:18
Receipt Date:	20111116
Manifest ID:	004868800FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEAN HARBORS ENV SERVICES
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.4
Waste Quantity:	800
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20111114
Creation Date:	7/19/2012 22:00:18
Receipt Date:	20111116
Manifest ID:	004868800FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEAN HARBORS ENV SERVICES
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)

KOCH CARBON LLC (Continued) **S113090440**

Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20111109
Creation Date:	4/13/2012 20:30:11
Receipt Date:	20111117
Manifest ID:	008421027JJK
Trans EPA ID:	CAR000163832
Trans Name:	J LOPEZ TRANSPORTATION
Trans 2 EPA ID:	MND044176113
Trans 2 Name:	PIONEER TANK LINES INC
TSDF EPA ID:	MND981098478
Trans Name:	SIEMENS INDUSTRY INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	4.725
Waste Quantity:	1125
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20110914
Creation Date:	7/19/2012 22:00:14
Receipt Date:	20110916
Manifest ID:	004937085FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEAN HARBORS ENV SERVICES
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0375
Waste Quantity:	75
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported

KOCH CARBON LLC (Continued) **S113090440**

Additional Code 5:	Not reported
Shipment Date:	20110914
Creation Date:	7/19/2012 22:00:14
Receipt Date:	20110916
Manifest ID:	004937085FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEAN HARBORS ENV SERVICES
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	- Not reported
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	Not reported
Waste Quantity:	Not reported
Quantity Unit:	Not reported
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20110914
Creation Date:	7/19/2012 22:00:14
Receipt Date:	20110916
Manifest ID:	004937085FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEAN HARBORS ENV SERVICES
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.125
Waste Quantity:	250
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20110914
Creation Date:	7/19/2012 22:00:14
Receipt Date:	20110916
Manifest ID:	004937085FLE
Trans EPA ID:	MAD039322250

KOCH CARBON LLC (Continued) **S113090440**

Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEAN HARBORS ENV SERVICES
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.2
Waste Quantity:	400
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20110914
Creation Date:	5/4/2013 22:16:06
Receipt Date:	20110926
Manifest ID:	004937083FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEAN HARBORS ENV SERVICES
TSDF EPA ID:	NED981723513
Trans Name:	CLEAN HARBORS ENV SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H040 - Incineration--Thermal Destruction Other Than Use As A Fuel
Quantity Tons:	0.209
Waste Quantity:	55
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20110901
Creation Date:	4/12/2012 20:30:13
Receipt Date:	20110908
Manifest ID:	005968447JJK
Trans EPA ID:	CAR000163832
Trans Name:	J LOPEZ TRANSPORTATION
Trans 2 EPA ID:	MND044176113
Trans 2 Name:	PIONEER TANK LINES INC
TSDF EPA ID:	MND981098478
Trans Name:	SIEMENS INDUSTRY INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution

KOCH CARBON LLC (Continued) **S113090440**

RCRA Code: Not reported
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons: 1.89
Waste Quantity: 450
Quantity Unit: G
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Additional Info:
Year: 2008
Gen EPA ID: CAL000172095

Shipment Date: 20081209
Creation Date: 4/28/2009 18:30:08
Receipt Date: 20081218
Manifest ID: 002082387JJK
Trans EPA ID: CAR000163832
Trans Name: J LOPEZ TRANSPORTATION
Trans 2 EPA ID: MND044176113
Trans 2 Name: PIONEER TANK LINES INC
TSDF EPA ID: MND981098478
Trans Name: SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 135 - Unspecified aqueous solution
RCRA Code: Not reported
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons: 1.5
Waste Quantity: 3000
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 20081203
Creation Date: Not reported
Receipt Date: Not reported
Manifest ID: 005031264JJK
Trans EPA ID: CAR000164012
Trans Name: 21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
Trans 2 EPA ID: UTR000007708
Trans 2 Name: SLT EXPRESS WAY INC
TSDF EPA ID: NVD980895338
Trans Name: 21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 223 - Unspecified oil-containing waste
RCRA Code: Not reported
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)

KOCH CARBON LLC (Continued) **S113090440**

Quantity Tons:	0.0625
Waste Quantity:	125
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20081203
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	005031264JJK
Trans EPA ID:	CAR000164012
Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
Trans 2 EPA ID:	UTR000007708
Trans 2 Name:	SLT EXPRESS WAY INC
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20081203
Creation Date:	4/29/2009 18:30:08
Receipt Date:	20081211
Manifest ID:	005031264JJK
Trans EPA ID:	CAR000164012
Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
Trans 2 EPA ID:	UTR000007708
Trans 2 Name:	SLT EXPRESS WAY INC
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0875
Waste Quantity:	175
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported

KOCH CARBON LLC (Continued) **S113090440**

Additional Code 5:	Not reported
Shipment Date:	20081203
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	005031264JJK
Trans EPA ID:	CAR000164012
Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
Trans 2 EPA ID:	UTR000007708
Trans 2 Name:	SLT EXPRESS WAY INC
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.375
Waste Quantity:	750
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20081203
Creation Date:	4/29/2009 18:30:08
Receipt Date:	20081211
Manifest ID:	005031264JJK
Trans EPA ID:	CAR000164012
Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
Trans 2 EPA ID:	UTR000007708
Trans 2 Name:	SLT EXPRESS WAY INC
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	551 - Laboratory waste chemicals 561 Detergent and soap
RCRA Code:	D001
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20081203
Creation Date:	4/29/2009 18:30:08
Receipt Date:	20081211
Manifest ID:	005031264JJK
Trans EPA ID:	CAR000164012

KOCH CARBON LLC (Continued) **S113090440**

Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
Trans 2 EPA ID:	UTR000007708
Trans 2 Name:	SLT EXPRESS WAY INC
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	D006
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.03
Waste Quantity:	60
Quantity Unit:	P
Additional Code 1:	D002
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20081203
Creation Date:	4/29/2009 18:30:08
Receipt Date:	20081211
Manifest ID:	005031264JJK
Trans EPA ID:	CAR000164012
Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
Trans 2 EPA ID:	UTR000007708
Trans 2 Name:	SLT EXPRESS WAY INC
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.06
Waste Quantity:	120
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20081124
Creation Date:	4/9/2009 18:30:08
Receipt Date:	20081204
Manifest ID:	002082367JJK
Trans EPA ID:	CAR000163832
Trans Name:	J LOPEZ TRANSPORTATION
Trans 2 EPA ID:	MND044176113
Trans 2 Name:	PIONEER TANK LINES INC
TSDF EPA ID:	MND981098478
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported

KOCH CARBON LLC (Continued) **S113090440**

Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	1.5
Waste Quantity:	3000
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20081120
Creation Date:	4/8/2009 18:30:30
Receipt Date:	20081202
Manifest ID:	005031033JJK
Trans EPA ID:	CAR000164012
Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
Trans 2 EPA ID:	UTR000007708
Trans 2 Name:	SLT EXPRESS WAY INC
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.2
Waste Quantity:	400
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2005
Gen EPA ID:	CAL000172095
Shipment Date:	20051128
Creation Date:	1/3/2007 18:30:08
Receipt Date:	20051202
Manifest ID:	24141457
Trans EPA ID:	INR000022798
Trans Name:	US FILTER TRANSPORT
Trans 2 EPA ID:	CAL000295621
Trans 2 Name:	J LOPEZ TRANSPORTATION
TSDF EPA ID:	CAD097030993
Trans Name:	US FILTER RECOVERY SERVICES CA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	R01 - Recycler

KOCH CARBON LLC (Continued) **S113090440**

Quantity Tons:	2.25
Waste Quantity:	4500
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20051128
Creation Date:	1/3/2007 18:30:08
Receipt Date:	20051202
Manifest ID:	24141457
Trans EPA ID:	INR000022798
Trans Name:	US FILTER TRANSPORT
Trans 2 EPA ID:	CAL000295621
Trans 2 Name:	J LOPEZ TRANSPORTATION
TSDF EPA ID:	CAD097030993
Trans Name:	US FILTER RECOVERY SERVICES CA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	1.5
Waste Quantity:	3000
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20051117
Creation Date:	1/2/2007 18:30:32
Receipt Date:	20051201
Manifest ID:	24744521
Trans EPA ID:	CAD063547996
Trans Name:	PHILIP TRANSPORTATION & REMEDIATION INC
Trans 2 EPA ID:	CAR000164012
Trans 2 Name:	21ST CENTURY EMI
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY EMI
TSDF Alt EPA ID:	NVD980895338
TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

KOCH CARBON LLC (Continued) **S113090440**

Shipment Date:	20051117
Creation Date:	1/2/2007 18:30:32
Receipt Date:	20051201
Manifest ID:	24744521
Trans EPA ID:	CAD063547996
Trans Name:	PHILIP TRANSPORTATION & REMEDIATION INC
Trans 2 EPA ID:	CAR000164012
Trans 2 Name:	21ST CENTURY EMI
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY EMI
TSDF Alt EPA ID:	NVD980895338
TSDF Alt Name:	Not reported
Waste Code Description:	- Not reported
RCRA Code:	D001
Meth Code:	T03 - Treatment, Incineration
Quantity Tons:	0.005
Waste Quantity:	10
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20051117
Creation Date:	1/2/2007 18:30:32
Receipt Date:	20051201
Manifest ID:	24744521
Trans EPA ID:	CAD063547996
Trans Name:	PHILIP TRANSPORTATION & REMEDIATION INC
Trans 2 EPA ID:	CAR000164012
Trans 2 Name:	21ST CENTURY EMI
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY EMI
TSDF Alt EPA ID:	NVD980895338
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	0.4
Waste Quantity:	800
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20051114
Creation Date:	1/2/2007 18:30:32
Receipt Date:	20051123
Manifest ID:	24141441
Trans EPA ID:	INR000022798
Trans Name:	US FILTER TRANSPORT
Trans 2 EPA ID:	CAL000295621
Trans 2 Name:	J LOPEZ TRANSPORTATION
TSDF EPA ID:	CAD097030993

KOCH CARBON LLC (Continued) **S113090440**

Trans Name:	US FILTER RECOVERY SERVICES CA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.75
Waste Quantity:	1500
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20051107
Creation Date:	7/12/2006 18:30:47
Receipt Date:	20051109
Manifest ID:	24141419
Trans EPA ID:	INR000022798
Trans Name:	US FILTER TRANSPORT
Trans 2 EPA ID:	CAL000295621
Trans 2 Name:	J LOPEZ TRANSPORTATION
TSDF EPA ID:	CAD097030993
Trans Name:	US FILTER RECOVERY SERVICES CA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.75
Waste Quantity:	1500
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20051107
Creation Date:	7/12/2006 18:30:47
Receipt Date:	20051109
Manifest ID:	24141419
Trans EPA ID:	INR000022798
Trans Name:	US FILTER TRANSPORT
Trans 2 EPA ID:	CAL000295621
Trans 2 Name:	J LOPEZ TRANSPORTATION
TSDF EPA ID:	CAD097030993
Trans Name:	US FILTER RECOVERY SERVICES CA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	2.25
Waste Quantity:	4500
Quantity Unit:	P

KOCH CARBON LLC (Continued) **S113090440**

Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20051026
Creation Date:	1/4/2007 18:30:12
Receipt Date:	20051103
Manifest ID:	24785875
Trans EPA ID:	CAR000164012
Trans Name:	21ST CENTURY EMI
Trans 2 EPA ID:	UTR000007708
Trans 2 Name:	SLT EXPRESS
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY EMI
TSDF Alt EPA ID:	NVD980895338
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	0.005
Waste Quantity:	10
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20051026
Creation Date:	1/4/2007 18:30:12
Receipt Date:	20051103
Manifest ID:	24785875
Trans EPA ID:	CAR000164012
Trans Name:	21ST CENTURY EMI
Trans 2 EPA ID:	UTR000007708
Trans 2 Name:	SLT EXPRESS
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY EMI
TSDF Alt EPA ID:	NVD980895338
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	0.01
Waste Quantity:	20
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2010
Gen EPA ID:	CAL000172095

KOCH CARBON LLC (Continued) **S113090440**

Shipment Date:	20101221
Creation Date:	5/26/2011 18:30:11
Receipt Date:	20110104
Manifest ID:	005968209JJK
Trans EPA ID:	CAR000163832
Trans Name:	J LOPEZ TRANSPORTATION
Trans 2 EPA ID:	MND044176113
Trans 2 Name:	PIONEER TANK LINES INC
TSDF EPA ID:	MND981098478
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	H129 - Other Treatment
Quantity Tons:	1.89
Waste Quantity:	450
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20101221
Creation Date:	5/26/2011 18:30:11
Receipt Date:	20110104
Manifest ID:	005968209JJK
Trans EPA ID:	CAR000163832
Trans Name:	J LOPEZ TRANSPORTATION
Trans 2 EPA ID:	MND044176113
Trans 2 Name:	PIONEER TANK LINES INC
TSDF EPA ID:	MND981098478
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	4.725
Waste Quantity:	1125
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20101214
Creation Date:	2/8/2011 18:30:44
Receipt Date:	20101217
Manifest ID:	000013548DAT
Trans EPA ID:	NVD980895338
Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported

KOCH CARBON LLC (Continued) **S113090440**

TSDF EPA ID:	CAD980884183
Trans Name:	GENERAL ENVIRONMENTAL MGT LLC DBA PSC ENVIRONMENTAL SERVICES
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.132
Waste Quantity:	40
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20101214
Creation Date:	2/8/2011 18:30:44
Receipt Date:	20101217
Manifest ID:	000013548DAT
Trans EPA ID:	NVD980895338
Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980884183
Trans Name:	GENERAL ENVIRONMENTAL MGT LLC DBA PSC ENVIRONMENTAL SERVICES
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20101118
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	000011636DAT
Trans EPA ID:	NVD980895338
Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980884183
Trans Name:	GENERAL ENVIRONMENTAL MGT LLC DBA PSC ENVIRONMENTAL SERVICES
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	591 - Baghouse waste
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No

KOCH CARBON LLC (Continued) **S113090440**

	Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.35
Waste Quantity:	700
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20101118
Creation Date:	2/8/2011 18:30:44
Receipt Date:	20101129
Manifest ID:	000011636DAT
Trans EPA ID:	NVD980895338
Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980884183
Trans Name:	GENERAL ENVIRONMENTAL MGT LLC DBA PSC ENVIRONMENTAL SERVICES
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.133
Waste Quantity:	35
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20101118
Creation Date:	2/8/2011 18:30:44
Receipt Date:	20101129
Manifest ID:	000011636DAT
Trans EPA ID:	NVD980895338
Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980884183
Trans Name:	GENERAL ENVIRONMENTAL MGT LLC DBA PSC ENVIRONMENTAL SERVICES
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.125
Waste Quantity:	250
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported

KOCH CARBON LLC (Continued) **S113090440**

Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20101118
Creation Date:	2/8/2011 18:30:44
Receipt Date:	20101129
Manifest ID:	000011636DAT
Trans EPA ID:	NVD980895338
Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980884183
Trans Name:	GENERAL ENVIRONMENTAL MGT LLC DBA PSC ENVIRONMENTAL SERVICES
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20101118
Creation Date:	2/8/2011 18:30:44
Receipt Date:	20101129
Manifest ID:	000011636DAT
Trans EPA ID:	NVD980895338
Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980884183
Trans Name:	GENERAL ENVIRONMENTAL MGT LLC DBA PSC ENVIRONMENTAL SERVICES
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.015
Waste Quantity:	30
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20100913
Creation Date:	2/10/2011 18:30:18
Receipt Date:	20100923
Manifest ID:	005968827JJK

KOCH CARBON LLC (Continued) **S113090440**

Trans EPA ID:	CAR000163832
Trans Name:	J LOPEZ TRANSPORTATION
Trans 2 EPA ID:	MND044176113
Trans 2 Name:	PIONEER TANK LINES
TSDF EPA ID:	MND981098478
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	2.835
Waste Quantity:	675
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2001
Gen EPA ID:	CAL000172095
Shipment Date:	20011024
Creation Date:	1/16/2002 0:00:00
Receipt Date:	20011129
Manifest ID:	20948494
Trans EPA ID:	CAR000021048
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD028409019
TSDF Alt Name:	Not reported
Waste Code Description:	211 - Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.025
Waste Quantity:	50
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20011024
Creation Date:	1/16/2002 0:00:00
Receipt Date:	20011129
Manifest ID:	20948494
Trans EPA ID:	CAR000021048
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported

KOCH CARBON LLC (Continued) **S113090440**

Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD028409019
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20011024
Creation Date:	1/16/2002 0:00:00
Receipt Date:	20011129
Manifest ID:	20948494
Trans EPA ID:	CAR000021048
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD028409019
TSDF Alt Name:	Not reported
Waste Code Description:	181 - Other inorganic solid waste Organics
RCRA Code:	D009
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20011024
Creation Date:	1/16/2002 0:00:00
Receipt Date:	20011129
Manifest ID:	20948494
Trans EPA ID:	CAR000021048
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD028409019
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.025

KOCH CARBON LLC (Continued) **S113090440**

Waste Quantity:	50
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20010412
Creation Date:	7/10/2001 0:00:00
Receipt Date:	20010416
Manifest ID:	20948485
Trans EPA ID:	CAR000021048
Trans Name:	Not reported
Trans 2 EPA ID:	CAD982524480
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD028409019
TSDF Alt Name:	Not reported
Waste Code Description:	512 - Other empty containers 30 gallons or more
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0
Waste Quantity:	100
Quantity Unit:	*
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20010412
Creation Date:	7/10/2001 0:00:00
Receipt Date:	20010416
Manifest ID:	20948485
Trans EPA ID:	CAR000021048
Trans Name:	Not reported
Trans 2 EPA ID:	CAD982524480
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD028409019
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0
Waste Quantity:	400
Quantity Unit:	*
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20010412

KOCH CARBON LLC (Continued) **S113090440**

Creation Date:	7/10/2001 0:00:00
Receipt Date:	20010416
Manifest ID:	20948485
Trans EPA ID:	CAR000021048
Trans Name:	Not reported
Trans 2 EPA ID:	CAD982524480
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD028409019
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2009
Gen EPA ID:	CAL000172095
Shipment Date:	20091210
Creation Date:	6/30/2010 18:30:18
Receipt Date:	20091217
Manifest ID:	006127681JJK
Trans EPA ID:	CAR000164012
Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
Trans 2 EPA ID:	UTR000007708
Trans 2 Name:	SLT EXPRESS WAY INC
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D035
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.03
Waste Quantity:	60
Quantity Unit:	P
Additional Code 1:	D001
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20091210
Creation Date:	6/30/2010 18:30:18
Receipt Date:	20091217
Manifest ID:	006127681JJK
Trans EPA ID:	CAR000164012

KOCH CARBON LLC (Continued) **S113090440**

Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
Trans 2 EPA ID:	UTR000007708
Trans 2 Name:	SLT EXPRESS WAY INC
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	591 - Baghouse waste
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.6
Waste Quantity:	1200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20091210
Creation Date:	6/30/2010 18:30:18
Receipt Date:	20091217
Manifest ID:	006127681JJK
Trans EPA ID:	CAR000164012
Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
Trans 2 EPA ID:	UTR000007708
Trans 2 Name:	SLT EXPRESS WAY INC
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.09
Waste Quantity:	180
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20091208
Creation Date:	7/20/2010 18:30:17
Receipt Date:	20091217
Manifest ID:	005968625JJK
Trans EPA ID:	CAR000163832
Trans Name:	J LOPEZ TRANSPORTATION
Trans 2 EPA ID:	MND044176113
Trans 2 Name:	PIONEER TANK LINES
TSDF EPA ID:	MND981098478
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported

KOCH CARBON LLC (Continued) **S113090440**

Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	H129 - Other Treatment
Quantity Tons:	3
Waste Quantity:	6000
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20091123
Creation Date:	5/27/2010 18:31:00
Receipt Date:	20091203
Manifest ID:	005968598JJK
Trans EPA ID:	CAR000163832
Trans Name:	J LOPEZ TRANSPORTATION
Trans 2 EPA ID:	MND44176113
Trans 2 Name:	PIONEER TANK LINES
TSDF EPA ID:	MND981098478
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	4.5
Waste Quantity:	9000
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20091013
Creation Date:	4/12/2010 18:31:03
Receipt Date:	20091022
Manifest ID:	005309828JJK
Trans EPA ID:	CAR000163832
Trans Name:	J LOPEZ TRANSPORTATION
Trans 2 EPA ID:	MND044176113
Trans 2 Name:	PIONEER TANK LINES
TSDF EPA ID:	MND981098478
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	2.25
Waste Quantity:	4500
Quantity Unit:	P
Additional Code 1:	Not reported

KOCH CARBON LLC (Continued) **S113090440**

Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20091008
Creation Date:	4/12/2010 18:31:03
Receipt Date:	20091019
Manifest ID:	005521264JJK
Trans EPA ID:	CAR000164012
Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
Trans 2 EPA ID:	UTR000007708
Trans 2 Name:	SLT
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	611 - Contaminated soil from site clean-ups
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0875
Waste Quantity:	175
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20091008
Creation Date:	4/12/2010 18:31:03
Receipt Date:	20091019
Manifest ID:	005521264JJK
Trans EPA ID:	CAR000164012
Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
Trans 2 EPA ID:	UTR000007708
Trans 2 Name:	SLT
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.209
Waste Quantity:	55
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20091008
Creation Date:	4/12/2010 18:31:03

KOCH CARBON LLC (Continued) **S113090440**

Receipt Date: 20091019
Manifest ID: 005521264JJK
Trans EPA ID: CAR000164012
Trans Name: 21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
Trans 2 EPA ID: UTR000007708
Trans 2 Name: SLT
TSDF EPA ID: NVD980895338
Trans Name: 21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 352 - Other organic solids
RCRA Code: Not reported
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons: 0.125
Waste Quantity: 250
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 20090831
Creation Date: 3/5/2010 18:30:17
Receipt Date: 20090904
Manifest ID: 006121398JJK
Trans EPA ID: CAR000164012
Trans Name: 21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
Trans 2 EPA ID: UTR000007708
Trans 2 Name: SLT EXPRESS WAY INC
TSDF EPA ID: NVD980895338
Trans Name: 21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA LLC
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 221 - Waste oil and mixed oil
RCRA Code: Not reported
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons: 0.171
Waste Quantity: 45
Quantity Unit: G
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Additional Info:
Year: 2016
Gen EPA ID: CAL000172095

Shipment Date: 20151125
Creation Date: 2/10/2016 22:15:22
Receipt Date: 20151203
Manifest ID: 008997747FLE
Trans EPA ID: MAD039322250

KOCH CARBON LLC (Continued) **S113090440**

Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICE INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0925
Waste Quantity:	185
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151125
Creation Date:	2/10/2016 22:15:22
Receipt Date:	20151203
Manifest ID:	008997747FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICE INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151125
Creation Date:	2/10/2016 22:15:22
Receipt Date:	20151203
Manifest ID:	008997747FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICE INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported

KOCH CARBON LLC (Continued) **S113090440**

Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0425
Waste Quantity:	85
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151106
Creation Date:	3/22/2016 22:15:44
Receipt Date:	20151204
Manifest ID:	009000180FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICE INC
Trans 2 EPA ID:	AZR000513770
Trans 2 Name:	SLT EXPRESS WAY
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.57
Waste Quantity:	150
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151106
Creation Date:	1/21/2016 22:15:39
Receipt Date:	20151113
Manifest ID:	009000179FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICE INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.125
Waste Quantity:	250
Quantity Unit:	P

KOCH CARBON LLC (Continued) **S113090440**

Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151106
Creation Date:	2/10/2016 22:15:22
Receipt Date:	20151120
Manifest ID:	009000177FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICE INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980675276
Trans Name:	CLEAN HARBORS BUTTONWILLOW LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.02
Waste Quantity:	40
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151106
Creation Date:	2/10/2016 22:15:22
Receipt Date:	20151120
Manifest ID:	009000177FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICE INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980675276
Trans Name:	CLEAN HARBORS BUTTONWILLOW LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.01
Waste Quantity:	20
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151106

KOCH CARBON LLC (Continued) **S113090440**

Creation Date:	5/12/2016 10:00:07
Receipt Date:	20151119
Manifest ID:	009000178FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICE INC
Trans 2 EPA ID:	AZR000513770
Trans 2 Name:	SLT
TSDF EPA ID:	UTD991301748
Trans Name:	CLEAN HARBORS GRASSY MOUNTAIN LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	181 - Other inorganic solid waste Organics
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.01
Waste Quantity:	20
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20151106
Creation Date:	1/21/2016 22:15:39
Receipt Date:	20151113
Manifest ID:	009000179FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICE INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.035
Waste Quantity:	70
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20151007
Creation Date:	12/21/2015 22:15:08
Receipt Date:	20151026
Manifest ID:	009117610FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICE INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported

KOCH CARBON LLC (Continued) **S113090440**

TSDF EPA ID: CAD044429835
Trans Name: CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 221 - Waste oil and mixed oil
RCRA Code: Not reported
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons: 1.14
Waste Quantity: 300
Quantity Unit: G
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Additional Info:
Year: 2007
Gen EPA ID: CAL000172095

Shipment Date: 20071121
Creation Date: 3/11/2008 18:30:23
Receipt Date: 20071206
Manifest ID: 002082798JJK
Trans EPA ID: CAR000163832
Trans Name: J LOPEZ TRANSPORTATION
Trans 2 EPA ID: MND044176113
Trans 2 Name: PIONEER TANK LINES INC
TSDF EPA ID: MND981098478
Trans Name: SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 135 - Unspecified aqueous solution
RCRA Code: Not reported
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons: 2.25
Waste Quantity: 4500
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 20071121
Creation Date: 3/11/2008 18:30:23
Receipt Date: 20071206
Manifest ID: 002082798JJK
Trans EPA ID: CAR000163832
Trans Name: J LOPEZ TRANSPORTATION
Trans 2 EPA ID: MND044176113
Trans 2 Name: PIONEER TANK LINES INC
TSDF EPA ID: MND981098478
Trans Name: SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID: Not reported

KOCH CARBON LLC (Continued) **S113090440**

TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	Not reported
Waste Quantity:	Not reported
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20071119
Creation Date:	7/16/2008 18:30:41
Receipt Date:	20071127
Manifest ID:	003369585JJK
Trans EPA ID:	CAR000177527
Trans Name:	PHILIP WEST INDUSTRIAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY EMI
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.4
Waste Quantity:	800
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20071119
Creation Date:	7/16/2008 18:30:41
Receipt Date:	20071127
Manifest ID:	003369585JJK
Trans EPA ID:	CAR000177527
Trans Name:	PHILIP WEST INDUSTRIAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY EMI
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.2
Waste Quantity:	400
Quantity Unit:	P

KOCH CARBON LLC (Continued) **S113090440**

Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20071119
Creation Date:	7/16/2008 18:30:41
Receipt Date:	20071127
Manifest ID:	003369585JJK
Trans EPA ID:	CAR000177527
Trans Name:	PHILIP WEST INDUSTRIAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY EMI
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	- Not reported
RCRA Code:	D035
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0125
Waste Quantity:	25
Quantity Unit:	P
Additional Code 1:	D001
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20071119
Creation Date:	7/16/2008 18:30:41
Receipt Date:	20071127
Manifest ID:	003369585JJK
Trans EPA ID:	CAR000177527
Trans Name:	PHILIP WEST INDUSTRIAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY EMI
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.10425
Waste Quantity:	25
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20070917

KOCH CARBON LLC (Continued) **S113090440**

Creation Date:	12/28/2007 18:30:46
Receipt Date:	20070920
Manifest ID:	002082660JJK
Trans EPA ID:	CAL000295621
Trans Name:	J LOPEZ TRANSPORTATION
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	3.75
Waste Quantity:	7500
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20070917
Creation Date:	12/28/2007 18:30:46
Receipt Date:	20070920
Manifest ID:	002082660JJK
Trans EPA ID:	CAL000295621
Trans Name:	J LOPEZ TRANSPORTATION
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	1.5
Waste Quantity:	3000
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20070910
Creation Date:	3/4/2008 18:30:07
Receipt Date:	Not reported
Manifest ID:	002007641JJK
Trans EPA ID:	CAR000177527
Trans Name:	PHILIP WEST INDUSTRIAL SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported

KOCH CARBON LLC (Continued) **S113090440**

TSDF EPA ID:	WAD991281767
Trans Name:	BURLINGTON ENVIRONMENTAL INC KENT FACILITY
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	591 - Baghouse waste
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	1
Waste Quantity:	2000
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20070907
Creation Date:	3/4/2008 18:31:02
Receipt Date:	20070913
Manifest ID:	003369515JJK
Trans EPA ID:	CAR000177527
Trans Name:	PHILIP WEST INDUSTRIAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY EMI
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.834
Waste Quantity:	200
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2006
Gen EPA ID:	CAL000172095
Shipment Date:	20061218
Creation Date:	4/19/2007 18:31:46
Receipt Date:	20070105
Manifest ID:	000327242JJK
Trans EPA ID:	CAL000295621
Trans Name:	J LOPEZ TRANSPORTATION
Trans 2 EPA ID:	CAL000295621
Trans 2 Name:	J LOPEZ TRANSPORTATION
TSDF EPA ID:	CAD097030993
Trans Name:	US FILTER RECOVERY SERVICES (CA)
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported

KOCH CARBON LLC (Continued) **S113090440**

Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.75
Waste Quantity:	1500
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20061218
Creation Date:	4/19/2007 18:31:46
Receipt Date:	20070105
Manifest ID:	000327242JJK
Trans EPA ID:	CAL000295621
Trans Name:	J LOPEZ TRANSPORTATION
Trans 2 EPA ID:	CAL000295621
Trans 2 Name:	J LOPEZ TRANSPORTATION
TSDF EPA ID:	CAD097030993
Trans Name:	US FILTER RECOVERY SERVICES (CA)
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	3
Waste Quantity:	6000
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20060925
Creation Date:	3/30/2007 13:32:55
Receipt Date:	20061004
Manifest ID:	000327032JJK
Trans EPA ID:	CAL000295621
Trans Name:	J LOPEZ TRANSPORTATION
Trans 2 EPA ID:	INR000022798
Trans 2 Name:	USFILTER TRANSPORT
TSDF EPA ID:	CAD097030993
Trans Name:	US FILTER RECOVERY SERVICES (CA)
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	4.5
Waste Quantity:	9000
Quantity Unit:	P

KOCH CARBON LLC (Continued) **S113090440**

Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20060925
Creation Date:	3/30/2007 13:32:55
Receipt Date:	20061004
Manifest ID:	000327032JJK
Trans EPA ID:	CAL000295621
Trans Name:	J LOPEZ TRANSPORTATION
Trans 2 EPA ID:	INR000022798
Trans 2 Name:	USFILTER TRANSPORT
TSDF EPA ID:	CAD097030993
Trans Name:	US FILTER RECOVERY SERVICES (CA)
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	0.75
Waste Quantity:	1500
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20060804
Creation Date:	9/28/2006 18:32:35
Receipt Date:	20060807
Manifest ID:	24140751
Trans EPA ID:	CAL000295621
Trans Name:	J LOPEZ TRANSPORTATION
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	US FILTER RECOVERY SERVICES CA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	3
Waste Quantity:	6000
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20060804
Creation Date:	9/28/2006 18:32:35
Receipt Date:	20060807

KOCH CARBON LLC (Continued) **S113090440**

Manifest ID:	24140751
Trans EPA ID:	CAL000295621
Trans Name:	J LOPEZ TRANSPORTATION
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	US FILTER RECOVERY SERVICES CA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	3.75
Waste Quantity:	7500
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20060731
Creation Date:	11/21/2006 18:30:04
Receipt Date:	20060807
Manifest ID:	25298744
Trans EPA ID:	CAR000164012
Trans Name:	21ST CENTURY EMI
Trans 2 EPA ID:	UTR000007708
Trans 2 Name:	SLT EXPRESS
TSDF EPA ID:	WAD991281767
Trans Name:	BURLINGTON ENVIRONMENTAL INC KENT
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.209
Waste Quantity:	55
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20060731
Creation Date:	11/21/2006 18:30:04
Receipt Date:	20060807
Manifest ID:	25298744
Trans EPA ID:	CAR000164012
Trans Name:	21ST CENTURY EMI
Trans 2 EPA ID:	UTR000007708
Trans 2 Name:	SLT EXPRESS
TSDF EPA ID:	WAD991281767
Trans Name:	BURLINGTON ENVIRONMENTAL INC KENT
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported

KOCH CARBON LLC (Continued) **S113090440**

Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	0.015
Waste Quantity:	30
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20060731
Creation Date:	11/21/2006 18:30:04
Receipt Date:	20060807
Manifest ID:	25298744
Trans EPA ID:	CAR000164012
Trans Name:	21ST CENTURY EMI
Trans 2 EPA ID:	UTR000007708
Trans 2 Name:	SLT EXPRESS
TSDF EPA ID:	WAD991281767
Trans Name:	BURLINGTON ENVIRONMENTAL INC KENT
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	0.0375
Waste Quantity:	75
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20060731
Creation Date:	11/21/2006 18:30:04
Receipt Date:	20060807
Manifest ID:	25298744
Trans EPA ID:	CAR000164012
Trans Name:	21ST CENTURY EMI
Trans 2 EPA ID:	UTR000007708
Trans 2 Name:	SLT EXPRESS
TSDF EPA ID:	WAD991281767
Trans Name:	BURLINGTON ENVIRONMENTAL INC KENT
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	0.04
Waste Quantity:	80
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported

KOCH CARBON LLC (Continued) **S113090440**

Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2013
Gen EPA ID:	CAL000172095
Shipment Date:	20131226
Creation Date:	3/18/2014 22:15:05
Receipt Date:	20140106
Manifest ID:	007085264FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEANHARBORS
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20131226
Creation Date:	3/18/2014 22:15:05
Receipt Date:	20140106
Manifest ID:	007085264FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEANHARBORS
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.8
Waste Quantity:	1600
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

KOCH CARBON LLC (Continued) **S113090440**

Shipment Date:	20131226
Creation Date:	3/18/2014 22:15:05
Receipt Date:	20140106
Manifest ID:	007085264FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEANHARBORS
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20131226
Creation Date:	5/24/2014 22:15:13
Receipt Date:	20140114
Manifest ID:	007085168FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEAN HARBORS
TSDF EPA ID:	UTD981552177
Trans Name:	CLEAN HARBORS ARAGONITE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	291 - Latex waste
RCRA Code:	Not reported
Meth Code:	H040 - Incineration--Thermal Destruction Other Than Use As A Fuel
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20131226
Creation Date:	8/20/2014 9:19:45
Receipt Date:	20140103
Manifest ID:	007085263FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEAN HARBORS

KOCH CARBON LLC (Continued) **S113090440**

TSDF EPA ID:	NED981723513
Trans Name:	CLEAN HARBORS ENV SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H040 - Incineration--Thermal Destruction Other Than Use As A Fuel
Quantity Tons:	0.0417
Waste Quantity:	10
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20131217
Creation Date:	5/14/2014 22:15:01
Receipt Date:	20131223
Manifest ID:	008420624JJK
Trans EPA ID:	CAR000163832
Trans Name:	J LOPEZ TRANSPORTATION
Trans 2 EPA ID:	MND044176113
Trans 2 Name:	PIONEER TANK LINES INC
TSDF EPA ID:	MND981098478
Trans Name:	SIEMENS WATER TECHNOLOGIES LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	H129 - Other Treatment
Quantity Tons:	2.835
Waste Quantity:	675
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20131217
Creation Date:	5/14/2014 22:15:01
Receipt Date:	20131223
Manifest ID:	008420624JJK
Trans EPA ID:	CAR000163832
Trans Name:	J LOPEZ TRANSPORTATION
Trans 2 EPA ID:	MND044176113
Trans 2 Name:	PIONEER TANK LINES INC
TSDF EPA ID:	MND981098478
Trans Name:	SIEMENS WATER TECHNOLOGIES LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	1.89

KOCH CARBON LLC (Continued) **S113090440**

Waste Quantity:	450
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20131203
Creation Date:	5/14/2014 22:14:54
Receipt Date:	20131211
Manifest ID:	008420600JJK
Trans EPA ID:	CAR000163832
Trans Name:	J LOPEZ TRANSPORTATION
Trans 2 EPA ID:	MND044176113
Trans 2 Name:	PIONEER TANK LINES INC
TSDF EPA ID:	MND981098478
Trans Name:	SIEMENS WATER TECHNOLOGIES LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	3.78
Waste Quantity:	900
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20131030
Creation Date:	1/29/2014 22:15:06
Receipt Date:	20131122
Manifest ID:	006780801FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEAN HARBORS
TSDF EPA ID:	CAD980675276
Trans Name:	CLEAN HARBORS BUTTONWILLOW LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.0165
Waste Quantity:	5
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

KOCH CARBON LLC (Continued) **S113090440**

Shipment Date:	20131030
Creation Date:	2/18/2014 22:15:06
Receipt Date:	20131113
Manifest ID:	006780803FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEAN HARBORS
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.6
Waste Quantity:	1200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2002
Gen EPA ID:	CAL000172095

Shipment Date:	20020816
Creation Date:	1/31/2003 15:02:08
Receipt Date:	20020829
Manifest ID:	21770421
Trans EPA ID:	CAR000052803
Trans Name:	Not reported
Trans 2 EPA ID:	UTD981552425
Trans 2 Name:	Not reported
TSDF EPA ID:	WAD991281767
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	591 - Baghouse waste
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20020816
Creation Date:	1/31/2003 15:02:08
Receipt Date:	20020829
Manifest ID:	21770421

KOCH CARBON LLC (Continued) **S113090440**

Trans EPA ID:	CAR000052803
Trans Name:	Not reported
Trans 2 EPA ID:	UTD981552425
Trans 2 Name:	Not reported
TSDF EPA ID:	WAD991281767
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	0.125
Waste Quantity:	250
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20020510
Creation Date:	2/4/2003 14:36:32
Receipt Date:	20020528
Manifest ID:	21675707
Trans EPA ID:	CAD981685886
Trans Name:	Not reported
Trans 2 EPA ID:	CAR000052803
Trans 2 Name:	Not reported
TSDF EPA ID:	WAD991281767
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	0.2085
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20020510
Creation Date:	2/4/2003 14:36:32
Receipt Date:	20020528
Manifest ID:	21675707
Trans EPA ID:	CAD981685886
Trans Name:	Not reported
Trans 2 EPA ID:	CAR000052803
Trans 2 Name:	Not reported
TSDF EPA ID:	WAD991281767
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids

KOCH CARBON LLC (Continued) **S113090440**

RCRA Code: Not reported
Meth Code: D80 - Disposal, Land Fill
Quantity Tons: 0.2
Waste Quantity: 400
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Additional Info:
Year: 2000
Gen EPA ID: CAL000172095

Shipment Date: 20000913
Creation Date: 12/13/2000 0:00:00
Receipt Date: 20000919
Manifest ID: 20042275
Trans EPA ID: CAD981694722
Trans Name: Not reported
Trans 2 EPA ID: CAD982524480
Trans 2 Name: Not reported
TSDF EPA ID: CAD028409019
Trans Name: Not reported
TSDF Alt EPA ID: CAD028409019
TSDF Alt Name: Not reported
Waste Code Description: 223 - Unspecified oil-containing waste
RCRA Code: Not reported
Meth Code: H01 - Transfer Station
Quantity Tons: 0.125
Waste Quantity: 250
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 20000322
Creation Date: 6/13/2000 0:00:00
Receipt Date: 20000328
Manifest ID: 99880778
Trans EPA ID: CAD981694722
Trans Name: Not reported
Trans 2 EPA ID: CAD982524480
Trans 2 Name: Not reported
TSDF EPA ID: CAD028409019
Trans Name: Not reported
TSDF Alt EPA ID: CAD028409019
TSDF Alt Name: Not reported
Waste Code Description: 223 - Unspecified oil-containing waste
RCRA Code: Not reported
Meth Code: H01 - Transfer Station
Quantity Tons: 0.15
Waste Quantity: 300
Quantity Unit: P

KOCH CARBON LLC (Continued) **S113090440**

Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20000322
Creation Date:	6/13/2000 0:00:00
Receipt Date:	20000328
Manifest ID:	99880778
Trans EPA ID:	CAD981694722
Trans Name:	Not reported
Trans 2 EPA ID:	CAD982524480
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD028409019
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.108
Waste Quantity:	30
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20000126
Creation Date:	4/4/2000 0:00:00
Receipt Date:	20000211
Manifest ID:	99880571
Trans EPA ID:	CAD981694722
Trans Name:	Not reported
Trans 2 EPA ID:	CAD982524480
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.6
Waste Quantity:	1200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2004
Gen EPA ID:	CAL000172095

KOCH CARBON LLC (Continued) **S113090440**

Shipment Date:	20041119
Creation Date:	2/17/2005 18:32:22
Receipt Date:	20041210
Manifest ID:	24200188
Trans EPA ID:	CAR000052803
Trans Name:	PHILIP TRANSPORTATION & REMEDIATION INC
Trans 2 EPA ID:	NVD980895338
Trans 2 Name:	21ST CENTURY EMI
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY EMI
TSDF Alt EPA ID:	NVD980895338
TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	NA
Meth Code:	T01 - Treatment, Tank
Quantity Tons:	3.78
Waste Quantity:	900
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20041103
Creation Date:	1/27/2005 18:31:12
Receipt Date:	Not reported
Manifest ID:	24204662
Trans EPA ID:	CAR000052803
Trans Name:	PHILIP TRANSPORTATION & REMEDIATION INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY EMI
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	NA
Meth Code:	- Not reported
Quantity Tons:	4.2
Waste Quantity:	1000
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20041103
Creation Date:	1/20/2005 18:30:18
Receipt Date:	20041117
Manifest ID:	24204661
Trans EPA ID:	CAR000052803
Trans Name:	PHILIP TRANSPORTATION & REMEDIATION INC
Trans 2 EPA ID:	NVD980895338
Trans 2 Name:	21ST CENTURY
TSDF EPA ID:	NVD980895338

KOCH CARBON LLC (Continued) **S113090440**

Trans Name:	21ST CENTURY EMI
TSDF Alt EPA ID:	NVD980895338
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	NA
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20041021
Creation Date:	1/11/2005 18:30:51
Receipt Date:	20041103
Manifest ID:	24203411
Trans EPA ID:	CAR000052803
Trans Name:	PHILIP TRANSPORTATION & REMEDIATION INC
Trans 2 EPA ID:	NVD980895338
Trans 2 Name:	21ST CENTURY EMI
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY EMI
TSDF Alt EPA ID:	NVD980895338
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	NA
Meth Code:	R01 - Recycler
Quantity Tons:	0.19
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20041021
Creation Date:	1/11/2005 18:30:51
Receipt Date:	20041103
Manifest ID:	24203411
Trans EPA ID:	CAR000052803
Trans Name:	PHILIP TRANSPORTATION & REMEDIATION INC
Trans 2 EPA ID:	NVD980895338
Trans 2 Name:	21ST CENTURY EMI
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY EMI
TSDF Alt EPA ID:	NVD980895338
TSDF Alt Name:	Not reported
Waste Code Description:	- Not reported
RCRA Code:	D001
Meth Code:	T03 - Treatment, Incineration
Quantity Tons:	0.01
Waste Quantity:	20
Quantity Unit:	P

KOCH CARBON LLC (Continued) **S113090440**

Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20041021
Creation Date:	1/11/2005 18:30:51
Receipt Date:	20041103
Manifest ID:	24203411
Trans EPA ID:	CAR000052803
Trans Name:	PHILIP TRANSPORTATION & REMEDIATION INC
Trans 2 EPA ID:	NVD980895338
Trans 2 Name:	21ST CENTURY EMI
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY EMI
TSDF Alt EPA ID:	NVD980895338
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	NA
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	0.02
Waste Quantity:	40
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20040901
Creation Date:	12/28/2004 14:46:39
Receipt Date:	20040902
Manifest ID:	23771751
Trans EPA ID:	CAD063547996
Trans Name:	PHILIP TRANSPORTATION & REMEDIATION INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY EMI
TSDF Alt EPA ID:	NVD980895338
TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	NA
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	11.34
Waste Quantity:	2700
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20040811
Creation Date:	1/4/2005 18:33:27
Receipt Date:	20040823

KOCH CARBON LLC (Continued) **S113090440**

Manifest ID:	23608322
Trans EPA ID:	CAR000052803
Trans Name:	PHILIP TRANSPORTATION & REMEDIATION INC
Trans 2 EPA ID:	UTR000007708
Trans 2 Name:	SLT EXPRESS
TSDF EPA ID:	WAD991281767
Trans Name:	BURLINGTON ENVIRONMENTAL INC KENT
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	NA
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20040527
Creation Date:	10/27/2004 15:08:36
Receipt Date:	Not reported
Manifest ID:	23416240
Trans EPA ID:	CAD063547996
Trans Name:	PHILIP TRANSPORTATION & REMEDIATION INC
Trans 2 EPA ID:	CAR000052803
Trans 2 Name:	PHILIP TRANSPORTATION & REMEDIATION INC
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY EMI
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20040527
Creation Date:	10/15/2004 10:46:40
Receipt Date:	20040528
Manifest ID:	23416239
Trans EPA ID:	CAD063547996
Trans Name:	PHILIP TRANSPORTATION & REMEDIATION INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD980895338
Trans Name:	21ST CENTURY EMI
TSDF Alt EPA ID:	NVD980895338
TSDF Alt Name:	Not reported

KOCH CARBON LLC (Continued) **S113090440**

Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	T01 - Treatment, Tank
Quantity Tons:	14.28
Waste Quantity:	3400
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2014
Gen EPA ID:	CAL000172095
Shipment Date:	20141230
Creation Date:	6/23/2015 22:15:30
Receipt Date:	20150108
Manifest ID:	008420916JJK
Trans EPA ID:	CAR000163832
Trans Name:	J LOPEZ TRANSPORTATION
Trans 2 EPA ID:	MND044176113
Trans 2 Name:	PIONEER TANK LINES INC
TSDF EPA ID:	MND981098478
Trans Name:	EVOQUA WATER TECHNOLOGIES LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	H100 - Not reported
Quantity Tons:	3.78
Waste Quantity:	900
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20141217
Creation Date:	3/6/2015 22:14:58
Receipt Date:	20141224
Manifest ID:	008100577FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	181 - Other inorganic solid waste Organics
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.015

KOCH CARBON LLC (Continued) **S113090440**

Waste Quantity:	30
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20141204
Creation Date:	2/13/2015 22:15:23
Receipt Date:	20141212
Manifest ID:	008143615FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.1125
Waste Quantity:	225
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20141204
Creation Date:	2/13/2015 22:15:23
Receipt Date:	20141212
Manifest ID:	008143615FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.2125
Waste Quantity:	425
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

KOCH CARBON LLC (Continued) **S113090440**

Shipment Date:	20141204
Creation Date:	2/13/2015 22:15:23
Receipt Date:	20141212
Manifest ID:	008143615FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20141204
Creation Date:	3/5/2015 22:15:15
Receipt Date:	20141212
Manifest ID:	008143616FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	AZR000513770
Trans 2 Name:	SLT
TSDF EPA ID:	NED981723513
Trans Name:	CLEAN HARBORS ENV SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H040 - Incineration--Thermal Destruction Other Than Use As A Fuel
Quantity Tons:	0.22935
Waste Quantity:	55
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20141204
Creation Date:	3/6/2015 22:14:58
Receipt Date:	20141217
Manifest ID:	008143617FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported

KOCH CARBON LLC (Continued) **S113090440**

TSDF EPA ID:	CAD980675276
Trans Name:	CLEAN HARBORS BUTTONWILLOW LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.025
Waste Quantity:	50
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20141201
Creation Date:	5/7/2015 22:15:07
Receipt Date:	20141211
Manifest ID:	008420895JJK
Trans EPA ID:	CAR000163832
Trans Name:	J LOPEZ TRANSPORTATION
Trans 2 EPA ID:	MND044176113
Trans 2 Name:	PIONEER TANK LINES INC
TSDF EPA ID:	MND981098478
Trans Name:	EVOQUA WATER TECHNOLOGIES LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	H100 - Not reported
Quantity Tons:	0.945
Waste Quantity:	225
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20141105
Creation Date:	5/27/2015 22:15:25
Receipt Date:	20141113
Manifest ID:	008144189FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	AZR000513770
Trans 2 Name:	SLT
TSDF EPA ID:	NED981723513
Trans Name:	CLEAN HARBORS ENV SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H040 - Incineration--Thermal Destruction Other Than Use As A Fuel
Quantity Tons:	0.56295

KOCH CARBON LLC (Continued) **S113090440**

Waste Quantity:	135
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20140924
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	007824065FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.03
Waste Quantity:	60
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2017
Gen EPA ID:	CAL000172095
Shipment Date:	20171108
Creation Date:	6/13/2018 18:31:14
Receipt Date:	20171113
Manifest ID:	011259725FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.045
Waste Quantity:	90
Quantity Unit:	P
Additional Code 1:	Not reported

KOCH CARBON LLC (Continued) **S113090440**

Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20171108
Creation Date:	10/16/2018 18:31:15
Receipt Date:	20171220
Manifest ID:	011259726FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	AZR000003681
Trans Name:	THERMO FLUIDS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	0.04
Waste Quantity:	80
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20171004
Creation Date:	7/23/2018 18:30:12
Receipt Date:	20171027
Manifest ID:	011260571FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	MOD095038998
Trans 2 Name:	TRI STATE MOTOR TRANSIT
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.209
Waste Quantity:	55
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20171004
Creation Date:	7/30/2018 18:30:10

KOCH CARBON LLC (Continued) **S113090440**

Receipt Date:	20171017
Manifest ID:	011260570FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	MOD095038998
Trans 2 Name:	TRI STATE MOTOR TRANSIT CO
TSDF EPA ID:	UTD991301748
Trans Name:	CLEAN HARBORS GRASSY MOUNTAIN LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	181 - Other inorganic solid waste Organics
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.0375
Waste Quantity:	75
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20170920
Creation Date:	6/20/2018 18:31:56
Receipt Date:	20170929
Manifest ID:	011154877FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20170816
Creation Date:	8/2/2018 18:30:37
Receipt Date:	20170920
Manifest ID:	010908343FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	AZR000003681

KOCH CARBON LLC (Continued) **S113090440**

Trans Name:	THERMO FLUIDS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	0.025
Waste Quantity:	50
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20170816
Creation Date:	5/17/2018 18:31:11
Receipt Date:	20170822
Manifest ID:	010908341FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.125
Waste Quantity:	250
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20170816
Creation Date:	5/17/2018 18:31:11
Receipt Date:	20170822
Manifest ID:	010908341FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)

KOCH CARBON LLC (Continued) **S113090440**

Quantity Tons:	0.0425
Waste Quantity:	85
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20170628
Creation Date:	7/30/2018 18:30:10
Receipt Date:	20170719
Manifest ID:	011011131FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	MOD095038998
Trans 2 Name:	TSMT
TSDF EPA ID:	UTD991301748
Trans Name:	CLEAN HARBORS GRASSY MOUNTAIN LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	181 - Other inorganic solid waste Organics
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.025
Waste Quantity:	50
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20170628
Creation Date:	5/21/2018 18:32:48
Receipt Date:	20170724
Manifest ID:	011011132FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.19
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported

KOCH CARBON LLC (Continued) **S113090440**

Additional Code 5: Not reported

Additional Info:
Year: 2015
Gen EPA ID: CAL000172095

Shipment Date: 20151125
Creation Date: 2/10/2016 22:15:22
Receipt Date: 20151203
Manifest ID: 008997747FLE
Trans EPA ID: MAD039322250
Trans Name: CLEAN HARBORS ENVIRONMENTAL SERVICE INC
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD059494310
Trans Name: CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 352 - Other organic solids
RCRA Code: Not reported
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons: 0.05
Waste Quantity: 100
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 20151125
Creation Date: 2/10/2016 22:15:22
Receipt Date: 20151203
Manifest ID: 008997747FLE
Trans EPA ID: MAD039322250
Trans Name: CLEAN HARBORS ENVIRONMENTAL SERVICE INC
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD059494310
Trans Name: CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 352 - Other organic solids
RCRA Code: Not reported
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons: 0.0425
Waste Quantity: 85
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 20151125

KOCH CARBON LLC (Continued) **S113090440**

Creation Date:	2/10/2016 22:15:22
Receipt Date:	20151203
Manifest ID:	008997747FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICE INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0925
Waste Quantity:	185
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20151106
Creation Date:	2/10/2016 22:15:22
Receipt Date:	20151120
Manifest ID:	009000177FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICE INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980675276
Trans Name:	CLEAN HARBORS BUTTONWILLOW LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.02
Waste Quantity:	40
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20151106
Creation Date:	3/22/2016 22:15:44
Receipt Date:	20151204
Manifest ID:	009000180FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICE INC
Trans 2 EPA ID:	AZR000513770
Trans 2 Name:	SLT EXPRESS WAY

KOCH CARBON LLC (Continued) **S113090440**

TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.57
Waste Quantity:	150
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151106
Creation Date:	2/10/2016 22:15:22
Receipt Date:	20151120
Manifest ID:	009000177FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICE INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980675276
Trans Name:	CLEAN HARBORS BUTTONWILLOW LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.01
Waste Quantity:	20
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151106
Creation Date:	5/12/2016 10:00:07
Receipt Date:	20151119
Manifest ID:	009000178FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICE INC
Trans 2 EPA ID:	AZR000513770
Trans 2 Name:	SLT
TSDF EPA ID:	UTD991301748
Trans Name:	CLEAN HARBORS GRASSY MOUNTAIN LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	181 - Other inorganic solid waste Organics
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As

KOCH CARBON LLC (Continued) **S113090440**

	Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.01
Waste Quantity:	20
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151106
Creation Date:	1/21/2016 22:15:39
Receipt Date:	20151113
Manifest ID:	009000179FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICE INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.125
Waste Quantity:	250
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151106
Creation Date:	1/21/2016 22:15:39
Receipt Date:	20151113
Manifest ID:	009000179FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICE INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD059494310
Trans Name:	CLEAN HARBORS SAN JOSE LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.035
Waste Quantity:	70
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported

KOCH CARBON LLC (Continued) **S113090440**

Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151007
Creation Date:	12/21/2015 22:15:08
Receipt Date:	20151026
Manifest ID:	009117610FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICE INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	1.14
Waste Quantity:	300
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	1999
Gen EPA ID:	CAL000172095
Shipment Date:	19991108
Creation Date:	1/11/2000 0:00:00
Receipt Date:	19991115
Manifest ID:	99880408
Trans EPA ID:	CAD981694722
Trans Name:	Not reported
Trans 2 EPA ID:	CAD982524480
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19991006

KOCH CARBON LLC (Continued) **S113090440**

Creation Date:	1/4/2000 0:00:00
Receipt Date:	19991008
Manifest ID:	99176705
Trans EPA ID:	CAD981694722
Trans Name:	Not reported
Trans 2 EPA ID:	CAD982524480
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19991006
Creation Date:	1/4/2000 0:00:00
Receipt Date:	19991008
Manifest ID:	99176705
Trans EPA ID:	CAD981694722
Trans Name:	Not reported
Trans 2 EPA ID:	CAD982524480
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	512 - Other empty containers 30 gallons or more
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0205
Waste Quantity:	41
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19990422
Creation Date:	6/10/1999 0:00:00
Receipt Date:	19990423
Manifest ID:	98166938
Trans EPA ID:	CAD028277036
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044003556
Trans Name:	Not reported

KOCH CARBON LLC (Continued) **S113090440**

TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.2919
Waste Quantity:	70
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19990305
Creation Date:	5/17/1999 0:00:00
Receipt Date:	19990308
Manifest ID:	98166975
Trans EPA ID:	CAD028277036
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044003556
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD044003556
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.417
Waste Quantity:	100
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

HWTS:

Name:	KOCH CARBON LLC
Address:	707 E 3RD ST
Address 2:	Not reported
City,State,Zip:	PITTSBURG, CA 945650000
EPA ID:	CAL000172095
Inactive Date:	Not reported
Create Date:	04/24/1998
Last Act Date:	07/13/2020
Mailing Name:	Not reported
Mailing Address:	4111 E 37TH ST N
Mailing Address 2:	Not reported
Mailing City,State,Zip:	WICHITA, KS 672200000
Owner Name:	KOCH CARBON, LLC
Owner Address:	4111 E 37TH ST N
Owner Address 2:	Not reported
Owner City,State,Zip:	WICHITA, KS 672200000
Contact Name:	JORDAN RADIN
Contact Address:	4111 EAST 37TH ST N

KOCH CARBON LLC (Continued) **S113090440**

Contact Address 2: Not reported
City,State,Zip: WICHITA, KS 672200000

NAICS:
EPA ID: CAL000172095
Create Date: 2002-03-14 16:36:28.000
NAICS Code: 48832
NAICS Description: Marine Cargo Handling
Issued EPA ID Date: 1998-04-24 00:00:00
Inactive Date: Not reported
Facility Name: KOCH CARBON LLC
Facility Address: 707 E 3RD ST
Facility Address 2: Not reported
Facility City: PITTSBURG
Facility County: Not reported
Facility State: CA
Facility Zip: 945650000

Q97 **GWF POWER SYSTEMS INC** **CA CPS-SLIC S118504575**
East **707-799 3RD ST E** **CA CERS N/A**
1/8-1/4 **PITTSBURG, CA**
0.242 mi.
1279 ft. **Site 3 of 5 in cluster Q**

Relative: **Lower**
Actual: **9 ft.**

CPS-SLIC:
Name: GWF POWER SYSTEMS INC
Address: 707-799 3RD ST E
City,State,Zip: PITTSBURG, CA
Region: STATE
Facility Status: **Open - Inactive**
Status Date: 06/02/2009
Global Id: SLT2O209312
Lead Agency: SAN FRANCISCO BAY RWQCB (REGION 2)
Lead Agency Case Number: Not reported
Latitude: 38.0304993520502
Longitude: -121.87023951584
Case Type: Cleanup Program Site
Case Worker: UUU
Local Agency: Not reported
RB Case Number: 07S0053
File Location: All Files are on GeoTracker or in the Local Agency Database
Potential Media Affected: Sediments, Surface water
Potential Contaminants of Concern: Copper, Lead, Total Petroleum Hydrocarbons (TPH)
Site History: Soil samples contained the following metals at concentrations greater than their respective soluble threshold limit concentrations: mercury, selenium, lead, thallium, and copper. The source of the soil was reported to be associated with the upper 2 to 3 feet of soil that was determined to be "fill material". One shallow soil also contained elevated concentrations of total petroleum hydrocarbons as diesel. The soil was capped/encapsulated in place at the site with asphalt and/or concrete. Groundwater monitoring wells were installed and groundwater monitoring was to take place after the encapsulation but there is no record/documentation that this monitoring ever took place or that the groundwater monitoring wells were abandoned.

Click here to access the California GeoTracker records for this facility:

GWF POWER SYSTEMS INC (Continued) **S118504575**

CERS:
Name: GWF POWER SYSTEMS INC
Address: 707-799 3RD ST E
City,State,Zip: PITTSBURG, CA
Site ID: 214034
CERS ID: SLT2O209312
CERS Description: Cleanup Program Site

Affiliation:
Affiliation Type Desc: Regional Board Caseworker
Entity Name: Regional Water Board - SAN FRANCISCO BAY RWQCB (REGION 2)
Entity Title: Not reported
Affiliation Address: 1515 CLAY ST SUITE 1400
Affiliation City: OAKLAND
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Q98 **KOCH CARBON LLC** **CA ENVIROSTOR** **S103973632**
East **707 E 3RD ST** **CA CPS-SLIC** **N/A**
1/8-1/4 **PITTSBURG, CA 94565** **CA CERS HAZ WASTE**
0.242 mi. **CA NPDES**
1279 ft. **Site 4 of 5 in cluster Q** **CA CONTRA COSTA CO. SITE LIST**
CA WDS
Relative: **CA CIWQS**
Lower **CA CERS**

Actual:
9 ft.

ENVIROSTOR:
Name: KOCH CARBON, LLC
Address: 707 E 3RD ST
City,State,Zip: PITTSBURG, CA 94565
Facility ID: 71003798
Status: Refer: Other Agency
Status Date: 11/27/2005
Site Code: Not reported
Site Type: Tiered Permit
Site Type Detailed: Tiered Permit
Acres: Not reported
NPL: NO
Regulatory Agencies: NONE SPECIFIED
Lead Agency: NONE SPECIFIED
Program Manager: Not reported
Supervisor: Not reported
Division Branch: Cleanup Berkeley
Assembly: 14
Senate: 07
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: Not reported
Latitude: 38.03153
Longitude: -121.8724
APN: NONE SPECIFIED
Past Use: NONE SPECIFIED
Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED

KOCH CARBON LLC (Continued) **S103973632**

Potential Description: NONE SPECIFIED
Alias Name: CAL000172095
Alias Type: EPA Identification Number
Alias Name: 71003798
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 11/27/2005
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 10/21/2002
Comments: USEPA prepared report concludes that Site does not qualify for Superfund listing

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

CPS-SLIC:
Name: KOCH CARBON BAY AREA BULK TERMINAL
Address: 707 E. 3RD. ST.
City,State,Zip: PITTSBURG, CA 94565
Region: STATE
Facility Status: **Completed - Case Closed**
Status Date: 03/20/2013
Global Id: SL0601387949
Lead Agency: SAN FRANCISCO BAY RWQCB (REGION 2)
Lead Agency Case Number: Not reported
Latitude: 38.031444
Longitude: -121.8721
Case Type: Cleanup Program Site
Case Worker: AJK
Local Agency: Not reported
RB Case Number: Not reported
File Location: Not reported
Potential Media Affected: Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern: Other Solvent or Non-Petroleum Hydrocarbon, Nickel
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

CERS HAZ WASTE:
Name: KOCH CARBON LLC
Address: 707 E 3RD ST
City,State,Zip: PITTSBURG, CA 94565

KOCH CARBON LLC (Continued) **S103973632**

Site ID: 42005
CERS ID: 10006177
CERS Description: Hazardous Waste Generator

Name: KOCH CARBON LLC
Address: 707 E 3RD ST
City,State,Zip: PITTSBURG, CA 94565
Site ID: 42005
CERS ID: 10006177
CERS Description: Hazardous Waste Onsite Treatment

NPDES:
Name: KOCH CARBON LLC
Address: 707 E 3RD ST
City,State,Zip: PITTSBURG, CA 94565
Facility Status: Active
NPDES Number: CAS000001
Region: 2
Agency Number: 0
Regulatory Measure ID: 181949
Place ID: Not reported
Order Number: 97-03-DWQ
WDID: 2 07I016988
Regulatory Measure Type: Enrollee
Program Type: Industrial
Adoption Date Of Regulatory Measure: Not reported
Effective Date Of Regulatory Measure: 12/10/2001
Termination Date Of Regulatory Measure: Not reported
Expiration Date Of Regulatory Measure: Not reported
Discharge Address: 707 E 3rd St
Discharge Name: Koch Carbon LLC
Discharge City: Pittsburg
Discharge State: California
Discharge Zip: 94565
Status: Not reported
Status Date: Not reported
Operator Name: Not reported
Operator Address: Not reported
Operator City: Not reported
Operator State: Not reported
Operator Zip: Not reported

NPDES as of 03/2018:
NPDES Number: Not reported
Status: Not reported
Agency Number: Not reported
Region: 2
Regulatory Measure ID: 181949
Order Number: Not reported
Regulatory Measure Type: Industrial
Place ID: Not reported
WDID: 2 07I016988
Program Type: Not reported
Adoption Date Of Regulatory Measure: Not reported
Effective Date Of Regulatory Measure: Not reported
Expiration Date Of Regulatory Measure: Not reported
Termination Date Of Regulatory Measure: Not reported

KOCH CARBON LLC (Continued) **S103973632**

Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Received Date:	05/09/2008
Processed Date:	12/10/2001
Status:	Active
Status Date:	12/10/2001
Place Size:	15
Place Size Unit:	Acres
Contact:	Joe Ray
Contact Title:	Not reported
Contact Phone:	925-431-1090
Contact Phone Ext:	Not reported
Contact Email:	rayj@kochind.com
Operator Name:	Koch Carbon LLC
Operator Address:	707 E 3rd St
Operator City:	Pittsburg
Operator State:	California
Operator Zip:	94565
Operator Contact:	Joe Ray
Operator Contact Title:	Not reported
Operator Contact Phone:	925-431-1090
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	rayj@kochind.com
Operator Type:	Private Business
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	California
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	925-431-1090
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	N
Receiving Water Name:	New York Slough
Certifier:	Joe Ray
Certifier Title:	Manager

KOCH CARBON LLC (Continued) **S103973632**

Certification Date:	29-JUN-17
Primary Sic:	4491-Marine Cargo Handling
Secondary Sic:	Not reported
Tertiary Sic:	Not reported
NPDES Number:	CAS000001
Status:	Active
Agency Number:	0
Region:	2
Regulatory Measure ID:	181949
Order Number:	97-03-DWQ
Regulatory Measure Type:	Enrollee
Place ID:	Not reported
WDID:	2 07I016988
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	12/10/2001
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Koch Carbon LLC
Discharge Address:	707 E 3rd St
Discharge City:	Pittsburg
Discharge State:	California
Discharge Zip:	94565
Received Date:	Not reported
Processed Date:	Not reported
Status:	Not reported
Status Date:	Not reported
Place Size:	Not reported
Place Size Unit:	Not reported
Contact:	Not reported
Contact Title:	Not reported
Contact Phone:	Not reported
Contact Phone Ext:	Not reported
Contact Email:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported
Operator Contact:	Not reported
Operator Contact Title:	Not reported
Operator Contact Phone:	Not reported
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Not reported
Operator Type:	Not reported
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	Not reported
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported

KOCH CARBON LLC (Continued) **S103973632**

Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	Not reported
Receiving Water Name:	Not reported
Certifier:	Not reported
Certifier Title:	Not reported
Certification Date:	Not reported
Primary Sic:	Not reported
Secondary Sic:	Not reported
Tertiary Sic:	Not reported

Name:	KOCH CARBON LLC
Address:	707 E 3RD ST
City,State,Zip:	PITTSBURG, CA 94565
Facility Status:	Not reported
NPDES Number:	Not reported
Region:	Not reported
Agency Number:	Not reported
Regulatory Measure ID:	Not reported
Place ID:	Not reported
Order Number:	Not reported
WDID:	2 07I016988
Regulatory Measure Type:	Industrial
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Discharge Address:	Not reported
Discharge Name:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Status:	Active
Status Date:	12/10/2001
Operator Name:	Koch Carbon LLC
Operator Address:	707 E 3rd St
Operator City:	Pittsburg
Operator State:	California
Operator Zip:	94565

NPDES as of 03/2018:

NPDES Number:	Not reported
Status:	Not reported

KOCH CARBON LLC (Continued) **S103973632**

Agency Number:	Not reported
Region:	2
Regulatory Measure ID:	181949
Order Number:	Not reported
Regulatory Measure Type:	Industrial
Place ID:	Not reported
WDID:	2 07I016988
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Received Date:	05/09/2008
Processed Date:	12/10/2001
Status:	Active
Status Date:	12/10/2001
Place Size:	15
Place Size Unit:	Acres
Contact:	Joe Ray
Contact Title:	Not reported
Contact Phone:	925-431-1090
Contact Phone Ext:	Not reported
Contact Email:	rayj@kochind.com
Operator Name:	Koch Carbon LLC
Operator Address:	707 E 3rd St
Operator City:	Pittsburg
Operator State:	California
Operator Zip:	94565
Operator Contact:	Joe Ray
Operator Contact Title:	Not reported
Operator Contact Phone:	925-431-1090
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	rayj@kochind.com
Operator Type:	Private Business
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	California
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	925-431-1090
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported

KOCH CARBON LLC (Continued) **S103973632**

Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	N
Receiving Water Name:	New York Slough
Certifier:	Joe Ray
Certifier Title:	Manager
Certification Date:	29-JUN-17
Primary Sic:	4491-Marine Cargo Handling
Secondary Sic:	Not reported
Tertiary Sic:	Not reported
NPDES Number:	CAS000001
Status:	Active
Agency Number:	0
Region:	2
Regulatory Measure ID:	181949
Order Number:	97-03-DWQ
Regulatory Measure Type:	Enrollee
Place ID:	Not reported
WDID:	2 07I016988
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	12/10/2001
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Koch Carbon LLC
Discharge Address:	707 E 3rd St
Discharge City:	Pittsburg
Discharge State:	California
Discharge Zip:	94565
Received Date:	Not reported
Processed Date:	Not reported
Status:	Not reported
Status Date:	Not reported
Place Size:	Not reported
Place Size Unit:	Not reported
Contact:	Not reported
Contact Title:	Not reported
Contact Phone:	Not reported
Contact Phone Ext:	Not reported
Contact Email:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported
Operator Contact:	Not reported
Operator Contact Title:	Not reported
Operator Contact Phone:	Not reported
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Not reported

KOCH CARBON LLC (Continued) **S103973632**

Operator Type:	Not reported
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	Not reported
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	Not reported
Receiving Water Name:	Not reported
Certifier:	Not reported
Certifier Title:	Not reported
Certification Date:	Not reported
Primary Sic:	Not reported
Secondary Sic:	Not reported
Tertiary Sic:	Not reported

CONTRA COSTA CO. SITE LIST:

Name:	KOCH CARBON LLC
Address:	707 E 3RD ST
City:	PITTSBURG
Facility ID:	FA0031875
Billing Status:	ACTIVE, BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	APSA: <10K GALLONS
Region:	CONTRA COSTA
Cupa Number:	719252

Name:	KOCH CARBON LLC
Address:	707 E 3RD ST
City:	PITTSBURG
Facility ID:	FA0031875
Billing Status:	ACTIVE, BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	HMBP: >500K-2.5M LBS
Region:	CONTRA COSTA
Cupa Number:	719252

KOCH CARBON LLC (Continued) **S103973632**

Name: KOCH CARBON LLC
Address: 707 E 3RD ST
City: PITTSBURG
Facility ID: FA0031875
Billing Status: ACTIVE, BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HWG: 12 - <25 TONS/YEAR
Region: CONTRA COSTA
Cupa Number: 719252

Name: KOCH CARBON LLC
Address: 707 E 3RD ST
City: PITTSBURG
Facility ID: FA0031875
Billing Status: ACTIVE, BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: TP: CONDITIONALLY AUTHORIZED
Region: CONTRA COSTA
Cupa Number: 719252

Name: KOCH CARBON LLC
Address: 707 E 3RD ST
City: PITTSBURG
Facility ID: FA0031875
Billing Status: INACTIVE, NON-BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: APSA: <10K GALLONS
Region: CONTRA COSTA
Cupa Number: 719252

Name: KOCH CARBON LLC
Address: 707 E 3RD ST
City: PITTSBURG
Facility ID: FA0031875
Billing Status: INACTIVE, NON-BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: UNDERGROUND STORAGE TANK SITE
Region: CONTRA COSTA
Cupa Number: 719252

WDS:
Name: KOCH CARBON LLC
Address: 707 E 3rd St
City: PITTSBURG
Facility ID: San Francisco Bay 07I016988
Facility Type: Industrial - Facility that treats and/or disposes of liquid or semisolid wastes from any servicing, producing, manufacturing or processing operation of whatever nature, including mining, gravel washing, geothermal operations, air conditioning, ship building and repairing, oil production, storage and disposal operations, water pumping.
Facility Status: Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
NPDES Number: CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board
Subregion: 2
Facility Telephone: 9254311090

KOCH CARBON LLC (Continued) **S103973632**

Facility Contact:	DAVID STAUFFER
Agency Name:	KOCH CARBON LLC
Agency Address:	707 E 3rd St
Agency City,St,Zip:	Pittsburg 945652100
Agency Contact:	DAVID STAUFFER
Agency Telephone:	9254311090
Agency Type:	Private
SIC Code:	0
SIC Code 2:	Not reported
Primary Waste Type:	Not reported
Primary Waste:	Not reported
Waste Type2:	Not reported
Waste2:	Not reported
Primary Waste Type:	Not reported
Secondary Waste:	Not reported
Secondary Waste Type:	Not reported
Design Flow:	0
Baseline Flow:	0
Reclamation:	Not reported
POTW:	Not reported
Treat To Water:	Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.
Complexity:	Category C - Facilities having no waste treatment systems, such as cooling water dischargers or thosewho must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds.

CIWQS:

Name:	KOCH CARBON LLC
Address:	707 E 3RD ST
City,State,Zip:	PITTSBURG, CA 94565
Agency:	Koch Carbon LLC
Agency Address:	707 E 3rd St, Pittsburg, CA 94565
Place/Project Type:	Industrial - Marine Cargo Handling
SIC/NAICS:	4491
Region:	2
Program:	INDSTW
Regulatory Measure Status:	Active
Regulatory Measure Type:	Storm water industrial
Order Number:	2014-0057-DWQ
WDID:	2 07I016988
NPDES Number:	CAS000001
Adoption Date:	01/01/1900
Effective Date:	12/10/2001
Termination Date:	01/01/1900
Expiration/Review Date:	01/01/1900
Design Flow:	Not reported
Major/Minor:	Not reported
Complexity:	Not reported
TTWQ:	Not reported
Enforcement Actions within 5 years:	0

KOCH CARBON LLC (Continued) **S103973632**

Violations within 5 years: 0
Latitude: 38.03118
Longitude: -121.87408

CERS:
Name: KOCH CARBON LLC
Address: 707 E 3RD ST
City,State,Zip: PITTSBURG, CA 94565
Site ID: 42005
CERS ID: 235168
CERS Description: Industrial Facility Storm Water

Violations:
Site ID: 42005
Site Name: KOCH CARBON LLC
Violation Date: 11-02-2017
Citation: HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description: Tiered Permitting - Administration/Documentation - General
Violation Notes: Returned to compliance on 11/02/2017.
Violation Division: Contra Costa County Health Services Department
Violation Program: CA
Violation Source: CERS

Site ID: 42005
Site Name: KOCH CARBON LLC
Violation Date: 11-02-2017
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 11/02/2017. OBSERVATION: The facility Chemical Inventory submitted in CERS in 2017 listed the on site Lead Acid Batteries quantity in pounds (lbs.). Lead Acid Batteries must be reported in gallons. CORRECTIVE ACTION: Corrected at time of inspection. The Lead Acid Battery inventory units were changed to gallons in a new CERS submittal during the inspection.
Violation Division: Contra Costa County Health Services Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 42005
Site Name: KOCH CARBON LLC
Violation Date: 12-17-2015
Citation: HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description: Tiered Permitting Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 01/12/2016.
Violation Division: Contra Costa County Health Services Department
Violation Program: CA
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-28-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported

KOCH CARBON LLC (Continued) **S103973632**

Eval Division:	Contra Costa County Health Services Department
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-28-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	CA
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-28-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-28-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-02-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-02-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	CA
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-02-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HMRRP
Eval Source:	CERS

KOCH CARBON LLC (Continued) **S103973632**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	12-12-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	CA
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	12-12-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	12-12-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	12-17-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	12-17-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	12-17-2015
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	CA
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	01-12-2016
Violations Found:	No

KOCH CARBON LLC (Continued) **S103973632**

Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: CA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-25-2020
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: CA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-25-2020
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-25-2020
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-02-2007
Violations Found: No
Eval Type: Industrial Storm Water Compliance Evaluation
Eval Notes: Not reported
Eval Division: Water Boards
Eval Program: INDSTW
Eval Source: SMARTS

Enforcement Action:
Site ID: 42005
Site Name: KOCH CARBON LLC
Site Address: 707 E 3RD ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 11-02-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: CA
Enf Action Source: CERS

Site ID: 42005

KOCH CARBON LLC (Continued) **S103973632**

Site Name:	KOCH CARBON LLC
Site Address:	707 E 3RD ST
Site City:	PITTSBURG
Site Zip:	94565
Enf Action Date:	11-02-2017
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Contra Costa County Health Services Department
Enf Action Program:	HMRRP
Enf Action Source:	CERS

Site ID:	42005
Site Name:	KOCH CARBON LLC
Site Address:	707 E 3RD ST
Site City:	PITTSBURG
Site Zip:	94565
Enf Action Date:	12-17-2015
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Contra Costa County Health Services Department
Enf Action Program:	CA
Enf Action Source:	CERS

Coordinates:

Site ID:	42005
Facility Name:	KOCH CARBON LLC
Env Int Type Code:	SMSWIND
Program ID:	235168
Coord Name:	Not reported
Ref Point Type Desc:	Unknown
Latitude:	38.031180
Longitude:	-121.874080

Affiliation:

Affiliation Type Desc:	Identification Signer
Entity Name:	Joe Ray
Entity Title:	Facility Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	Koch Carbon LLC
Entity Title:	Not reported
Affiliation Address:	707 E 3rd St
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	94565
Affiliation Phone:	(925) 431-1090

KOCH CARBON LLC (Continued) **S103973632**

Affiliation Type Desc:	Environmental Contact
Entity Name:	Joe Ray
Entity Title:	Not reported
Affiliation Address:	707 E 3rd St
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94565
Affiliation Phone:	Not reported

Affiliation Type Desc:	Onsite Treatment Unit Owner Operator
Entity Name:	Craig Maetzold
Entity Title:	Environmental Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Onsite Treatment Unit Owner Operator
Entity Name:	Jordan Radin
Entity Title:	Compliance Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Operator
Entity Name:	Koch Carbon LLC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(925) 431-1090

Affiliation Type Desc:	Document Preparer
Entity Name:	Jordan Radin
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	707 E 3rd St
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	Not reported

KOCH CARBON LLC (Continued) **S103973632**

Affiliation Zip: 94565
Affiliation Phone: Not reported

Affiliation Type Desc: Onsite Treatment Unit Owner Operator
Entity Name: Terry Steinert
Entity Title: SW Regional Environmental Manager
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Owner/Operator
Entity Name: Koch Carbon LLC
Entity Title: Operator
Affiliation Address: 707 E 3rd St
Affiliation City: Pittsburg
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 94565
Affiliation Phone: Not reported

Affiliation Type Desc: Parent Corporation
Entity Name: Koch Carbon LLC
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: CUPA District
Entity Name: Contra Costa County Health Services Department
Entity Title: Not reported
Affiliation Address: 4585 Pacheco BlvdSuite 100
Affiliation City: Martinez
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 94553
Affiliation Phone: (925) 655-3200

Name: KOCH CARBON BAY AREA BULK TERMINAL
Address: 707 E. 3RD. ST.
City,State,Zip: PITTSBURG, CA 94565
Site ID: 198705
CERS ID: SL0601387949
CERS Description: Cleanup Program Site

Affiliation:
Affiliation Type Desc: Regional Board Caseworker
Entity Name: ALYX KARPOWICZ - SAN FRANCISCO BAY RWQCB (REGION 2)
Entity Title: Not reported
Affiliation Address: 1515 Clay St., Suite 1400
Affiliation City: OAKLAND
Affiliation State: CA

KOCH CARBON LLC (Continued) **S103973632**

Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: 5106222427

Name: KOCH CARBON LLC
Address: 707 E 3RD ST
City,State,Zip: PITTSBURG, CA 94565
Site ID: 42005
CERS ID: 10006177
CERS Description: Chemical Storage Facilities

Violations:

Site ID: 42005
Site Name: KOCH CARBON LLC
Violation Date: 11-02-2017
Citation: HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description: Tiered Permitting - Administration/Documentation - General
Violation Notes: Returned to compliance on 11/02/2017.
Violation Division: Contra Costa County Health Services Department
Violation Program: CA
Violation Source: CERS

Site ID: 42005
Site Name: KOCH CARBON LLC
Violation Date: 11-02-2017
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 11/02/2017. OBSERVATION: The facility Chemical Inventory submitted in CERS in 2017 listed the on site Lead Acid Batteries quantity in pounds (lbs.). Lead Acid Batteries must be reported in gallons. CORRECTIVE ACTION: Corrected at time of inspection. The Lead Acid Battery inventory units were changed to gallons in a new CERS submittal during the inspection.
Violation Division: Contra Costa County Health Services Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 42005
Site Name: KOCH CARBON LLC
Violation Date: 12-17-2015
Citation: HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description: Tiered Permitting Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 01/12/2016.
Violation Division: Contra Costa County Health Services Department
Violation Program: CA
Violation Source: CERS

Evaluation:

Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-28-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported

KOCH CARBON LLC (Continued) **S103973632**

Eval Division: Contra Costa County Health Services Department
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-28-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: CA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-28-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-28-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-02-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-02-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: CA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-02-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

KOCH CARBON LLC (Continued) **S103973632**

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-12-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: CA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-12-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-12-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-17-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-17-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-17-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: CA
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-12-2016
Violations Found: No

KOCH CARBON LLC (Continued) **S103973632**

Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: CA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-25-2020
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: CA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-25-2020
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-25-2020
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-02-2007
Violations Found: No
Eval Type: Industrial Storm Water Compliance Evaluation
Eval Notes: Not reported
Eval Division: Water Boards
Eval Program: INDSTW
Eval Source: SMARTS

Enforcement Action:
Site ID: 42005
Site Name: KOCH CARBON LLC
Site Address: 707 E 3RD ST
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 11-02-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: CA
Enf Action Source: CERS

Site ID: 42005

KOCH CARBON LLC (Continued) **S103973632**

Site Name:	KOCH CARBON LLC
Site Address:	707 E 3RD ST
Site City:	PITTSBURG
Site Zip:	94565
Enf Action Date:	11-02-2017
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Contra Costa County Health Services Department
Enf Action Program:	HMRRP
Enf Action Source:	CERS

Site ID:	42005
Site Name:	KOCH CARBON LLC
Site Address:	707 E 3RD ST
Site City:	PITTSBURG
Site Zip:	94565
Enf Action Date:	12-17-2015
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Contra Costa County Health Services Department
Enf Action Program:	CA
Enf Action Source:	CERS

Coordinates:

Site ID:	42005
Facility Name:	KOCH CARBON LLC
Env Int Type Code:	SMSWIND
Program ID:	235168
Coord Name:	Not reported
Ref Point Type Desc:	Unknown
Latitude:	38.031180
Longitude:	-121.874080

Affiliation:

Affiliation Type Desc:	Identification Signer
Entity Name:	Joe Ray
Entity Title:	Facility Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	Koch Carbon LLC
Entity Title:	Not reported
Affiliation Address:	707 E 3rd St
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	94565
Affiliation Phone:	(925) 431-1090

KOCH CARBON LLC (Continued) **S103973632**

Affiliation Type Desc:	Environmental Contact
Entity Name:	Joe Ray
Entity Title:	Not reported
Affiliation Address:	707 E 3rd St
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94565
Affiliation Phone:	Not reported

Affiliation Type Desc:	Onsite Treatment Unit Owner Operator
Entity Name:	Craig Maetzold
Entity Title:	Environmental Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Onsite Treatment Unit Owner Operator
Entity Name:	Jordan Radin
Entity Title:	Compliance Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Operator
Entity Name:	Koch Carbon LLC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(925) 431-1090

Affiliation Type Desc:	Document Preparer
Entity Name:	Jordan Radin
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	707 E 3rd St
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	Not reported

KOCH CARBON LLC (Continued) **S103973632**

Affiliation Zip:	94565
Affiliation Phone:	Not reported
Affiliation Type Desc:	Onsite Treatment Unit Owner Operator
Entity Name:	Terry Steinert
Entity Title:	SW Regional Environmental Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Owner/Operator
Entity Name:	Koch Carbon LLC
Entity Title:	Operator
Affiliation Address:	707 E 3rd St
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94565
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	Koch Carbon LLC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	Contra Costa County Health Services Department
Entity Title:	Not reported
Affiliation Address:	4585 Pacheco BlvdSuite 100
Affiliation City:	Martinez
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94553
Affiliation Phone:	(925) 655-3200

P99 **PITTSBURG VALERO** **CA UST** **U004273963**
WSW **1005 RAILROAD AVE** **N/A**
1/8-1/4 **PITTSBURG, CA 94565**
0.248 mi.
1307 ft. **Site 5 of 7 in cluster P**

Relative: **Higher**
Actual: **24 ft.**

UST:

Name:	PITTSBURG VALERO
Address:	1005 RAILROAD AVE
City,State,Zip:	PITTSBURG, CA 94565
Facility ID:	07-000-701647
Permitting Agency:	Contra Costa County Health Services Department
Latitude:	38.02773
Longitude:	-121.885009

P100 **PITTSBURG VALERO** **CA CERS HAZ WASTE** **S120629520**
WSW **1005 RAILROAD AVE** **CA CERS TANKS** **N/A**
1/8-1/4 **PITTSBURG, CA 94565** **CA CONTRA COSTA CO. SITE LIST**
0.248 mi. **CA CERS**
1307 ft. **Site 6 of 7 in cluster P**

Relative:
Higher

Actual:
24 ft.

CERS HAZ WASTE:
Name: PITTSBURG VALERO
Address: 1005 RAILROAD AVE
City,State,Zip: PITTSBURG, CA 94565
Site ID: 146449
CERS ID: 10004353
CERS Description: Hazardous Waste Generator

CERS TANKS:
Name: PITTSBURG VALERO
Address: 1005 RAILROAD AVE
City,State,Zip: PITTSBURG, CA 94565
Site ID: 146449
CERS ID: 10004353
CERS Description: Underground Storage Tank

CONTRA COSTA CO. SITE LIST:
Name: PITTSBURG VALERO
Address: 1005 RAILROAD AVE
City: PITTSBURG
Facility ID: FA0030687
Billing Status: ACTIVE, BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HMBP: >100K-250K LBS, 0-19 EMPLOYEES
Region: CONTRA COSTA
Cupa Number: 701647

Name: PITTSBURG VALERO
Address: 1005 RAILROAD AVE
City: PITTSBURG
Facility ID: FA0030687
Billing Status: ACTIVE, BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HWG: REPORTED ZERO
Region: CONTRA COSTA
Cupa Number: 701647

Name: PITTSBURG VALERO
Address: 1005 RAILROAD AVE
City: PITTSBURG
Facility ID: FA0030687
Billing Status: ACTIVE, BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: UNDERGROUND STORAGE TANK SITE
Region: CONTRA COSTA
Cupa Number: 701647

CERS:
Name: PITTSBURG VALERO
Address: 1005 RAILROAD AVE
City,State,Zip: PITTSBURG, CA 94565
Site ID: 146449

PITTSBURG VALERO (Continued) **S120629520**

CERS ID: 10004353
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 146449
Site Name: Pittsburg Valero
Violation Date: 12-29-2017
Citation: 22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description: Failure to properly label hazardous waste accumulation containers and portable tanks with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes: OBSERVATION: Facility has 3-55 gal drums. 1 drum is about 1/10th full of a sludgey liquid and has no label. 1 drum is at least 1/3rd full of a sludgey liquid and has a hazardous waste label with the old owner's name, an accum. date from 2015, and is missing information regarding contents. The last drum is labeled "Spill Kit", missing a metal ring and is full of used absorbent pads (at least 1/2 full). Hazardous waste label has old owner's information and is missing information regarding contents, and a 2015 accum start date. CORRECTIVE ACTION: Properly label al hazardous waste containers and send a photo to CCHSHMP OR send documentation to CCHSHMP that all waste has been properly disposed of.
Violation Division: Contra Costa County Health Services Department
Violation Program: HW
Violation Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Violation Date: 04-14-2017
Citation: HSC 6.7 Multiple - California Health and Safety Code, Chapter 6.7, Section(s) Multiple
Violation Description: UST Program - Administration/Documentation - General - Must include violation description, proper statute and regulation citation in the "comment" section.
Violation Notes: Returned to compliance on 04/17/2017.
Violation Division: Contra Costa County Health Services Department
Violation Program: UST
Violation Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Violation Date: 09-08-2020
Citation: 23 CCR 16 2712(b)(1)(G) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)(1)(G)
Violation Description: Failure to comply with one or more of the following overfill prevention equipment requirements: Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; or Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm at least five minutes before the tank overfills; or Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity; or Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to

PITTSBURG VALERO (Continued) **S120629520**

product due to overfilling. Install/retrofit overfill prevention equipment that does not use flow restrictors on vent piping to meet overfill prevention equipment requirements when the overfill prevention equipment is installed, repaired, or replaced on and after October 1,- 2018. For USTs installed before October 1, 2018, perform an inspection by October 13, 2018 and every 36 months thereafter. For USTs installed on and after October- 1,- 2018, perform an inspection at installation and every 36 months thereafter. Inspected within 30 days after a repair to the overfill prevention equipment. Inspected using an applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer. Inspected by a certified UST service technician. Maintain records of overfill prevention equipment inspection for 36 months.

Violation Notes: OBSERVATION: Owner/Operator failed to meet one or more of the requirements applicable to overfill prevention equipment. UST Overfill Prevention Equipment has not been tested and/or the inspection reports were not maintained and submitted to the CUPA. CORRECTIVE ACTION: Maintain overfill prevention system to comply with the deficiencies noted above. Submit verification.
Violation Division: Contra Costa County Health Services Department
Violation Program: UST
Violation Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Violation Date: 02-20-2014
Citation: HSC 6.7 Multiple Sections - California Health and Safety Code, Chapter 6.7, Section(s) Multiple Sections
Violation Description: UST Program - Release/Leaks/Spills - General
Violation Notes: Returned to compliance on 03/28/2014.
Violation Division: Contra Costa County Health Services Department
Violation Program: UST
Violation Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Violation Date: 03-28-2019
Citation: HSC 6.7 25284.2 - California Health and Safety Code, Chapter 6.7, Section(s) 25284.2
Violation Description: "Failure to meet one or more of the following requirements: Install or maintain a liquid-tight spill container. Have a minimum capacity of five gallons. Have a functional drain valve or other method for the removal of liquid from the spill container. Be resistant to galvanic corrosion. Perform a tightness test at installation, every 12 months thereafter, or within 30 days after a repair to the spill container. Tested using applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer. Tested by a certified UST service technician. Maintain records of spill containment testing for 36 months. "
Violation Notes: Returned to compliance on 03/28/2019. OBSERVATION: Owner/Operator failed to meet one or more of the following spill container requirements: install or maintain spill container which is liquid-tight, has a minimum capacity of five gallons, has a functional drain valve or other method for the removal of liquid from the spill container, and is resistant to galvanic corrosion; did not perform tightness test at installation, every 12 months thereafter, or within 30 days after a repair; did not have tested using manufacturer's

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guidelines, industry codes, engineering standards, or method approved by PE, or was not tested by a certified UST service technician; or failed to maintain testing records for 36 months. Spill buckets are required to be tested every 12 months, last test date was December 2017. CORRECTIVE ACTION: Install or repair spill buckets to meet all of the listed requirements, have tightness tested using approved method, by certified UST service technician, and submit documentation to verfiy compliance. [Truncated]

Violation Division: Contra Costa County Health Services Department
Violation Program: UST
Violation Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Violation Date: 03-05-2019
Citation: 23 CCR 16 2712(b)(1)(G) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)(1)(G)
Violation Description: Failure to comply with one or more of the following overfill prevention equipment requirements: Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; or Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm at least five minutes before the tank overfills; or Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity; or Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling. Install/retrofit overfill prevention equipment that does not use flow restrictors on vent piping to meet overfill prevention equipment requirements when the overfill prevention equipment is installed, repaired, or replaced on and after October 1,- 2018. For USTs installed before October 1, 2018, perform an inspection by October 13, 2018 and every 36 months thereafter. For USTs installed on and after October- 1,- 2018, perform an inspection at installation and every 36 months thereafter. Inspected within 30 days after a repair to the overfill prevention equipment. Inspected using an applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer. Inspected by a certified UST service technician. Maintain records of overfill prevention equipment inspection for 36 months.
Violation Notes: Returned to compliance on 10/28/2019. OBSERVATION: Owner/Operator failed to meet one or more of the requirements applicable to overfill prevention equipment. CORRECTIVE ACTION: Maintain overfill prevention system to comply with the deficiencies noted above. Submit verfiication.
Violation Division: Contra Costa County Health Services Department
Violation Program: UST
Violation Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Violation Date: 07-10-2017
Citation: 23 CCR 16 2715(e) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(e)
Violation Description: Failure to maintain a copy of the designated operator monthly inspections for the last 12 months on-site or off-site at a readily

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	available location, if approved by the UPA.
Violation Notes:	Returned to compliance on 10/03/2017.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero
Violation Date:	04-20-2015
Citation:	Un-Specified
Violation Description:	UST Program - Training - For use of Local Ordinance only.
Violation Notes:	Returned to compliance on 11/25/2015.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero
Violation Date:	07-10-2017
Citation:	HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description:	Business Plan Program - Administration/Documentation - General
Violation Notes:	OBSERVATION: BP05 was cited 12/22/2015, 9/16/16 and 12/20/16. A new site map was submitted on 8/16/2016 that adds a North arrow but removes other information. No changes have been made since then. No site map submitted has had an evacuation staging area and current map removed keys to make map readable. CORRECTIVE ACTION: Submit a map via CERS that meets all the requirements of HSC 25505(a)(2).
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero
Violation Date:	12-29-2017
Citation:	HSC 6.5 25123.3(h)(1) - California Health and Safety Code, Chapter 6.5, Section(s) 25123.3(h)(1)
Violation Description:	Failure to send hazardous waste offsite for treatment, storage, or disposal within 180 days (or 270 days if waste is transported over 200 miles) for a generator who generates less than 1000 kilogram per month if all of the following conditions are met: (1) The quantity of hazardous waste accumulated onsite never exceeds 6,000 kilograms. (2) The generator complies with the requirements of 40 Code of Federal Regulations section 262.34(d), (e) and (f). (3) The generator does not hold acutely hazardous waste or extremely hazardous waste in an amount greater than one kilogram for more than 90 days.
Violation Notes:	OBSERVATION: All 3 drums are onsite from the Dec 12/29/2017 inspection and appear to contain the same contents by external inspection (weight/sound). Hazardous waste was far over adequate accumulation times in December 2017. CORRECTIVE ACTION: Have all hazardous waste hauled off site and provide manifest to CCHSHMP.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HW
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero

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Violation Date:	05-09-2016
Citation:	HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description:	Business Plan Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 10/07/2016.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero
Violation Date:	04-14-2017
Citation:	HSC 6.7 Multiple - California Health and Safety Code, Chapter 6.7, Section(s) Multiple
Violation Description:	UST Program - Administration/Documentation - General - Must include violation description, proper statute and regulation citation in the "comment" section.
Violation Notes:	Returned to compliance on 04/18/2017. HSC 25296.10
Violation Division:	Contra Costa County Health Services Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero
Violation Date:	03-28-2019
Citation:	HSC 6.7 25284, 25286 - California Health and Safety Code, Chapter 6.7, Section(s) 25284, 25286
Violation Description:	Failure to submit a complete and accurate application for a permit to operate a UST, or for renewal of the permit.
Violation Notes:	Returned to compliance on 02/27/2020. OBSERVATION: Owner/Operator did not submit and/or maintain a complete and/or accurate UST Operating Permit Application. UST #1 is missing line leak detection equipment on CERS. CORRECTIVE ACTION: Submit and/or maintain a complete and/or accurate UST Operating Permit Application, including for permit renewal. Log into CERS and input the required information on what line leak detector is present for UST #1.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero
Violation Date:	02-20-2014
Citation:	HSC 6.67 Multiple - California Health and Safety Code, Chapter 6.67, Section(s) Multiple
Violation Description:	Haz Waste Generator Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 08/06/2014.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HW
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero
Violation Date:	12-20-2016
Citation:	HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description:	Business Plan Program - Administration/Documentation - General

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Violation Notes:	Returned to compliance on 10/12/2017. OBSERVATION: BP05 was cited 12/22/15 and again on 9/6/16. Site map submitted to CERS still does not address evacuation staging area and no new map submitted since 8/4/16. CORRECTIVE ACTION: Submit a site map that meets all the requirements of HSC25505(a)(2).
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero
Violation Date:	10-30-2019
Citation:	HSC 6.7 25284, 25286 - California Health and Safety Code, Chapter 6.7, Section(s) 25284, 25286
Violation Description:	Failure to submit a complete and accurate application for a permit to operate a UST, or for renewal of the permit.
Violation Notes:	Returned to compliance on 02/27/2020. OBSERVATION: Owner/Operator did not submit and/or maintain a complete and/or accurate UST Operating Permit Application. UST #1 IS MISSING LINE LEAK DETECTION EQUIPMENT ON CERS. CORRECTIVE ACTION: Submit and/or maintain a complete and/or accurate UST Operating Permit Application, including for permit renewal. LOG INTO CERS AND INPUT THE REQUIRED INFORMATION ON WHAT LINE LEAK DETECTOR IS PRESENT FOR UST #1.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero
Violation Date:	12-29-2017
Citation:	22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description:	Failure to properly label hazardous waste accumulation containers and portable tanks with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes:	OBSERVATION: All 3 drums are onsite from the Dec 12/29/2017 inspection and appear to contain the same contents by external inspection (weight/sound), labeling appears unchanged. From that inspection: Facility has 3-55 gal drums. 1 drum is about 1/10th full of a sludgey liquid and has no label. 1 drum is at least 1/3rd full of a sludgey liquid and has a hazardous waste label with the old owner’s name, an accum. date from 2015, and is missing information regarding contents. The last drum is labeled "Spill Kit", and is full of used absorbent pads (at least 1/2 full). Hazardous waste label has old owner’s information and is missing information regarding contents, and a 2015 accum start date. CORRECTIVE ACTION: Properly label al hazardous waste containers and send a photo to CCHSHMP OR send documentation to CCHSHMP that all waste has been properly disposed of.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HW
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero
Violation Date:	12-22-2015

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Citation:	HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description:	Business Plan Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 10/12/2017.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero
Violation Date:	12-29-2017
Citation:	HSC 6.5 25123.3(h)(1) - California Health and Safety Code, Chapter 6.5, Section(s) 25123.3(h)(1)
Violation Description:	Failure to send hazardous waste offsite for treatment, storage, or disposal within 180 days (or 270 days if waste is transported over 200 miles) for a generator who generates less than 1000 kilogram per month if all of the following conditions are met: (1) The quantity of hazardous waste accumulated onsite never exceeds 6,000 kilograms. (2) The generator complies with the requirements of 40 Code of Federal Regulations section 262.34(d), (e) and (f). (3) The generator does not hold acutely hazardous waste or extremely hazardous waste in an amount greater than one kilogram for more than 90 days.
Violation Notes:	OBSERVATION: The two partial labels on the hazardous waste drums had accum. start date from 2015. All 3 drums contain hazardous waste. CORRECTIVE ACTION: Have all hazardous waste hauled off site and provide manifest to CCHSHMP.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HW
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero
Violation Date:	10-03-2017
Citation:	23 CCR 16 2715(e) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(e)
Violation Description:	Failure to maintain a copy of the designated operator monthly inspections for the last 12 months on-site or off-site at a readily available location, if approved by the UPA.
Violation Notes:	Returned to compliance on 10/03/2017.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero
Violation Date:	12-29-2017
Citation:	40 CFR 1 265.173 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.173
Violation Description:	Failure to meet the following container management requirements: (a) A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste. (b) A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.
Violation Notes:	Returned to compliance on 09/04/2018. OBSERVATION: The container holding used spill pads is missing the metal ring needed to appropriately close the solids - 55gal drums. CORRECTIVE ACTION: Get

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the metal ring to close the drum and send CCHSHMP a photo of 3 drums appropriately closed OR the waste documentation to CCHSHMP if waste is disposed of.
Violation Division: Contra Costa County Health Services Department
Violation Program: HW
Violation Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Violation Date: 10-03-2017
Citation: 23 CCR 16 2636(f)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(2)
Violation Description: Failure of the line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements:Monitor at least hourly.Be capable of detecting a release of 3.0 gallons per hour at 10 p.s.i.g. Restrict or shut off the flow of product through the piping when a leak is detected.
Violation Notes: Returned to compliance on 10/12/2017.
Violation Division: Contra Costa County Health Services Department
Violation Program: UST
Violation Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Violation Date: 10-03-2017
Citation: 23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)
Violation Description: Failure to retain a copy of the permit to operate at the facility.
Violation Notes: Returned to compliance on 10/12/2017.
Violation Division: Contra Costa County Health Services Department
Violation Program: UST
Violation Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Violation Date: 09-06-2016
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 10/12/2017.
Violation Division: Contra Costa County Health Services Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Violation Date: 12-29-2017
Citation: 23 CCR 16 2715(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(i)
Violation Description: Failure to have a properly qualified service technician test leak detection equipment as required every 12 months (vapor, pressure, hydrostatic (VPH) system, sensors, line-leak detectors (LLD), automatic tank gauge (ATG), etc.).
Violation Notes: Returned to compliance on 12/29/2017. OBSERVATION: Last annual monitoring system certification occurred on 12/20/16. CORRECTIVE ACTION: Today, an annual monitoring certification was conducted by a qualified technician.

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Violation Division:	Contra Costa County Health Services Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero
Violation Date:	09-08-2020
Citation:	23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)
Violation Description:	Failure to have current UST Monitoring Plan available on site.
Violation Notes:	OBSERVATION: Approved copy of the UST monitoring plan was not found on-site. CORRECTIVE ACTION: Immediately locate and retain a copy on-site.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero
Violation Date:	12-20-2016
Citation:	23 CCR 16 2636(f)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(2)
Violation Description:	Failure of the line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements:Monitor at least hourly.Be capable of detecting a release of 3.0 gallons per hour at 10 p.s.i.g. Restrict or shut off the flow of product through the piping when a leak is detected.
Violation Notes:	Returned to compliance on 10/12/2017.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero
Violation Date:	07-10-2017
Citation:	23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)
Violation Description:	Failure to retain a copy of the permit to operate at the facility.
Violation Notes:	Returned to compliance on 10/12/2017.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero
Violation Date:	03-23-2017
Citation:	23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)
Violation Description:	Failure to retain a copy of the permit to operate at the facility.
Violation Notes:	Returned to compliance on 10/12/2017.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero
Violation Date:	09-01-2017

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Citation:	HSC 6.7 Multiple - California Health and Safety Code, Chapter 6.7, Section(s) Multiple
Violation Description:	UST Program - Administration/Documentation - General - Must include violation description, proper statute and regulation citation in the "comment" section.
Violation Notes:	Not reported
Violation Division:	Contra Costa County Health Services Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero
Violation Date:	09-06-2016
Citation:	HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description:	Business Plan Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 10/07/2016.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero
Violation Date:	06-24-2014
Citation:	HSC 6.7 Multiple Sections - California Health and Safety Code, Chapter 6.7, Section(s) Multiple Sections
Violation Description:	UST Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 07/23/2014.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero
Violation Date:	06-23-2016
Citation:	HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description:	Business Plan Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 10/13/2016.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero
Violation Date:	03-05-2019
Citation:	23 CCR 16 2715(f) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(f)
Violation Description:	Failure to have a properly qualified service technician test leak detection equipment as required every 12 months (vapor, pressure, hydrostatic (VPH) system, sensors, line-leak detectors (LLD), automatic tank gauge (ATG), etc.).
Violation Notes:	Returned to compliance on 03/28/2019. OBSERVATION: Owner/Operator did not have a properly qualified service technician test leak detection equipment every 12 months (VPH, sensor, LLD, ATG, etc.). CORRECTIVE ACTION: Have a properly qualified service technician test leak detection equipment every 12 months.

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Violation Division: Contra Costa County Health Services Department
Violation Program: UST
Violation Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Violation Date: 09-01-2017
Citation: 23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)
Violation Description: Failure to retain a copy of the permit to operate at the facility.
Violation Notes: Returned to compliance on 10/12/2017.
Violation Division: Contra Costa County Health Services Department
Violation Program: UST
Violation Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Violation Date: 12-22-2015
Citation: HSC 6.5 Multiple Sections - California Health and Safety Code, Chapter 6.5, Section(s) Multiple Sections
Violation Description: Haz Waste Generator Program - Operations/Maintenance - General
Violation Notes: Returned to compliance on 12/22/2015.
Violation Division: Contra Costa County Health Services Department
Violation Program: HW
Violation Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Violation Date: 12-20-2016
Citation: 23 CCR 16 2715(e) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(e)
Violation Description: Failure to maintain a copy of the designated operator monthly inspections for the last 12 months on-site or off-site at a readily available location, if approved by the UPA.
Violation Notes: Returned to compliance on 10/03/2017.
Violation Division: Contra Costa County Health Services Department
Violation Program: UST
Violation Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Violation Date: 04-14-2017
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 04/17/2017.
Violation Division: Contra Costa County Health Services Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Violation Date: 12-22-2015
Citation: Un-Specified
Violation Description: UST Program - Administration/Documentation - For use of Local Ordinance only
Violation Notes: Returned to compliance on 09/06/2016.

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Violation Division:	Contra Costa County Health Services Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero
Violation Date:	12-22-2015
Citation:	Un-Specified
Violation Description:	UST Program - Operations/Maintenance - For use of Local Ordinance only.
Violation Notes:	Returned to compliance on 12/22/2015.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero
Violation Date:	10-02-2015
Citation:	Un-Specified
Violation Description:	UST Program - Administration/Documentation - For use of Local Ordinance only
Violation Notes:	Returned to compliance on 11/25/2015.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero
Violation Date:	04-14-2017
Citation:	HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description:	Tiered Permitting - Administration/Documentation - General
Violation Notes:	Returned to compliance on 04/17/2017.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HW
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero
Violation Date:	06-24-2014
Citation:	HSC 6.67 Multiple - California Health and Safety Code, Chapter 6.67, Section(s) Multiple
Violation Description:	Haz Waste Generator Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 07/23/2014.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HW
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero
Violation Date:	09-08-2020
Citation:	23 CCR 16 2715(c)(4) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(c)(4)
Violation Description:	Failure to maintain a list of employees trained by the designated operator on-site or off-site at a readily available location, if approved by the UPA. For training that occurs on or after October 1, 2018, failure to maintain a copy of the "Facility Employee Training

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	Certificate" on-site or off-site at a readily available location, if approved by the UPA.
Violation Notes:	OBSERVATION: Owner/Operator did not maintain a list of employees trained by the DO, or for training that occurs on or after 10/1/18, failure to maintain a copy of the "Facility Employee Training Certificate". CORRECTIVE ACTION: Maintain list of employees trained by the DO and copies of "Facility Employee Training Certificate" for training that occurs on or after 10/1/18. Submit copies of the 2020 or 2019 training certificates if they are less than 12 months old.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero
Violation Date:	07-10-2017
Citation:	23 CCR 16 2636(f)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(2)
Violation Description:	Failure of the line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements:Monitor at least hourly.Be capable of detecting a release of 3.0 gallons per hour at 10 p.s.i.g. Restrict or shut off the flow of product through the piping when a leak is detected.
Violation Notes:	Returned to compliance on 10/12/2017.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero
Violation Date:	07-01-2019
Citation:	HSC 6.7 25284 - California Health and Safety Code, Chapter 6.7, Section(s) 25284
Violation Description:	Failure to obtain a valid permit to operate from the UPA including but not limited to unpaid permit fees.
Violation Notes:	Returned to compliance on 02/27/2020. Observation: As of September 6, 2019, the subject facility does not possess a current and valid CUPA Permit. Corrective Action: 1) Conduct tightness testing of secondary containment at least once every 36 months 1) Immediately Remit payment for all outstanding Certified Unified Program Agency permit fees to CCHS Finance Department (925) 957-5520. and/or 2) Immediately address and correct all outstanding Underground Storage Tank violations and/or any Class I violations in other CUPA programs. A list of outstanding violations is enclosed, if applicable.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	146449
Site Name:	Pittsburg Valero
Violation Date:	03-28-2019
Citation:	23 CCR 16 2712(b)(1)(G) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)(1)(G)
Violation Description:	Failure to comply with one or more of the following overfill prevention equipment requirements: Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; or Restrict delivery of flow

PITTSBURG VALERO (Continued) **S120629520**

to the tank at least 30 minutes before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm at least five minutes before the tank overfills; or Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity; or Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling. Install/retrofit overfill prevention equipment that does not use flow restrictors on vent piping to meet overfill prevention equipment requirements when the overfill prevention equipment is installed, repaired, or replaced on and after October 1,- 2018. For USTs installed before October 1, 2018, perform an inspection by October 13, 2018 and every 36 months thereafter. For USTs installed on and after October- 1,- 2018, perform an inspection at installation and every 36 months thereafter. Inspected within 30 days after a repair to the overfill prevention equipment. Inspected using an applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer. Inspected by a certified UST service technician. Maintain records of overfill prevention equipment inspection for 36 months.

Violation Notes: Returned to compliance on 10/28/2019. OBSERVATION: Owner/Operator failed to meet one or more of the requirements applicable to overfill prevention equipment. 87-1, 87-2, and 91 were not able to be tested and Diesel failed failed by 2 inches. CORRECTIVE ACTION: Maintain overfill prevention system to comply with the deficiencies noted above. Submit verification.
Violation Division: Contra Costa County Health Services Department
Violation Program: UST
Violation Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Violation Date: 10-03-2017
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 10/12/2017. OBSERVATION: BP05 has been cited 12/22/2015, 9/6/2016, 12/20/16, & 7/10/17. No changes have been made in CERS to the site map since 8/16/2016 and there has been no CERS submittal since 4/17/17. Facility submitted an incomplete site map by email on 8/14/17 but site map was not submitted via CERS and does not meet the requirements of HSC 25505(a)(2). CORRECTIVE ACTION: Submit a map via CERS that meets the requirements of HSC 25505(a)(2).
Violation Division: Contra Costa County Health Services Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Violation Date: 10-03-2016
Citation: 23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)
Violation Description: Failure to retain a copy of the permit to operate at the facility.
Violation Notes: Returned to compliance on 10/12/2016.
Violation Division: Contra Costa County Health Services Department
Violation Program: UST
Violation Source: CERS

PITTSBURG VALERO (Continued) **S120629520**

Site ID: 146449
Site Name: Pittsburg Valero
Violation Date: 12-29-2017
Citation: 23 CCR 16 2637(e) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637(e)
Violation Description: Failure to submit a copy of the secondary containment test results to the UPA within 30 days after the test.
Violation Notes: Returned to compliance on 01/02/2018. OBSERVATION: Secondary containment testing (SB989) was started on September 13th, cancelled on Sept. 28th and finished on October 13th, 2017. A test report has not been submitted to the CUPA. A copy of the test report must be submitted within 30 days of the test. CORRECTIVE ACTION: Submit a copy of the test report to the CUPA.
Violation Division: Contra Costa County Health Services Department
Violation Program: UST
Violation Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Violation Date: 09-08-2020
Citation: 23 CCR 16 2636(f)(4) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(4)
Violation Description: Failure to meet one or more of the following monitoring requirements in lieu of the requirement to be tightness tested every 12 months: The monitoring system maintains all product piping outside the dispenser to be fail-safe and shut down the pump when a leak is detected. The monitoring system shuts down the pump or stops flow when a leak is detected in the under dispenser containment (UDC).
Violation Notes: OBSERVATION: Owner/Operator, in lieu of annual tightness testing, failed to maintain all product piping, outside the dispenser, to be fail-safe and capable of shutting down the pump when a leak is detected and a monitoring system capable of shutting down the pump or stops the flow (flow restriction) when a leak is detected in the under dispenser containment. 87 unleaded STP was not running during the AMC testing and fail safe shut down could not be tested. CORRECTIVE ACTION: Maintain all product piping outside the dispenser to be fail-safe and shut down the pump when a leak is detected and the monitoring system shuts down the pump or stops the flow (flow restriction) when a leak is detected in the under dispenser containment. Submit verification.
Violation Division: Contra Costa County Health Services Department
Violation Program: UST
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-20-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-20-2014
Violations Found: Yes

PITTSBURG VALERO (Continued) **S120629520**

Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-20-2014
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-27-2020
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-05-2019
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-23-2017
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-28-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-28-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department

PITTSBURG VALERO (Continued) **S120629520**

Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-28-2019
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-28-2019
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-14-2017
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-14-2017
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-14-2017
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-18-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

PITTSBURG VALERO (Continued) **S120629520**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-20-2015
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	05-09-2016
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	06-23-2016
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	06-24-2014
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	06-24-2014
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	07-10-2017
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	07-10-2017
Violations Found:	Yes

PITTSBURG VALERO (Continued) **S120629520**

Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-13-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-28-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 08-07-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 09-01-2017
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 09-04-2018
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 09-06-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department

PITTSBURG VALERO (Continued) **S120629520**

Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 09-06-2016
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-08-2020
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 09-10-2019
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-02-2015
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-03-2016
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-03-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

PITTSBURG VALERO (Continued) **S120629520**

Eval General Type: Other/Unknown
Eval Date: 10-03-2017
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-09-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-12-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-12-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-28-2019
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-30-2019
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-25-2015
Violations Found: No

PITTSBURG VALERO (Continued) **S120629520**

Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-20-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 12-20-2016
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-22-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-22-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-22-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-29-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department

PITTSBURG VALERO (Continued) **S120629520**

Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-29-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

Enforcement Action:
Site ID: 146449
Site Name: Pittsburg Valero
Site Address: 1005 RAILROAD AVE
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 02-20-2014
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Site Address: 1005 RAILROAD AVE
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 02-20-2014
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Site Address: 1005 RAILROAD AVE
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 03-05-2019
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Site Address: 1005 RAILROAD AVE
Site City: PITTSBURG
Site Zip: 94565

PITTSBURG VALERO (Continued) **S120629520**

Enf Action Date: 03-23-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Site Address: 1005 RAILROAD AVE
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 03-28-2019
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Site Address: 1005 RAILROAD AVE
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 04-14-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Site Address: 1005 RAILROAD AVE
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 04-14-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Site Address: 1005 RAILROAD AVE
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 04-14-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department

PITTSBURG VALERO (Continued) **S120629520**

Enf Action Program: UST
Enf Action Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Site Address: 1005 RAILROAD AVE
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 04-14-2017
Enf Action Type: Referral to Other
Enf Action Description: Referral to Other
Enf Action Notes: Red Tag #2357 was affixed to the fill pipe of #4/87 tank.
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Site Address: 1005 RAILROAD AVE
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 04-14-2017
Enf Action Type: Referral to Other
Enf Action Description: Referral to Other
Enf Action Notes: Red Tag #3395 was affixed to the fill pipe of #2/Diesel tank.
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Site Address: 1005 RAILROAD AVE
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 04-14-2017
Enf Action Type: Referral to Other
Enf Action Description: Referral to Other
Enf Action Notes: Red Tag #3396 was affixed to the fill pipe of #1/91 tank.
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Site Address: 1005 RAILROAD AVE
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 04-14-2017
Enf Action Type: Referral to Other
Enf Action Description: Referral to Other
Enf Action Notes: Red Tag #3397 was affixed to the fill pipe of #3/87 tank.
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero

PITTSBURG VALERO (Continued) **S120629520**

Site Address: 1005 RAILROAD AVE
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 04-20-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Site Address: 1005 RAILROAD AVE
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 05-09-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Site Address: 1005 RAILROAD AVE
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 06-23-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Site Address: 1005 RAILROAD AVE
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 06-24-2014
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Site Address: 1005 RAILROAD AVE
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 06-24-2014
Enf Action Type: Notice of Violation (Unified Program)

PITTSBURG VALERO (Continued) **S120629520**

Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Site Address: 1005 RAILROAD AVE
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 07-10-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Site Address: 1005 RAILROAD AVE
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 07-10-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Site Address: 1005 RAILROAD AVE
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 09-01-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Site Address: 1005 RAILROAD AVE
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 09-04-2018
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

PITTSBURG VALERO (Continued) **S120629520**

Site ID:	146449
Site Name:	Pittsburg Valero
Site Address:	1005 RAILROAD AVE
Site City:	PITTSBURG
Site Zip:	94565
Enf Action Date:	09-06-2016
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Contra Costa County Health Services Department
Enf Action Program:	HMRRP
Enf Action Source:	CERS

Site ID:	146449
Site Name:	Pittsburg Valero
Site Address:	1005 RAILROAD AVE
Site City:	PITTSBURG
Site Zip:	94565
Enf Action Date:	09-08-2020
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Contra Costa County Health Services Department
Enf Action Program:	UST
Enf Action Source:	CERS

Site ID:	146449
Site Name:	Pittsburg Valero
Site Address:	1005 RAILROAD AVE
Site City:	PITTSBURG
Site Zip:	94565
Enf Action Date:	09-10-2019
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Contra Costa County Health Services Department
Enf Action Program:	UST
Enf Action Source:	CERS

Site ID:	146449
Site Name:	Pittsburg Valero
Site Address:	1005 RAILROAD AVE
Site City:	PITTSBURG
Site Zip:	94565
Enf Action Date:	10-02-2015
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Contra Costa County Health Services Department
Enf Action Program:	UST
Enf Action Source:	CERS

Site ID:	146449
Site Name:	Pittsburg Valero
Site Address:	1005 RAILROAD AVE
Site City:	PITTSBURG
Site Zip:	94565

PITTSBURG VALERO (Continued) **S120629520**

Enf Action Date: 10-03-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Site Address: 1005 RAILROAD AVE
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 10-03-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Site Address: 1005 RAILROAD AVE
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 10-03-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Site Address: 1005 RAILROAD AVE
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 10-30-2019
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Site Address: 1005 RAILROAD AVE
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 12-20-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department

PITTSBURG VALERO (Continued) **S120629520**

Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Site Address: 1005 RAILROAD AVE
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 12-20-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Site Address: 1005 RAILROAD AVE
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 12-22-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Site Address: 1005 RAILROAD AVE
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 12-22-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero
Site Address: 1005 RAILROAD AVE
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 12-22-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 146449
Site Name: Pittsburg Valero

PITTSBURG VALERO (Continued) **S120629520**

Site Address:	1005 RAILROAD AVE
Site City:	PITTSBURG
Site Zip:	94565
Enf Action Date:	12-29-2017
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Contra Costa County Health Services Department
Enf Action Program:	HW
Enf Action Source:	CERS

Site ID:	146449
Site Name:	Pittsburg Valero
Site Address:	1005 RAILROAD AVE
Site City:	PITTSBURG
Site Zip:	94565
Enf Action Date:	12-29-2017
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Contra Costa County Health Services Department
Enf Action Program:	UST
Enf Action Source:	CERS

Coordinates:

Site ID:	146449
Facility Name:	Pittsburg Valero
Env Int Type Code:	HWG
Program ID:	10004353
Coord Name:	Not reported
Ref Point Type Desc:	Unknown
Latitude:	38.027573
Longitude:	-121.884979

Affiliation:

Affiliation Type Desc:	UST Tank Owner
Entity Name:	Shaan Holdings LLC
Entity Title:	Not reported
Affiliation Address:	10940 Trinity Pkwy c274
Affiliation City:	stockton
Affiliation State:	ca
Affiliation Country:	United States
Affiliation Zip:	95219
Affiliation Phone:	(209) 518-3496

Affiliation Type Desc:	CUPA District
Entity Name:	Contra Costa County Health Services Department
Entity Title:	Not reported
Affiliation Address:	4585 Pacheco BlvdSuite 100
Affiliation City:	Martinez
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94553
Affiliation Phone:	(925) 655-3200

Affiliation Type Desc:	Facility Mailing Address

PITTSBURG VALERO (Continued) **S120629520**

Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	1005 Railroad Ave
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94565
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	sandeep dhanda
Entity Title:	president
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Avin Investments Inc
Entity Title:	Not reported
Affiliation Address:	5453 cosumnes dr
Affiliation City:	stockton
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	95219
Affiliation Phone:	(209) 518-3496
Affiliation Type Desc:	Operator
Entity Name:	Avin Investments Inc
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(209) 518-3496
Affiliation Type Desc:	UST Tank Operator
Entity Name:	Avin Invesmnets Inc
Entity Title:	Not reported
Affiliation Address:	10940 trinity pkwy c274
Affiliation City:	stockton
Affiliation State:	ca
Affiliation Country:	United States
Affiliation Zip:	95219
Affiliation Phone:	(209) 518-3496
Affiliation Type Desc:	Environmental Contact
Entity Name:	Sandeep Dhanda
Entity Title:	Not reported
Affiliation Address:	10940 trinity pkwy c274
Affiliation City:	stockton
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	95219

PITTSBURG VALERO (Continued) **S120629520**

Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	Pittsburg Valero
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Property Owner
Entity Name:	Shaan Holdings LLC
Entity Title:	Not reported
Affiliation Address:	10940 trinity pkwy c274
Affiliation City:	stockton
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	95219
Affiliation Phone:	(209) 518-3496
Affiliation Type Desc:	UST Permit Applicant
Entity Name:	Joy Kachadorian
Entity Title:	EHS Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(916) 825-1000
Affiliation Type Desc:	UST Property Owner Name
Entity Name:	Shaan Holding LLC
Entity Title:	Not reported
Affiliation Address:	10940 Trinity Pkwy c274
Affiliation City:	stockton
Affiliation State:	ca
Affiliation Country:	United States
Affiliation Zip:	95219
Affiliation Phone:	(209) 518-3496

P101 **BELL GAS** **CA LUST** **S102261769**
WSW **998 RAILROAD AVE** **CA SWEEPS UST** **N/A**
1/4-1/2 **PITTSBURG, CA 94565** **CA Cortese**
0.254 mi. **CA HIST CORTESE**
1342 ft. **Site 7 of 7 in cluster P** **CA CONTRA COSTA CO. SITE LIST**
CA CERS

Relative:
Higher

Actual:
24 ft.

LUST REG 2:

Region:	2
Facility Id:	07-0588
Facility Status:	Leak being confirmed
Case Number:	70107
How Discovered:	Tank Closure
Leak Cause:	UNK
Leak Source:	UNK

BELL GAS (Continued) **S102261769**

Date Leak Confirmed: 9/1/1994
Oversight Program: LUST
Prelim. Site Assesment Wokplan Submitted: Not reported
Preliminary Site Assesment Began: Not reported
Pollution Characterization Began: Not reported
Pollution Remediation Plan Submitted: Not reported
Date Remediation Action Underway: Not reported
Date Post Remedial Action Monitoring Began: Not reported

LUST:

Name:	BELL GAS AND DIESEL
Address:	998 RAILROAD AVE
City,State,Zip:	PITTSBURG, CA 94565
Lead Agency:	SAN FRANCISCO BAY RWQCB (REGION 2)
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0601300541
Global Id:	T0601300541
Latitude:	38.02823494
Longitude:	-121.885275
Status:	Completed - Case Closed
Status Date:	04/17/2018
Case Worker:	Not reported
RB Case Number:	07-0588
Local Agency:	CONTRA COSTA COUNTY
File Location:	Regional Board
Local Case Number:	70107
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	The Site is located in downtown Pittsburg, California and is bounded by 10th Street to the south, Railroad Avenue to the east, vacant unpaved lots (now part of the Marina School site) to the north, and the previous (prior to expansion) Marina School property boundary to the west. The Site had historically been used as a petroleum service station (All Star Gas) and Bell Gas operated the fuel station, mini-mart, and tire shop. The Site was acquired by the Pittsburg Unified School District (PUSD) through eminent domain in January 2008. Prior to acquisition by the PUSD, the Site was comprised of a single-story mini-mart (55 feet by 25 feet) and tire shop (20 feet by 25 feet) buildings, both located at the northwest portion. Two petroleum underground storage tanks (USTs) (one 10,000-gallon gasoline and one 10,000 gallon gasoline/diesel dual compartment tank) were located in the north central portion of the property. Former USTs were removed prior to 1987. The USTs were removed in July-Sept of 2008. The Site has a flat topography and the surface water drains gently toward the streets.

LUST:

Global Id:	T0601300541
Contact Type:	Local Agency Caseworker
Contact Name:	SUE LOYD
Organization Name:	CONTRA COSTA COUNTY
Address:	4333 PACHECO BLVD.
City:	MARTINEZ
Email:	sloyd@hsd.co.contra-costa.ca.us
Phone Number:	Not reported

BELL GAS (Continued) **S102261769**

LUST:

Global Id:	T0601300541
Action Type:	RESPONSE
Date:	04/30/2011
Action:	Monitoring Report - Quarterly
Global Id:	T0601300541
Action Type:	RESPONSE
Date:	02/22/2010
Action:	Monitoring Report - Quarterly
Global Id:	T0601300541
Action Type:	RESPONSE
Date:	03/25/2008
Action:	Other Report / Document
Global Id:	T0601300541
Action Type:	RESPONSE
Date:	04/02/2009
Action:	Other Workplan
Global Id:	T0601300541
Action Type:	RESPONSE
Date:	04/27/2007
Action:	Soil and Water Investigation Workplan
Global Id:	T0601300541
Action Type:	RESPONSE
Date:	09/29/2008
Action:	Other Report / Document
Global Id:	T0601300541
Action Type:	RESPONSE
Date:	03/04/2008
Action:	Email Correspondence
Global Id:	T0601300541
Action Type:	RESPONSE
Date:	01/01/2000
Action:	Other Report / Document
Global Id:	T0601300541
Action Type:	RESPONSE
Date:	07/19/2007
Action:	Email Correspondence
Global Id:	T0601300541
Action Type:	ENFORCEMENT
Date:	10/28/2009
Action:	13267 Requirement
Global Id:	T0601300541
Action Type:	ENFORCEMENT
Date:	12/22/2009
Action:	13267 Requirement
Global Id:	T0601300541

BELL GAS (Continued) **S102261769**

Action Type: ENFORCEMENT
Date: 07/13/2015
Action: 13267 Requirement

Global Id: T0601300541
Action Type: RESPONSE
Date: 07/30/2011
Action: Monitoring Report - Quarterly

Global Id: T0601300541
Action Type: RESPONSE
Date: 01/30/2012
Action: Monitoring Report - Quarterly

Global Id: T0601300541
Action Type: RESPONSE
Date: 01/30/2013
Action: Monitoring Report - Semi-Annually

Global Id: T0601300541
Action Type: RESPONSE
Date: 10/30/2011
Action: Monitoring Report - Quarterly

Global Id: T0601300541
Action Type: RESPONSE
Date: 07/30/2015
Action: Monitoring Report - Semi-Annually

Global Id: T0601300541
Action Type: RESPONSE
Date: 07/30/2012
Action: Monitoring Report - Semi-Annually

Global Id: T0601300541
Action Type: RESPONSE
Date: 07/30/2016
Action: Monitoring Report - Semi-Annually

Global Id: T0601300541
Action Type: RESPONSE
Date: 11/01/2009
Action: Monitoring Report - Quarterly

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 04/14/2010
Action: 13267 Requirement

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 07/29/2010
Action: 13267 Requirement

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 03/04/2014

BELL GAS (Continued) **S102261769**

Action:	Staff Letter
Global Id:	T0601300541
Action Type:	RESPONSE
Date:	01/22/2009
Action:	Monitoring Report - Quarterly
Global Id:	T0601300541
Action Type:	RESPONSE
Date:	02/27/2008
Action:	Other Workplan
Global Id:	T0601300541
Action Type:	RESPONSE
Date:	04/24/2007
Action:	Other Report / Document
Global Id:	T0601300541
Action Type:	RESPONSE
Date:	05/29/2009
Action:	Monitoring Report - Quarterly
Global Id:	T0601300541
Action Type:	RESPONSE
Date:	05/31/2007
Action:	Email Correspondence
Global Id:	T0601300541
Action Type:	RESPONSE
Date:	08/26/2008
Action:	Respond to Petition
Global Id:	T0601300541
Action Type:	RESPONSE
Date:	09/25/2008
Action:	Email Correspondence
Global Id:	T0601300541
Action Type:	RESPONSE
Date:	11/03/2008
Action:	Well Installation Report
Global Id:	T0601300541
Action Type:	RESPONSE
Date:	01/10/2007
Action:	Other Report / Document
Global Id:	T0601300541
Action Type:	RESPONSE
Date:	03/04/2008
Action:	Email Correspondence
Global Id:	T0601300541
Action Type:	RESPONSE
Date:	03/24/2008
Action:	Email Correspondence

BELL GAS (Continued) **S102261769**

Global Id: T0601300541
Action Type: RESPONSE
Date: 01/18/2006
Action: Other Report / Document

Global Id: T0601300541
Action Type: RESPONSE
Date: 09/25/1986
Action: Other Report / Document

Global Id: T0601300541
Action Type: RESPONSE
Date: 11/21/2007
Action: Corrective Action Plan / Remedial Action Plan - Addendum

Global Id: T0601300541
Action Type: RESPONSE
Date: 06/09/1986
Action: Other Report / Document

Global Id: T0601300541
Action Type: RESPONSE
Date: 04/04/2008
Action: Tank Removal Workplan

Global Id: T0601300541
Action Type: RESPONSE
Date: 02/28/2007
Action: Other Report / Document

Global Id: T0601300541
Action Type: RESPONSE
Date: 03/20/2007
Action: Email Correspondence

Global Id: T0601300541
Action Type: RESPONSE
Date: 04/03/2008
Action: Other Report / Document

Global Id: T0601300541
Action Type: RESPONSE
Date: 07/27/2007
Action: Well Installation Workplan

Global Id: T0601300541
Action Type: RESPONSE
Date: 08/28/2008
Action: Other Report / Document

Global Id: T0601300541
Action Type: RESPONSE
Date: 01/22/2008
Action: Correspondence

Global Id: T0601300541
Action Type: RESPONSE

BELL GAS (Continued) **S102261769**

Date: 01/27/2009
Action: Email Correspondence

Global Id: T0601300541
Action Type: RESPONSE
Date: 10/30/2007
Action: Other Report / Document

Global Id: T0601300541
Action Type: RESPONSE
Date: 08/31/2010
Action: Email Correspondence

Global Id: T0601300541
Action Type: RESPONSE
Date: 09/08/2008
Action: Email Correspondence

Global Id: T0601300541
Action Type: RESPONSE
Date: 10/01/2008
Action: Other Report / Document

Global Id: T0601300541
Action Type: RESPONSE
Date: 12/26/2008
Action: Other Report / Document

Global Id: T0601300541
Action Type: RESPONSE
Date: 01/12/2009
Action: Email Correspondence

Global Id: T0601300541
Action Type: RESPONSE
Date: 08/08/2007
Action: Other Report / Document

Global Id: T0601300541
Action Type: RESPONSE
Date: 10/04/2006
Action: Other Workplan

Global Id: T0601300541
Action Type: RESPONSE
Date: 09/22/1986
Action: Other Report / Document

Global Id: T0601300541
Action Type: RESPONSE
Date: 10/31/2007
Action: Monitoring Report - Quarterly

Global Id: T0601300541
Action Type: RESPONSE
Date: 03/20/2007
Action: Email Correspondence

BELL GAS (Continued) **S102261769**

Global Id: T0601300541
Action Type: RESPONSE
Date: 01/23/2009
Action: Email Correspondence

Global Id: T0601300541
Action Type: RESPONSE
Date: 02/01/2008
Action: Other Workplan

Global Id: T0601300541
Action Type: RESPONSE
Date: 03/12/2007
Action: Email Correspondence

Global Id: T0601300541
Action Type: RESPONSE
Date: 03/23/2007
Action: Correspondence

Global Id: T0601300541
Action Type: RESPONSE
Date: 10/09/1986
Action: Other Report / Document

Global Id: T0601300541
Action Type: RESPONSE
Date: 07/03/2008
Action: Email Correspondence

Global Id: T0601300541
Action Type: RESPONSE
Date: 12/04/2007
Action: Correspondence

Global Id: T0601300541
Action Type: RESPONSE
Date: 09/16/2008
Action: Email Correspondence

Global Id: T0601300541
Action Type: RESPONSE
Date: 03/12/2007
Action: Respond to Petition

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 10/03/2006
Action: 13267 Requirement

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 05/03/2000
Action: 13267 Requirement

Global Id: T0601300541
Action Type: ENFORCEMENT

BELL GAS (Continued) **S102261769**

Date: 10/05/2016
Action: Letter - Notice

Global Id: T0601300541
Action Type: RESPONSE
Date: 01/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0601300541
Action Type: RESPONSE
Date: 04/27/2007
Action: Other Workplan

Global Id: T0601300541
Action Type: RESPONSE
Date: 01/10/2007
Action: Email Correspondence

Global Id: T0601300541
Action Type: RESPONSE
Date: 02/28/2007
Action: Other Report / Document

Global Id: T0601300541
Action Type: RESPONSE
Date: 04/10/2010
Action: Monitoring Report - Quarterly

Global Id: T0601300541
Action Type: RESPONSE
Date: 07/15/2006
Action: Response to Comments

Global Id: T0601300541
Action Type: RESPONSE
Date: 05/24/2007
Action: Email Correspondence

Global Id: T0601300541
Action Type: RESPONSE
Date: 06/23/2006
Action: Other Workplan

Global Id: T0601300541
Action Type: RESPONSE
Date: 12/02/2005
Action: Email Correspondence

Global Id: T0601300541
Action Type: RESPONSE
Date: 12/02/2008
Action: Tank Removal Report / UST Sampling Report

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 07/27/2007
Action: 13267 Requirement

BELL GAS (Continued) **S102261769**

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 08/13/2006
Action: Notice of Responsibility

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 04/09/2008
Action: 13267 Requirement

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 01/25/2007
Action: Site Visit / Inspection / Sampling

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 10/15/2007
Action: Site Visit / Inspection / Sampling

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 11/30/2006
Action: 13267 Requirement

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 05/16/2007
Action: Notice of Violation

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 09/07/2006
Action: Site Visit / Inspection / Sampling

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 03/27/2007
Action: 13267 Requirement

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 06/21/2016
Action: Technical Correspondence / Assistance / Other

Global Id: T0601300541
Action Type: RESPONSE
Date: 02/27/2007
Action: Other Report / Document

Global Id: T0601300541
Action Type: RESPONSE
Date: 07/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0601300541
Action Type: RESPONSE

BELL GAS (Continued) **S102261769**

Date: 04/27/2007
Action: Other Workplan

Global Id: T0601300541
Action Type: RESPONSE
Date: 10/03/2008
Action: Well Installation Report

Global Id: T0601300541
Action Type: RESPONSE
Date: 07/02/2013
Action: Correspondence

Global Id: T0601300541
Action Type: RESPONSE
Date: 05/30/2013
Action: Other Report / Document

Global Id: T0601300541
Action Type: RESPONSE
Date: 07/30/2013
Action: Monitoring Report - Semi-Annually

Global Id: T0601300541
Action Type: RESPONSE
Date: 08/16/2013
Action: CAP/RAP - Other Report

Global Id: T0601300541
Action Type: RESPONSE
Date: 01/09/2005
Action: Email Correspondence

Global Id: T0601300541
Action Type: RESPONSE
Date: 03/09/2007
Action: Email Correspondence

Global Id: T0601300541
Action Type: RESPONSE
Date: 04/17/2015
Action: Proposed Plan - Regulator Responded

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 03/04/2008
Action: Site Visit / Inspection / Sampling

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 07/13/2011
Action: File review

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 12/29/2011
Action: 13267 Requirement

BELL GAS (Continued) **S102261769**

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 02/22/2012
Action: Meeting

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 04/18/2017
Action: Staff Letter

Global Id: T0601300541
Action Type: RESPONSE
Date: 11/21/2007
Action: Other Report / Document

Global Id: T0601300541
Action Type: RESPONSE
Date: 11/21/2007
Action: Corrective Action Plan / Remedial Action Plan

Global Id: T0601300541
Action Type: RESPONSE
Date: 02/25/2008
Action: Other Workplan

Global Id: T0601300541
Action Type: RESPONSE
Date: 02/26/2008
Action: Other Workplan

Global Id: T0601300541
Action Type: RESPONSE
Date: 05/07/2014
Action: Well Installation Report

Global Id: T0601300541
Action Type: RESPONSE
Date: 01/30/2015
Action: Remedial Progress Report

Global Id: T0601300541
Action Type: RESPONSE
Date: 04/30/2017
Action: Soil Vapor Intrusion Investigation Report - Regulator Responded

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 01/30/2008
Action: 13267 Requirement

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 04/03/2008
Action: 13267 Requirement

Global Id: T0601300541
Action Type: ENFORCEMENT

BELL GAS (Continued) **S102261769**

Date: 08/27/2013
Action: Meeting

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 03/03/2017
Action: Staff Letter

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 06/05/2017
Action: Staff Letter

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 07/24/2017
Action: Notification - Preclosure

Global Id: T0601300541
Action Type: RESPONSE
Date: 01/30/2014
Action: Monitoring Report - Semi-Annually

Global Id: T0601300541
Action Type: RESPONSE
Date: 07/30/2014
Action: Monitoring Report - Semi-Annually

Global Id: T0601300541
Action Type: RESPONSE
Date: 02/23/2009
Action: Other Workplan

Global Id: T0601300541
Action Type: RESPONSE
Date: 02/22/2008
Action: Tank Removal Workplan

Global Id: T0601300541
Action Type: RESPONSE
Date: 04/30/2007
Action: Other Report / Document

Global Id: T0601300541
Action Type: RESPONSE
Date: 05/09/2008
Action: Other Report / Document

Global Id: T0601300541
Action Type: RESPONSE
Date: 07/20/2007
Action: Email Correspondence

Global Id: T0601300541
Action Type: RESPONSE
Date: 07/26/2007
Action: Monitoring Report - Quarterly

BELL GAS (Continued) **S102261769**

Global Id: T0601300541
Action Type: RESPONSE
Date: 09/17/2007
Action: Email Correspondence

Global Id: T0601300541
Action Type: RESPONSE
Date: 12/02/2008
Action: Monitoring Report - Quarterly

Global Id: T0601300541
Action Type: RESPONSE
Date: 12/02/2008
Action: Tank Removal Report / UST Sampling Report

Global Id: T0601300541
Action Type: RESPONSE
Date: 12/08/1986
Action: Respond to Petition

Global Id: T0601300541
Action Type: RESPONSE
Date: 01/30/2017
Action: Monitoring Report - Semi-Annually - Regulator Responded

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 01/29/2001
Action: Staff Letter

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 06/12/2013
Action: 13267 Requirement

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 09/29/2017
Action: 13267 Requirement

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 12/26/2017
Action: Staff Letter

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 07/20/2017
Action: Staff Letter

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 06/16/2017
Action: Technical Correspondence / Assistance / Other

Global Id: T0601300541
Action Type: ENFORCEMENT

BELL GAS (Continued) **S102261769**

Date: 04/17/2018
Action: Closure/No Further Action Letter

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 06/08/2017
Action: Clean Up Fund - Case Closure Review Summary Report (RSR)

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 04/03/2008
Action: Staff Letter

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 07/27/2007
Action: Staff Letter

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 12/22/2009
Action: 13267 Monitoring Program

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 03/27/2007
Action: 13267 Requirement

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 02/09/2001
Action: Staff Letter

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 07/10/1986
Action: Staff Letter

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 07/07/2008
Action: Deadline Extension

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 09/26/2006
Action: Clean Up Fund - Letter to RP

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 10/12/2007
Action: Deadline Extension

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 04/09/2008
Action: Staff Letter

BELL GAS (Continued) **S102261769**

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 07/21/2007
Action: Staff Letter

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 09/03/2008
Action: Staff Letter

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 06/23/2009
Action: Staff Letter

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 12/29/2011
Action: Staff Letter

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 02/06/2008
Action: Staff Letter

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 04/20/1988
Action: Notice to Comply

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 05/16/2007
Action: Notice of Violation

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 08/27/2008
Action: Staff Letter

Global Id: T0601300541
Action Type: Other
Date: 01/20/1987
Action: Leak Began

Global Id: T0601300541
Action Type: Other
Date: 01/20/1987
Action: Leak Discovery

Global Id: T0601300541
Action Type: RESPONSE
Date: 07/30/2010
Action: Monitoring Report - Quarterly

Global Id: T0601300541
Action Type: RESPONSE

BELL GAS (Continued) **S102261769**

Date: 10/30/2010
Action: Monitoring Report - Quarterly

Global Id: T0601300541
Action Type: RESPONSE
Date: 01/30/2016
Action: Monitoring Report - Semi-Annually

Global Id: T0601300541
Action Type: RESPONSE
Date: 06/12/2008
Action: Other Report / Document

Global Id: T0601300541
Action Type: RESPONSE
Date: 07/31/2007
Action: Other Report / Document

Global Id: T0601300541
Action Type: RESPONSE
Date: 09/09/2009
Action: Well Installation Report

Global Id: T0601300541
Action Type: RESPONSE
Date: 10/31/2006
Action: Other Workplan

Global Id: T0601300541
Action Type: RESPONSE
Date: 12/12/2008
Action: Interim Remedial Action Report

Global Id: T0601300541
Action Type: REMEDIATION
Date: 01/20/1987
Action: Excavation

Global Id: T0601300541
Action Type: REMEDIATION
Date: 09/20/2008
Action: In Situ Physical/Chemical Treatment (other than SVE)

Global Id: T0601300541
Action Type: REMEDIATION
Date: 08/12/2008
Action: Pump & Treat (P&T) Groundwater

Global Id: T0601300541
Action Type: REMEDIATION
Date: 07/30/2008
Action: Excavation

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 07/17/2008
Action: Site Visit / Inspection / Sampling

BELL GAS (Continued) **S102261769**

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 08/05/2008
Action: Site Visit / Inspection / Sampling

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 07/21/2008
Action: Site Visit / Inspection / Sampling

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 08/27/2008
Action: Site Visit / Inspection / Sampling

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 08/27/2008
Action: 13267 Requirement

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 11/29/2012
Action: File Review - Closure

Global Id: T0601300541
Action Type: Other
Date: 01/20/1987
Action: Leak Stopped

Global Id: T0601300541
Action Type: Other
Date: 05/28/1986
Action: Leak Reported

Global Id: T0601300541
Action Type: RESPONSE
Date: 07/12/2008
Action: Correspondence

Global Id: T0601300541
Action Type: RESPONSE
Date: 08/26/2008
Action: Correspondence

Global Id: T0601300541
Action Type: RESPONSE
Date: 10/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0601300541
Action Type: RESPONSE
Date: 01/30/2009
Action: Monitoring Report - Quarterly

Global Id: T0601300541
Action Type: RESPONSE

BELL GAS (Continued) **S102261769**

Date: 01/30/2011
Action: Monitoring Report - Quarterly

Global Id: T0601300541
Action Type: RESPONSE
Date: 01/30/2010
Action: Monitoring Report - Quarterly

Global Id: T0601300541
Action Type: RESPONSE
Date: 04/30/2009
Action: Monitoring Report - Quarterly

Global Id: T0601300541
Action Type: RESPONSE
Date: 11/14/2008
Action: CAP/RAP - Other Report

Global Id: T0601300541
Action Type: RESPONSE
Date: 04/30/2010
Action: Monitoring Report - Quarterly

Global Id: T0601300541
Action Type: RESPONSE
Date: 07/06/2009
Action: Other Report / Document

Global Id: T0601300541
Action Type: RESPONSE
Date: 04/02/2009
Action: Soil and Water Investigation Workplan - Addendum

Global Id: T0601300541
Action Type: RESPONSE
Date: 02/19/2009
Action: Other Workplan

Global Id: T0601300541
Action Type: RESPONSE
Date: 01/30/2015
Action: Monitoring Report - Semi-Annually

Global Id: T0601300541
Action Type: RESPONSE
Date: 11/26/2007
Action: Other Report / Document

Global Id: T0601300541
Action Type: RESPONSE
Date: 05/25/2006
Action: Other Workplan

Global Id: T0601300541
Action Type: RESPONSE
Date: 01/28/2008
Action: Monitoring Report - Quarterly

BELL GAS (Continued) **S102261769**

Global Id: T0601300541
Action Type: RESPONSE
Date: 07/14/2008
Action: Monitoring Report - Quarterly

Global Id: T0601300541
Action Type: RESPONSE
Date: 08/20/2008
Action: Corrective Action Plan / Remedial Action Plan

Global Id: T0601300541
Action Type: RESPONSE
Date: 09/03/2008
Action: Other Report / Document

Global Id: T0601300541
Action Type: RESPONSE
Date: 09/01/2010
Action: Monitoring Report - Quarterly

Global Id: T0601300541
Action Type: RESPONSE
Date: 11/21/2008
Action: Tank Removal Report / UST Sampling Report

Global Id: T0601300541
Action Type: RESPONSE
Date: 11/27/2006
Action: Other Workplan

Global Id: T0601300541
Action Type: RESPONSE
Date: 12/26/2008
Action: Other Report / Document

Global Id: T0601300541
Action Type: REMEDIATION
Date: 07/03/2014
Action: In Situ Biological Treatment

Global Id: T0601300541
Action Type: REMEDIATION
Date: 12/30/2014
Action: Ex Situ Biological Treatment

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 04/06/2009
Action: 13267 Requirement

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 07/02/2013
Action: Staff Letter

Global Id: T0601300541
Action Type: ENFORCEMENT

BELL GAS (Continued) **S102261769**

Date: 10/01/2013
Action: Meeting

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 12/06/2013
Action: 13267 Requirement

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 06/13/2014
Action: File review

Global Id: T0601300541
Action Type: RESPONSE
Date: 10/31/2006
Action: Other Workplan

Global Id: T0601300541
Action Type: RESPONSE
Date: 07/09/2008
Action: Tank Removal Report / UST Sampling Report

Global Id: T0601300541
Action Type: RESPONSE
Date: 07/09/2008
Action: Well Destruction Report

Global Id: T0601300541
Action Type: RESPONSE
Date: 07/09/2008
Action: Well Installation Report

Global Id: T0601300541
Action Type: RESPONSE
Date: 03/01/2018
Action: Well Destruction Report

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 10/22/2007
Action: Site Visit / Inspection / Sampling

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 01/29/2000
Action: * Historical Enforcement

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 07/21/2009
Action: File review

Global Id: T0601300541
Action Type: ENFORCEMENT
Date: 04/10/2015
Action: Staff Letter

BELL GAS (Continued) **S102261769**

LUST:

Global Id:	T0601300541
Status:	Open - Case Begin Date
Status Date:	05/28/1986
Global Id:	T0601300541
Status:	Open - Site Assessment
Status Date:	09/01/1994
Global Id:	T0601300541
Status:	Open - Site Assessment
Status Date:	11/30/2006
Global Id:	T0601300541
Status:	Open - Remediation
Status Date:	11/20/2007
Global Id:	T0601300541
Status:	Open - Remediation
Status Date:	11/26/2007
Global Id:	T0601300541
Status:	Open - Remediation
Status Date:	09/20/2008
Global Id:	T0601300541
Status:	Open - Eligible for Closure
Status Date:	09/28/2017
Global Id:	T0601300541
Status:	Completed - Case Closed
Status Date:	04/17/2018

SWEEPS UST:

Name:	ALL STAR GAS
Address:	998 RAILROAD AVE
City:	PITTSBURG
Status:	Active
Comp Number:	70107
Number:	9
Board Of Equalization:	44-002622
Referral Date:	06-20-88
Action Date:	Not reported
Created Date:	07-22-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	07-000-070107-000001
Tank Status:	A
Capacity:	6000
Active Date:	06-20-88
Tank Use:	M.V. FUEL
STG:	P
Content:	REG UNLEADED
Number Of Tanks:	3
Name:	ALL STAR GAS

BELL GAS (Continued) **S102261769**

Address: 998 RAILROAD AVE
City: PITTSBURG
Status: Active
Comp Number: 70107
Number: 9
Board Of Equalization: 44-002622
Referral Date: 06-20-88
Action Date: Not reported
Created Date: 07-22-88
Owner Tank Id: Not reported
SWRCB Tank Id: 07-000-070107-000002
Tank Status: A
Capacity: 10000
Active Date: 06-20-88
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Name: ALL STAR GAS
Address: 998 RAILROAD AVE
City: PITTSBURG
Status: Active
Comp Number: 70107
Number: 9
Board Of Equalization: 44-002622
Referral Date: 06-20-88
Action Date: Not reported
Created Date: 07-22-88
Owner Tank Id: Not reported
SWRCB Tank Id: 07-000-070107-000003
Tank Status: A
Capacity: 10000
Active Date: 06-20-88
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: Not reported

CORTESE:
Name: BELL GAS AND DIESEL
Address: 998 RAILROAD AVE
City,State,Zip: PITTSBURG, CA 94565
Region: CORTESE
Envirostor Id: Not reported
Global ID: T0601300541
Site/Facility Type: LUST CLEANUP SITE
Cleanup Status: COMPLETED - CASE CLOSED
Status Date: Not reported
Site Code: Not reported
Latitude: Not reported
Longitude: Not reported
Owner: Not reported
Enf Type: Not reported
Swat R: Not reported
Flag: active
Order No: Not reported

BELL GAS (Continued) **S102261769**

Waste Discharge System No: Not reported
Effective Date: Not reported
Region 2: Not reported
WID Id: Not reported
Solid Waste Id No: Not reported
Waste Management Uit Name: Not reported
File Name: Active Open

HIST CORTESE:
edr_fname: BELL GAS
edr_fadd1: 998 RAILROAD
City,State,Zip: PITTSBURG, CA 94565
Region: CORTESE
Facility County Code: 7
Reg By: LTNKA
Reg Id: 07-0588

CONTRA COSTA CO. SITE LIST:
Name: FORMERLY BELL GASOLINE
Address: 998 RAILROAD AVE
City: PITTSBURG
Facility ID: FA0032661
Billing Status: INACTIVE, NON-BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HMBP GENERAL
Region: CONTRA COSTA
Cupa Number: 770107

Name: FORMERLY BELL GASOLINE
Address: 998 RAILROAD AVE
City: PITTSBURG
Facility ID: FA0032661
Billing Status: INACTIVE, NON-BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HWG: REPORTED ZERO
Region: CONTRA COSTA
Cupa Number: 770107

Name: FORMERLY BELL GASOLINE
Address: 998 RAILROAD AVE
City: PITTSBURG
Facility ID: FA0032661
Billing Status: INACTIVE, NON-BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: UNDERGROUND STORAGE TANK SITE
Region: CONTRA COSTA
Cupa Number: 770107

CERS:
Name: BELL GAS AND DIESEL
Address: 998 RAILROAD AVE
City,State,Zip: PITTSBURG, CA 94565
Site ID: 252273
CERS ID: T0601300541
CERS Description: Leaking Underground Storage Tank Cleanup Site

BELL GAS (Continued) **S102261769**

Affiliation:

Affiliation Type Desc:	Regional Board Caseworker
Entity Name:	BARBARA SIEMINSKI - SAN FRANCISCO BAY RWQCB (REGION 2)
Entity Title:	Not reported
Affiliation Address:	1515 CLAY STREET, SUITE 1400
Affiliation City:	OAKLAND
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Local Agency Caseworker
Entity Name:	SUE LOYD - CONTRA COSTA COUNTY
Entity Title:	Not reported
Affiliation Address:	4333 PACHECO BLVD.
Affiliation City:	MARTINEZ
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

R102 **RAILROAD AVENUE ICE HOUSE** **CA HIST CORTESE** **S101306990**
SW **1095 RAILROAD AVE** **CA CONTRA COSTA CO. SITE LIST** **N/A**
1/4-1/2 **PITTSBURG, CA 94565**
0.271 mi.
1430 ft. **Site 1 of 3 in cluster R**

Relative:
Higher

Actual:
24 ft.

HIST CORTESE:

edr_fname:	PITTSBURG ST REDEVLOPMENT
edr_fadd1:	1095 RAILROAD
City,State,Zip:	PITTSBURG, CA
Region:	CORTESE
Facility County Code:	7
Reg By:	LTNKA
Reg Id:	07-0093

CONTRA COSTA CO. SITE LIST:

Name:	RAILROAD AVENUE ICE HOUSE
Address:	1095 RAILROAD AVE
City:	PITTSBURG
Facility ID:	FA0033110
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	UNDERGROUND STORAGE TANK SITE
Region:	CONTRA COSTA
Cupa Number:	770594

R103
SW
1/4-1/2
0.271 mi.
1430 ft.

PITTSBURG ST REDEVLOPMENT #1
1095 RAILROAD AVE
PITTSBURG, CA 94565

Site 2 of 3 in cluster R

CA LUST **S103472478**
N/A

Relative:
Higher

Actual:
24 ft.

LUST REG 2:

Region:	2
Facility Id:	07-0093
Facility Status:	Case Closed
Case Number:	70726
How Discovered:	Tank Closure
Leak Cause:	UNK
Leak Source:	UNK
Date Leak Confirmed:	Not reported
Oversight Program:	LUST
Prelim. Site Assesment Wokplan Submitted:	8/7/1987
Preliminary Site Assesment Began:	10/30/1987
Pollution Characterization Began:	Not reported
Pollution Remediation Plan Submitted:	Not reported
Date Remediation Action Underway:	Not reported
Date Post Remedial Action Monitoring Began:	Not reported

R104
SW
1/4-1/2
0.271 mi.
1430 ft.

PITTSBURG REDEVLOPMENT #1
1095 RAILROAD AVE
PITTSBURG, CA 94565

Site 3 of 3 in cluster R

CA LUST **S113804490**
CA Cortese **N/A**
CA CERS

Relative:
Higher

Actual:
24 ft.

LUST:

Name:	PITTSBURG REDEVLOPMENT #1
Address:	1095 RAILROAD AVE
City,State,Zip:	PITTSBURG, CA 94565
Lead Agency:	SAN FRANCISCO BAY RWQCB (REGION 2)
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0601300089
Global Id:	T0601300089
Latitude:	38.026346988
Longitude:	-121.886
Status:	Completed - Case Closed
Status Date:	03/20/2014
Case Worker:	Not reported
RB Case Number:	07-0093
Local Agency:	CONTRA COSTA COUNTY
File Location:	Not reported
Local Case Number:	70726
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

LUST:

Global Id:	T0601300089
Contact Type:	Local Agency Caseworker
Contact Name:	SUE LOYD
Organization Name:	CONTRA COSTA COUNTY
Address:	4333 PACHECO BLVD.
City:	MARTINEZ
Email:	sloyd@hsd.co.contra-costa.ca.us
Phone Number:	Not reported

PITTSBURG REDEVLOPMENT #1 (Continued) **S113804490**

LUST:

Global Id:	T0601300089
Action Type:	ENFORCEMENT
Date:	03/10/2014
Action:	Staff Letter
Global Id:	T0601300089
Action Type:	ENFORCEMENT
Date:	06/13/2008
Action:	Technical Correspondence / Assistance / Other
Global Id:	T0601300089
Action Type:	RESPONSE
Date:	06/19/2013
Action:	Fact Sheets - Public Participation
Global Id:	T0601300089
Action Type:	ENFORCEMENT
Date:	06/16/2008
Action:	13267 Requirement
Global Id:	T0601300089
Action Type:	RESPONSE
Date:	02/07/2014
Action:	Well Destruction Report
Global Id:	T0601300089
Action Type:	RESPONSE
Date:	07/24/2006
Action:	Other Report / Document
Global Id:	T0601300089
Action Type:	RESPONSE
Date:	07/16/2008
Action:	Other Workplan
Global Id:	T0601300089
Action Type:	RESPONSE
Date:	05/28/2008
Action:	Other Report / Document
Global Id:	T0601300089
Action Type:	Other
Date:	07/14/1986
Action:	Leak Discovery
Global Id:	T0601300089
Action Type:	ENFORCEMENT
Date:	09/25/2013
Action:	13267 Requirement
Global Id:	T0601300089
Action Type:	ENFORCEMENT
Date:	06/27/2013
Action:	Notification - Preclosure
Global Id:	T0601300089

PITTSBURG REDEVLOPMENT #1 (Continued) **S113804490**

Action Type: ENFORCEMENT
Date: 06/04/2013
Action: File Review - Closure

Global Id: T0601300089
Action Type: ENFORCEMENT
Date: 06/06/2013
Action: Staff Letter

Global Id: T0601300089
Action Type: Other
Date: 07/14/1986
Action: Leak Stopped

Global Id: T0601300089
Action Type: Other
Date: 03/09/1987
Action: Leak Reported

Global Id: T0601300089
Action Type: RESPONSE
Date: 10/31/2008
Action: Soil and Water Investigation Report

Global Id: T0601300089
Action Type: ENFORCEMENT
Date: 08/27/2013
Action: Staff Letter

Global Id: T0601300089
Action Type: ENFORCEMENT
Date: 12/30/2013
Action: Staff Letter

Global Id: T0601300089
Action Type: ENFORCEMENT
Date: 08/04/2008
Action: 13267 Requirement

Global Id: T0601300089
Action Type: ENFORCEMENT
Date: 07/09/2009
Action: File review

Global Id: T0601300089
Action Type: ENFORCEMENT
Date: 03/20/2014
Action: Closure/No Further Action Letter

LUST:
Global Id: T0601300089
Status: Open - Case Begin Date
Status Date: 07/14/1986

Global Id: T0601300089
Status: Open - Site Assessment
Status Date: 08/07/1987

PITTSBURG REDEVLOPMENT #1 (Continued) **S113804490**

Global Id: T0601300089
Status: Completed - Case Closed
Status Date: 10/01/1997

Global Id: T0601300089
Status: Open - Reopen Case
Status Date: 06/16/2008

Global Id: T0601300089
Status: Open - Assessment & Interim Remedial Action
Status Date: 09/13/2010

Global Id: T0601300089
Status: Open - Eligible for Closure
Status Date: 06/04/2013

Global Id: T0601300089
Status: Completed - Case Closed
Status Date: 03/20/2014

CORTESE:
Name: PITTSBURG REDEVLOPMENT #1
Address: 1095 RAILROAD AVE
City,State,Zip: PITTSBURG, CA 94565
Region: CORTESE
Envirostor Id: Not reported
Global ID: T0601300089
Site/Facility Type: LUST CLEANUP SITE
Cleanup Status: COMPLETED - CASE CLOSED
Status Date: Not reported
Site Code: Not reported
Latitude: Not reported
Longitude: Not reported
Owner: Not reported
Enf Type: Not reported
Swat R: Not reported
Flag: active
Order No: Not reported
Waste Discharge System No: Not reported
Effective Date: Not reported
Region 2: Not reported
WID Id: Not reported
Solid Waste Id No: Not reported
Waste Management Uit Name: Not reported
File Name: Active Open

CERS:
Name: PITTSBURG REDEVLOPMENT #1
Address: 1095 RAILROAD AVE
City,State,Zip: PITTSBURG, CA 94565
Site ID: 238991
CERS ID: T0601300089
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker

PITTSBURG REDEVLOPMENT #1 (Continued) **S113804490**

Entity Name:	SUE LOYD - CONTRA COSTA COUNTY
Entity Title:	Not reported
Affiliation Address:	4333 PACHECO BLVD.
Affiliation City:	MARTINEZ
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Regional Board Caseworker
Entity Name:	BARBARA SIEMINSKI - SAN FRANCISCO BAY RWQCB (REGION 2)
Entity Title:	Not reported
Affiliation Address:	1515 CLAY STREET, SUITE 1400
Affiliation City:	OAKLAND
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Q105 **KOCH CARBON INC.** **CA ENVIROSTOR** **S104735477**
East **700- 707 E. 3RD STREET** **N/A**
1/4-1/2 **PITTSBURG, CA 94565**
0.288 mi.
1520 ft. **Site 5 of 5 in cluster Q**

Relative: **Lower**

Actual: **8 ft.**

ENVIROSTOR:

Name:	KOCH CARBON INC.
Address:	700- 707 E. 3RD STREET
City,State,Zip:	PITTSBURG, CA 94565
Facility ID:	07290043
Status:	Refer: RWQCB
Status Date:	04/11/2003
Site Code:	Not reported
Site Type:	Evaluation
Site Type Detailed:	Evaluation
Acres:	25
NPL:	NO
Regulatory Agencies:	RWQCB 2 - San Francisco Bay
Lead Agency:	RWQCB 2 - San Francisco Bay
Program Manager:	Not reported
Supervisor:	Referred - Not Assigned
Division Branch:	Cleanup Berkeley
Assembly:	14
Senate:	07
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	Not reported
Latitude:	38.03111
Longitude:	-121.8719
APN:	NONE SPECIFIED
Past Use:	NONE SPECIFIED
Potential COC:	NONE SPECIFIED
Confirmed COC:	NONE SPECIFIED
Potential Description:	NONE SPECIFIED
Alias Name:	REDWOOD MANUFACTURERS CO. INC.
Alias Type:	Alternate Name

KOCH CARBON INC. (Continued) **S104735477**

Alias Name: U.S. STEEL
Alias Type: Alternate Name
Alias Name: USX CORPORATION
Alias Type: Alternate Name
Alias Name: 07290043
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 05/10/1999
Comments: Further action required since previous operations may have filled areas with waste materials.

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

106
NW
1/4-1/2
0.320 mi.
1691 ft.

Relative:
Lower

Actual:
7 ft.

PITTSBURG MARINA
51 MARINA BLVD
PITTSBURG, CA 94565

CA LUST **S104568135**
CA SWEEPS UST **N/A**
CA CHMIRS
CA Cortese
CA HIST CORTESE
CA CERS

LUST REG 2:
Region: 2
Facility Id: 07-0784
Facility Status: Leak being confirmed
Case Number: 70115
How Discovered: Tank Closure
Leak Cause: UNK
Leak Source: UNK
Date Leak Confirmed: 9/8/1999
Oversight Program: LUST
Prelim. Site Assesment Wokplan Submitted: Not reported
Preliminary Site Assesment Began: Not reported
Pollution Characterization Began: Not reported
Pollution Remediation Plan Submitted: Not reported
Date Remediation Action Underway: Not reported
Date Post Remedial Action Monitoring Began: Not reported

LUST:
Name: PITTSBURG MARINA
Address: 51 MARINA BLVD
City,State,Zip: PITTSBURG, CA 94565-
Lead Agency: SAN FRANCISCO BAY RWQCB (REGION 2)
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0601300729
Global Id: T0601300729
Latitude: 38.03314

PITTSBURG MARINA (Continued) **S104568135**

Longitude: -121.884835
Status: Completed - Case Closed
Status Date: 07/10/2008
Case Worker: MYM
RB Case Number: 07-0784
Local Agency: CONTRA COSTA COUNTY
File Location: Not reported
Local Case Number: 70115
Potential Media Affect: Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern: Gasoline
Site History: Not reported

LUST:
Global Id: T0601300729
Contact Type: Regional Board Caseworker
Contact Name: MARTIN MUSONGE
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)
Address: 1515 CLAY STREET
City: OAKLAND
Email: martin.musonge@waterboards.ca.gov
Phone Number: Not reported

Global Id: T0601300729
Contact Type: Local Agency Caseworker
Contact Name: SUE LOYD
Organization Name: CONTRA COSTA COUNTY
Address: 4333 PACHECO BLVD.
City: MARTINEZ
Email: sloyd@hsd.co.contra-costa.ca.us
Phone Number: Not reported

LUST:
Global Id: T0601300729
Action Type: RESPONSE
Date: 03/19/2008
Action: Preliminary Site Assessment Workplan

Global Id: T0601300729
Action Type: RESPONSE
Date: 05/22/2008
Action: Site Assessment Report

Global Id: T0601300729
Action Type: RESPONSE
Date: 01/26/2004
Action: Other Report / Document

Global Id: T0601300729
Action Type: RESPONSE
Date: 06/27/2006
Action: Other Report / Document

Global Id: T0601300729
Action Type: RESPONSE
Date: 12/06/2005
Action: Tank Removal Report / UST Sampling Report

PITTSBURG MARINA (Continued) **S104568135**

Global Id: T0601300729
Action Type: Other
Date: 03/25/1999
Action: Leak Discovery

Global Id: T0601300729
Action Type: ENFORCEMENT
Date: 07/10/2008
Action: Closure/No Further Action Letter

Global Id: T0601300729
Action Type: Other
Date: 03/25/1999
Action: Leak Stopped

Global Id: T0601300729
Action Type: Other
Date: 03/25/1999
Action: Leak Reported

LUST:
Global Id: T0601300729
Status: Open - Case Begin Date
Status Date: 03/25/1999

Global Id: T0601300729
Status: Open - Site Assessment
Status Date: 09/08/1999

Global Id: T0601300729
Status: Completed - Case Closed
Status Date: 07/10/2008

SWEEPS UST:
Name: CITY OF PITTSBURG
Address: 51 MARINA BLVD
City: PITTSBURG
Status: Active
Comp Number: 70115
Number: 4
Board Of Equalization: 44-002624
Referral Date: 11-26-91
Action Date: 11-26-91
Created Date: 07-22-88
Owner Tank Id: Not reported
SWRCB Tank Id: 07-000-070115-000001
Tank Status: A
Capacity: 350
Active Date: 11-26-91
Tank Use: M.V. FUEL
STG: P
Content: DIESEL
Number Of Tanks: 4

Name: CITY OF PITTSBURG

PITTSBURG MARINA (Continued) **S104568135**

Address:	51 MARINA BLVD
City:	PITTSBURG
Status:	Active
Comp Number:	70115
Number:	4
Board Of Equalization:	44-002624
Referral Date:	11-26-91
Action Date:	11-26-91
Created Date:	07-22-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	07-000-070115-000002
Tank Status:	A
Capacity:	350
Active Date:	11-26-91
Tank Use:	M.V. FUEL
STG:	P
Content:	DIESEL
Number Of Tanks:	Not reported

Name:	CITY OF PITTSBURG
Address:	51 MARINA BLVD
City:	PITTSBURG
Status:	Active
Comp Number:	70115
Number:	4
Board Of Equalization:	44-002624
Referral Date:	11-26-91
Action Date:	11-26-91
Created Date:	07-22-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	07-000-070115-000003
Tank Status:	A
Capacity:	350
Active Date:	11-26-91
Tank Use:	M.V. FUEL
STG:	P
Content:	DIESEL
Number Of Tanks:	Not reported

Name:	CITY OF PITTSBURG
Address:	51 MARINA BLVD
City:	PITTSBURG
Status:	Active
Comp Number:	70115
Number:	4
Board Of Equalization:	44-002624
Referral Date:	11-26-91
Action Date:	11-26-91
Created Date:	07-22-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	07-000-070115-000004
Tank Status:	A
Capacity:	350
Active Date:	11-26-91
Tank Use:	M.V. FUEL
STG:	P
Content:	DIESEL

PITTSBURG MARINA (Continued) **S104568135**

Number Of Tanks: Not reported

CHMIRS:

Name:	Not reported
Address:	51 MARINA BLVD
City,State,Zip:	PITTSBURG, CA
OES Incident Number:	13-3472
OES notification:	06/07/2013
OES Date:	Not reported
OES Time:	Not reported
Date Completed:	**Not reported**
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA DOT PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	Yes
Waterway:	Suisun Bay
Spill Site:	Waterways
Cleanup By:	Unknown
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	N/A
Other:	Not reported
Date/Time:	2100
Year:	2013
Agency:	NRC
Incident Date:	6/7/2013
Admin Agency:	Contra Costa County Health Services Department
Amount:	Not reported
Contained:	Unknown
Site Type:	Suisun Bay
E Date:	Not reported
Substance:	Sinking Vessel
Quantity Released:	1
Unknown:	Not reported
Substance #2:	Not reported

PITTSBURG MARINA (Continued) **S104568135**

Substance #3:	Not reported
Evacuations:	Not reported
Number of Injuries:	Not reported
Number of Fatalities:	Not reported
#1 Pipeline:	Not reported
#2 Pipeline:	Not reported
#3 Pipeline:	Not reported
#1 Vessel >= 300 Tons:	Not reported
#2 Vessel >= 300 Tons:	Not reported
#3 Vessel >= 300 Tons:	Not reported
Evacs:	Not reported
Injuries:	Not reported
Fatals:	Not reported
Comments:	Not reported
Description:	Per NRC: "Caller reports a vessel is taking on water and pumps are unable to keep up. There is 100 gallons of diesel fuel on board." Remedial Actions: "The owner has a salvage plan for the morning of 08-Jun-2013"

CORTESE:

Name:	PITTSBURG MARINA
Address:	51 MARINA BLVD
City,State,Zip:	PITTSBURG, CA
Region:	CORTESE
Envirostor Id:	Not reported
Global ID:	T0601300729
Site/Facility Type:	LUST CLEANUP SITE
Cleanup Status:	COMPLETED - CASE CLOSED
Status Date:	Not reported
Site Code:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Owner:	Not reported
Enf Type:	Not reported
Swat R:	Not reported
Flag:	active
Order No:	Not reported
Waste Discharge System No:	Not reported
Effective Date:	Not reported
Region 2:	Not reported
WID Id:	Not reported
Solid Waste Id No:	Not reported
Waste Management Uit Name:	Not reported
File Name:	Active Open

HIST CORTESE:

edr_fname:	PITTSBURG MARINA
edr_fadd1:	51 MARINA
City,State,Zip:	PITTSBURG, CA 94565
Region:	CORTESE
Facility County Code:	7
Reg By:	LTNKA
Reg Id:	07-0784

PITTSBURG MARINA (Continued) **S104568135**

CERS:
Name: PITTSBURG MARINA
Address: 51 MARINA BLVD
City,State,Zip: PITTSBURG, CA 94565-
Site ID: 198040
CERS ID: T0601300729
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Regional Board Caseworker
Entity Name: MARTIN MUSONGE - SAN FRANCISCO BAY RWQCB (REGION 2)
Entity Title: Not reported
Affiliation Address: 1515 CLAY STREET
Affiliation City: OAKLAND
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Local Agency Caseworker
Entity Name: SUE LOYD - CONTRA COSTA COUNTY
Entity Title: Not reported
Affiliation Address: 4333 PACHECO BLVD.
Affiliation City: MARTINEZ
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

S107 **PEPSI COLA COMPANY** **CA LUST** **U001597927**
SW **338 CENTRAL AVE** **CA HIST UST** **N/A**
1/4-1/2 **PITTSBURG, CA 94565** **CA ENF**
0.339 mi. **CA HIST CORTESE**
1792 ft. **Site 1 of 2 in cluster S** **CA CONTRA COSTA CO. SITE LIST**
CA CERS

Relative: Higher

Actual: 30 ft.

LUST:
Name: PEPSI COLA COMPANY
Address: 338 CENTRAL AVE
City,State,Zip: PITTSBURG, CA 94565
Lead Agency: SAN FRANCISCO BAY RWQCB (REGION 2)
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0601300216
Global Id: T0601300216
Latitude: 38.024567
Longitude: -121.881523
Status: Completed - Case Closed
Status Date: 08/12/2008
Case Worker: MYM
RB Case Number: 07-0233
Local Agency: CONTRA COSTA COUNTY
File Location: All Files are on GeoTracker or in the Local Agency Database
Local Case Number: 11008
Potential Media Affect: Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern: Gasoline
Site History: Not reported

PEPSI COLA COMPANY (Continued) **U001597927**

LUST:
Global Id: T0601300216
Contact Type: Regional Board Caseworker
Contact Name: MARTIN MUSONGE
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)
Address: 1515 CLAY STREET
City: OAKLAND
Email: martin.musonge@waterboards.ca.gov
Phone Number: Not reported

Global Id: T0601300216
Contact Type: Local Agency Caseworker
Contact Name: SUE LOYD
Organization Name: CONTRA COSTA COUNTY
Address: 4333 PACHECO BLVD.
City: MARTINEZ
Email: sloyd@hsd.co.contra-costa.ca.us
Phone Number: Not reported

LUST:
Global Id: T0601300216
Action Type: RESPONSE
Date: 05/25/2000
Action: Correspondence

Global Id: T0601300216
Action Type: RESPONSE
Date: 05/25/2000
Action: Correspondence

Global Id: T0601300216
Action Type: RESPONSE
Date: 07/26/2004
Action: Monitoring Report - Quarterly

Global Id: T0601300216
Action Type: RESPONSE
Date: 08/01/2002
Action: Email Correspondence

Global Id: T0601300216
Action Type: RESPONSE
Date: 08/02/2001
Action: Correspondence

Global Id: T0601300216
Action Type: RESPONSE
Date: 08/02/2002
Action: Response to Comments

Global Id: T0601300216
Action Type: RESPONSE
Date: 08/06/2003
Action: Monitoring Report - Annually

Global Id: T0601300216

PEPSI COLA COMPANY (Continued) **U001597927**

Action Type: RESPONSE
Date: 08/11/1998
Action: Correspondence

Global Id: T0601300216
Action Type: RESPONSE
Date: 09/06/2001
Action: Soil and Water Investigation Report

Global Id: T0601300216
Action Type: RESPONSE
Date: 09/05/2003
Action: Interim Remedial Action Plan

Global Id: T0601300216
Action Type: RESPONSE
Date: 09/18/2001
Action: Correspondence

Global Id: T0601300216
Action Type: ENFORCEMENT
Date: 05/24/2002
Action: Staff Letter

Global Id: T0601300216
Action Type: ENFORCEMENT
Date: 01/03/2003
Action: Staff Letter

Global Id: T0601300216
Action Type: ENFORCEMENT
Date: 11/01/2002
Action: File review

Global Id: T0601300216
Action Type: ENFORCEMENT
Date: 11/01/2002
Action: Staff Letter

Global Id: T0601300216
Action Type: RESPONSE
Date: 10/08/2004
Action: Request for Closure

Global Id: T0601300216
Action Type: ENFORCEMENT
Date: 09/15/2003
Action: Staff Letter

Global Id: T0601300216
Action Type: ENFORCEMENT
Date: 03/16/2004
Action: Staff Letter

Global Id: T0601300216
Action Type: ENFORCEMENT
Date: 07/27/2004

PEPSI COLA COMPANY (Continued) **U001597927**

Action: 13267 Monitoring Program

Global Id: T0601300216
Action Type: ENFORCEMENT
Date: 11/19/2004
Action: * No Action

Global Id: T0601300216
Action Type: RESPONSE
Date: 03/26/2002
Action: Other Report / Document

Global Id: T0601300216
Action Type: RESPONSE
Date: 04/08/2004
Action: Correspondence

Global Id: T0601300216
Action Type: RESPONSE
Date: 04/17/2001
Action: Correspondence

Global Id: T0601300216
Action Type: RESPONSE
Date: 05/16/2000
Action: Correspondence

Global Id: T0601300216
Action Type: RESPONSE
Date: 01/10/2005
Action: Monitoring Report - Quarterly

Global Id: T0601300216
Action Type: RESPONSE
Date: 01/09/2001
Action: Correspondence

Global Id: T0601300216
Action Type: RESPONSE
Date: 03/12/2003
Action: Monitoring Report - Quarterly

Global Id: T0601300216
Action Type: RESPONSE
Date: 03/15/2001
Action: Correspondence

Global Id: T0601300216
Action Type: RESPONSE
Date: 03/22/2001
Action: Correspondence

Global Id: T0601300216
Action Type: RESPONSE
Date: 05/20/2002
Action: CAP/RAP - Other Report

PEPSI COLA COMPANY (Continued) **U001597927**

Global Id: T0601300216
Action Type: RESPONSE
Date: 07/10/2002
Action: Other Workplan

Global Id: T0601300216
Action Type: RESPONSE
Date: 07/16/1996
Action: Correspondence

Global Id: T0601300216
Action Type: RESPONSE
Date: 07/20/1998
Action: Correspondence

Global Id: T0601300216
Action Type: RESPONSE
Date: 01/03/2003
Action: Correspondence

Global Id: T0601300216
Action Type: RESPONSE
Date: 03/09/2004
Action: CAP/RAP - Feasibility Study Report

Global Id: T0601300216
Action Type: RESPONSE
Date: 11/22/2002
Action: CAP/RAP - Other Report

Global Id: T0601300216
Action Type: RESPONSE
Date: 06/09/2003
Action: Monitoring Report - Quarterly

Global Id: T0601300216
Action Type: RESPONSE
Date: 06/28/2001
Action: Site Assessment Report

Global Id: T0601300216
Action Type: RESPONSE
Date: 03/23/2006
Action: Other Report / Document

Global Id: T0601300216
Action Type: RESPONSE
Date: 04/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0601300216
Action Type: RESPONSE
Date: 07/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0601300216
Action Type: RESPONSE

PEPSI COLA COMPANY (Continued) **U001597927**

Date: 08/16/2002
Action: Correspondence

Global Id: T0601300216
Action Type: RESPONSE
Date: 11/01/2002
Action: Correspondence

Global Id: T0601300216
Action Type: RESPONSE
Date: 02/26/2002
Action: Correspondence

Global Id: T0601300216
Action Type: RESPONSE
Date: 04/28/2006
Action: Other Workplan

Global Id: T0601300216
Action Type: RESPONSE
Date: 05/09/2002
Action: Correspondence

Global Id: T0601300216
Action Type: RESPONSE
Date: 05/20/2008
Action: Public Participation Plan

Global Id: T0601300216
Action Type: ENFORCEMENT
Date: 12/26/2007
Action: 13267 Requirement

Global Id: T0601300216
Action Type: RESPONSE
Date: 05/29/2002
Action: Other Workplan

Global Id: T0601300216
Action Type: RESPONSE
Date: 11/04/2004
Action: Monitoring Report - Quarterly

Global Id: T0601300216
Action Type: ENFORCEMENT
Date: 08/20/2002
Action: Staff Letter

Global Id: T0601300216
Action Type: ENFORCEMENT
Date: 02/02/2001
Action: 13267 Monitoring Program

Global Id: T0601300216
Action Type: RESPONSE
Date: 06/01/2003
Action: Monitoring Report - Quarterly

PEPSI COLA COMPANY (Continued) **U001597927**

Global Id: T0601300216
Action Type: RESPONSE
Date: 01/05/2004
Action: CAP/RAP - Feasibility Study Report

Global Id: T0601300216
Action Type: ENFORCEMENT
Date: 04/13/2004
Action: Staff Letter

Global Id: T0601300216
Action Type: ENFORCEMENT
Date: 03/18/2010
Action: Staff Letter

Global Id: T0601300216
Action Type: ENFORCEMENT
Date: 03/18/2010
Action: Staff Letter

Global Id: T0601300216
Action Type: ENFORCEMENT
Date: 03/18/2010
Action: Staff Letter

Global Id: T0601300216
Action Type: ENFORCEMENT
Date: 03/18/2010
Action: Other Report

Global Id: T0601300216
Action Type: ENFORCEMENT
Date: 03/18/2010
Action: Staff Letter

Global Id: T0601300216
Action Type: ENFORCEMENT
Date: 12/26/2007
Action: Staff Letter

Global Id: T0601300216
Action Type: ENFORCEMENT
Date: 08/11/1998
Action: Staff Letter

Global Id: T0601300216
Action Type: ENFORCEMENT
Date: 03/18/2010
Action: Staff Letter

Global Id: T0601300216
Action Type: Other
Date: 05/12/1986
Action: Leak Discovery

Global Id: T0601300216
Action Type: RESPONSE

PEPSI COLA COMPANY (Continued) **U001597927**

Date: 10/23/2003
Action: Interim Remedial Action Report

Global Id: T0601300216
Action Type: RESPONSE
Date: 11/22/2002
Action: Correspondence

Global Id: T0601300216
Action Type: ENFORCEMENT
Date: 08/19/2008
Action: Closure/No Further Action Letter

Global Id: T0601300216
Action Type: Other
Date: 05/12/1986
Action: Leak Stopped

Global Id: T0601300216
Action Type: Other
Date: 06/06/1986
Action: Leak Reported

Global Id: T0601300216
Action Type: ENFORCEMENT
Date: 03/19/2001
Action: Staff Letter

Global Id: T0601300216
Action Type: RESPONSE
Date: 11/22/2002
Action: Soil and Water Investigation Report

Global Id: T0601300216
Action Type: RESPONSE
Date: 07/15/2002
Action: Other Report / Document

Global Id: T0601300216
Action Type: RESPONSE
Date: 06/03/2003
Action: Other Report / Document

Global Id: T0601300216
Action Type: RESPONSE
Date: 06/02/2003
Action: Other Report / Document

Global Id: T0601300216
Action Type: RESPONSE
Date: 05/30/2003
Action: Other Report / Document

Global Id: T0601300216
Action Type: RESPONSE
Date: 05/29/2003
Action: Monitoring Report - Quarterly

PEPSI COLA COMPANY (Continued) **U001597927**

Global Id: T0601300216
Action Type: RESPONSE
Date: 11/01/2002
Action: Other Report / Document

Global Id: T0601300216
Action Type: RESPONSE
Date: 07/15/2002
Action: Other Workplan

Global Id: T0601300216
Action Type: RESPONSE
Date: 06/04/2003
Action: Monitoring Report - Quarterly

Global Id: T0601300216
Action Type: RESPONSE
Date: 06/06/2003
Action: Other Report / Document

Global Id: T0601300216
Action Type: RESPONSE
Date: 06/05/2003
Action: Other Report / Document

Global Id: T0601300216
Action Type: RESPONSE
Date: 12/12/2003
Action: Other Report / Document

Global Id: T0601300216
Action Type: RESPONSE
Date: 01/31/2005
Action: Monitoring Report - Quarterly

Global Id: T0601300216
Action Type: RESPONSE
Date: 05/03/2004
Action: Other Report / Document

Global Id: T0601300216
Action Type: RESPONSE
Date: 08/01/2004
Action: Monitoring Report - Quarterly

Global Id: T0601300216
Action Type: RESPONSE
Date: 10/31/2004
Action: Monitoring Report - Quarterly

Global Id: T0601300216
Action Type: RESPONSE
Date: 01/15/2002
Action: Correspondence

Global Id: T0601300216
Action Type: RESPONSE

PEPSI COLA COMPANY (Continued) **U001597927**

Date: 02/02/2001
Action: Correspondence

Global Id: T0601300216
Action Type: RESPONSE
Date: 03/07/2001
Action: Correspondence

Global Id: T0601300216
Action Type: ENFORCEMENT
Date: 09/18/2001
Action: Staff Letter

Global Id: T0601300216
Action Type: ENFORCEMENT
Date: 08/02/2001
Action: * Historical Enforcement

Global Id: T0601300216
Action Type: ENFORCEMENT
Date: 05/25/2000
Action: 13267 Requirement

Global Id: T0601300216
Action Type: ENFORCEMENT
Date: 06/19/2003
Action: 13267 Requirement

LUST:
Global Id: T0601300216
Status: Open - Case Begin Date
Status Date: 05/12/1986

Global Id: T0601300216
Status: Open - Site Assessment
Status Date: 08/30/1989

Global Id: T0601300216
Status: Completed - Case Closed
Status Date: 08/12/2008

HIST UST:
Name: PEPSI COLA BOTTLING COMPANY
Address: 338 CENTRAL
City,State,Zip: PITTSBURG, CA 94565
File Number: 00022D2A
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00022D2A.pdf
Region: STATE
Facility ID: 00000011008
Facility Type: Other
Other Type: BEVERAGE DISTRIBUTOR
Contact Name: DICK MASON
Telephone: 4154395566
Owner Name: NEW CENTURY BEVERAGE COMPANY I
Owner Address: NC

PEPSI COLA COMPANY (Continued) **U001597927**

Owner City,St,Zip: SAN FRANCISCO, CA 94110
Total Tanks: 0010

Tank Num: 001
Container Num: 10
Year Installed: Not reported
Tank Capacity: 00001000
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

Tank Num: 002
Container Num: 14
Year Installed: 1981
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Container Construction Thickness: 0.25
Leak Detection: Stock Inventor

Tank Num: 003
Container Num: 15
Year Installed: 1981
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Container Construction Thickness: 0.25
Leak Detection: Stock Inventor

Tank Num: 004
Container Num: 16
Year Installed: 1981
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Container Construction Thickness: 0.25
Leak Detection: Stock Inventor

Tank Num: 005
Container Num: 17
Year Installed: 1981
Tank Capacity: 00000500
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Container Construction Thickness: 0.25
Leak Detection: None

Tank Num: 006
Container Num: 10
Year Installed: Not reported
Tank Capacity: 00001000
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

PEPSI COLA COMPANY (Continued) **U001597927**

Tank Num:	007
Container Num:	14
Year Installed:	1981
Tank Capacity:	00010000
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Container Construction Thickness:	0.25
Leak Detection:	Stock Inventor

Tank Num:	008
Container Num:	15
Year Installed:	1981
Tank Capacity:	00010000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Container Construction Thickness:	0.25
Leak Detection:	Stock Inventor

Tank Num:	009
Container Num:	16
Year Installed:	1981
Tank Capacity:	00010000
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Container Construction Thickness:	0.25
Leak Detection:	Stock Inventor

Tank Num:	010
Container Num:	17
Year Installed:	1981
Tank Capacity:	00000500
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Container Construction Thickness:	0.25
Leak Detection:	None

Click here for Geo Tracker PDF:

ENF:

Name:	FORMER PEPSI COLA BOTTLING CO
Address:	338 CENTRAL
City,State,Zip:	PITTSBURG, CA 94565
Region:	2
Facility Id:	226249
Agency Name:	Campodonico Investment Co
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	All other facilities
Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	38.024854
Place Longitude:	-121.884808
SIC Code 1:	Not reported
SIC Desc 1:	Not reported
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported

PEPSI COLA COMPANY (Continued) **U001597927**

SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	UST
Program Category1:	TANKS
Program Category2:	TANKS
# Of Programs:	1
WDID:	2 07-0233
Reg Measure Id:	168599
Reg Measure Type:	Unregulated
Region:	2
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Never Active
Status Date:	02/20/2013
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	241421
Region:	2
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	13267 Letter
Effective Date:	05/28/2002
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	Not reported
ACL Issuance Date:	Not reported

PEPSI COLA COMPANY (Continued) **U001597927**

EPL Issuance Date:	Not reported
Status:	Active
Title:	Enforcement - 2 07-0233
Description:	Request for a work plan
Program:	UST
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Name:	FORMER PEPSI COLA BOTTLING CO
Address:	338 CENTRAL
City,State,Zip:	PITTSBURG, CA 94565
Region:	2
Facility Id:	226249
Agency Name:	Campodonico Investment Co
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	All other facilities
Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	38.024854
Place Longitude:	-121.884808
SIC Code 1:	Not reported
SIC Desc 1:	Not reported
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	UST
Program Category1:	TANKS
Program Category2:	TANKS
# Of Programs:	1
WDID:	2 07-0233
Reg Measure Id:	168599
Reg Measure Type:	Unregulated

PEPSI COLA COMPANY (Continued) **U001597927**

Region:	2
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Never Active
Status Date:	02/20/2013
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	238325
Region:	2
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	13267 Letter
Effective Date:	09/18/2001
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 2 07-0233
Description:	Approval of Workplan
Program:	UST
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Name:	FORMER PEPSI COLA BOTTLING CO
Address:	338 CENTRAL
City,State,Zip:	PITTSBURG, CA 94565
Region:	2
Facility Id:	226249
Agency Name:	Campodonico Investment Co
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	All other facilities

PEPSI COLA COMPANY (Continued) **U001597927**

Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	38.024854
Place Longitude:	-121.884808
SIC Code 1:	Not reported
SIC Desc 1:	Not reported
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	UST
Program Category1:	TANKS
Program Category2:	TANKS
# Of Programs:	1
WDID:	2 07-0233
Reg Measure Id:	168599
Reg Measure Type:	Unregulated
Region:	2
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Never Active
Status Date:	02/20/2013
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive

PEPSI COLA COMPANY (Continued) **U001597927**

Enforcement Id(EID):	238217
Region:	2
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	13267 Letter
Effective Date:	09/18/2001
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 2 07-0233
Description:	Not reported
Program:	UST
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Name:	FORMER PEPSI COLA BOTTLING CO
Address:	338 CENTRAL
City,State,Zip:	PITTSBURG, CA 94565
Region:	2
Facility Id:	226249
Agency Name:	Campodonico Investment Co
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	All other facilities
Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	38.024854
Place Longitude:	-121.884808
SIC Code 1:	Not reported
SIC Desc 1:	Not reported
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported

PEPSI COLA COMPANY (Continued) **U001597927**

Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	UST
Program Category1:	TANKS
Program Category2:	TANKS
# Of Programs:	1
WDID:	2 07-0233
Reg Measure Id:	168599
Reg Measure Type:	Unregulated
Region:	2
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Never Active
Status Date:	02/20/2013
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	237871
Region:	2
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	13267 Letter
Effective Date:	09/18/2001
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 2 07-0233
Description:	Not reported
Program:	UST
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

PEPSI COLA COMPANY (Continued) **U001597927**

Name:	FORMER PEPSI COLA BOTTLING CO
Address:	338 CENTRAL
City,State,Zip:	PITTSBURG, CA 94565
Region:	2
Facility Id:	226249
Agency Name:	Campodonico Investment Co
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	All other facilities
Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	38.024854
Place Longitude:	-121.884808
SIC Code 1:	Not reported
SIC Desc 1:	Not reported
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	UST
Program Category1:	TANKS
Program Category2:	TANKS
# Of Programs:	1
WDID:	2 07-0233
Reg Measure Id:	168599
Reg Measure Type:	Unregulated
Region:	2
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Never Active
Status Date:	02/20/2013
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported

PEPSI COLA COMPANY (Continued) **U001597927**

WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	237870
Region:	2
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	13267 Letter
Effective Date:	09/18/2001
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 2 07-0233
Description:	Not reported
Program:	UST
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Name:	FORMER PEPSI COLA BOTTLING CO
Address:	338 CENTRAL
City,State,Zip:	PITTSBURG, CA 94565
Region:	2
Facility Id:	226249
Agency Name:	Campodonico Investment Co
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	All other facilities
Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	38.024854
Place Longitude:	-121.884808
SIC Code 1:	Not reported
SIC Desc 1:	Not reported
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported

PEPSI COLA COMPANY (Continued) **U001597927**

NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	UST
Program Category1:	TANKS
Program Category2:	TANKS
# Of Programs:	1
WDID:	2 07-0233
Reg Measure Id:	168599
Reg Measure Type:	Unregulated
Region:	2
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Never Active
Status Date:	02/20/2013
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	237276
Region:	2
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	13267 Letter
Effective Date:	Not reported
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 2 07-0233
Description:	Not reported
Program:	UST
Latest Milestone Completion Date:	Not reported

PEPSI COLA COMPANY (Continued) **U001597927**

# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Name:	FORMER PEPSI COLA BOTTLING CO
Address:	338 CENTRAL
City,State,Zip:	PITTSBURG, CA 94565
Region:	2
Facility Id:	226249
Agency Name:	Campodonico Investment Co
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	All other facilities
Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	38.024854
Place Longitude:	-121.884808
SIC Code 1:	Not reported
SIC Desc 1:	Not reported
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	UST
Program Category1:	TANKS
Program Category2:	TANKS
# Of Programs:	1
WDID:	2 07-0233
Reg Measure Id:	168599
Reg Measure Type:	Unregulated
Region:	2
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported

PEPSI COLA COMPANY (Continued) **U001597927**

Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Never Active
Status Date:	02/20/2013
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	237275
Region:	2
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	13267 Letter
Effective Date:	03/19/2001
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 2 07-0233
Description:	Not reported
Program:	UST
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Name:	FORMER PEPSI COLA BOTTLING CO
Address:	338 CENTRAL
City,State,Zip:	PITTSBURG, CA 94565
Region:	2
Facility Id:	226249
Agency Name:	Campodonico Investment Co
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	All other facilities
Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	38.024854
Place Longitude:	-121.884808
SIC Code 1:	Not reported
SIC Desc 1:	Not reported

PEPSI COLA COMPANY (Continued) **U001597927**

SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	UST
Program Category1:	TANKS
Program Category2:	TANKS
# Of Programs:	1
WDID:	2 07-0233
Reg Measure Id:	168599
Reg Measure Type:	Unregulated
Region:	2
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Never Active
Status Date:	02/20/2013
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	237274
Region:	2
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	13267 Letter
Effective Date:	02/02/2001
Adoption/Issuance Date:	Not reported

PEPSI COLA COMPANY (Continued) **U001597927**

Achieve Date:	3/19/2001
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 2 07-0233
Description:	Not reported
Program:	UST
Latest Milestone Completion Date:	3/19/2001
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Name:	FORMER PEPSI COLA BOTTLING CO
Address:	338 CENTRAL
City,State,Zip:	PITTSBURG, CA 94565
Region:	2
Facility Id:	226249
Agency Name:	Campodonico Investment Co
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	All other facilities
Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	38.024854
Place Longitude:	-121.884808
SIC Code 1:	Not reported
SIC Desc 1:	Not reported
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	UST
Program Category1:	TANKS
Program Category2:	TANKS
# Of Programs:	1

PEPSI COLA COMPANY (Continued) **U001597927**

WDID:	2 07-0233
Reg Measure Id:	168599
Reg Measure Type:	Unregulated
Region:	2
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Never Active
Status Date:	02/20/2013
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	237273
Region:	2
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	13267 Letter
Effective Date:	08/02/2001
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 2 07-0233
Description:	Not reported
Program:	UST
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

HIST CORTESE:

edr_fname:	PEPSI COLA COMPANY
edr_fadd1:	338 CENTRAL
City,State,Zip:	PITTSBURG, CA
Region:	CORTESE
Facility County Code:	7

PEPSI COLA COMPANY (Continued) **U001597927**

Reg By: LTNKA
Reg Id: 07-0233

CONTRA COSTA CO. SITE LIST:
Name: PEPSI COLA BOTTLING CO
Address: 338 CENTRAL AVE
City: PITTSBURG
Facility ID: FA0031594
Billing Status: INACTIVE, NON-BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: UNDERGROUND STORAGE TANK SITE
Region: CONTRA COSTA
Cupa Number: 711008

CERS:
Name: PEPSI COLA COMPANY
Address: 338 CENTRAL AVE
City,State,Zip: PITTSBURG, CA 94565
Site ID: 202875
CERS ID: T0601300216
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: SUE LOYD - CONTRA COSTA COUNTY
Entity Title: Not reported
Affiliation Address: 4333 PACHECO BLVD.
Affiliation City: MARTINEZ
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Regional Board Caseworker
Entity Name: MARTIN MUSONGE - SAN FRANCISCO BAY RWQCB (REGION 2)
Entity Title: Not reported
Affiliation Address: 1515 CLAY STREET
Affiliation City: OAKLAND
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

S108 **PEPSI COLA COMPANY** **CA LUST** **S105033309**
SW **338 CENTRAL AVE** **CA SWEEPS UST** **N/A**
1/4-1/2 **PITTSBURG, CA 94565** **CA Cortese**
0.339 mi.
1792 ft. **Site 2 of 2 in cluster S**

Relative:
Higher

Actual:
30 ft.

LUST REG 2:
Region: 2
Facility Id: 07-0233
Facility Status: Leak being confirmed
Case Number: 11008
How Discovered: Tank Closure
Leak Cause: Structure Failure

PEPSI COLA COMPANY (Continued) **S105033309**

Leak Source: Tank
Date Leak Confirmed: 8/30/1989
Oversight Program: LUST
Prelim. Site Assesment Wokplan Submitted: Not reported
Preliminary Site Assesment Began: Not reported
Pollution Characterization Began: Not reported
Pollution Remediation Plan Submitted: Not reported
Date Remediation Action Underway: Not reported
Date Post Remedial Action Monitoring Began: Not reported

SWEEPS UST:
Name: PEPSI COLA BOTTLING COMPANY
Address: 338 CENTRAL
City: PITTSBURG
Status: Not reported
Comp Number: 11008
Number: Not reported
Board Of Equalization: Not reported
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 07-000-011008-000001
Tank Status: Not reported
Capacity: 1000
Active Date: Not reported
Tank Use: M.V. FUEL
STG: PRODUCT
Content: REG UNLEADED
Number Of Tanks: 1

CORTESE:
Name: PEPSI COLA COMPANY
Address: 338 CENTRAL AVE
City,State,Zip: PITTSBURG, CA 94565
Region: CORTESE
Envirostor Id: Not reported
Global ID: T0601300216
Site/Facility Type: LUST CLEANUP SITE
Cleanup Status: COMPLETED - CASE CLOSED
Status Date: Not reported
Site Code: Not reported
Latitude: Not reported
Longitude: Not reported
Owner: Not reported
Enf Type: Not reported
Swat R: Not reported
Flag: active
Order No: Not reported
Waste Discharge System No: Not reported
Effective Date: Not reported
Region 2: Not reported
WID Id: Not reported
Solid Waste Id No: Not reported
Waste Management Uit Name: Not reported
File Name: Active Open

109
WSW
1/4-1/2
0.370 mi.
1952 ft.

SANTA FE PITTSBURG DEPOT
1 SANTA FE AVE W
PITTSBURG, CA 94565

CA LUST
CA Cortese
CA HIST CORTESE
CA CERS

S101294161
N/A

Relative:
Higher

Actual:
22 ft.

LUST REG 2:

Region:	2
Facility Id:	07-0470
Facility Status:	Case Closed
Case Number:	70909
How Discovered:	Tank Closure
Leak Cause:	UNK
Leak Source:	UNK
Date Leak Confirmed:	5/12/1994
Oversight Program:	LUST
Prelim. Site Assesment Wokplan Submitted:	Not reported
Preliminary Site Assesment Began:	Not reported
Pollution Characterization Began:	Not reported
Pollution Remediation Plan Submitted:	Not reported
Date Remediation Action Underway:	Not reported
Date Post Remedial Action Monitoring Began:	Not reported

LUST:

Name:	SANTA FE PITTSBURG DEPOT
Address:	1 SANTA FE AVE W
City,State,Zip:	PITTSBURG, CA 94565
Lead Agency:	SAN FRANCISCO BAY RWQCB (REGION 2)
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0601300435
Global Id:	T0601300435
Latitude:	38.026849
Longitude:	-121.88702
Status:	Completed - Case Closed
Status Date:	07/23/1998
Case Worker:	Not reported
RB Case Number:	07-0470
Local Agency:	CONTRA COSTA COUNTY
File Location:	Not reported
Local Case Number:	70909
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Diesel
Site History:	Not reported

LUST:

Global Id:	T0601300435
Contact Type:	Local Agency Caseworker
Contact Name:	SUE LOYD
Organization Name:	CONTRA COSTA COUNTY
Address:	4333 PACHECO BLVD.
City:	MARTINEZ
Email:	sloyd@hsd.co.contra-costa.ca.us
Phone Number:	Not reported

LUST:

Global Id:	T0601300435
Action Type:	ENFORCEMENT
Date:	07/23/1998
Action:	Closure/No Further Action Letter

SANTA FE PITTSBURG DEPOT (Continued) **S101294161**

Global Id: T0601300435
Action Type: Other
Date: 05/07/1989
Action: Leak Discovery

Global Id: T0601300435
Action Type: Other
Date: 05/07/1989
Action: Leak Stopped

Global Id: T0601300435
Action Type: Other
Date: 05/17/1989
Action: Leak Reported

LUST:
Global Id: T0601300435
Status: Open - Case Begin Date
Status Date: 05/07/1989

Global Id: T0601300435
Status: Open - Site Assessment
Status Date: 05/12/1994

Global Id: T0601300435
Status: Completed - Case Closed
Status Date: 07/23/1998

CORTESE:
Name: SANTA FE PITTSBURG DEPOT
Address: 1 SANTA FE AVE W
City,State,Zip: PITTSBURG, CA 94565
Region: CORTESE
Envirostor Id: Not reported
Global ID: T0601300435
Site/Facility Type: LUST CLEANUP SITE
Cleanup Status: COMPLETED - CASE CLOSED
Status Date: Not reported
Site Code: Not reported
Latitude: Not reported
Longitude: Not reported
Owner: Not reported
Enf Type: Not reported
Swat R: Not reported
Flag: active
Order No: Not reported
Waste Discharge System No: Not reported
Effective Date: Not reported
Region 2: Not reported
WID Id: Not reported
Solid Waste Id No: Not reported
Waste Management Uit Name: Not reported
File Name: Active Open

SANTA FE PITTSBURG DEPOT (Continued) **S101294161**

HIST CORTESE:
- edr_fname: SANTA FE PITTSBURG DEPOT
- edr_fadd1: 1 SANTA FE
- City,State,Zip: PITTSBURG, CA 94565
- Region: CORTESE
- Facility County Code: 7
- Reg By: LTNKA
- Reg Id: 07-0470

CERS:
- Name: SANTA FE PITTSBURG DEPOT
- Address: 1 SANTA FE AVE W
- City,State,Zip: PITTSBURG, CA 94565
- Site ID: 218767
- CERS ID: T0601300435
- CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
- Affiliation Type Desc: Local Agency Caseworker
- Entity Name: SUE LOYD - CONTRA COSTA COUNTY
- Entity Title: Not reported
- Affiliation Address: 4333 PACHECO BLVD.
- Affiliation City: MARTINEZ
- Affiliation State: CA
- Affiliation Country: Not reported
- Affiliation Zip: Not reported
- Affiliation Phone: Not reported

T110 **DIVING SYSTEMS INTERNATIO** **CA HIST CORTESE** **S105025580**
East **895 3RD** **N/A**
1/4-1/2 **PITTSBURG, CA 94565**
0.381 mi.
2013 ft. **Site 1 of 4 in cluster T**

Relative:
Lower

Actual:
10 ft.

HIST CORTESE:
- edr_fname: Diving Systems Internatio
- edr_fadd1: 895 3RD
- City,State,Zip: PITTSBURG, CA 94565
- Region: CORTESE
- Facility County Code: 7
- Reg By: LTNKA
- Reg Id: 3243

T111 **GWF POWER SYSTEMS,LP (SITE 1)** **CA ENVIROSTOR** **S105937979**
East **895 E 3RD STREET** **CA VCP** **N/A**
1/4-1/2 **PITTSBURG, CA 94565** **CA DEED**
0.381 mi. **CA EMI**
2013 ft. **Site 2 of 4 in cluster T** **CA CONTRA COSTA CO. SITE LIST**
CA CIWQS

Relative:
Lower

Actual:
10 ft.

ENVIROSTOR:
- Name: GWF POWER SYSTEMS
- Address: 895 E. 3RD STREET
- City,State,Zip: PITTSBURG, CA 94565
- Facility ID: 07490047

GWF POWER SYSTEMS,LP (SITE 1) (Continued) **S105937979**

Status: Certified O&M - Land Use Restrictions Only
Status Date: 03/13/2014
Site Code: 200447
Site Type: Voluntary Cleanup
Site Type Detailed: Voluntary Cleanup
Acres: 2.5
NPL: NO
Regulatory Agencies: SMBRP
Lead Agency: SMBRP
Program Manager: Claude Jemison
Supervisor: Cheryl Prowell
Division Branch: Cleanup Berkeley
Assembly: 14
Senate: 07
Special Program: Not reported
Restricted Use: YES
Site Mgmt Req: NONE SPECIFIED
Funding: EPA Grant
Latitude: 38.03068
Longitude: -121.8702
APN: 073020019
Past Use: LANDFILL - CONSTRUCTION
Potential COC: Lead Polynuclear aromatic hydrocarbons (PAHs Tetrachloroethylene (PCE TPH-MOTOR OIL Cadmium and compounds Copper and compounds Selenium Thallium and compounds Zinc
Confirmed COC: Selenium Thallium and compounds Polynuclear aromatic hydrocarbons (PAHs Tetrachloroethylene (PCE Cadmium and compounds Copper and compounds Lead TPH-MOTOR OIL Zinc
Potential Description: SOIL
Alias Name: 073020019
Alias Type: APN
Alias Name: 110033620794
Alias Type: EPA (FRS #)
Alias Name: 200447
Alias Type: Project Code (Site Code)
Alias Name: 07490047
Alias Type: Envirostor ID Number
Alias Name: 07490049
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 02/18/2016
Comments: Groundwater & Environmental Services, Inc. (GES) conducted an annual inspection of the Site on November 23, 2015 and observed an uncovered stockpile of excavated soil estimated at 5 cubic yards. GES collected a soil sample for chemical analysis on December 21, 2015, by compositing soil from four locations within the stockpile. Laboratory results showed that concentrations of contaminants of concern were either non-detect or below Environmental Screening Levels. DTSC concurs with GES that the stockpiled excess soil, at the Site, is suitable for unrestricted reuse on the Site.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction Monitoring Report

GWF POWER SYSTEMS,LP (SITE 1) (Continued) **S105937979**

Completed Date: 01/13/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction Monitoring Report
Completed Date: 02/13/2018
Comments: The report was prepared by Ground & Environments Services, Inc. (GES) on the behalf of Pittsburg Water View Properties LLC and documents the site inspection, which was conducted on December 21, 2017 to verify compliance with the restrictions and requirements of the Land Use Covenant. DTSC concurred with the report's conclusion that the remedial action continues to be protective of human health. The report recommended actions to correct conditions observed during the site inspection.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction Monitoring Report
Completed Date: 02/25/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction Monitoring Report
Completed Date: 01/30/2020
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Assessment/Site Inspection Report (PA/SI)
Completed Date: 06/28/2001
Comments: Completed a Preliminary Assessment for the site under the PA/SI grant. The assessment indicates that the property is capped under a power plant building and no further remediation is required. However, a deed restriction for the property is necessary.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Mitigation Monitoring Report
Completed Date: 02/01/1988
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Report
Completed Date: 12/23/1988
Comments: Site soils were characterized by 3 to 4 feet (ft) of fill, generally underlain by 6 to 8 ft of medium stiff clays. The lower 2 t0 3 ft of brown fill contained debris suchas sllag, bricks and pieces of metal. Also, there were layers of near-surface staining and slightly oily black sand at several trenches. The following metal contaminants of concern in the ranges set forth below: arsenic (43.8 - 326 parts per million ("ppm"), thallium (19.3 - 1410 ppm), vanadium (ND - 1270 ppm, lead (9.5 19,300 ppm), and antimony (ND 72.1). In addition, total petroleum hydrocarbons as motor oil (ND 4,940 ppm) and diesel (ND 13,500) were detected in the soils. Groundwater was also contaminated

GWF POWER SYSTEMS,LP (SITE 1) (Continued) **S105937979**

with metals such as Vanadium and molybdenum.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Report
Completed Date: 01/30/1991
Comments: This report was submitted to DTSC in 2006. It presents results of air monitoring results activities conducted during site grading and construction of the Power Plant from May 1989 to December 1990. It also documents on-site capping of fill material excavated during plant construction. Based on the Air monitoring results, concentrations of 7 heavy metals in dust generated did not exceed OSHA s Permissible Exposure Limits with the exception of chromium found in 2 samples that slightly exceeded the standard to protect off site populations. The fill material excavated during construction was placed, compacted, and capped on site in accordance the recommendations in the November 1988 Remedial Investigation Report. In addition to the 2 Monitoring wells (MW2 and MW3), this Report recommended installation and quarterly sampling of 2 additional new Monitoring wells, one along the up-gradient (Third Street) side of the site and the 2nd one to be midway MW-2 and MW-3.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Public Notice
Completed Date: 11/22/2013
Comments: This Public Notice was Published in one of the Local news Papers on 11/22/2013

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 11/22/2013
Comments: The Department of Toxic Substances Control recommends implementation of a Land Use Covenant as a remedial alternative for this this Site. The cap will remain undisturbed and the property restricted to only commercial/industrial uses to protect present or future human health and the environment.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Workplan
Completed Date: 12/27/2013
Comments: The Preliminary Endangerment Assessment Report and the Draft Land Use Covenant together constitute the Department’s decision document. The recommended remedy for this site is a Land Use Covenant. The PEA was approved by DTSC on 11/22/2013 and the PEA and a draft LUC were circulated for public comment. A public notice announcing a 30 day public comment period was published on 11/23/2013. No comments were received and the public comment period closed on 12/23/2013. The approved PEA and draft LUC circulated for public comment were approved as a final remedy decision on 12/27/2013.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Discovery
Completed Date: 05/10/1999

GWF POWER SYSTEMS,LP (SITE 1) (Continued) **S105937979**

Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 05/10/2013
Comments: The presence of soil and groundwater contaminants at concentrations above screening levels means that further action is needed to address contamination at the Site. DTSC requested to discuss entering into a Voluntary Cleanup Agreement (VCA) for oversight of site characterization and remediation activities.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 03/22/2013
Comments: The purpose of this letter is to request all information relating to any incidents at or near the GWF Power Systems Company Site that may have resulted in the release of chemicals to the environment. DTSC also requests the Company to provide a chemical use history report for the facility.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 04/22/2013
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Standard Voluntary Agreement
Completed Date: 01/07/2014
Comments: Voluntary Cleanup Agreement executed between owners of the GWF Power Systems Site and DTSC. The VCA outlines the activities that will be completed by the property owners and overseen by DTSC. The VCA also provides for DTSC reimbursement of its oversight costs.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Certification
Completed Date: 01/21/2014
Comments: Certification package and letter for GWF site. The certification package documents the selected remedy for the site and that the remedy has been implemented as approved in the remedy selection document. The remedy for the site as identified in the PEA is a land use covenant, which was recorded on January 15, 2014.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/06/2014
Comments: Cost Estimate Letter for Fiscal Year 2014-2015

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/24/2015

GWF POWER SYSTEMS,LP (SITE 1) (Continued) **S105937979**

Comments: DTSC's Final Cost Estimate Letter

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/13/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/04/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/25/2018
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction
Completed Date: 01/15/2014
Comments: The LUC limits use to Industrial/Commercial only. It prohibits use as residence, hospital for humans, school for persons under 21 years and day care center. It prohibits activities that disturb soil unless with DTSC s permission and a soil management plan.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction - Site Inspection/Visit
Completed Date: 09/04/2015
Comments: The Report outlines observations during the Site inspection of March 9, 2015. DTSC supports the recommended corrective actions in the Report.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction - Site Inspection/Visit
Completed Date: 02/24/2016
Comments: Groundwater & Environmental Services, Inc. conducted an annual inspection as required by the land use covenant to verify compliance with the restrictions. The site is used by Viking Industrial/ Pittsburg Water View Properties, LLC for vehicle and semi-truck/trailer parking and equipment storage. According to the inspection report, the majority of the asphalt/concrete cover (>92%) observed inside of the boundary fences, prevents exposure of storm water to the underlying contaminated debris. Site areas with exposed soil, gravel, or fill materials were observed during the site inspection. Trenching and installation of new subsurface utilities was observed during the inspection that did not comply with the land use covenant restrictions. The inspection report recommended actions to correct the observed conditions not in compliance with the land use covenant restrictions, including notifying DTSC within 10 days of non-compliant conditions, preparing a soil management plan for future activities that disturb the subsurface, and collect and analyze a

GWF POWER SYSTEMS,LP (SITE 1) (Continued) **S105937979**

sample to determine the appropriate way for handling a stockpile of trench spoils.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/02/2020
Comments: Emailed letter on 10/2/2020. EC, 10/2/2020

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 02/25/2019
Comments: Not reported

Future Area Name: PROJECT WIDE
Future Sub Area Name: Not reported
Future Document Type: 5 Year Review Reports
Future Due Date: 2025
Schedule Area Name: PROJECT WIDE
Schedule Sub Area Name: Not reported
Schedule Document Type: 5 Year Review Reports
Schedule Due Date: 06/28/2021
Schedule Revised Date: Not reported

VCP:
Name: GWF POWER SYSTEMS
Address: 895 E. 3RD STREET
City,State,Zip: PITTSBURG, CA 94565
Facility ID: 07490047
Site Type: Voluntary Cleanup
Site Type Detail: Voluntary Cleanup
Site Mgmt. Req.: NONE SPECIFIED
Acres: 2.5
National Priorities List: NO
Cleanup Oversight Agencies: SMBRP
Lead Agency: SMBRP
Lead Agency Description: DTSC - Site Cleanup Program
Project Manager: Claude Jemison
Supervisor: Cheryl Prowell
Division Branch: Cleanup Berkeley
Site Code: 200447
Assembly: 14
Senate: 07
Special Programs Code: Not reported
Status: Certified O&M - Land Use Restrictions Only
Status Date: 03/13/2014
Restricted Use: YES
Funding: EPA Grant
Lat/Long: 38.03068 / -121.8702
APN: 073020019
Past Use: LANDFILL - CONSTRUCTION
Potential COC: 30013, 30019, 30022, 3002502, 30108, 30156, 30515, 30542, 30594
Confirmed COC: 30515,30542,30019,30022,30108,30156,30013,3002502,30594
Potential Description: SOIL
Alias Name: 073020019
Alias Type: APN

GWF POWER SYSTEMS,LP (SITE 1) (Continued) **S105937979**

Alias Name: 110033620794
Alias Type: EPA (FRS #)
Alias Name: 200447
Alias Type: Project Code (Site Code)
Alias Name: 07490047
Alias Type: Envirostor ID Number
Alias Name: 07490049
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 02/18/2016
Comments: Groundwater & Environmental Services, Inc. (GES) conducted an annual inspection of the Site on November 23, 2015 and observed an uncovered stockpile of excavated soil estimated at 5 cubic yards. GES collected a soil sample for chemical analysis on December 21, 2015, by compositing soil from four locations within the stockpile. Laboratory results showed that concentrations of contaminants of concern were either non-detect or below Environmental Screening Levels. DTSC concurs with GES that the stockpiled excess soil, at the Site, is suitable for unrestricted reuse on the Site.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction Monitoring Report
Completed Date: 01/13/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction Monitoring Report
Completed Date: 02/13/2018
Comments: The report was prepared by Ground & Environments Services, Inc. (GES) on the behalf of Pittsburg Water View Properties LLC and documents the site inspection, which was conducted on December 21, 2017 to verify compliance with the restrictions and requirements of the Land Use Covenant. DTSC concurred with the report's conclusion that the remedial action continues to be protective of human health. The report recommended actions to correct conditions observed during the site inspection.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction Monitoring Report
Completed Date: 02/25/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction Monitoring Report
Completed Date: 01/30/2020
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Assessment/Site Inspection Report (PA/SI)

GWF POWER SYSTEMS,LP (SITE 1) (Continued) **S105937979**

Completed Date: 06/28/2001
Comments: Completed a Preliminary Assessment for the site under the PA/SI grant. The assessment indicates that the property is capped under a power plant building and no further remediation is required. However, a deed restriction for the property is necessary.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Mitigation Monitoring Report
Completed Date: 02/01/1988
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Report
Completed Date: 12/23/1988
Comments: Site soils were characterized by 3 to 4 feet (ft) of fill, generally underlain by 6 to 8 ft of medium stiff clays. The lower 2 t0 3 ft of brown fill contained debris suchas sllag, bricks and pieces of metal. Also, there were layers of near-surface staining and slightly oily black sand at several trenches. The following metal contaminants of concern in the ranges set forth below: arsenic (43.8 - 326 parts per million ("ppm"), thallium (19.3 - 1410 ppm), vanadium (ND - 1270 ppm, lead (9.5 19,300 ppm), and antimony (ND 72.1). In addition, total petroleum hydrocarbons as motor oil (ND 4,940 ppm) and diesel (ND 13,500) were detected in the soils. Groundwater was also contaminated with metals such as Vanadium and molybdenum.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Report
Completed Date: 01/30/1991
Comments: This report was submitted to DTSC in 2006. It presents results of air monitoring results activities conducted during site grading and construction of the Power Plant from May 1989 to December 1990. It also documents on-site capping of fill material excavated during plant construction. Based on the Air monitoring results, concentrations of 7 heavy metals in dust generated did not exceed OSHA s Permissible Exposure Limits with the exception of chromium found in 2 samples that slightly exceeded the standard to protect off site populations. The fill material excavated during construction was placed, compacted, and capped on site in accordance the recommendations in the November 1988 Remedial Investigation Report. In addition to the 2 Monitoring wells (MW2 and MW3), this Report recommended installation and quarterly sampling of 2 additional new Monitoring wells, one along the up-gradient (Third Street) side of the site and the 2nd one to be midway MW-2 and MW-3.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Public Notice
Completed Date: 11/22/2013
Comments: This Public Notice was Published in one of the Local news Papers on 11/22/2013

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

GWF POWER SYSTEMS,LP (SITE 1) (Continued) **S105937979**

Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 11/22/2013
Comments: The Department of Toxic Substances Control recommends implementation of a Land Use Covenant as a remedial alternative for this this Site. The cap will remain undisturbed and the property restricted to only commercial/industrial uses to protect present or future human health and the environment.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Workplan
Completed Date: 12/27/2013
Comments: The Preliminary Endangerment Assessment Report and the Draft Land Use Covenant together constitute the Department's decision document. The recommended remedy for this site is a Land Use Covenant. The PEA was approved by DTSC on 11/22/2013 and the PEA and a draft LUC were circulated for public comment. A public notice announcing a 30 day public comment period was published on 11/23/2013. No comments were received and the public comment period closed on 12/23/2013. The approved PEA and draft LUC circulated for public comment were approved as a final remedy decision on 12/27/2013.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Discovery
Completed Date: 05/10/1999
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 05/10/2013
Comments: The presence of soil and groundwater contaminants at concentrations above screening levels means that further action is needed to address contamination at the Site. DTSC requested to discuss entering into a Voluntary Cleanup Agreement (VCA) for oversight of site characterization and remediation activities.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 03/22/2013
Comments: The purpose of this letter is to request all information relating to any incidents at or near the GWF Power Systems Company Site that may have resulted in the release of chemicals to the environment. DTSC also requests the Company to provide a chemical use history report for the facility.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 04/22/2013
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Standard Voluntary Agreement

GWF POWER SYSTEMS,LP (SITE 1) (Continued) **S105937979**

Completed Date: 01/07/2014
Comments: Voluntary Cleanup Agreement executed between owners of the GWF Power Systems Site and DTSC. The VCA outlines the activities that will be completed by the property owners and overseen by DTSC. The VCA also provides for DTSC reimbursement of its oversight costs.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Certification
Completed Date: 01/21/2014
Comments: Certification package and letter for GWF site. The certification package documents the selected remedy for the site and that the remedy has been implemented as approved in the remedy selection document. The remedy for the site as identified in the PEA is a land use covenant, which was recorded on January 15, 2014.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/06/2014
Comments: Cost Estimate Letter for Fiscal Year 2014-2015

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/24/2015
Comments: DTSC's Final Cost Estimate Letter

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/13/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/04/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/25/2018
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction
Completed Date: 01/15/2014
Comments: The LUC limits use to Industrial/Commercial only. It prohibits use as residence, hospital for humans, school for persons under 21 years and day care center. It prohibits activities that disturb soil unless with DTSC s permission and a soil management plan.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

GWF POWER SYSTEMS,LP (SITE 1) (Continued) **S105937979**

Completed Document Type: Land Use Restriction - Site Inspection/Visit
Completed Date: 09/04/2015
Comments: The Report outlines observations during the Site inspection of March 9, 2015. DTSC supports the recommended corrective actions in the Report.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction - Site Inspection/Visit
Completed Date: 02/24/2016
Comments: Groundwater & Environmental Services, Inc. conducted an annual inspection as required by the land use covenant to verify compliance with the restrictions. The site is used by Viking Industrial/ Pittsburg Water View Properties, LLC for vehicle and semi-truck/trailer parking and equipment storage. According to the inspection report, the majority of the asphalt/concrete cover (>92%) observed inside of the boundary fences, prevents exposure of storm water to the underlying contaminated debris. Site areas with exposed soil, gravel, or fill materials were observed during the site inspection. Trenching and installation of new subsurface utilities was observed during the inspection that did not comply with the land use covenant restrictions. The inspection report recommended actions to correct the observed conditions not in compliance with the land use covenant restrictions, including notifying DTSC within 10 days of non-compliant conditions, preparing a soil management plan for future activities that disturb the subsurface, and collect and analyze a sample to determine the appropriate way for handling a stockpile of trench spoils.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/02/2020
Comments: Emailed letter on 10/2/2020. EC, 10/2/2020

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 02/25/2019
Comments: Not reported

Future Area Name: PROJECT WIDE
Future Sub Area Name: Not reported
Future Document Type: 5 Year Review Reports
Future Due Date: 2025
Schedule Area Name: PROJECT WIDE
Schedule Sub Area Name: Not reported
Schedule Document Type: 5 Year Review Reports
Schedule Due Date: 06/28/2021
Schedule Revised Date: Not reported

DEED:
Name: GWF POWER SYSTEMS
Address: 895 E. 3RD STREET
City,State,Zip: PITTSBURG, CA 94565
Envirostor ID: 7490047
Area: PROJECT WIDE

GWF POWER SYSTEMS,LP (SITE 1) (Continued) **S105937979**

Sub Area: Not reported
Site Type: VOLUNTARY CLEANUP
Status: CERTIFIED O&M - LAND USE RESTRICTIONS ONLY
Agency: Not reported
Covenant Uploaded: Not reported
Deed Date(s): Not reported
File Name: Envirostor Land Use Restrictions

EMI:

Name:	GWF POWER SYSTEMS,LP (SITE 1)
Address:	895 E 3RD STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	1990
County Code:	7
Air Basin:	SF
Facility ID:	3243
Air District Name:	BA
SIC Code:	4911
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	6
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	22
NOX - Oxides of Nitrogen Tons/Yr:	20
SOX - Oxides of Sulphur Tons/Yr:	22
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	GWF POWER SYSTEMS,LP (SITE 1)
Address:	895 E 3RD STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	1993
County Code:	7
Air Basin:	SF
Facility ID:	3243
Air District Name:	BA
SIC Code:	4911
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	8
Part. Matter 10 Micrometers and Smllr Tons/Yr:	6

Name:	GWF POWER SYSTEMS,LP (SITE 1)
Address:	895 E 3RD STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	1995
County Code:	7
Air Basin:	SF
Facility ID:	3243
Air District Name:	BA

GWF POWER SYSTEMS,LP (SITE 1) (Continued) **S105937979**

SIC Code:	4911
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	24
Reactive Organic Gases Tons/Yr:	20
Carbon Monoxide Emissions Tons/Yr:	101
NOX - Oxides of Nitrogen Tons/Yr:	65
SOX - Oxides of Sulphur Tons/Yr:	95
Particulate Matter Tons/Yr:	13
Part. Matter 10 Micrometers and Smllr Tons/Yr:	10

Name:	GWF POWER SYSTEMS,LP (SITE 1)
Address:	895 E 3RD STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	1996
County Code:	7
Air Basin:	SF
Facility ID:	3243
Air District Name:	BA
SIC Code:	4911
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	23
Reactive Organic Gases Tons/Yr:	19
Carbon Monoxide Emissions Tons/Yr:	100
NOX - Oxides of Nitrogen Tons/Yr:	64
SOX - Oxides of Sulphur Tons/Yr:	94
Particulate Matter Tons/Yr:	13
Part. Matter 10 Micrometers and Smllr Tons/Yr:	10

Name:	GWF POWER SYSTEMS,LP (SITE 1)
Address:	895 E 3RD STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	1997
County Code:	7
Air Basin:	SF
Facility ID:	3243
Air District Name:	BA
SIC Code:	4911
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	23
Reactive Organic Gases Tons/Yr:	19
Carbon Monoxide Emissions Tons/Yr:	99
NOX - Oxides of Nitrogen Tons/Yr:	63
SOX - Oxides of Sulphur Tons/Yr:	93
Particulate Matter Tons/Yr:	13
Part. Matter 10 Micrometers and Smllr Tons/Yr:	10

Name:	GWF POWER SYSTEMS,LP (SITE 1)
Address:	895 E 3RD STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	1998
County Code:	7

GWF POWER SYSTEMS,LP (SITE 1) (Continued) **S105937979**

Air Basin:	SF
Facility ID:	3243
Air District Name:	BA
SIC Code:	4911
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	23
Reactive Organic Gases Tons/Yr:	19
Carbon Monoxide Emissions Tons/Yr:	98
NOX - Oxides of Nitrogen Tons/Yr:	62
SOX - Oxides of Sulphur Tons/Yr:	92
Particulate Matter Tons/Yr:	12
Part. Matter 10 Micrometers and Smllr Tons/Yr:	10

Name:	GWF POWER SYSTEMS,LP (SITE 1)
Address:	895 E 3RD STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	1999
County Code:	7
Air Basin:	SF
Facility ID:	3243
Air District Name:	BA
SIC Code:	4911
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	21
Reactive Organic Gases Tons/Yr:	3
Carbon Monoxide Emissions Tons/Yr:	93
NOX - Oxides of Nitrogen Tons/Yr:	59
SOX - Oxides of Sulphur Tons/Yr:	87
Particulate Matter Tons/Yr:	8
Part. Matter 10 Micrometers and Smllr Tons/Yr:	4

Name:	GWF POWER SYSTEMS,LP (SITE 1)
Address:	895 E 3RD STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	2000
County Code:	7
Air Basin:	SF
Facility ID:	3243
Air District Name:	BA
SIC Code:	4911
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	21
Reactive Organic Gases Tons/Yr:	3
Carbon Monoxide Emissions Tons/Yr:	93
NOX - Oxides of Nitrogen Tons/Yr:	59
SOX - Oxides of Sulphur Tons/Yr:	87
Particulate Matter Tons/Yr:	8
Part. Matter 10 Micrometers and Smllr Tons/Yr:	4

Name:	GWF POWER SYSTEMS,LP (SITE 1)
Address:	895 E 3RD STREET

GWF POWER SYSTEMS,LP (SITE 1) (Continued) **S105937979**

City,State,Zip:	PITTSBURG, CA 94565
Year:	2001
County Code:	7
Air Basin:	SF
Facility ID:	3243
Air District Name:	BA
SIC Code:	4931
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Y
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	25
Reactive Organic Gases Tons/Yr:	4
Carbon Monoxide Emissions Tons/Yr:	24
NOX - Oxides of Nitrogen Tons/Yr:	46
SOX - Oxides of Sulphur Tons/Yr:	49
Particulate Matter Tons/Yr:	9
Part. Matter 10 Micrometers and Smllr Tons/Yr:	4

Name:	GWF POWER SYSTEMS,LP (SITE 1)
Address:	895 E 3RD STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	2002
County Code:	7
Air Basin:	SF
Facility ID:	3243
Air District Name:	BA
SIC Code:	4911
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	25
Reactive Organic Gases Tons/Yr:	4
Carbon Monoxide Emissions Tons/Yr:	24
NOX - Oxides of Nitrogen Tons/Yr:	46
SOX - Oxides of Sulphur Tons/Yr:	49
Particulate Matter Tons/Yr:	9
Part. Matter 10 Micrometers and Smllr Tons/Yr:	4

Name:	GWF POWER SYSTEMS,LP (SITE 1)
Address:	895 E 3RD STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	2003
County Code:	7
Air Basin:	SF
Facility ID:	3243
Air District Name:	BA
SIC Code:	4911
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	22
Reactive Organic Gases Tons/Yr:	3
Carbon Monoxide Emissions Tons/Yr:	21
NOX - Oxides of Nitrogen Tons/Yr:	41
SOX - Oxides of Sulphur Tons/Yr:	44
Particulate Matter Tons/Yr:	8
Part. Matter 10 Micrometers and Smllr Tons/Yr:	4

GWF POWER SYSTEMS,LP (SITE 1) (Continued) **S105937979**

Name:	GWF POWER SYSTEMS,LP (SITE 1)
Address:	895 E 3RD STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	2004
County Code:	7
Air Basin:	SF
Facility ID:	3243
Air District Name:	BA
SIC Code:	4911
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	22.08
Reactive Organic Gases Tons/Yr:	3.1974642
Carbon Monoxide Emissions Tons/Yr:	21.019
NOX - Oxides of Nitrogen Tons/Yr:	41.251
SOX - Oxides of Sulphur Tons/Yr:	43.718
Particulate Matter Tons/Yr:	7.788
Part. Matter 10 Micrometers and Smllr Tons/Yr:	3.8657

Name:	GWF POWER SYSTEMS,LP (SITE 1)
Address:	895 E 3RD STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	2005
County Code:	7
Air Basin:	SF
Facility ID:	3243
Air District Name:	BA
SIC Code:	4911
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	26.203
Reactive Organic Gases Tons/Yr:	4.4541804
Carbon Monoxide Emissions Tons/Yr:	32.735
NOX - Oxides of Nitrogen Tons/Yr:	81.971
SOX - Oxides of Sulphur Tons/Yr:	62.423
Particulate Matter Tons/Yr:	8.691
Part. Matter 10 Micrometers and Smllr Tons/Yr:	4.312016

Name:	GWF POWER SYSTEMS,LP (SITE 1)
Address:	895 E 3RD STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	2006
County Code:	7
Air Basin:	SF
Facility ID:	3243
Air District Name:	BA
SIC Code:	4911
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	25.271
Reactive Organic Gases Tons/Yr:	3.6551111
Carbon Monoxide Emissions Tons/Yr:	24.048
NOX - Oxides of Nitrogen Tons/Yr:	47.163
SOX - Oxides of Sulphur Tons/Yr:	50.004

GWF POWER SYSTEMS,LP (SITE 1) (Continued) **S105937979**

Particulate Matter Tons/Yr: 8.871
Part. Matter 10 Micrometers and Smllr Tons/Yr: 4.422264

Name: GWF POWER SYSTEMS,LP (SITE 1)
Address: 895 E 3RD STREET
City,State,Zip: PITTSBURG, CA 93710
Year: 2007
County Code: 7
Air Basin: SF
Facility ID: 3243
Air District Name: BA
SIC Code: 4911
Air District Name: BAY AREA AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 25.3
Reactive Organic Gases Tons/Yr: 3.6594174
Carbon Monoxide Emissions Tons/Yr: 24.075
NOX - Oxides of Nitrogen Tons/Yr: 48.522
SOX - Oxides of Sulphur Tons/Yr: 50.069
Particulate Matter Tons/Yr: 8.659
Part. Matter 10 Micrometers and Smllr Tons/Yr: 4.298604

Name: GWF POWER SYSTEMS,LP (SITE 1)
Address: 895 E 3RD STREET
City,State,Zip: PITTSBURG, CA 94565
Year: 2008
County Code: 7
Air Basin: SF
Facility ID: 3243
Air District Name: BA
SIC Code: 4911
Air District Name: BAY AREA AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 31.737
Reactive Organic Gases Tons/Yr: 4.5864398
Carbon Monoxide Emissions Tons/Yr: 24.075
NOX - Oxides of Nitrogen Tons/Yr: 48.522
SOX - Oxides of Sulphur Tons/Yr: 50.069
Particulate Matter Tons/Yr: 8.659
Part. Matter 10 Micrometers and Smllr Tons/Yr: 4.298604

Name: GWF POWER SYSTEMS,LP (SITE 1)
Address: 895 E 3RD STREET
City,State,Zip: PITTSBURG, CA 94565
Year: 2009
County Code: 7
Air Basin: SF
Facility ID: 3243
Air District Name: BA
SIC Code: 4911
Air District Name: BAY AREA AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 29.456
Reactive Organic Gases Tons/Yr: 4.2610638999999999

GWF POWER SYSTEMS,LP (SITE 1) (Continued) **S105937979**

Carbon Monoxide Emissions Tons/Yr:	22.363
NOX - Oxides of Nitrogen Tons/Yr:	45.030999999999999
SOX - Oxides of Sulphur Tons/Yr:	46.463000000000001
Particulate Matter Tons/Yr:	9.6855245901639293
Part. Matter 10 Micrometers and Smllr Tons/Yr:	4.6342999999999996

Name:	GWF POWER SYSTEMS,LP (SITE 1)
Address:	895 E 3RD STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	2010
County Code:	7
Air Basin:	SF
Facility ID:	3243
Air District Name:	BA
SIC Code:	4911
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	26.306999999999999
Reactive Organic Gases Tons/Yr:	3.8201415000000001
Carbon Monoxide Emissions Tons/Yr:	20.021000000000001
NOX - Oxides of Nitrogen Tons/Yr:	40.387999999999998
SOX - Oxides of Sulphur Tons/Yr:	41.494999999999997
Particulate Matter Tons/Yr:	14.551606474581799
Part. Matter 10 Micrometers and Smllr Tons/Yr:	7.1059999999999999

Name:	GWF POWER SYSTEMS,LP (SITE 1)
Address:	895 E 3RD STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	2011
County Code:	7
Air Basin:	SF
Facility ID:	3243
Air District Name:	BA
SIC Code:	4911
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	26.307
Reactive Organic Gases Tons/Yr:	3.8201415
Carbon Monoxide Emissions Tons/Yr:	20.021
NOX - Oxides of Nitrogen Tons/Yr:	40.388
SOX - Oxides of Sulphur Tons/Yr:	41.495
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	GWF POWER SYSTEMS,LP (SITE 1)
Address:	895 E 3RD STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	2012
County Code:	7
Air Basin:	SF
Facility ID:	3243
Air District Name:	BA
SIC Code:	4911
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported

GWF POWER SYSTEMS,LP (SITE 1) (Continued) **S105937979**

Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	26.307
Reactive Organic Gases Tons/Yr:	3.8201415
Carbon Monoxide Emissions Tons/Yr:	20.021
NOX - Oxides of Nitrogen Tons/Yr:	40.388
SOX - Oxides of Sulphur Tons/Yr:	41.495
Particulate Matter Tons/Yr:	14.551606475
Part. Matter 10 Micrometers and Smllr Tons/Yr:	7.106

CONTRA COSTA CO. SITE LIST:

Name:	FORMER GWF POWER SYSTEMS LP
Address:	895 E 3RD ST
City:	PITTSBURG
Facility ID:	FA0028155
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	APSA: 10K - <100K GALLONS
Region:	CONTRA COSTA
Cupa Number:	771391

Name:	FORMER GWF POWER SYSTEMS LP
Address:	895 E 3RD ST
City:	PITTSBURG
Facility ID:	FA0028155
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	CALARP RMP
Region:	CONTRA COSTA
Cupa Number:	771391

Name:	FORMER GWF POWER SYSTEMS LP
Address:	895 E 3RD ST
City:	PITTSBURG
Facility ID:	FA0028155
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	CALARP: UNANNOUNCED INSPECTION PROGRAM
Region:	CONTRA COSTA
Cupa Number:	771391

Name:	FORMER GWF POWER SYSTEMS LP
Address:	895 E 3RD ST
City:	PITTSBURG
Facility ID:	FA0028155
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	HMBP: >10K-100K LBS, 0-19 EMPLOYEES
Region:	CONTRA COSTA
Cupa Number:	771391

Name:	FORMER GWF POWER SYSTEMS LP
Address:	895 E 3RD ST
City:	PITTSBURG
Facility ID:	FA0028155
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	HWG: 500 - <1000 TONS/YEAR

GWF POWER SYSTEMS,LP (SITE 1) (Continued) **S105937979**

Region: CONTRA COSTA
Cupa Number: 771391

CIWQS:

Name:	GWF POWER SYSTEMS EAST THIRD ST
Address:	895 E 3RD ST
City,State,Zip:	PITTSBURG, CA 94565
Agency:	GWF Power Systems
Agency Address:	2121 N California Blvd Ste 290, Walnut Creek, CA 94565
Place/Project Type:	Industrial - Electric Services
SIC/NAICS:	4911
Region:	2
Program:	INDSTW
Regulatory Measure Status:	Terminated
Regulatory Measure Type:	Storm water industrial
Order Number:	2014-0057-DWQ
WDID:	2 07I019354
NPDES Number:	CAS000001
Adoption Date:	01/01/1900
Effective Date:	03/18/2005
Termination Date:	05/27/2014
Expiration/Review Date:	01/01/1900
Design Flow:	Not reported
Major/Minor:	Not reported
Complexity:	Not reported
TTWQ:	Not reported
Enforcement Actions within 5 years:	0
Violations within 5 years:	0
Latitude:	38.03011
Longitude:	-121.86967

T112 **BLUE PLANET** **US BROWNFIELDS** **1025815303**
East **895 E. 3RD STREET** **FINDS** **N/A**
1/4-1/2 **PITTSBURG, CA 94565**
0.381 mi.
2013 ft. **Site 3 of 4 in cluster T**

Relative: **Lower**
Actual: **10 ft.**

US BROWNFIELDS:

Name:	BLUE PLANET
Address:	895 E. 3RD STREET
City,State,Zip:	PITTSBURG, CA 94565
Recipient Name:	City of Pittsburg (California)
Grant Type:	Assessment
Property Number:	-
Parcel size:	2.5
Latitude:	38.030515
Longitude:	-121.8700701
HCM Label:	-
Map Scale:	-
Point of Reference:	-
Highlights:	-
Datum:	-
Acres Property ID:	239512
IC Data Access:	-
Start Date:	-
Redev Completition Date:	-
Completed Date:	-

BLUE PLANET (Continued) **1025815303**

Acres Cleaned Up:	-
Cleanup Funding:	-
Cleanup Funding Source:	-
Assessment Funding:	-
Assessment Funding Source:	-
Redevelopment Funding:	-
Redev. Funding Source:	-
Redev. Funding Entity Name:	-
Redevelopment Start Date:	-
Assessment Funding Entity:	-
Cleanup Funding Entity:	-
Grant Type:	Hazardous & Petroleum
Accomplishment Type:	-
Accomplishment Count:	-
Cooperative Agreement Number:	99T62601
Start Date:	-
Ownership Entity:	-
Completion Date:	-
Current Owner:	-
Did Owner Change:	-
Cleanup Required:	-
Video Available:	-
Photo Available:	-
Institutional Controls Required:	-
IC Category Proprietary Controls:	-
IC Cat. Info. Devices:	-
IC Cat. Gov. Controls:	-
IC Cat. Enforcement Permit Tools:	-
IC in place date:	-
IC in place:	-
State/tribal program date:	-
State/tribal program ID:	-
State/tribal NFA date:	-
Air cleaned:	-
Asbestos found:	-
Asbestos cleaned:	-
Controled substance found:	-
Controled substance cleaned:	-
Drinking water affected:	-
Drinking water cleaned:	-
Groundwater affected:	-
Groundwater cleaned:	-
Lead contaminant found:	-
Lead cleaned up:	-
No media affected:	Not reported
Unknown media affected:	-
Other cleaned up:	-
Other metals found:	-
Other metals cleaned:	-
Other contaminants found:	-
Other contams found description:	-
PAHs found:	-
PAHs cleaned up:	-
PCBs found:	-
PCBs cleaned up:	-
Petro products found:	-
Petro products cleaned:	-

BLUE PLANET (Continued) **1025815303**

Sediments found:	-
Sediments cleaned:	-
Soil affected:	-
Soil cleaned up:	-
Surface water cleaned:	-
VOCs found:	-
VOCs cleaned:	-
Cleanup other description:	-
Num. of cleanup and re-dev. jobs:	-
Past use greenspace acreage:	-
Past use residential acreage:	-
Surface Water:	-
Past use commercial acreage:	-
Past use industrial acreage:	-
Future use greenspace acreage:	-
Future use residential acreage:	-
Future use commercial acreage:	-
Future use industrial acreage:	-
Superfund Fed. landowner flag:	-
Arsenic cleaned up:	-
Cadmium cleaned up:	-
Chromium cleaned up:	-
Copper cleaned up:	-
Iron cleaned up:	-
mercury cleaned up:	-
Nickel Cleaned Up:	-
No clean up:	-
Pesticides cleaned up:	-
Selenium cleaned up:	-
SVOCs cleaned up:	-
Unknown clean up:	-
Arsenic contaminant found:	-
Cadmium contaminant found:	-
Chromium contaminant found:	-
Copper contaminant found:	-
Iron contaminant found:	-
Mercury contaminant found:	-
Nickel contaminant found:	-
No contaminant found:	-
Pesticides contaminant found:	-
Selenium contaminant found:	-
SVOCs contaminant found:	-
Unknown contaminant found:	-
Future Use: Multistory	-
Media affected Bluiding Material:	-
Media affected indoor air:	-
Building material media cleaned up:	-
Indoor air media cleaned up:	-
Unknown media cleaned up:	-
Past Use: Multistory	Not reported
Property Description:	-
Below Poverty Number:	9
Below Poverty Percent:	19.57
Meidan Income:	2744
Meidan Income Number:	12
Meidan Income Percent:	26.09
Vacant Housing Number:	4

BLUE PLANET (Continued) **1025815303**

Vacant Housing Percent: 21.88
Unemployed Number: 3
Unemployed Percent: 6.52

FINDS:
Registry ID: 110070556229

Click Here:

Environmental Interest/Information System:
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

T113 **GWF POWER SYSTEM** **SEMS-ARCHIVE** **1001491865**
East **895 E. 3RD STREET** **CASFN0905522**
1/4-1/2 **PITTSBURG, CA 94565**
0.381 mi.
2013 ft. **Site 4 of 4 in cluster T**

Relative:
Lower

Actual:
10 ft.

SEMS Archive:
Site ID: 0905522
EPA ID: CASFN0905522
Name: GWF POWER SYSTEM
Address: 895 E. 3RD STREET
Address 2: Not reported
City,State,Zip: PITTSBURG, CA 94565
Cong District: Not reported
FIPS Code: 06013
FF: N
NPL: Not on the NPL
Non NPL Status: NFRAP-Site does not qualify for the NPL based on existing information

SEMS Archive Detail:
Region: 09
Site ID: 0905522
EPA ID: CASFN0905522
Site Name: GWF POWER SYSTEM
NPL: N
FF: N
OU: 00
Action Code: VS
Action Name: ARCH SITE
SEQ: 1
Start Date: Not reported
Finish Date: 2001-09-21 04:00:00
Qual: Not reported
Current Action Lead: EPA Perf In-Hse

Region: 09
Site ID: 0905522
EPA ID: CASFN0905522
Site Name: GWF POWER SYSTEM
NPL: N
FF: N
OU: 00

GWF POWER SYSTEM (Continued) **1001491865**

Action Code:	DS
Action Name:	DISCVRY
SEQ:	1
Start Date:	1998-12-01 05:00:00
Finish Date:	1998-12-01 05:00:00
Qual:	Not reported
Current Action Lead:	EPA Perf
Region:	09
Site ID:	0905522
EPA ID:	CASFN0905522
Site Name:	GWF POWER SYSTEM
NPL:	N
FF:	N
OU:	00
Action Code:	PA
Action Name:	PA
SEQ:	1
Start Date:	2000-08-15 04:00:00
Finish Date:	2001-06-30 04:00:00
Qual:	N
Current Action Lead:	St Perf

114
NW
1/4-1/2
0.409 mi.
2157 ft.

THE BERM **US BROWNFIELDS** **1025442669**
27 MARINA BOULEVARD **N/A**
PITTSBURG, CA 94565

Relative:
Lower

Actual:
13 ft.

US BROWNFIELDS:

Name:	THE BERM
Address:	27 MARINA BOULEVARD
City,State,Zip:	PITTSBURG, CA 94565
Recipient Name:	City of Pittsburg (California)
Grant Type:	Assessment
Property Number:	-
Parcel size:	1.85
Latitude:	38.0372002
Longitude:	-121.8844332
HCM Label:	-
Map Scale:	-
Point of Reference:	-
Highlights:	Much of this property lies in the CA State Lands Commission granted tidelands.
Datum:	-
Acres Property ID:	238078
IC Data Access:	-
Start Date:	-
Redev Completition Date:	-
Completed Date:	-
Acres Cleaned Up:	-
Cleanup Funding:	-
Cleanup Funding Source:	-
Assessment Funding:	6740
Assessment Funding Source:	EPA
Redevelopment Funding:	-
Redev. Funding Source:	-

THE BERM (Continued) **1025442669**

Redev. Funding Entity Name:	-
Redevelopment Start Date:	-
Assessment Funding Entity:	US EPA - Brownfields Assessment Cooperative Agreement
Cleanup Funding Entity:	-
Grant Type:	Hazardous & Petroleum
Accomplishment Type:	Phase I Environmental Assessment
Accomplishment Count:	Y
Cooperative Agreement Number:	99T62601
Start Date:	07/25/2018
Ownership Entity:	Government
Completion Date:	08/03/2018
Current Owner:	City of Pittsburg
Did Owner Change:	N
Cleanup Required:	N
Video Available:	-
Photo Available:	-
Institutional Controls Required:	N
IC Category Proprietary Controls:	-
IC Cat. Info. Devices:	-
IC Cat. Gov. Controls:	-
IC Cat. Enforcement Permit Tools:	-
IC in place date:	-
IC in place:	Y
State/tribal program date:	-
State/tribal program ID:	-
State/tribal NFA date:	-
Air cleaned:	-
Asbestos found:	-
Asbestos cleaned:	-
Controled substance found:	-
Controled substance cleaned:	-
Drinking water affected:	-
Drinking water cleaned:	-
Groundwater affected:	-
Groundwater cleaned:	-
Lead contaminant found:	Y
Lead cleaned up:	-
No media affected:	Not reported
Unknown media affected:	-
Other cleaned up:	-
Other metals found:	-
Other metals cleaned:	-
Other contaminants found:	-
Other contams found description:	-
PAHs found:	-
PAHs cleaned up:	-
PCBs found:	-
PCBs cleaned up:	-
Petro products found:	Y
Petro products cleaned:	-
Sediments found:	-
Sediments cleaned:	-
Soil affected:	Y
Soil cleaned up:	-
Surface water cleaned:	-
VOCs found:	-
VOCs cleaned:	-

THE BERM (Continued) **1025442669**

Cleanup other description:	-
Num. of cleanup and re-dev. jobs:	-
Past use greenspace acreage:	-
Past use residential acreage:	-
Surface Water:	-
Past use commercial acreage:	1.85
Past use industrial acreage:	-
Future use greenspace acreage:	-
Future use residential acreage:	-
Future use commercial acreage:	-
Future use industrial acreage:	-
Superfund Fed. landowner flag:	-
Arsenic cleaned up:	-
Cadmium cleaned up:	-
Chromium cleaned up:	-
Copper cleaned up:	-
Iron cleaned up:	-
mercury cleaned up:	-
Nickel Cleaned Up:	-
No clean up:	-
Pesticides cleaned up:	-
Selenium cleaned up:	-
SVOCs cleaned up:	-
Unknown clean up:	-
Arsenic contaminant found:	-
Cadmium contaminant found:	-
Chromium contaminant found:	-
Copper contaminant found:	-
Iron contaminant found:	-
Mercury contaminant found:	-
Nickel contaminant found:	-
No contaminant found:	-
Pesticides contaminant found:	-
Selenium contaminant found:	-
SVOCs contaminant found:	Y
Unknown contaminant found:	-
Future Use: Multistory	-
Media affected Bluiding Material:	-
Media affected indoor air:	-
Building material media cleaned up:	-
Indoor air media cleaned up:	-
Unknown media cleaned up:	-
Past Use: Multistory	Not reported
Property Description:	Before the Site was expanded to its current configuration, a portion of the Site included residential houses (from at least 1939 until approximately 1963), a roadway (from at least 1939 until 1979 when the new road, Marina Boulevard, was constructed), and part of a dock/wharf associated with boating and fishing activities. Land that eventually became the Site was part of the Marina View Redevelopment Project during the 1960s, when the Redevelopment Agency of the City of Pittsburg began purchasing waterfront parcels along the New York Slough. Between 1963 and 1969, the Redevelopment Agency acquired the land before transferring the property to Marina View Associates in a grant deed dated January 30, 1969. A grant deed dated March 24, 1969 then transferred the property from Marina View Associates to the City of Pittsburg, the current owner of the Site. Sanborn maps show: 1958-1966: The San Francisco International Fish Company previously

THE BERM (Continued) **1025442669**

located east of the Site is no longer in operation. The ?oils and storage? structure is still present in the northern corner of the Site and there is a ?gas and oil? label on the road in front of a grocery store in the southwestern portion of the Site.

Below Poverty Number:	444
Below Poverty Percent:	20.54
Meidan Income:	21395
Meidan Income Number:	711
Meidan Income Percent:	32.89
Vacant Housing Number:	150
Vacant Housing Percent:	16.03
Unemployed Number:	143
Unemployed Percent:	6.61
Name:	THE BERM
Address:	27 MARINA BOULEVARD
City,State,Zip:	PITTSBURG, CA 94565
Recipient Name:	City of Pittsburg (California)
Grant Type:	Assessment
Property Number:	-
Parcel size:	1.85
Latitude:	38.0372002
Longitude:	-121.8844332
HCM Label:	-
Map Scale:	-
Point of Reference:	-
Highlights:	Much of this property lies in the CA State Lands Commission granted tidelands.
Datum:	-
Acres Property ID:	238078
IC Data Access:	-
Start Date:	-
Redev Completition Date:	-
Completed Date:	-
Acres Cleaned Up:	-
Cleanup Funding:	-
Cleanup Funding Source:	-
Assessment Funding:	19919
Assessment Funding Source:	EPA
Redevelopment Funding:	-
Redev. Funding Source:	-
Redev. Funding Entity Name:	-
Redevelopment Start Date:	-
Assessment Funding Entity:	US EPA - Brownfields Assessment Cooperative Agreement
Cleanup Funding Entity:	-
Grant Type:	Hazardous & Petroleum
Accomplishment Type:	Phase II Environmental Assessment
Accomplishment Count:	N
Cooperative Agreement Number:	99T62601
Start Date:	08/06/2018
Ownership Entity:	Government
Completion Date:	05/21/2019
Current Owner:	City of Pittsburg
Did Owner Change:	N
Cleanup Required:	N
Video Available:	-
Photo Available:	-

THE BERM (Continued) **1025442669**

Institutional Controls Required:	N
IC Category Proprietary Controls:	-
IC Cat. Info. Devices:	-
IC Cat. Gov. Controls:	-
IC Cat. Enforcement Permit Tools:	-
IC in place date:	-
IC in place:	Y
State/tribal program date:	-
State/tribal program ID:	-
State/tribal NFA date:	-
Air cleaned:	-
Asbestos found:	-
Asbestos cleaned:	-
Controled substance found:	-
Controled substance cleaned:	-
Drinking water affected:	-
Drinking water cleaned:	-
Groundwater affected:	-
Groundwater cleaned:	-
Lead contaminant found:	Y
Lead cleaned up:	-
No media affected:	Not reported
Unknown media affected:	-
Other cleaned up:	-
Other metals found:	-
Other metals cleaned:	-
Other contaminants found:	-
Other contams found description:	-
PAHs found:	-
PAHs cleaned up:	-
PCBs found:	-
PCBs cleaned up:	-
Petro products found:	Y
Petro products cleaned:	-
Sediments found:	-
Sediments cleaned:	-
Soil affected:	Y
Soil cleaned up:	-
Surface water cleaned:	-
VOCs found:	-
VOCs cleaned:	-
Cleanup other description:	-
Num. of cleanup and re-dev. jobs:	-
Past use greenspace acreage:	-
Past use residential acreage:	-
Surface Water:	-
Past use commercial acreage:	1.85
Past use industrial acreage:	-
Future use greenspace acreage:	-
Future use residential acreage:	-
Future use commercial acreage:	-
Future use industrial acreage:	-
Superfund Fed. landowner flag:	-
Arsenic cleaned up:	-
Cadmium cleaned up:	-
Chromium cleaned up:	-
Copper cleaned up:	-

THE BERM (Continued) **1025442669**

Iron cleaned up:	-
mercury cleaned up:	-
Nickel Cleaned Up:	-
No clean up:	-
Pesticides cleaned up:	-
Selenium cleaned up:	-
SVOCs cleaned up:	-
Unknown clean up:	-
Arsenic contaminant found:	-
Cadmium contaminant found:	-
Chromium contaminant found:	-
Copper contaminant found:	-
Iron contaminant found:	-
Mercury contaminant found:	-
Nickel contaminant found:	-
No contaminant found:	-
Pesticides contaminant found:	-
Selenium contaminant found:	-
SVOCs contaminant found:	Y
Unknown contaminant found:	-
Future Use: Multistory	-
Media affected Bluiding Material:	-
Media affected indoor air:	-
Building material media cleaned up:	-
Indoor air media cleaned up:	-
Unknown media cleaned up:	-
Past Use: Multistory	Not reported
Property Description:	Before the Site was expanded to its current configuration, a portion of the Site included residential houses (from at least 1939 until approximately 1963), a roadway (from at least 1939 until 1979 when the new road, Marina Boulevard, was constructed), and part of a dock/wharf associated with boating and fishing activities. Land that eventually became the Site was part of the Marina View Redevelopment Project during the 1960s, when the Redevelopment Agency of the City of Pittsburg began purchasing waterfront parcels along the New York Slough. Between 1963 and 1969, the Redevelopment Agency acquired the land before transferring the property to Marina View Associates in a grant deed dated January 30, 1969. A grant deed dated March 24, 1969 then transferred the property from Marina View Associates to the City of Pittsburg, the current owner of the Site. Sanborn maps show: 1958-1966: The San Francisco International Fish Company previously located east of the Site is no longer in operation. The ?oils and storage? structure is still present in the northern corner of the Site and there is a ?gas and oil? label on the road in front of a grocery store in the southwestern portion of the Site.
Below Poverty Number:	444
Below Poverty Percent:	20.54
Meidan Income:	21395
Meidan Income Number:	711
Meidan Income Percent:	32.89
Vacant Housing Number:	150
Vacant Housing Percent:	16.03
Unemployed Number:	143
Unemployed Percent:	6.61

U115 **PITTSBURG REDEVELOPMENT AGENCY** **CA LUST** **S101294160**
SW **1300 RAILROAD** **CA ENF** **N/A**
1/4-1/2 **PITTSBURG, CA 94565** **CA HIST CORTESE**
0.423 mi. **CA CONTRA COSTA CO. SITE LIST**
2236 ft. **Site 1 of 2 in cluster U**

Relative: Higher

Actual: 28 ft.

LUST:

Name:	PITTSBURG ST RDEVELOPMENT #3
Address:	1300 RAILROAD AVE
City,State,Zip:	PITTSBURG, CA 94565
Lead Agency:	SAN FRANCISCO BAY RWQCB (REGION 2)
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0601300441
Global Id:	T0601300441
Latitude:	38.022964036
Longitude:	-121.886758
Status:	Completed - Case Closed
Status Date:	02/02/2009
Case Worker:	MYM
RB Case Number:	07-0477
Local Agency:	CONTRA COSTA COUNTY
File Location:	Not reported
Local Case Number:	70728
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

LUST:

Global Id:	T0601300441
Contact Type:	Regional Board Caseworker
Contact Name:	MARTIN MUSONGE
Organization Name:	SAN FRANCISCO BAY RWQCB (REGION 2)
Address:	1515 CLAY STREET
City:	OAKLAND
Email:	martin.musonge@waterboards.ca.gov
Phone Number:	Not reported

Global Id:	T0601300441
Contact Type:	Local Agency Caseworker
Contact Name:	SUE LOYD
Organization Name:	CONTRA COSTA COUNTY
Address:	4333 PACHECO BLVD.
City:	MARTINEZ
Email:	sloyd@hsd.co.contra-costa.ca.us
Phone Number:	Not reported

LUST:

Global Id:	T0601300441
Action Type:	ENFORCEMENT
Date:	02/02/2009
Action:	Closure/No Further Action Letter

Global Id:	T0601300441
Action Type:	ENFORCEMENT
Date:	01/27/2000
Action:	13267 Requirement

Global Id:	T0601300441
Action Type:	ENFORCEMENT

PITTSBURG REDEVELOPMENT AGENCY (Continued) **S101294160**

Date: 02/01/2001
Action: Staff Letter

Global Id: T0601300441
Action Type: Other
Date: 07/14/1986
Action: Leak Discovery

Global Id: T0601300441
Action Type: ENFORCEMENT
Date: 02/02/2009
Action: Closure/No Further Action Letter

Global Id: T0601300441
Action Type: Other
Date: 07/14/1986
Action: Leak Stopped

Global Id: T0601300441
Action Type: Other
Date: 03/09/1987
Action: Leak Reported

Global Id: T0601300441
Action Type: ENFORCEMENT
Date: 01/30/2001
Action: * Historical Enforcement

LUST:
Global Id: T0601300441
Status: Open - Case Begin Date
Status Date: 07/14/1986

Global Id: T0601300441
Status: Open - Site Assessment
Status Date: 05/09/1994

Global Id: T0601300441
Status: Completed - Case Closed
Status Date: 02/02/2009

ENF:
Name: PITTSBURG REDEVELOPMENT AGENCY
Address: 1300 RAILROAD
City,State,Zip: PITTSBURG, CA 94565
Region: 2
Facility Id: 250472
Agency Name: Pittsburg City Redevelopment Agency
Place Type: Facility
Place Subtype: Not reported
Facility Type: All other facilities
Agency Type: City Agency
Of Agencies: 1
Place Latitude: Not reported
Place Longitude: Not reported

PITTSBURG REDEVELOPMENT AGENCY (Continued) **S101294160**

SIC Code 1:	Not reported
SIC Desc 1:	Not reported
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	UST
Program Category1:	TANKS
Program Category2:	TANKS
# Of Programs:	1
WDID:	2 07-0477
Reg Measure Id:	168783
Reg Measure Type:	Unregulated
Region:	2
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Never Active
Status Date:	02/20/2013
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	238253
Region:	2
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	13267 Letter

PITTSBURG REDEVELOPMENT AGENCY (Continued) **S101294160**

Effective Date:	02/01/2001
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 2 07-0477
Description:	Not reported
Program:	UST
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Name:	PITTSBURG REDEVELOPMENT AGENCY
Address:	1300 RAILROAD
City,State,Zip:	PITTSBURG, CA 94565
Region:	2
Facility Id:	250472
Agency Name:	Pittsburg City Redevelopment Agency
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	All other facilities
Agency Type:	City Agency
# Of Agencies:	1
Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	Not reported
SIC Desc 1:	Not reported
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	UST
Program Category1:	TANKS

PITTSBURG REDEVELOPMENT AGENCY (Continued) **S101294160**

Program Category2:	TANKS
# Of Programs:	1
WDID:	2 07-0477
Reg Measure Id:	168783
Reg Measure Type:	Unregulated
Region:	2
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Never Active
Status Date:	02/20/2013
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	236640
Region:	2
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	13267 Letter
Effective Date:	01/30/2001
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 2 07-0477
Description:	Not reported
Program:	UST
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Name:	PITTSBURG REDEVELOPMENT AGENCY
Address:	1300 RAILROAD
City,State,Zip:	PITTSBURG, CA 94565
Region:	2

PITTSBURG REDEVELOPMENT AGENCY (Continued) **S101294160**

Facility Id:	250472
Agency Name:	Pittsburg City Redevelopment Agency
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	All other facilities
Agency Type:	City Agency
# Of Agencies:	1
Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	Not reported
SIC Desc 1:	Not reported
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	UST
Program Category1:	TANKS
Program Category2:	TANKS
# Of Programs:	1
WDID:	2 07-0477
Reg Measure Id:	168783
Reg Measure Type:	Unregulated
Region:	2
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Never Active
Status Date:	02/20/2013
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported

PITTSBURG REDEVELOPMENT AGENCY (Continued) **S101294160**

WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	236639
Region:	2
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	13267 Letter
Effective Date:	01/27/2000
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 2 07-0477
Description:	Not reported
Program:	UST
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

HIST CORTESE:

edr_fname:	PITTSBURG ST RDEVELOPMENT
edr_fadd1:	1300 RAILROAD
City,State,Zip:	PITTSBURG, CA 94565
Region:	CORTESE
Facility County Code:	7
Reg By:	LTNKA
Reg Id:	07-0477

CONTRA COSTA CO. SITE LIST:

Name:	PITTSBURG STREET REDEVELOP #3
Address:	1300 RAILROAD AVE
City:	PITTSBURG
Facility ID:	FA0033241
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	UNDERGROUND STORAGE TANK SITE
Region:	CONTRA COSTA
Cupa Number:	770728

U116 **PITTSBURG ST RDEVELOPMENT #3** **CA LUST** **S103723111**
SW **1300 RAILROAD AVE** **CA Cortese** **N/A**
1/4-1/2 **PITTSBURG, CA 94565** **CA CERS**
0.423 mi.
2236 ft. **Site 2 of 2 in cluster U**

Relative:
Higher

Actual:
28 ft.

LUST REG 2:

Region:	2
Facility Id:	07-0477
Facility Status:	Preliminary site assessment underway
Case Number:	70728
How Discovered:	Tank Closure
Leak Cause:	UNK
Leak Source:	UNK
Date Leak Confirmed:	Not reported
Oversight Program:	LUST
Prelim. Site Assesment Wokplan Submitted:	Not reported
Preliminary Site Assesment Began:	5/9/1994
Pollution Characterization Began:	Not reported
Pollution Remediation Plan Submitted:	Not reported
Date Remediation Action Underway:	Not reported
Date Post Remedial Action Monitoring Began:	Not reported

CORTESE:

Name:	PITTSBURG ST RDEVELOPMENT #3
Address:	1300 RAILROAD AVE
City,State,Zip:	PITTSBURG, CA 94565
Region:	CORTESE
Envirostor Id:	Not reported
Global ID:	T0601300441
Site/Facility Type:	LUST CLEANUP SITE
Cleanup Status:	COMPLETED - CASE CLOSED
Status Date:	Not reported
Site Code:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Owner:	Not reported
Enf Type:	Not reported
Swat R:	Not reported
Flag:	active
Order No:	Not reported
Waste Discharge System No:	Not reported
Effective Date:	Not reported
Region 2:	Not reported
WID Id:	Not reported
Solid Waste Id No:	Not reported
Waste Management Uit Name:	Not reported
File Name:	Active Open

CERS:

Name:	PITTSBURG ST RDEVELOPMENT #3
Address:	1300 RAILROAD AVE
City,State,Zip:	PITTSBURG, CA 94565
Site ID:	210094
CERS ID:	T0601300441
CERS Description:	Leaking Underground Storage Tank Cleanup Site

Affiliation:

Affiliation Type Desc:	Local Agency Caseworker

PITTSBURG ST RDEVELOPMENT #3 (Continued) **S103723111**

Entity Name:	SUE LOYD - CONTRA COSTA COUNTY
Entity Title:	Not reported
Affiliation Address:	4333 PACHECO BLVD.
Affiliation City:	MARTINEZ
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Regional Board Caseworker
Entity Name:	MARTIN MUSONGE - SAN FRANCISCO BAY RWQCB (REGION 2)
Entity Title:	Not reported
Affiliation Address:	1515 CLAY STREET
Affiliation City:	OAKLAND
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

117
NNW
1/2-1
0.512 mi.
2702 ft.

PITTSBURG MARINA EXPANSION PHASE III **CA ENVIROSTOR** **S116165384**
MONTEZUMA & CODY **N/A**
PITTSBURG, CA 94565

Relative:
Lower

Actual:
6 ft.

ENVIROSTOR:

Name:	PITTSBURG MARINA EXPANSION PHASE III
Address:	MONTEZUMA & CODY
City,State,Zip:	PITTSBURG, CA 94565
Facility ID:	07150006
Status:	No Further Action
Status Date:	05/03/2002
Site Code:	200568
Site Type:	Evaluation
Site Type Detailed:	Evaluation
Acres:	80
NPL:	NO
Regulatory Agencies:	CONTRA COSTA COUNTY
Lead Agency:	CONTRA COSTA COUNTY
Program Manager:	Not reported
Supervisor:	Denise Tsuji
Division Branch:	Cleanup Berkeley
Assembly:	14
Senate:	07
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	Not reported
Latitude:	38.03820
Longitude:	-121.8850
APN:	NONE SPECIFIED
Past Use:	LANDFILL - DOMESTIC, RESIDENTIAL AREA, WASTE - SEWAGE TREATMENT PLANT
Potential COC:	NONE SPECIFIED No Contaminants found
Confirmed COC:	31000-NO
Potential Description:	SOIL
Alias Name:	200568
Alias Type:	Project Code (Site Code)

PITTSBURG MARINA EXPANSION PHASE III (Continued) **S116165384**

Alias Name: 07150006
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 02/17/1987
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Discovery
Completed Date: 02/17/1987
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

118
West
1/2-1
0.522 mi.
2758 ft.

MARINA SCHOOL EXPANSION **CA ENVIROSTOR S107736681**
EAST 8TH AND EAST 10TH STREETS **CA SCH N/A**
PITTSBURG, CA 94565

Relative:
Lower

Actual:
10 ft.

ENVIROSTOR:
Name: MARINA SCHOOL EXPANSION
Address: EAST 8TH AND EAST 10TH STREETS
City,State,Zip: PITTSBURG, CA 94565
Facility ID: 70000066
Status: No Further Action
Status Date: 03/12/2007
Site Code: 204164
Site Type: School Investigation
Site Type Detailed: School
Acres: 4
NPL: NO
Regulatory Agencies: SMBRP
Lead Agency: SMBRP
Program Manager: Not reported
Supervisor: Mark Malinowski
Division Branch: Northern California Schools & Santa Susana
Assembly: 14
Senate: 07
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: School District
Latitude: 38.02879
Longitude: -121.8856
APN: NONE SPECIFIED

MARINA SCHOOL EXPANSION (Continued) **S107736681**

Past Use: RETAIL - SERVICE STATION, SCHOOL - ELEMENTARY
Potential COC: Benzene Lead Methyl tertbutyl ether (MTBE TPH-diesel TPH-gas Ethylbenzene Toluene Xylenes
Confirmed COC: 30550-NO 30024-NO 30025-NO 30272-NO 30003-NO 30013-NO 30016-NO No Contaminants found 30593-NO
Potential Description: OTH
Alias Name: 110033608736
Alias Type: EPA (FRS #)
Alias Name: T0601300541
Alias Type: GeoTracker Global ID
Alias Name: 204164
Alias Type: Project Code (Site Code)
Alias Name: 70000066
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 02/27/2006
Comments: EOA signed and completed.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: School Cleanup Agreement
Completed Date: 09/18/2006
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 10/26/2006
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 11/01/2006
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 10/19/2006
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 10/17/2006
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 06/19/2007
Comments: DTSC issued a cost recovery memorandum to accounting to close the project.

MARINA SCHOOL EXPANSION (Continued) **S107736681**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Workplan
Completed Date: 05/05/2006
Comments: The final PEA Workplan adequately addresses DTSC's comments and is hereby approved.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 10/25/2006
Comments: DTSC approved the PEA with a further action required determination. A supplemental Site Investigation is required to verify lead in soil. The letter also included a SFPD Form 4.14 approval.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: 4.14 Request
Completed Date: 10/25/2006
Comments: DTSC aproved the SFPD Form 4.14 with the PEA-further action determination letter.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 03/12/2007
Comments: DTSC approved document with a no further action determination. Letter is uploaded under the Fuel Oil Vault SSI and under the Lead House-keeping Activities Tech Memo.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Workplan
Completed Date: 09/27/2006
Comments: DTSC's comments were incorporated into a revised workplan. See uploaded document.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Workplan
Completed Date: 08/15/2006
Comments: Lead SSI Tech Memo for Step out sampling was accepted.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 03/12/2007
Comments: DTSC approved the report. The DTSC letter is uploaded under the Lead House-keeping Activities Tech Memo and under the Fuel Oil Vault SSI.

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported

MARINA SCHOOL EXPANSION (Continued) **S107736681**

Schedule Due Date: Not reported
Schedule Revised Date: Not reported

SCH:

Name: MARINA SCHOOL EXPANSION
Address: EAST 8TH AND EAST 10TH STREETS
City,State,Zip: PITTSBURG, CA 94565
Facility ID: 70000066
Site Type: School Investigation
Site Type Detail: School
Site Mgmt. Req.: NONE SPECIFIED
Acres: 4
National Priorities List: NO
Cleanup Oversight Agencies: SMBRP
Lead Agency: SMBRP
Lead Agency Description: DTSC - Site Cleanup Program
Project Manager: Not reported
Supervisor: Mark Malinowski
Division Branch: Northern California Schools & Santa Susana
Site Code: 204164
Assembly: 14
Senate: 07
Special Program Status: Not reported
Status: No Further Action
Status Date: 03/12/2007
Restricted Use: NO
Funding: School District
Latitude: 38.02879
Longitude: -121.8856
APN: NONE SPECIFIED
Past Use: RETAIL - SERVICE STATION, SCHOOL - ELEMENTARY
Potential COC: Benzene, Benzene, Lead, Methyl tertbutyl ether (MTBE, TPH-diesel, TPH-gas, Ethylbenzene, Toluene, Xylenes
Confirmed COC: 30550-NO, 30024-NO, 30025-NO, 30272-NO, 30003-NO, 30013-NO, 30016-NO, No Contaminants found, 30593-NO
Potential Description: OTH
Alias Name: 110033608736
Alias Type: EPA (FRS #)
Alias Name: T0601300541
Alias Type: GeoTracker Global ID
Alias Name: 204164
Alias Type: Project Code (Site Code)
Alias Name: 70000066
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 02/27/2006
Comments: EOA signed and completed.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: School Cleanup Agreement
Completed Date: 09/18/2006

MARINA SCHOOL EXPANSION (Continued) **S107736681**

Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 10/26/2006
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 11/01/2006
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 10/19/2006
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 10/17/2006
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 06/19/2007
Comments: DTSC issued a cost recovery memorandum to accounting to close the project.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Workplan
Completed Date: 05/05/2006
Comments: The final PEA Workplan adequately addresses DTSC's comments and is hereby approved.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 10/25/2006
Comments: DTSC approved the PEA with a further action required determination. A supplemental Site Investigation is required to verify lead in soil.
The letter also included a SFPD Form 4.14 approval.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: 4.14 Request
Completed Date: 10/25/2006
Comments: DTSC aproved the SFPD Form 4.14 with the PEA-further action determination letter.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

MARINA SCHOOL EXPANSION (Continued) **S107736681**

Completed Document Type:	Supplemental Site Investigation Report
Completed Date:	03/12/2007
Comments:	DTSC approved document with a no further action determination. Letter is uploaded under the Fuel Oil Vault SSI and under the Lead House-keeping Activities Tech Memo.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Supplemental Site Investigation Workplan
Completed Date:	09/27/2006
Comments:	DTSC's comments were incorporated into a revised workplan. See uploaded document.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Supplemental Site Investigation Workplan
Completed Date:	08/15/2006
Comments:	Lead SSI Tech Memo for Step out sampling was accepted.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Technical Report
Completed Date:	03/12/2007
Comments:	DTSC approved the report. The DTSC letter is uploaded under the Lead House-keeping Activities Tech Memo and under the Fuel Oil Vault SSI.
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

119
WSW
1/2-1
0.583 mi.
3077 ft.

Relative:
Higher

Actual:
24 ft.

SIGNODE SUPPLY CORP.
1 LESLIE DR
PITTSBURG, CA 94565

CA ENVIROSTOR **1000318073**
CA VCP **N/A**
CA CERS HAZ WASTE
CA SWEEPS UST
CA HIST UST
CA CONTRA COSTA CO. SITE LIST
CA WDS
CA CIWQS
CA CERS

ENVIROSTOR:

Name:	1 LESLIE DRIVE
Address:	1 LESLIE DRIVE
City,State,Zip:	PITTSBURG, CA 94565
Facility ID:	60002656
Status:	Active
Status Date:	05/16/2018
Site Code:	202185
Site Type:	Voluntary Cleanup
Site Type Detailed:	Voluntary Cleanup
Acres:	15.3
NPL:	NO

SIGNODE SUPPLY CORP. (Continued) **1000318073**

Regulatory Agencies: SMBRP
Lead Agency: SMBRP
Program Manager: Chia Rin Yen
Supervisor: Yolanda Garza
Division Branch: Southern California Schools & Brownfields Outreach
Assembly: , 14
Senate: , 07
Special Program: Voluntary Cleanup Program
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: Responsible Party
Latitude: 38.02560
Longitude: -121.8906
APN: 086-110-002
Past Use: HAZARDOUS WASTE STORAGE - TANKS/CONTAINERS, MAINTENANCE / CLEANING, UNDERGROUND STORAGE TANKS
Potential COC: Benzene Tetrachloroethylene (PCE TPH-gas Trichloroethylene (TCE Vinyl chloride 1,2-Dichloroethane (EDC 1,1-Dichloroethylene 1,2-Dichloroethylene (cis
Confirmed COC: Benzene Tetrachloroethylene (PCE TPH-gas Trichloroethylene (TCE Vinyl chloride 1,2-Dichloroethane (EDC 1,1-Dichloroethylene 1,2-Dichloroethylene (cis
Potential Description: OTH, SOIL, SV
Alias Name: Signode
Alias Type: Alternate Name
Alias Name: 086-110-002
Alias Type: APN
Alias Name: 202185
Alias Type: Project Code (Site Code)
Alias Name: 60002656
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Workplan
Completed Date: 12/12/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Standard Voluntary Agreement
Completed Date: 08/16/2018
Comments: Additional investigation is needed.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Pre-HARP Form
Completed Date: 10/01/2018
Comments: HARP for site visit

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Standard Voluntary Agreement
Completed Date: 06/06/2018
Comments: VCA fully executed. Advance payment of $12,597 due by June 23, 2018

Completed Area Name: PROJECT WIDE

SIGNODE SUPPLY CORP. (Continued) **1000318073**

Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 10/02/2018
Comments: Site visit was conducted by DTSC on 10/2/2018.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 09/11/2019
Comments: Annual cost estimate was sent on 9/11/2019.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/04/2020
Comments: Not reported

Future Area Name: PROJECT WIDE
Future Sub Area Name: Not reported
Future Document Type: Site Characterization Report
Future Due Date: 2021
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

VCP:
Name: 1 LESLIE DRIVE
Address: 1 LESLIE DRIVE
City,State,Zip: PITTSBURG, CA 94565
Facility ID: 60002656
Site Type: Voluntary Cleanup
Site Type Detail: Voluntary Cleanup
Site Mgmt. Req.: NONE SPECIFIED
Acres: 15.3
National Priorities List: NO
Cleanup Oversight Agencies: SMBRP
Lead Agency: SMBRP
Lead Agency Description: DTSC - Site Cleanup Program
Project Manager: Chia Rin Yen
Supervisor: Yolanda Garza
Division Branch: Southern California Schools & Brownfields Outreach
Site Code: 202185
Assembly: , 14
Senate: , 07
Special Programs Code: Voluntary Cleanup Program
Status: Active
Status Date: 05/16/2018
Restricted Use: NO
Funding: Responsible Party
Lat/Long: 38.02560 / -121.8906
APN: 086-110-002
Past Use: HAZARDOUS WASTE STORAGE - TANKS/CONTAINERS, MAINTENANCE / CLEANING, UNDERGROUND STORAGE TANKS
Potential COC: 30003, 30022, 30025, 30027, 30028, 30193, 30194, 30195
Confirmed COC: 30003,30022,30025,30027,30028,30193,30194,30195

SIGNODE SUPPLY CORP. (Continued) **1000318073**

Potential Description: OTH, SOIL, SV
Alias Name: Signode
Alias Type: Alternate Name
Alias Name: 086-110-002
Alias Type: APN
Alias Name: 202185
Alias Type: Project Code (Site Code)
Alias Name: 60002656
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Workplan
Completed Date: 12/12/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Standard Voluntary Agreement
Completed Date: 08/16/2018
Comments: Additional investigation is needed.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Pre-HARP Form
Completed Date: 10/01/2018
Comments: HARP for site visit

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Standard Voluntary Agreement
Completed Date: 06/06/2018
Comments: VCA fully executed. Advance payment of $12,597 due by June 23, 2018

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 10/02/2018
Comments: Site visit was conducted by DTSC on 10/2/2018.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 09/11/2019
Comments: Annual cost estimate was sent on 9/11/2019.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/04/2020
Comments: Not reported

Future Area Name: PROJECT WIDE
Future Sub Area Name: Not reported
Future Document Type: Site Characterization Report
Future Due Date: 2021
Schedule Area Name: Not reported

SIGNODE SUPPLY CORP. (Continued) **1000318073**

Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

CERS HAZ WASTE:
Name: SIGNODE WESTERN OPERATIONS
Address: 1 LESLIE DR
City,State,Zip: PITTSBURG, CA 94565
Site ID: 153575
CERS ID: 10007584
CERS Description: Hazardous Waste Generator

SWEEPS UST:
Name: SIGNODE SUPPLY CORP.
Address: 1 LESLIE DR
City: PITTSBURG
Status: Not reported
Comp Number: 50265
Number: Not reported
Board Of Equalization: Not reported
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 07-000-050265-000001
Tank Status: Not reported
Capacity: 550
Active Date: Not reported
Tank Use: M.V. FUEL
STG: PRODUCT
Content: REG UNLEADED
Number Of Tanks: 1

HIST UST:
Name: SIGNODE SUPPLY CORP
Address: 1 LESLIE DR
City,State,Zip: PITTSBURG, CA 94565
File Number: 00022F65
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00022F65.pdf
Region: STATE
Facility ID: 00000050265
Facility Type: Other
Other Type: MANUFACTURING PLANT
Contact Name: DAVID J. PACKO, PLANT MANAGER
Telephone: 4154391005
Owner Name: SIGNODE SUPPLY CORP.
Owner Address: 3600 W. LAKE AVE.
Owner City,St,Zip: GLENVIEW, IL 60025
Total Tanks: 0001

Tank Num: 001
Container Num: 007-001
Year Installed: 1981
Tank Capacity: 00000515
Tank Used for: PRODUCT

SIGNODE SUPPLY CORP. (Continued) **1000318073**

Type of Fuel: REGULAR
Container Construction Thickness: 10
Leak Detection: Stock Inventor

Click here for Geo Tracker PDF:

CONTRA COSTA CO. SITE LIST:
Name: SIGNODE WESTERN OPERATIONS
Address: 1 LESLIE DR
City: PITTSBURG
Facility ID: FA0032353
Billing Status: ACTIVE, BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HMBP: LESS THAN 1000 LBS
Region: CONTRA COSTA
Cupa Number: 750265

Name: SIGNODE WESTERN OPERATIONS
Address: 1 LESLIE DR
City: PITTSBURG
Facility ID: FA0032353
Billing Status: ACTIVE, BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HWG: REPORTED ZERO
Region: CONTRA COSTA
Cupa Number: 750265

Name: SIGNODE WESTERN OPERATIONS
Address: 1 LESLIE DR
City: PITTSBURG
Facility ID: FA0032353
Billing Status: INACTIVE, NON-BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: UNDERGROUND STORAGE TANK SITE
Region: CONTRA COSTA
Cupa Number: 750265

WDS:
Name: SIGNODE WSTRN OPERATIONS
Address: 1 Leslie Dr
City: PITTSBURG
Facility ID: San Francisco Bay 07I001163
Facility Type: Industrial - Facility that treats and/or disposes of liquid or semisolid wastes from any servicing, producing, manufacturing or processing operation of whatever nature, including mining, gravel washing, geothermal operations, air conditioning, ship building and repairing, oil production, storage and disposal operations, water pumping.
Facility Status: Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
NPDES Number: CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board
Subregion: 2
Facility Telephone: 9254391005
Facility Contact: MR DAN WARGO
Agency Name: ILLINOIS TOOL WKS CORP

SIGNODE SUPPLY CORP. (Continued) **1000318073**

Agency Address:	3600 W Lake Ave
Agency City,St,Zip:	Glenview 600255811
Agency Contact:	BARBARA MCARDLE
Agency Telephone:	7086574750
Agency Type:	Private
SIC Code:	0
SIC Code 2:	Not reported
Primary Waste Type:	Not reported
Primary Waste:	Not reported
Waste Type2:	Not reported
Waste2:	Not reported
Primary Waste Type:	Not reported
Secondary Waste:	Not reported
Secondary Waste Type:	Not reported
Design Flow:	0
Baseline Flow:	0
Reclamation:	Not reported
POTW:	Not reported
Treat To Water:	Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.
Complexity:	Category C - Facilities having no waste treatment systems, such as cooling water dischargers or thosewho must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds.

CIWQS:

Name:	SIGNODE WESTERN OPERATIONS
Address:	1 LESLIE DR
City,State,Zip:	PITTSBURG, CA 94565
Agency:	Illinois Tool Work
Agency Address:	1 Leslie Dr, Pittsburg, CA 94565
Place/Project Type:	Industrial - Fabricated Metal Products, NEC
SIC/NAICS:	3499
Region:	2
Program:	INDSTW
Regulatory Measure Status:	Terminated
Regulatory Measure Type:	Storm water industrial
Order Number:	2014-0057-DWQ
WDID:	2 07I001163
NPDES Number:	CAS000001
Adoption Date:	01/01/1900
Effective Date:	03/25/1992
Termination Date:	11/24/2009
Expiration/Review Date:	01/01/1900
Design Flow:	Not reported
Major/Minor:	Not reported
Complexity:	Not reported
TTWQ:	Not reported
Enforcement Actions within 5 years:	0
Violations within 5 years:	0
Latitude:	38.02477

SIGNODE SUPPLY CORP. (Continued) **1000318073**

Longitude: -121.88932

CERS:
Name: SIGNODE WESTERN OPERATIONS
Address: 1 LESLIE DR
City,State,Zip: PITTSBURG, CA 94565
Site ID: 153575
CERS ID: 10007584
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 153575
Site Name: SIGNODE WESTERN OPERATIONS
Violation Date: 06-17-2016
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Administration/Documentation - General
Violation Notes: Not reported
Violation Division: Contra Costa County Health Services Department
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-17-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-17-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-25-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-25-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW

SIGNODE SUPPLY CORP. (Continued) **1000318073**

Eval Source: CERS

Enforcement Action:
Site ID: 153575
Site Name: SIGNODE WESTERN OPERATIONS
Site Address: 1 LESLIE DR
Site City: PITTSBURG
Site Zip: 94565
Enf Action Date: 06-17-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Affiliation:
Affiliation Type Desc: Document Preparer
Entity Name: Gary A. Lieberman
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: Signode Western Operations
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (925) 473-3269

Affiliation Type Desc: Environmental Contact
Entity Name: Gary Lieberman
Entity Title: Not reported
Affiliation Address: 1670 Corporate Circle, Suite 101
Affiliation City: Petaluma
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 94954
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: Gary A. Lieberman
Entity Title: Associate Geology Professional
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

SIGNODE SUPPLY CORP. (Continued) **1000318073**

Affiliation Type Desc:	CUPA District
Entity Name:	Contra Costa County Health Services Department
Entity Title:	Not reported
Affiliation Address:	4585 Pacheco BlvdSuite 100
Affiliation City:	Martinez
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94553
Affiliation Phone:	(925) 655-3200

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	1 Leslie Drive
Affiliation City:	Pittsburg
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94565
Affiliation Phone:	Not reported

Affiliation Type Desc:	Parent Corporation
Entity Name:	Signode Western Operations
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	Signode Industrial Group
Entity Title:	Not reported
Affiliation Address:	3600 West Lake Ave.
Affiliation City:	Glenview
Affiliation State:	IL
Affiliation Country:	United States
Affiliation Zip:	60026
Affiliation Phone:	(847) 724-7500

V120 **PITTSBURG HIGH SCHOOL EXPANSION - EAST CAMPUS** **CA ENVIROSTOR** **S118757171**
SSW **250 SCHOOL STREET** **CA SCH** **N/A**
1/2-1 **PITTSBURG, CA 94565**
0.592 mi.
3125 ft. **Site 1 of 2 in cluster V**

Relative:
Higher

Actual:
47 ft.

ENVIROSTOR:

Name:	PITTSBURG HIGH SCHOOL EXPANSION - EAST CAMPUS
Address:	250 SCHOOL STREET
City,State,Zip:	PITTSBURG, CA 94565
Facility ID:	60000830
Status:	No Action Required
Status Date:	07/15/2008
Site Code:	204215
Site Type:	School Investigation
Site Type Detailed:	School
Acres:	10

PITTSBURG HIGH SCHOOL EXPANSION - EAST CAMPUS (Continued) **S118757171**

NPL: NO
Regulatory Agencies: SMBRP
Lead Agency: SMBRP
Program Manager: Jose Luevano
Supervisor: Mark Malinowski
Division Branch: Northern California Schools & Santa Susana
Assembly: 14
Senate: 07
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: School District
Latitude: 38.01913
Longitude: -121.8843
APN: NONE SPECIFIED
Past Use: INCINERATOR - OTHER, PHOTOGRAPHIC PROCESSING, SCHOOL - HIGH SCHOOL
Potential COC: Arsenic Benzene Chlordane Total Chromium (1:6 ratio Cr VI:Cr III Lead
Not reported
Confirmed COC: 30001-NO 30003-NO 30004-NO 30005-NO 30013-NO No Contaminants found
Potential Description: SOIL
Alias Name: Pittsburg High School
Alias Type: Alternate Name
Alias Name: Pittsburg High School Phase I Modernization - East Campus
Alias Type: Alternate Name
Alias Name: 204215
Alias Type: Project Code (Site Code)
Alias Name: 60000830
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 03/26/2008
Comments: DTSC approved the Phase I with a Phase I Addendum required for the Pittsburg HS Modernization Phase I - East Campus area. A seperate PEA evaluation is to be completed for the North and Main Campuses at a later time.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1 Addendum
Completed Date: 07/15/2008
Comments: DTSC approved the Phase I Addendum with a no further action determination. Lead sampling results were below levels of concern.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 07/15/2008
Comments: Cost recovery/project closeout memo was approved.

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported

PITTSBURG HIGH SCHOOL EXPANSION - EAST CAMPUS (Continued) **S118757171**

Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

SCH:

Name: PITTSBURG HIGH SCHOOL EXPANSION - EAST CAMPUS
Address: 250 SCHOOL STREET
City,State,Zip: PITTSBURG, CA 94565
Facility ID: 60000830
Site Type: School Investigation
Site Type Detail: School
Site Mgmt. Req.: NONE SPECIFIED
Acres: 10
National Priorities List: NO
Cleanup Oversight Agencies: SMBRP
Lead Agency: SMBRP
Lead Agency Description: DTSC - Site Cleanup Program
Project Manager: Jose Luevano
Supervisor: Mark Malinowski
Division Branch: Northern California Schools & Santa Susana
Site Code: 204215
Assembly: 14
Senate: 07
Special Program Status: Not reported
Status: No Action Required
Status Date: 07/15/2008
Restricted Use: NO
Funding: School District
Latitude: 38.01913
Longitude: -121.8843
APN: NONE SPECIFIED
Past Use: INCINERATOR - OTHER, PHOTOGRAPHIC PROCESSING, SCHOOL - HIGH SCHOOL
Potential COC: Arsenic, Arsenic, Benzene, Chlordane, Total Chromium (1:6 ratio Cr VI:Cr III, Lead
Confirmed COC: 30001-NO, 30003-NO, 30004-NO, 30005-NO, 30013-NO, No Contaminants found
Potential Description: SOIL
Alias Name: Pittsburg High School
Alias Type: Alternate Name
Alias Name: Pittsburg High School Phase I Modernization - East Campus
Alias Type: Alternate Name
Alias Name: 204215
Alias Type: Project Code (Site Code)
Alias Name: 60000830
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 03/26/2008
Comments: DTSC approved the Phase I with a Phase I Addendum required for the Pittsburg HS Modernization Phase I - East Campus area. A seperate PEA evaluation is to be completed for the North and Main Campuses at a later time.

PITTSBURG HIGH SCHOOL EXPANSION - EAST CAMPUS (Continued) **S118757171**

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Phase 1 Addendum
Completed Date:	07/15/2008
Comments:	DTSC approved the Phase I Addendum with a no further action determination. Lead sampling results were below levels of concern.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Cost Recovery Closeout Memo
Completed Date:	07/15/2008
Comments:	Cost recovery/project closeout memo was approved.
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

V121 **PITTSBURG SENIOR HIGH SCHOOL** **CA ENVIROSTOR** **U001597936**
SSW **250 SCHOOL STREET** **CA SCH** **N/A**
1/2-1 **PITTSBURG, CA 94565** **CA HIST UST**
0.592 mi. **CA NPDES**
3125 ft. **Site 2 of 2 in cluster V** **CA CONTRA COSTA CO. SITE LIST**
CA CIWQS

Relative:
Higher

Actual:
47 ft.

ENVIROSTOR:

Name:	PITTSBURG HIGH SCHOOL - MAIN/NORTH CAMPUS
Address:	250 SCHOOL STREET
City,State,Zip:	PITTSBURG, CA 94565
Facility ID:	60000879
Status:	No Further Action
Status Date:	11/23/2010
Site Code:	204216
Site Type:	School Investigation
Site Type Detailed:	School
Acres:	29.98
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Jose Luevano
Supervisor:	Juan Koponen
Division Branch:	Northern California Schools & Santa Susana
Assembly:	14
Senate:	07
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	School District
Latitude:	38.01913
Longitude:	-121.8843
APN:	086202003
Past Use:	INCINERATOR - OTHER, MAINTENANCE / CLEANING, RAILROAD RIGHT OF WAY, SCHOOL - HIGH SCHOOL, SCHOOL - MIDDLE, TRANSFORMER REPAIR,

PITTSBURG SENIOR HIGH SCHOOL (Continued) **U001597936**

TRANSPORTATION - PIPELINE, UNDERGROUND STORAGE TANKS, VEHICLE MAINTENANCE
Potential COC: Arsenic Chlordane Lead TPH-diesel TPH-gas TPH-MOTOR OIL
Confirmed COC: 30001-NO 30004-NO 30013-NO 31000-NO 30024-NO 30025-NO 3002502-NO
Potential Description: SOIL, SV
Alias Name: 086202003
Alias Type: APN
Alias Name: 204216
Alias Type: Project Code (Site Code)
Alias Name: 60000879
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 06/06/2008
Comments: Rec'd executed agreement from Javier. Sent overnight to District.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 11/16/2010
Comments: DTSC sent a CRU to the accounting unit to summarize costs associated with supplemental site investigation,for Pittsburg

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Workplan
Completed Date: 03/02/2009
Comments: DTSC approved the PEA workplan for implementation.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 08/04/2008
Comments: Phase I ESA completed for Main, North and East Campuses, Pittsburg High School.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 04/13/2009
Comments: DTSC provided field oversight of first day of PEA fieldwork implementation. Observed soil gas sampling activities, tank investigation activities and surface soil sampling.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Tech Memo
Completed Date: 06/23/2009
Comments: DTSC approved the PEA Tech Memo for implementation contingent on collection of additional arsenic samples in play field area of north campus. Note: The approval letter was mistakenly dated for June 24, 2009 (should read June 23, 2009).

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

PITTSBURG SENIOR HIGH SCHOOL (Continued) **U001597936**

Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 04/08/2010
Comments: DTSC approvee the PEA letter with a further action determination

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Tech Memo
Completed Date: 12/01/2009
Comments: DTSC Approved the SSI Tech Memo Workplan

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 12/02/2009
Comments: SSI field work was implemented on Dec 2, 2009.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 01/28/2010
Comments: The additional sampling activities in the area of the suspected UST (Small Storage Shed area), Auto Shop Planter Box (east side), the pole mounted transformer, and Planter Boxes 3, 5, and 6 data is intended to further delineate and/or define impacted areas. The specified work is being carried out pursuant to the previously approved PEA Tech Memo Workplan.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 04/09/2010
Comments: On Apr 5, 2010, DTSC traveled to the site to provided field oversight of housekeeping activities in the area of the Auto Shop, Planter Boxes, and PMT. Housekeeping activities were not implemented due to coordination issues with debris disposal. DTSC was not informed of the cancelation.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 06/08/2010
Comments: DTSC approved the SSI with a no further action determination

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

SCH:

Name: PITTSBURG HIGH SCHOOL - MAIN/NORTH CAMPUS
Address: 250 SCHOOL STREET

PITTSBURG SENIOR HIGH SCHOOL (Continued) **U001597936**

City,State,Zip:	PITTSBURG, CA 94565
Facility ID:	60000879
Site Type:	School Investigation
Site Type Detail:	School
Site Mgmt. Req.:	NONE SPECIFIED
Acres:	29.98
National Priorities List:	NO
Cleanup Oversight Agencies:	SMBRP
Lead Agency:	SMBRP
Lead Agency Description:	DTSC - Site Cleanup Program
Project Manager:	Jose Luevano
Supervisor:	Juan Koponen
Division Branch:	Northern California Schools & Santa Susana
Site Code:	204216
Assembly:	14
Senate:	07
Special Program Status:	Not reported
Status:	No Further Action
Status Date:	11/23/2010
Restricted Use:	NO
Funding:	School District
Latitude:	38.01913
Longitude:	-121.8843
APN:	086202003
Past Use:	INCINERATOR - OTHER, MAINTENANCE / CLEANING, RAILROAD RIGHT OF WAY, SCHOOL - HIGH SCHOOL, SCHOOL - MIDDLE, TRANSFORMER REPAIR, TRANSPORTATION - PIPELINE, UNDERGROUND STORAGE TANKS, VEHICLE MAINTENANCE
Potential COC:	Arsenic, Arsenic, Chlordane, Lead, TPH-diesel, TPH-gas, TPH-MOTOR OIL Not reported
Confirmed COC:	30001-NO, 30004-NO, 30013-NO, 31000-NO, 30024-NO, 30025-NO, 3002502-NO
Potential Description:	SOIL, SV
Alias Name:	086202003
Alias Type:	APN
Alias Name:	204216
Alias Type:	Project Code (Site Code)
Alias Name:	60000879
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Environmental Oversight Agreement
Completed Date:	06/06/2008
Comments:	Rec'd executed agreement from Javier. Sent overnight to District.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Cost Recovery Closeout Memo
Completed Date:	11/16/2010
Comments:	DTSC sent a CRU to the accounting unit to summarize costs associated with supplemental site investigation,for Pittsburg
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Workplan
Completed Date:	03/02/2009

PITTSBURG SENIOR HIGH SCHOOL (Continued) **U001597936**

Comments:	DTSC approved the PEA workplan for implementation.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Other Report
Completed Date:	08/04/2008
Comments:	Phase I ESA completed for Main, North and East Campuses, Pittsburg High School.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Fieldwork
Completed Date:	04/13/2009
Comments:	DTSC provided field oversight of first day of PEA fieldwork implementation. Observed soil gas sampling activities, tank investigation activities and surface soil sampling.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Tech Memo
Completed Date:	06/23/2009
Comments:	DTSC approved the PEA Tech Memo for implementation contingent on collection of additional arsenic samples in play field area of north campus. Note: The approval letter was mistakenly dated for June 24, 2009 (should read June 23, 2009).
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Report
Completed Date:	04/08/2010
Comments:	DTSC approvee the PEA letter with a further action determination
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Supplemental Site Investigation Tech Memo
Completed Date:	12/01/2009
Comments:	DTSC Approved the SSI Tech Memo Workplan
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Fieldwork
Completed Date:	12/02/2009
Comments:	SSI field work was implemented on Dec 2, 2009.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Fieldwork
Completed Date:	01/28/2010
Comments:	The additional sampling activities in the area of the suspected UST (Small Storage Shed area), Auto Shop Planter Box (east side), the pole mounted transformer, and Planter Boxes 3, 5, and 6 data is intended to further delineate and/or define impacted areas. The specified work is being carried out pursuant to the previously approved PEA Tech Memo Workplan.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported

PITTSBURG SENIOR HIGH SCHOOL (Continued) **U001597936**

Completed Document Type: Fieldwork
Completed Date: 04/09/2010
Comments: On Apr 5, 2010, DTSC traveled to the site to provided field oversight of housekeeping activities in the area of the Auto Shop, Planter Boxes, and PMT. Housekeeping activities were not implemented due to coordination issues with debris disposal. DTSC was not informed of the cancelation.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 06/08/2010
Comments: DTSC approved the SSI with a no further action determination

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

HIST UST:
Name: PITTSBURG SENIOR HIGH SCHOOL
Address: 250 SCHOOL STREET
City,State,Zip: PITTSBURG, CA 94565
File Number: 00022E1D
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00022E1D.pdf
Region: STATE
Facility ID: 00000065610
Facility Type: Other
Other Type: PUBLIC SCHOOL DISTRI
Contact Name: JESS LEBER
Telephone: 4154324705
Owner Name: PITTSBURG UNIFIED SCHOOL DISTR
Owner Address: 2000 RAILROAD AVENUE
Owner City,St,Zip: PITTSBURG, CA 94565
Total Tanks: 0001

Tank Num: 001
Container Num: 0005
Year Installed: 1974
Tank Capacity: 00000300
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

Click here for Geo Tracker PDF:

NPDES:
Name: PITTSBURG HIGH SCHOOL NORTH ANNEX
Address: 250 SCHOOL STREET
City,State,Zip: PITTSBURG, CA 94565

PITTSBURG SENIOR HIGH SCHOOL (Continued) **U001597936**

Facility Status:	Not reported
NPDES Number:	Not reported
Region:	Not reported
Agency Number:	Not reported
Regulatory Measure ID:	Not reported
Place ID:	Not reported
Order Number:	Not reported
WDID:	2 07C378889
Regulatory Measure Type:	Construction
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Discharge Address:	Not reported
Discharge Name:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Status:	Terminated
Status Date:	09/29/2017
Operator Name:	Pittsburg Unified School District
Operator Address:	2000 Railroad Avenue
Operator City:	Pittsburg
Operator State:	California
Operator Zip:	94565

NPDES as of 03/2018:

NPDES Number:	CAS000002
Status:	Terminated
Agency Number:	0
Region:	2
Regulatory Measure ID:	481633
Order Number:	2009-0009-DWQ
Regulatory Measure Type:	Enrollee
Place ID:	Not reported
WDID:	2 07C378889
Program Type:	Construction
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	02/07/2017
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	09/29/2017
Discharge Name:	Pittsburg Unified School District
Discharge Address:	2000 Railroad Avenue
Discharge City:	Pittsburg
Discharge State:	California
Discharge Zip:	94565
Received Date:	Not reported
Processed Date:	Not reported
Status:	Not reported
Status Date:	Not reported
Place Size:	Not reported
Place Size Unit:	Not reported
Contact:	Not reported
Contact Title:	Not reported
Contact Phone:	Not reported
Contact Phone Ext:	Not reported
Contact Email:	Not reported

PITTSBURG SENIOR HIGH SCHOOL (Continued) **U001597936**

Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported
Operator Contact:	Not reported
Operator Contact Title:	Not reported
Operator Contact Phone:	Not reported
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Not reported
Operator Type:	Not reported
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	Not reported
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	Not reported
Receiving Water Name:	Not reported
Certifier:	Not reported
Certifier Title:	Not reported
Certification Date:	Not reported
Primary Sic:	Not reported
Secondary Sic:	Not reported
Tertiary Sic:	Not reported
NPDES Number:	Not reported
Status:	Not reported
Agency Number:	Not reported
Region:	2
Regulatory Measure ID:	481633
Order Number:	Not reported
Regulatory Measure Type:	Construction
Place ID:	Not reported
WDID:	2 07C378889
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported

PITTSBURG SENIOR HIGH SCHOOL (Continued) **U001597936**

Effective Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Received Date:	12/16/2016
Processed Date:	02/07/2017
Status:	Active
Status Date:	02/07/2017
Place Size:	1.7
Place Size Unit:	Acres
Contact:	Enrique Palacios
Contact Title:	Not reported
Contact Phone:	925-473-2302
Contact Phone Ext:	Not reported
Contact Email:	epalacios@pittsburg.k12.ca.us
Operator Name:	Pittsburg Unified School District
Operator Address:	2000 Railroad Avenue
Operator City:	Pittsburg
Operator State:	California
Operator Zip:	94565
Operator Contact:	Enrique Palacios
Operator Contact Title:	Not reported
Operator Contact Phone:	925-473-2302
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	epalacios@pittsburg.k12.ca.us
Operator Type:	Special District
Developer:	Pittsburg Unified School District
Developer Address:	2000 Railroad Avenue
Developer City:	Pittsburg
Developer State:	California
Developer Zip:	94565
Developer Contact:	Enrique Palacios
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	N
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	N
Constype Below Ground Ind:	N
Constype Cable Line Ind:	N
Constype Comm Line Ind:	N
Constype Commertial Ind:	N
Constype Electrical Line Ind:	N
Constype Gas Line Ind:	N
Constype Industrial Ind:	N
Constype Other Description:	School
Constype Other Ind:	Y
Constype Recons Ind:	N
Constype Residential Ind:	N
Constype Transport Ind:	N
Constype Utility Description:	Not reported
Constype Utility Ind:	N
Constype Water Sewer Ind:	N
Dir Discharge Uswater Ind:	N

PITTSBURG SENIOR HIGH SCHOOL (Continued) **U001597936**

Receiving Water Name:	Kirker Creek
Certifier:	Enrique Palacios
Certifier Title:	Deputy Superintendent
Certification Date:	16-DEC-16
Primary Sic:	Not reported
Secondary Sic:	Not reported
Tertiary Sic:	Not reported

CONTRA COSTA CO. SITE LIST:

Name:	PITTSBURG HIGH SCHOOL
Address:	250 SCHOOL ST
City:	PITTSBURG
Facility ID:	FA0032570
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	HWG: LESS THAN 5 TONS/YEAR
Region:	CONTRA COSTA
Cupa Number:	770012

Name:	PITTSBURG HIGH SCHOOL
Address:	250 SCHOOL ST
City:	PITTSBURG
Facility ID:	FA0032570
Billing Status:	INACTIVE, NON-BILLABLE
Program Status:	CONTRA COSTA CO. SITE LIST
Program/Elements:	UNDERGROUND STORAGE TANK SITE
Region:	CONTRA COSTA
Cupa Number:	770012

CIWQS:

Name:	PITTSBURG HIGH SCHOOL RECONSTRUCTION
Address:	250 SCHOOL ST
City,State,Zip:	PITTSBURG, CA 94565
Agency:	Pittsburg Unified School District
Agency Address:	2000 Railroad Avenue, Pittsburg, CA 94565
Place/Project Type:	Construction
SIC/NAICS:	Not reported
Region:	2
Program:	CONSTW
Regulatory Measure Status:	Terminated
Regulatory Measure Type:	Storm water construction
Order Number:	2009-0009-DWQ
WDID:	2 07C354205
NPDES Number:	CAS000002
Adoption Date:	01/01/1900
Effective Date:	12/18/2008
Termination Date:	02/04/2014
Expiration/Review Date:	01/01/1900
Design Flow:	Not reported
Major/Minor:	Not reported
Complexity:	Not reported
TTWQ:	Not reported
Enforcement Actions within 5 years:	0
Violations within 5 years:	0
Latitude:	Not reported

PITTSBURG SENIOR HIGH SCHOOL (Continued) **U001597936**

Longitude: Not reported

122
ESE
1/2-1
0.626 mi.
3303 ft.

PG AND E GAS PLANT PITTSBURG **EDR MGP** **1008407734**
APPROX 1/2 MILE E HARBOR /8TH **N/A**
PITTSBURG, CA 94565

Relative:
Higher

Actual:
15 ft.

Manufactured Gas Plants:
Alternate Name:COAST COUNTIES GAS AND ELECTRIC; CONTRA COSTA GAS CO. No additional information available

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123
West
1/2-1
0.874 mi.
4615 ft.

TRANS BAY CABLE CONVERTER STATION **CA ENVIROSTOR** **S108195948**
570 TO 620 & 650 W. 10TH STREET **CA VCP** **N/A**
PITTSBURG, CA 94565 **CA DEED**

Relative:
Lower

Actual:
7 ft.

ENVIROSTOR:

Name:	TRANS BAY CABLE CONVERTER STATION
Address:	570 TO 620 & 650 W. 10TH STREET
City,State,Zip:	PITTSBURG, CA 94565
Facility ID:	60000487
Status:	Certified O&M - Land Use Restrictions Only
Status Date:	05/18/2010
Site Code:	201725
Site Type:	Voluntary Cleanup
Site Type Detailed:	Voluntary Cleanup
Acres:	5
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Ryan Ahrling
Supervisor:	Whitney Smith
Division Branch:	Cleanup Berkeley
Assembly:	14
Senate:	07
Special Program:	Voluntary Cleanup Program
Restricted Use:	YES
Site Mgmt Req:	NONE SPECIFIED
Funding:	Responsible Party
Latitude:	38.03046
Longitude:	-121.8965
APN:	085-270-018, 085-270-019, 085-270-025, 085270018, 085270019, 085270025 Not reported
Past Use:	JUNKYARD, VEHICLE MAINTENANCE
Potential COC:	Arsenic Total Chromium (1:6 ratio Cr VI:Cr III Lead Polynuclear aromatic hydrocarbons (PAHs TPH-diesel TPH-gas TPH-MOTOR OIL
Confirmed COC:	Polynuclear aromatic hydrocarbons (PAHs TPH-diesel TPH-gas Arsenic Total Chromium (1:6 ratio Cr VI:Cr III Lead TPH-MOTOR OIL
Potential Description:	SOIL
Alias Name:	085-270-018
Alias Type:	APN
Alias Name:	085-270-019
Alias Type:	APN
Alias Name:	085-270-025
Alias Type:	APN

TRANS BAY CABLE CONVERTER STATION (Continued) **S108195948**

Alias Name: 085270018
Alias Type: APN
Alias Name: 085270019
Alias Type: APN
Alias Name: 085270025
Alias Type: APN
Alias Name: 110033609637
Alias Type: EPA (FRS #)
Alias Name: 201725
Alias Type: Project Code (Site Code)
Alias Name: 60000487
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Amendment - Order/Agreement
Completed Date: 12/10/2010
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction - Amendment
Completed Date: 05/13/2010
Comments: October 30, 2009 Land Use Covenant for Parcel 085-270-025 was replaced and superseded by Land Use Covenant executed May 13, 2010 to correct property ownership information. May 13, 2010 Land Use Covenant was recorded on May 17, 2010.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 02/26/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 01/10/2017
Comments: Report is acceptable.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 09/08/2017
Comments: DTSC REVEIWED REORT AND HSS NO COMMENTS.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 08/21/2019
Comments: Annual Inspection Report 2018 approved via email on 8/21/2019

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 01/04/2011
Comments: Not reported

TRANS BAY CABLE CONVERTER STATION (Continued) **S108195948**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 01/26/2012
Comments: Completed.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 01/18/2013
Comments: This report documents where cracks, breaks, erosion, or other conditions in the cap may warrant repair (or replacement) to restrict contaminated soil from becoming exposed at the surface. All surfaces were in good condition. DTSC supports the recommendation to patch areas A3 and A4 to prevent further depressions.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 02/06/2014
Comments: The floors and pavements have a few isolated superficial cracks which appear not to penetrate the Cap. Therefore, the remedy is functioning as intended.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: *Correspondence - Received
Completed Date: 12/06/2010
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Soils Management Plan
Completed Date: 06/17/2011
Comments: Work was completed.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Workplan
Completed Date: 06/13/2013
Comments: Approved the Revised Workplan, Planned Water Line Installation

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Soils Management Plan
Completed Date: 02/25/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 01/21/2015
Comments: The construction was completed approximately in January 2015.This activity has no document.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

TRANS BAY CABLE CONVERTER STATION (Continued) **S108195948**

Completed Document Type: Technical Workplan
Completed Date: 10/22/2013
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Workplan
Completed Date: 07/17/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Application
Completed Date: 01/30/2007
Comments: Voluntary Cleanup Program application submitted. Determined to be incomplete as site to be considered not sufficiently defined.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Workplan
Completed Date: 07/26/2007
Comments: Removal Action Workplan approved for public comment. Public comment period to run from 6/22/2007 through 7/23/2007.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Public Notice
Completed Date: 06/18/2007
Comments: Final Public Notice sent to consultant for placement in Contra Costa Times.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fact Sheets
Completed Date: 06/18/2007
Comments: Formatted Fact Sheet for the Removal Action Workplan sent to the consultant for distribution to mailing list.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fact Sheets
Completed Date: 03/30/2007
Comments: Baseline Community Survey cover letter and survey approved by DTSC. URS to mail out by 4/2/2007 to approved mailing list. Responses requested by 4/20/2007.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Community Profile
Completed Date: 05/14/2007
Comments: Community Profile Report approved by Public Participation Specialist.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 03/31/2008
Comments: In response to repeated requests, consultant notified on 4/15/2008

TRANS BAY CABLE CONVERTER STATION (Continued) **S108195948**

that field work was completed on 3/31/2008.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Action Completion Report
Completed Date: 03/05/2009
Comments: Implementation Report documents the removal of soil containing lead, PAHs and/or diesel and motor-oil range petroleum hydrocarbons above the Site's commercial/industrial cleanup goals. Approximately 1,195 cubic yards (1,673 tons) of California hazardous waste soils and 1,633 cubic yards (2,286 tons) of Class II non-hazardous soils were removed and disposed offsite.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Workplan
Completed Date: 10/23/2007
Comments: Minor modification to Removal Action Workplan approved to allow tipping soil from truck containers into specialty railcars at a transfer facility at Pier 96 in San Francisco. DTSC had required revision of the draft RAW prior to issuance of the RAW for public comment to remove this option. A concurrent investigation by the Hazardous Waste Management Program and the Office of Legal Affairs to clarify whether the operations at the facility required a transfer facility permit. This investigation determined that the facility was already subject to federal hazardous waste management regulations as a federally certified railroad operation. Therefore, under the doctrine of federal preemption of state law, the facility did not require a transfer facility permit from DTSC to tip soil from truck containers into railcars.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: 5 Year Review Reports
Completed Date: 02/26/2016
Comments: The Report concluded that the remedy implemented at the Site was functioning as originally intended, the exposure assessments, toxicity data, cleanup levels and remedial action objectives used at the time of the remedy selection were still valid, and no information had come to light that could call into question the protectiveness of the remedy.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Standard Voluntary Agreement
Completed Date: 03/02/2007
Comments: VCA signed for oversight of the site characterization and cleanup of the site and for oversight for the preparation of a soil management plan for the offsite cable route.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction
Completed Date: 05/17/2010
Comments: Not reported

Completed Area Name: PROJECT WIDE

TRANS BAY CABLE CONVERTER STATION (Continued) **S108195948**

Completed Sub Area Name: Not reported
Completed Document Type: CEQA - Responsible Agency Review
Completed Date: 07/26/2007
Comments: RAW approved and CEQA Notice of Determination signed. Signed NOD, Statement of Findings, Findings of Fact and Responsible Agency Checklist sent to HQ for filing.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction
Completed Date: 11/17/2009
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Certification
Completed Date: 05/18/2010
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 05/04/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction - Site Inspection/Visit
Completed Date: 04/26/2011
Comments: The Report was completed earlier than planned.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction - Site Inspection/Visit
Completed Date: 05/08/2012
Comments: Completed 5/8/2012.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction - Site Inspection/Visit
Completed Date: 06/17/2013
Comments: Upon observing the current site conditions, DTSC concludes that the selected remedial action remains protective of human health and the environment. Impacted soil remains under the asphalt surface, which is in good shape and remains protective.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction - Site Inspection/Visit
Completed Date: 08/18/2014
Comments: DTSC concludes that the selected remedial action remains protective of human health and the environment. No prohibited uses for the Property were observed. Impacted soil in the Constructed Area remains under the asphalt surface, which is in good shape and remains protective. In the area of new constructions, Trans Bay Cable is following provisions of the Deed Restrictions to ensure protection of human health and the environment.

TRANS BAY CABLE CONVERTER STATION (Continued) **S108195948**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/01/2014
Comments: Cost Estimates Cover Letter for FSY 2014/2015

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/01/2015
Comments: DTSC Final Cost Estimate Letter

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 08/04/2010
Comments: Sent a cost estimate of approximately 75 hours for all staff for 07/01/2010 to 06/30/2011.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/04/2011
Comments: Completed.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/11/2012
Comments: Completed.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/13/2013
Comments: Annual Cost Estimates and Schedule for fiscal year 2013-2014 sent on 9/13/2013

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/07/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/20/2017
Comments: COST ESTMIATE COMLETED AND LETTER SENT.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/29/2020
Comments: Not reported

Completed Area Name: PROJECT WIDE

TRANS BAY CABLE CONVERTER STATION (Continued) **S108195948**

Completed Sub Area Name: Not reported
Completed Document Type: Pre-HARP Form
Completed Date: 05/30/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 02/20/2020
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Public Notice
Completed Date: 03/30/2016
Comments: Completed public notice was published and distributed by mail to the mailing list.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Soils Management Plan
Completed Date: 12/05/2016
Comments: DTSC APPROVAL, SOIL MANAGEMENT PLAN FOR REMODELLING

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 12/05/2016
Comments: DTSC APPROVAL OF SOILS AMPLING SUMMARY VIA EMAIL

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 08/27/2018
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Soils Management Plan
Completed Date: 10/01/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Land Use Restriction Monitoring Report
Completed Date: 01/15/2010
Comments: An annual inspection of the property was conducted by Trans Bay Cable's consultant on January 8, 2010 to verify that the Property is being utilized in compliance with the land use covenant requirements. No violations were noted. A photographic log was submitted as part of the inspection report.

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: PROJECT WIDE

TRANS BAY CABLE CONVERTER STATION (Continued) **S108195948**

Schedule Sub Area Name: Not reported
Schedule Document Type: 5 Year Review Reports
Schedule Due Date: 05/16/2021
Schedule Revised Date: Not reported

VCP:
Name: TRANS BAY CABLE CONVERTER STATION
Address: 570 TO 620 & 650 W. 10TH STREET
City,State,Zip: PITTSBURG, CA 94565
Facility ID: 60000487
Site Type: Voluntary Cleanup
Site Type Detail: Voluntary Cleanup
Site Mgmt. Req.: NONE SPECIFIED
Acres: 5
National Priorities List: NO
Cleanup Oversight Agencies: SMBRP
Lead Agency: SMBRP
Lead Agency Description: DTSC - Site Cleanup Program
Project Manager: Ryan Ahrling
Supervisor: Whitney Smith
Division Branch: Cleanup Berkeley
Site Code: 201725
Assembly: 14
Senate: 07
Special Programs Code: Voluntary Cleanup Program
Status: Certified O&M - Land Use Restrictions Only
Status Date: 05/18/2010
Restricted Use: YES
Funding: Responsible Party
Lat/Long: 38.03046 / -121.8965
APN: 085-270-018, 085-270-019, 085-270-025, 085270018, 085270019, 085270025
Not reported
Past Use: JUNKYARD, VEHICLE MAINTENANCE
Potential COC: 30001, 30005, 30013, 30019, 30024, 30025, 3002502
Confirmed COC: 30019,30024,30025,30001,30005,30013,3002502
Potential Description: SOIL
Alias Name: 085-270-018
Alias Type: APN
Alias Name: 085-270-019
Alias Type: APN
Alias Name: 085-270-025
Alias Type: APN
Alias Name: 085270018
Alias Type: APN
Alias Name: 085270019
Alias Type: APN
Alias Name: 085270025
Alias Type: APN
Alias Name: 110033609637
Alias Type: EPA (FRS #)
Alias Name: 201725
Alias Type: Project Code (Site Code)
Alias Name: 60000487
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE

TRANS BAY CABLE CONVERTER STATION (Continued) **S108195948**

Completed Sub Area Name: Not reported
Completed Document Type: Amendment - Order/Agreement
Completed Date: 12/10/2010
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction - Amendment
Completed Date: 05/13/2010
Comments: October 30, 2009 Land Use Covenant for Parcel 085-270-025 was replaced and superseded by Land Use Covenant executed May 13, 2010 to correct property ownership information. May 13, 2010 Land Use Covenant was recorded on May 17, 2010.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 02/26/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 01/10/2017
Comments: Report is acceptable.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 09/08/2017
Comments: DTSC REVEIWED REORT AND HSS NO COMMENTS.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 08/21/2019
Comments: Annual Inspection Report 2018 approved via email on 8/21/2019

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 01/04/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 01/26/2012
Comments: Completed.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 01/18/2013
Comments: This report documents where cracks, breaks, erosion, or other conditions in the cap may warrant repair (or replacement) to restrict contaminated soil from becoming exposed at the surface. All surfaces

TRANS BAY CABLE CONVERTER STATION (Continued) **S108195948**

were in good condition. DTSC supports the recommendation to patch areas A3 and A4 to prevent further depressions.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 02/06/2014
Comments: The floors and pavements have a few isolated superficial cracks which appear not to penetrate the Cap. Therefore, the remedy is functioning as intended.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: *Correspondence - Received
Completed Date: 12/06/2010
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Soils Management Plan
Completed Date: 06/17/2011
Comments: Work was completed.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Workplan
Completed Date: 06/13/2013
Comments: Approved the Revised Workplan, Planned Water Line Installation

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Soils Management Plan
Completed Date: 02/25/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 01/21/2015
Comments: The construction was completed approximately in January 2015.This activity has no document.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Workplan
Completed Date: 10/22/2013
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Workplan
Completed Date: 07/17/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Application

TRANS BAY CABLE CONVERTER STATION (Continued) **S108195948**

Completed Date:	01/30/2007
Comments:	Voluntary Cleanup Program application submitted. Determined to be incomplete as site to be considered not sufficiently defined.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Removal Action Workplan
Completed Date:	07/26/2007
Comments:	Removal Action Workplan approved for public comment. Public comment period to run from 6/22/2007 through 7/23/2007.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Public Notice
Completed Date:	06/18/2007
Comments:	Final Public Notice sent to consultant for placement in Contra Costa Times.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Fact Sheets
Completed Date:	06/18/2007
Comments:	Formatted Fact Sheet for the Removal Action Workplan sent to the consultant for distribution to mailing list.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Fact Sheets
Completed Date:	03/30/2007
Comments:	Baseline Community Survey cover letter and survey approved by DTSC. URS to mail out by 4/2/2007 to approved mailing list. Responses requested by 4/20/2007.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Community Profile
Completed Date:	05/14/2007
Comments:	Community Profile Report approved by Public Participation Specialist.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Fieldwork
Completed Date:	03/31/2008
Comments:	In response to repeated requests, consultant notified on 4/15/2008 that field work was completed on 3/31/2008.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Remedial Action Completion Report
Completed Date:	03/05/2009
Comments:	Implementation Report documents the removal of soil containing lead, PAHs and/or diesel and motor-oil range petroleum hydrocarbons above the Site's commercial/industrial cleanup goals. Approximately 1,195 cubic yards (1,673 tons) of California hazardous waste soils and 1,633 cubic yards (2,286 tons) of Class II non-hazardous soils were removed and disposed offsite.

TRANS BAY CABLE CONVERTER STATION (Continued) **S108195948**

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Removal Action Workplan
Completed Date:	10/23/2007
Comments:	Minor modification to Removal Action Workplan approved to allow tipping soil from truck containers into specialty railcars at a transfer facility at Pier 96 in San Francisco. DTSC had required revision of the draft RAW prior to issuance of the RAW for public comment to remove this option. A concurrent investigation by the Hazardous Waste Management Program and the Office of Legal Affairs to clarify whether the operations at the facility required a transfer facility permit. This investigation determined that the facility was already subject to federal hazardous waste management regulations as a federally certified railroad operation. Therefore, under the doctrine of federal preemption of state law, the facility did not require a transfer facility permit from DTSC to tip soil from truck containers into railcars.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	5 Year Review Reports
Completed Date:	02/26/2016
Comments:	The Report concluded that the remedy implemented at the Site was functioning as originally intended, the exposure assessments, toxicity data, cleanup levels and remedial action objectives used at the time of the remedy selection were still valid, and no information had come to light that could call into question the protectiveness of the remedy.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Standard Voluntary Agreement
Completed Date:	03/02/2007
Comments:	VCA signed for oversight of the site characterization and cleanup of the site and for oversight for the preparation of a soil management plan for the offsite cable route.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Land Use Restriction
Completed Date:	05/17/2010
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	CEQA - Responsible Agency Review
Completed Date:	07/26/2007
Comments:	RAW approved and CEQA Notice of Determination signed. Signed NOD, Statement of Findings, Findings of Fact and Responsible Agency Checklist sent to HQ for filing.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Land Use Restriction
Completed Date:	11/17/2009
Comments:	Not reported

TRANS BAY CABLE CONVERTER STATION (Continued) **S108195948**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Certification
Completed Date: 05/18/2010
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 05/04/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction - Site Inspection/Visit
Completed Date: 04/26/2011
Comments: The Report was completed earlier than planned.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction - Site Inspection/Visit
Completed Date: 05/08/2012
Comments: Completed 5/8/2012.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction - Site Inspection/Visit
Completed Date: 06/17/2013
Comments: Upon observing the current site conditions, DTSC concludes that the selected remedial action remains protective of human health and the environment. Impacted soil remains under the asphalt surface, which is in good shape and remains protective.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction - Site Inspection/Visit
Completed Date: 08/18/2014
Comments: DTSC concludes that the selected remedial action remains protective of human health and the environment. No prohibited uses for the Property were observed. Impacted soil in the Constructed Area remains under the asphalt surface, which is in good shape and remains protective. In the area of new constructions, Trans Bay Cable is following provisions of the Deed Restrictions to ensure protection of human health and the environment.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/01/2014
Comments: Cost Estimates Cover Letter for FSY 2014/2015

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/01/2015
Comments: DTSC Final Cost Estimate Letter

TRANS BAY CABLE CONVERTER STATION (Continued) **S108195948**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 08/04/2010
Comments: Sent a cost estimate of approximately 75 hours for all staff for 07/01/2010 to 06/30/2011.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/04/2011
Comments: Completed.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/11/2012
Comments: Completed.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/13/2013
Comments: Annual Cost Estimates and Schedule for fiscal year 2013-2014 sent on 9/13/2013

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/07/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/20/2017
Comments: COST ESTMIATE COMLETED AND LETTER SENT.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/29/2020
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Pre-HARP Form
Completed Date: 05/30/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 02/20/2020
Comments: Not reported

Completed Area Name: PROJECT WIDE

TRANS BAY CABLE CONVERTER STATION (Continued) **S108195948**

Completed Sub Area Name: Not reported
Completed Document Type: Public Notice
Completed Date: 03/30/2016
Comments: Completed public notice was published and distributed by mail to the mailing list.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Soils Management Plan
Completed Date: 12/05/2016
Comments: DTSC APPROVAL, SOIL MANAGEMENT PLAN FOR REMODELLING

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 12/05/2016
Comments: DTSC APPROVAL OF SOILS AMPLING SUMMARY VIA EMAIL

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 08/27/2018
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Soils Management Plan
Completed Date: 10/01/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Land Use Restriction Monitoring Report
Completed Date: 01/15/2010
Comments: An annual inspection of the property was conducted by Trans Bay Cable's consultant on January 8, 2010 to verify that the Property is being utilized in compliance with the land use covenant requirements. No violations were noted. A photographic log was submitted as part of the inspection report.

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: PROJECT WIDE
Schedule Sub Area Name: Not reported
Schedule Document Type: 5 Year Review Reports
Schedule Due Date: 05/16/2021
Schedule Revised Date: Not reported

DEED:
Name: TRANS BAY CABLE CONVERTER STATION
Address: 570 TO 620 & 650 W. 10TH STREET
City,State,Zip: PITTSBURG, CA 94565
Envirostor ID: 60000487
Area: PROJECT WIDE
Sub Area: Not reported

TRANS BAY CABLE CONVERTER STATION (Continued) **S108195948**

Site Type: VOLUNTARY CLEANUP
Status: CERTIFIED O&M - LAND USE RESTRICTIONS ONLY
Agency: Not reported
Covenant Uploaded: Not reported
Deed Date(s): Not reported
File Name: Envirostor Land Use Restrictions

Name: TRANS BAY CABLE CONVERTER STATION
Address: 570 TO 620 & 650 W. 10TH STREET
City,State,Zip: PITTSBURG, CA 94565
Envirostor ID: 60000487
Area: PROJECT WIDE
Sub Area: Not reported
Site Type: VOLUNTARY CLEANUP
Status: CERTIFIED O&M - LAND USE RESTRICTIONS ONLY
Agency: Not reported
Covenant Uploaded: Not reported
Deed Date(s): Not reported
File Name: Envirostor Land Use Restrictions

Name: TRANS BAY CABLE CONVERTER STATION
Address: 570 TO 620 & 650 W. 10TH STREET
City,State,Zip: PITTSBURG, CA 94565
Envirostor ID: 60000487
Area: PROJECT WIDE
Sub Area: Not reported
Site Type: VOLUNTARY CLEANUP
Status: CERTIFIED O&M - LAND USE RESTRICTIONS ONLY
Agency: Not reported
Covenant Uploaded: Not reported
Deed Date(s): Not reported
File Name: Envirostor Land Use Restrictions

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124 West 1/2-1 0.900 mi. 4754 ft. **PG&E PITTSBURG POWER PLANT** **CA ENVIROSTOR** **S105628363**
595 WEST 10TH STREET **N/A**
PITTSBURG, CA 94565

Relative: Lower
Actual: 9 ft.

ENVIROSTOR:
Name: PG&E PITTSBURG POWER PLANT
Address: 595 WEST 10TH STREET
City,State,Zip: PITTSBURG, CA 94565
Facility ID: 07490048
Status: No Action Required
Status Date: 11/15/2016
Site Code: Not reported
Site Type: Evaluation
Site Type Detailed: Evaluation
Acres: 2.1
NPL: NO
Regulatory Agencies: NONE SPECIFIED
Lead Agency: NONE SPECIFIED
Program Manager: Not reported
Supervisor: Barbara Cook
Division Branch: Cleanup Berkeley
Assembly: 14
Senate: 07

PG&E PITTSBURG POWER PLANT (Continued) **S105628363**

Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: Responsible Party
Latitude: 38.03050
Longitude: -121.8966
APN: 999-135-002
Past Use: NONE SPECIFIED
Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: SOUTHERN ENERGY DELTA
Alias Type: Alternate Name
Alias Name: 999-135-002
Alias Type: APN
Alias Name: CAT080011695
Alias Type: EPA Identification Number
Alias Name: 07490048
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 01/30/2001
Comments: Completed PEA. A Preliminary Assessment for the site was completed under the US EPA PA/SI grant. The assessment found that this site is currently a RCRA permitted facility and that other soil and groundwater contamination is being addressed under corrective action.

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

W125 **NRG DELTA, LLC** **CA ENVIROSTOR** **U001597931**
West **696 W 10TH STREET** **CA CERS HAZ WASTE** **N/A**
1/2-1 **PITTSBURG, CA 94565** **CA HIST UST**
0.981 mi. **CA CERS TANKS**
5182 ft. **Site 1 of 3 in cluster W** **CA CHMIRS**
CA EMI
Relative: Lower **CA Financial Assurance**
CA ICE
Actual: 8 ft. **CA HWP**
CA CONTRA COSTA CO. SITE LIST
CA CERS

ENVIROSTOR:
Name: PG&E SHELL POND/CARBON BLACK AREA AND POWER PLANT
Address: 696 W 10TH ST
City,State,Zip: PITTSBURG, CA 945651806
Facility ID: 80001834
Status: Active

NRG DELTA, LLC (Continued) **U001597931**

Status Date:	01/01/2008
Site Code:	202260
Site Type:	Corrective Action
Site Type Detailed:	Corrective Action
Acres:	2029.11
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	WM
Program Manager:	Nancy Tu
Supervisor:	Whitney Smith
Division Branch:	Cleanup Berkeley
Assembly:	14
Senate:	07
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	Not reported
Latitude:	38.02945
Longitude:	-121.8984
APN:	096-100-020, 098-250-013, 098-260-001, 098-260-003
Past Use:	MANUFACTURING - CHEMICALS, HAZARDOUS WASTE TREATMENT, LANDFILL - HAZARDOUS WASTE, MANUFACTURING - PETROLEUM, WASTE - INDUSTRIAL TREATMENT FACILITY, WASTE WATER PONDS, LANDFILL - HAZARDOUS WASTE, MANUFACTURING - PETROLEUM, WASTE - INDUSTRIAL TREATMENT FACILITY, WASTE WATER PONDS, TRANSFER STATION, HAZARDOUS WASTE STORAGE - TANKS/CONTAINERS, HAZARDOUS WASTE TREATMENT, WASTE - INDUSTRIAL WASTE LINE, WASTE WATER PONDS, ELECTRIC GENERATION/SUBSTATION
Potential COC:	Arsenic Lead Mercury (elemental Polynuclear aromatic hydrocarbons (PAHs Cadmium and compounds Lead, Organic (tetraethyl lead Polynuclear aromatic hydrocarbons (PAHs Zinc Arsenic Lead Mercury (elemental Polynuclear aromatic hydrocarbons (PAHs Cyanide (free Arsenic Lead Polynuclear aromatic hydrocarbons (PAHs TPH-diesel TPH-gas TPH-JET FUEL TPH-MOTOR OIL Chromium III Xylenes Benzene Total Chromium (1:6 ratio Cr VI:Cr III Lead Mercury (elemental TPH-diesel TPH-gas TPH-MOTOR OIL Benzene Total Chromium (1:6 ratio Cr VI:Cr III Lead Perchlorate TPH-diesel TPH-gas TPH-JET FUEL TPH-MOTOR OIL Benzene Lead Mercury (elemental TPH-gas TPH-MOTOR OIL
Confirmed COC:	30001-NO 30019-NO 30160-NO 30013-NO Mercury (elemental Arsenic Polynuclear aromatic hydrocarbons (PAHs TPH-diesel TPH-gas Lead Arsenic Lead Mercury (elemental Polynuclear aromatic hydrocarbons (PAHs Polynuclear aromatic hydrocarbons (PAHs Lead, Organic (tetraethyl lead Cadmium and compounds Zinc Lead Mercury (elemental TPH-gas TPH-MOTOR OIL Lead Mercury (elemental TPH-diesel TPH-gas TPH-MOTOR OIL 30003-NO Lead 30017-NO 30005-NO TPH-diesel TPH-gas TPH-JET FUEL TPH-MOTOR OIL
Potential Description:	OTH, SED, SOIL, SURFW, CSS, SED, SOIL, SURFW, SED, SOIL, SURFW, OTH, SED, SOIL, SURFW, OTH, SED, SOIL, SV
Alias Name:	Mirant Delta, LLC
Alias Type:	Alternate Name
Alias Name:	PG&E
Alias Type:	Alternate Name
Alias Name:	096-100-020
Alias Type:	APN
Alias Name:	098-250-013
Alias Type:	APN
Alias Name:	098-260-001
Alias Type:	APN

NRG DELTA, LLC (Continued) **U001597931**

Alias Name: 098-260-003
Alias Type: APN
Alias Name: CAT080011695
Alias Type: EPA Identification Number
Alias Name: SL372221169
Alias Type: GeoTracker Global ID
Alias Name: T10000000106
Alias Type: GeoTracker Global ID
Alias Name: 200187
Alias Type: Project Code (Site Code)
Alias Name: 202260
Alias Type: Project Code (Site Code)
Alias Name: 80001834
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: CEQA - Initial Study/ Environmental Impact Report
Completed Date: 06/15/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Historical Operating Permit Authority
Completed Date: 01/20/1995
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Amendment - Order/Agreement
Completed Date: 02/03/2010
Comments: Order modification temporarily addressed by DTSC authorizing RP to not comply with section in the order requiring water circulation.

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMU 4.18 Shell Pond
Completed Document Type: Technical Report
Completed Date: 05/17/2017
Comments: The document was submitted to the Water Board to review and sent to DTSC for record keeping.

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMU 4.18 Shell Pond
Completed Document Type: Pilot Study/Treatability Workplan
Completed Date: 06/02/2017
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Monitoring Report
Completed Date: 07/17/2017
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Pilot Study/Treatability Workplan
Completed Date: 08/16/2017

NRG DELTA, LLC (Continued) **U001597931**

Comments: Not reported

Completed Area Name: Pittsburg Power Plant
Completed Sub Area Name: Not reported
Completed Document Type: RFI Report
Completed Date: 01/10/2019
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Monitoring Report
Completed Date: 08/24/2018
Comments: Not reported

Completed Area Name: Pittsburg Power Plant
Completed Sub Area Name: Not reported
Completed Document Type: Risk Assessment Report
Completed Date: 07/07/2020
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: CEQA - Initial Study/ Mitigated Neg. Dec. (MND)
Completed Date: 06/17/2011
Comments: Notice of Determination Filed on Friday June 17, 2011.

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Consent Agreement
Completed Date: 01/22/2004
Comments: Corrective Action Consent Agreement signed by DTSC.

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Risk Assessment Report
Completed Date: 11/03/2017
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Technical Workplan
Completed Date: 03/09/2018
Comments: This Work Plan is conditionally approved. PG&E needs to get approval about the timing to implement the Work Plan.

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Monitoring Report
Completed Date: 03/09/2018
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Community Profile
Completed Date: 06/26/2018
Comments: Not reported

NRG DELTA, LLC (Continued) **U001597931**

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Pilot Study/Treatability Workplan
Completed Date: 06/14/2018
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Monitoring Report
Completed Date: 10/29/2018
Comments: DTSC approves the pond monitoring report.

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Public Notice
Completed Date: 08/22/2019
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Fact Sheets
Completed Date: 08/22/2019
Comments: Not reported

Completed Area Name: Pittsburg Power Plant
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 02/19/2020
Comments: The Memo describes the draft conceptual site model for the Pittsburg Power Plant (CSM). The CSM is subject to change based on the upcoming risk assessments.

Completed Area Name: Pittsburg Power Plant
Completed Sub Area Name: Not reported
Completed Document Type: Risk Assessment Workplan
Completed Date: 11/06/2019
Comments: HHRA WP approved with modifications described in RTC.

Completed Area Name: Pittsburg Power Plant
Completed Sub Area Name: Not reported
Completed Document Type: Risk Assessment Report
Completed Date: 07/16/2020
Comments: The Ecological Risk Assessment (ERA) did not identify any chemicals of ecological concerns for the soil or groundwater exposure pathways listed. The Site is recommended for no further evaluation for ecological exposures. However, the potential for erosion of surface soil and transport as sediment to surface water and aquatic receptors due to potential future sea level was not considered a pathway in the Revised ERA. This issue will be resolved via one or a combination of the following: tracking in 5-year reviews; Evaluation in future ERAs; Corrective Measure Implementation requirements; and Future Actions, Contingent Remedies, or other means in the forthcoming Statement of Basis.

Completed Area Name: Pittsburg Power Plant
Completed Sub Area Name: Not reported
Completed Document Type: Risk Assessment Workplan

NRG DELTA, LLC (Continued) **U001597931**

Completed Date:	10/28/2019
Comments:	Ecological Risk Assessment Work Plan describes the details on the approach for the Ecological Risk Assessment.
Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	Pilot/Treatability Study Report
Completed Date:	10/26/2018
Comments:	Not reported
Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	Fieldwork
Completed Date:	12/31/2017
Comments:	The fieldwork of the Landfarming Study Implementation was completed on Dec 31, 2017. A report will be submitted later.
Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	Corrective Measure Implementation Workplan
Completed Date:	11/20/2017
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	* Historical Operating Permit Authority
Completed Date:	11/14/1987
Comments:	Not reported
Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	Corrective Measures Study Workplan
Completed Date:	01/02/2010
Comments:	Letter approves temporary suspension of requirement to refresh water in pond to control salinity pending Implementation of Remedial Alternative.
Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	Corrective Measures Study Report
Completed Date:	09/01/2000
Comments:	Corrective Measures Study Report
Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	Monitoring Report
Completed Date:	02/02/2005
Comments:	2004 Annual Groundwater Monitoring Report
Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	Monitoring Report
Completed Date:	05/09/2007
Comments:	2006 Annual Groundwater Evaluation Report.
Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12

NRG DELTA, LLC (Continued) **U001597931**

Completed Document Type: Corrective Measures Study Workplan
Completed Date: 12/21/1996
Comments: Not reported

Completed Area Name: NRG Pittsburg Power Plant Property
Completed Sub Area Name: 5 SWMUS: TANK; PITS; POND; SUMP; PAD
Completed Document Type: RFI Workplan
Completed Date: 08/30/1989
Comments: Not reported

Completed Area Name: NRG Pittsburg Power Plant Property
Completed Sub Area Name: 5 SWMUS: TANK; PITS; POND; SUMP; PAD
Completed Document Type: RFI Report
Completed Date: 03/18/1996
Comments: RFI approved for five (5) solid waste management unit. Please note that PGE Carbon Pile and Shell Pond units are going through next phase of corrective action.

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: RFI Report
Completed Date: 03/29/1990
Comments: DELETE this event as another event has been added. Also, after next RCRA upload delete. 10/25/07 laki

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Public Notice
Completed Date: 06/27/2000
Comments: Draft Remedy Selection and Permit Modification

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Monitoring Report
Completed Date: 02/20/2006
Comments: 2005 Annual Groundwater Evaluation Report.

Completed Area Name: Pittsburg Power Plant
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 12/30/2019
Comments: The letter presents the results of groundwater sampling conducted in 2019. Sampling was conducted according to the RFI Workplan and the results will be evaluated in conjunction with previous data collected in the forthcoming human health and ecological risk assessments.

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Work Notice
Completed Date: 06/22/2020
Comments: Not reported

Completed Area Name: Pittsburg Power Plant
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 04/24/2019
Comments: Not reported

NRG DELTA, LLC (Continued) **U001597931**

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Interim Measures Questionnaire
Completed Date:	08/15/1994
Comments:	Not reported

Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMU 4.12 Carbon Black Landfill
Completed Document Type:	Land Use Restriction - Site Inspection/Visit
Completed Date:	03/10/2016
Comments:	Visited the site on March 10 2016. The CBA was inspected. No abnormal activity or phenomenon was found.

Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	Land Use Restriction - Site Inspection/Visit
Completed Date:	08/24/2018
Comments:	DTSC conducted a site inspection at the Carbon Black Area on August 24, 2018.

Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	Remedy Selection and Statement of Basis
Completed Date:	06/15/2011
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Annual Oversight Cost Estimate
Completed Date:	10/10/2011
Comments:	Estimate and schedule prepared and reviewed in cooperation with responsible aprties.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Annual Oversight Cost Estimate
Completed Date:	09/13/2012
Comments:	Scheduled and estimate agreed to by PG&E representative Robert Gray

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Human Exposure Controlled
Completed Date:	03/19/1999
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Groundwater Migration Controlled
Completed Date:	04/17/2000
Comments:	Not reported

Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	Not reported
Completed Document Type:	Letter - Demand
Completed Date:	07/17/2012
Comments:	Demand letter #1

NRG DELTA, LLC (Continued) **U001597931**

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Human Exposure Controlled
Completed Date:	04/17/2000
Comments:	Not reported

Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	Remedy Selection and Statement of Basis
Completed Date:	06/26/2000
Comments:	Remedy consists of water cap over waste pond and Land Use Covenant over the entire property prohibiting public access.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	RCRA Facility Assessment Report
Completed Date:	09/24/1986
Comments:	Not reported

Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	Not reported
Completed Document Type:	Annual Oversight Cost Estimate
Completed Date:	09/30/2014
Comments:	includes activities associated with new remedy development for SWMU 4.12 (Pond)

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Amendment - Order/Agreement
Completed Date:	04/17/2003
Comments:	Modified Permit issued in 2003 and expired in 2005. Facility closed in 2004.

Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	CEQA - Initial Study/ Neg. Declaration
Completed Date:	12/16/2019
Comments:	Not reported

Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	Not reported
Completed Document Type:	Consent Agreement
Completed Date:	06/20/2017
Comments:	The final RCRA Consent Agreement was signed by both parties. It became effective on June 20, 2017.

Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	Pre-HARP Form
Completed Date:	09/24/2015
Comments:	Completed the Pre-HARP for a site visit to Shell Pond and Carbon Black Area.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Annual Oversight Cost Estimate
Completed Date:	09/30/2016

NRG DELTA, LLC (Continued) **U001597931**

Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 10/02/2015
Comments: Site visit completed.

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/25/2015
Comments: Sent the Annual Oversight Cost Estimate to the RP.

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Correspondence
Completed Date: 05/25/2016
Comments: DTSC approved the request of making bench study reports confidential.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/30/2009
Comments: Fiscal Year 2009-2010

Completed Area Name: Pittsburg Power Plant
Completed Sub Area Name: Not reported
Completed Document Type: Consent Agreement
Completed Date: 12/30/2019
Comments: Facility Initiated Consent Agreement signed between PG&E and DTSC.

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/29/2017
Comments: The Annual Cost Estimate is completed and a letter was sent to the RP.
Not reported

Completed Area Name: Pittsburg Power Plant
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 09/15/2017
Comments: Renato and I went to Pittsburg Power Plant to observe the tidal
study. Anne Conner and David Fransen were there too.

Completed Area Name: Pittsburg Power Plant
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 03/06/2018
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Request for Tribal Outreach
Completed Date: 06/14/2019
Comments: Not reported

NRG DELTA, LLC (Continued) **U001597931**

Completed Area Name: Pittsburg Power Plant
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/28/2018
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/28/2018
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/21/2019
Comments: Not reported

Completed Area Name: Pittsburg Power Plant
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 10/21/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/21/2020
Comments: Annual Cost estimate along with Gantt Chart sent to RP.

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Remedy Selection and Statement of Basis
Completed Date: 12/16/2019
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Interim Measures Implementation Report
Completed Date: 05/28/1998
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Interim Measures Workplan
Completed Date: 05/28/1998
Comments: Excavation Activities, Report of - Text

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: RFI Workplan Addendum
Completed Date: 06/30/2008
Comments: Approval of Cyanide and Cobalt Characterization and Evaluation AND recomendations to conduct Interim REmoval. Laki 2/2/09

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12

NRG DELTA, LLC (Continued) **U001597931**

Completed Document Type:	Corrective Measures Study Report
Completed Date:	11/16/2010
Comments:	Document complete, all comments addressed.
Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	Public Notice
Completed Date:	04/12/2011
Comments:	Public comment planned for March 21, 2011
Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	Fact Sheets
Completed Date:	04/12/2011
Comments:	All activities finally defined, tentative date for commencement of Public Comment Period April 11, 2011
Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	Public Participation Plan / Community Relations Plan
Completed Date:	03/16/2010
Comments:	Plan revised and completed. Approved by Richard Perry, Public Participation Specialist
Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	Corrective Measures Study Workplan
Completed Date:	06/30/2010
Comments:	Workplan is approved.
Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	Pilot/Treatability Study Report
Completed Date:	03/24/2011
Comments:	The report generates data key to address the Correctiev Measures and CEQA Environmental Review.
Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	Corrective Measure Implementation Workplan
Completed Date:	09/06/2011
Comments:	Document required numerous revisions before it met applicable HSC Chapter 6.5 requirements and CEQA requirements.
Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	Fact Sheets
Completed Date:	06/27/2000
Comments:	Fact Sheet approved informs of 6/27/2000 to 8/11/200 Public Comment period.
Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	Health & Safety Plan
Completed Date:	09/06/2011
Comments:	Document required numerous revisions to meet our minimum standards.

NRG DELTA, LLC (Continued) **U001597931**

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Technical Report
Completed Date: 01/01/2008
Comments: Report preceeds Corrective Action of the Shell Pond and guides its design.

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: RFI Workplan
Completed Date: 03/29/1990
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMU 4.18 Shell Pond
Completed Document Type: Risk Assessment Report
Completed Date: 08/15/1988
Comments: Report concludes work needs to be completed to ensure protection of public health and the environment.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: RFI Report
Completed Date: 08/23/1983
Comments: REport admited as Final RFI Report

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Risk Assessment Report
Completed Date: 12/31/1998
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Risk Assessment Report
Completed Date: 02/03/2009
Comments: This addendum along with the 1998 HHRA by Pacific Environmental Group support the 2011 Shell Pond and CBA Restoration Plan.

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Risk Assessment Report
Completed Date: 06/12/2009
Comments: Risk Assessment supports Shell Pond restoration and CBA remedy

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Risk Assessment Report
Completed Date: 06/30/2009
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: RFI Report
Completed Date: 06/30/2008
Comments: Not reported

NRG DELTA, LLC (Continued) **U001597931**

Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	Work Notice
Completed Date:	10/30/2011
Comments:	Both English and Spanish versions reviewed and ready to be mailed.

Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	Work Notice
Completed Date:	09/07/2011
Comments:	Work Notice makes public the beginning of Phase 1A of the project. Phase 1A consists of the construction of an access road from McAvoy Road in Bay View west of Pittsburg to the area within the PG&E Shell Pond Property where the project will be staged at.

Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	Corrective Measure Implementation Workplan
Completed Date:	11/04/2011
Comments:	Not reported

Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	Health & Safety Plan
Completed Date:	11/07/2011
Comments:	Plan is completely up to date

Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	Design/Implementation Workplan
Completed Date:	10/11/2011
Comments:	Amendment approved on 10/11/2011

Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	Technical Report
Completed Date:	07/12/2010
Comments:	Report summarizes findings of investigation surveys conducted in Shell Pond.

Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	Fact Sheets
Completed Date:	06/01/2012
Comments:	Not reported

Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMU 4.18 Shell Pond
Completed Document Type:	Pilot Study/Treatability Workplan
Completed Date:	05/29/2013
Comments:	Verbal Approval Issued May 29, the same date we received the Final version of the workplan.

Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	Corrective Measures Study Report
Completed Date:	05/29/2019

NRG DELTA, LLC (Continued) **U001597931**

Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 12/01/2013
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Corrective Measure Implementation Workplan
Completed Date: 07/23/2020
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 06/24/2015
Comments: Field work completed. Completion report pending.

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: Not reported
Completed Document Type: Fact Sheets
Completed Date: 12/04/2012
Comments: One Fact sheet and a community notice card were prepared.

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: Not reported
Completed Document Type: Work Notice
Completed Date: 05/21/2013
Comments: Notice explains PG&E will be testing a number of alternatives in pursuit of a new remedy

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: Not reported
Completed Document Type: Fact Sheets
Completed Date: 05/28/2013
Comments: Informs neighbors that PG&E is studying remedial alternatives.

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: Not reported
Completed Document Type: Pilot Study/Treatability Workplan
Completed Date: 12/31/2013
Comments: Workplan currently under implementation.

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 11/01/2013
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 12/05/2013
Comments: Not reported

NRG DELTA, LLC (Continued) **U001597931**

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 12/18/2013
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMU 4.18 Shell Pond
Completed Document Type: Technical Report
Completed Date: 01/13/2014
Comments: Report documents data trends within normal range.

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMU 4.18 Shell Pond
Completed Document Type: Technical Report
Completed Date: 02/20/2014
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMU 4.18 Shell Pond
Completed Document Type: Technical Report
Completed Date: 03/18/2014
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMU 4.18 Shell Pond
Completed Document Type: Technical Report
Completed Date: 05/01/2014
Comments: All data reported are within allowable range

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMU 4.18 Shell Pond
Completed Document Type: Technical Report
Completed Date: 05/29/2014
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMU 4.18 Shell Pond
Completed Document Type: Technical Report
Completed Date: 06/18/2014
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMU 4.18 Shell Pond
Completed Document Type: Technical Report
Completed Date: 08/01/2014
Comments: all within range of safety

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMU 4.18 Shell Pond
Completed Document Type: Technical Report
Completed Date: 09/01/2014
Comments: Report concludes all trends are within the expected range and that no exceptional action is required at this time.

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMU 4.18 Shell Pond

NRG DELTA, LLC (Continued) **U001597931**

Completed Document Type: Technical Report
Completed Date: 09/23/2014
Comments: All observations and trends within expectable range.

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMU 4.18 Shell Pond
Completed Document Type: Technical Report
Completed Date: 10/20/2014
Comments: All parameters within acceptable range.

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMU 4.18 Shell Pond
Completed Document Type: Technical Report
Completed Date: 11/15/2014
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: Not reported
Completed Document Type: Fact Sheets
Completed Date: 11/19/2013
Comments: Update card informs the community about ongoing development of a remedy and current status of the site.

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMU 4.18 Shell Pond
Completed Document Type: Pilot/Treatability Study Report
Completed Date: 03/13/2014
Comments: Report concludes planting in the pond basin is possible. Did not meet other objectives outlined in the workplan.

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: Not reported
Completed Document Type: Pilot/Treatability Study Report
Completed Date: 06/18/2014
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMU 4.18 Shell Pond
Completed Document Type: Pilot Study/Treatability Workplan
Completed Date: 03/26/2014
Comments: Workplan consist of minor additions to the main workplan. Additions are appropriate

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMU 4.18 Shell Pond
Completed Document Type: Pilot Study/Treatability Workplan
Completed Date: 06/16/2014
Comments: Items proposed include experiments to determine detoxification potential of plants being investigated.

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: Not reported
Completed Document Type: Pilot Study/Treatability Workplan
Completed Date: 09/15/2014
Comments: Approved with the foolowing conditions: 1. Submit habitat management plan addressing previous comments. 2. Obtain permission for the activity from CDFW, US-ACE and BCDC and 3. Prepare and distribute

NRG DELTA, LLC (Continued) **U001597931**

DTSC approved Work Notice

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Risk Assessment Workplan
Completed Date: 10/20/2014
Comments: Third and Final draft approval

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Action Implementation Workplan
Completed Date: 03/25/2015
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMU 4.18 Shell Pond
Completed Document Type: Work Notice
Completed Date: 07/22/2016
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Work Notice
Completed Date: 04/02/2015
Comments: Work to Start April 6, 2015

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 11/19/2014
Comments: Fieldwork completed

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: Not reported
Completed Document Type: Technical Workplan
Completed Date: 10/20/2014
Comments: Plan stipulates maintenance and inspection requirements for the Materials Handling Area while a removal solution is approved and the waste remaining in the unit is sent to an off-site disposal facility.

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Pilot/Treatability Study Report
Completed Date: 02/22/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Work Notice
Completed Date: 02/19/2016
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Risk Assessment Report
Completed Date: 07/15/2016
Comments: Not reported

NRG DELTA, LLC (Continued) **U001597931**

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMU 4.18 Shell Pond
Completed Document Type: Technical Report
Completed Date: 03/03/2015
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMU 4.18 Shell Pond
Completed Document Type: Technical Report
Completed Date: 01/02/2015
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMU 4.18 Shell Pond
Completed Document Type: Technical Report
Completed Date: 01/20/2015
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMU 4.18 Shell Pond
Completed Document Type: Technical Report
Completed Date: 04/02/2015
Comments: Measured paramenters reported to be within allowable range

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMU 4.18 Shell Pond
Completed Document Type: Technical Report
Completed Date: 04/16/2015
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMU 4.18 Shell Pond
Completed Document Type: Technical Report
Completed Date: 05/22/2015
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMU 4.18 Shell Pond
Completed Document Type: Technical Report
Completed Date: 06/26/2015
Comments: All results withing allowable range

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMU 4.18 Shell Pond
Completed Document Type: Technical Report
Completed Date: 08/17/2015
Comments: .

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMU 4.18 Shell Pond
Completed Document Type: Technical Report
Completed Date: 09/28/2015
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMU 4.18 Shell Pond
Completed Document Type: Technical Report

NRG DELTA, LLC (Continued) **U001597931**

Completed Date: 10/21/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Assessment Report
Completed Date: 04/09/2014
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: Not reported
Completed Document Type: Health & Safety Plan
Completed Date: 04/01/2015
Comments: Activities to begin April 6, 2015

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: RFI Report
Completed Date: 06/30/2017
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Technical Report
Completed Date: 10/29/2015
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMU 4.18 Shell Pond
Completed Document Type: Technical Workplan
Completed Date: 02/02/2016
Comments: DTSC reviewed the Tissue Sample Design and RTC matrix, and approved the final plan.

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Risk Assessment Report
Completed Date: 05/18/2018
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Corrective Measures Study Workplan
Completed Date: 03/14/2016
Comments: Not reported

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Corrective Measures Study Workplan Addendum
Completed Date: 06/18/2019
Comments: DTSC approves the Supplemental CMS Workplan Addendum: Corrective Action Goals

Completed Area Name: PG&E Shell Pond Property
Completed Sub Area Name: SWMUS 4.18 and 4.12
Completed Document Type: Fieldwork
Completed Date: 12/31/2017

NRG DELTA, LLC (Continued) **U001597931**

Comments:	Field work for implementing the Phase 2 Pilot Study was completed on Dec 31, 2017.
Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMU 4.18 Shell Pond
Completed Document Type:	Pilot Study/Treatability Workplan
Completed Date:	09/18/2015
Comments:	Not reported
Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMU 4.18 Shell Pond
Completed Document Type:	Technical Report
Completed Date:	07/22/2016
Comments:	Not reported
Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMU 4.18 Shell Pond
Completed Document Type:	Technical Report
Completed Date:	09/10/2015
Comments:	Completed
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Technical Workplan
Completed Date:	12/03/2015
Comments:	Not reported
Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMU 4.18 Shell Pond
Completed Document Type:	Pilot Study/Treatability Workplan
Completed Date:	12/08/2015
Comments:	Addendum IV to the Technical Memorandum is approved.
Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMU 4.18 Shell Pond
Completed Document Type:	Monitoring Report
Completed Date:	02/19/2016
Comments:	Measured paramenters reported to be within allowable range
Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	Pilot Study/Treatability Workplan
Completed Date:	02/02/2016
Comments:	Not reported
Completed Area Name:	Pittsburg Power Plant
Completed Sub Area Name:	Not reported
Completed Document Type:	Technical Report
Completed Date:	06/06/2016
Comments:	Not reported
Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMU 4.18 Shell Pond
Completed Document Type:	Pilot Study/Treatability Workplan
Completed Date:	06/01/2016
Comments:	Not reported

NRG DELTA, LLC (Continued) **U001597931**

Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	Pilot/Treatability Study Report
Completed Date:	01/08/2018
Comments:	Not reported
Completed Area Name:	PG&E Shell Pond Property
Completed Sub Area Name:	SWMUS 4.18 and 4.12
Completed Document Type:	Pilot Study/Treatability Workplan
Completed Date:	06/23/2017
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Pilot Study/Treatability Workplan
Completed Date:	01/12/2017
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Technical Report
Completed Date:	02/22/2017
Comments:	Not reported
Completed Area Name:	Pittsburg Power Plant
Completed Sub Area Name:	Not reported
Completed Document Type:	RFI Workplan
Completed Date:	08/08/2017
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Annual Oversight Cost Estimate
Completed Date:	10/19/2010
Comments:	Estimate prepared, reviewed by RP representative and mailed to RP.
Future Area Name:	PG&E Shell Pond Property
Future Sub Area Name:	SWMUS 4.18 and 4.12
Future Document Type:	Remedial Action Completion Report
Future Due Date:	2028
Future Area Name:	PG&E Shell Pond Property
Future Sub Area Name:	SWMUS 4.18 and 4.12
Future Document Type:	Land Use Restriction
Future Due Date:	2021
Future Area Name:	Pittsburg Power Plant
Future Sub Area Name:	Not reported
Future Document Type:	Land Use Restriction
Future Due Date:	2022
Future Area Name:	PROJECT WIDE
Future Sub Area Name:	Not reported
Future Document Type:	Remedy Construction Complete
Future Due Date:	2028
Future Area Name:	Pittsburg Power Plant
Future Sub Area Name:	Not reported
Future Document Type:	Remedy Selection and Statement of Basis
Future Due Date:	2021
Schedule Area Name:	Not reported

NRG DELTA, LLC (Continued) **U001597931**

Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

CERS HAZ WASTE:
Name: GENON DELTA LLC
Address: 696 W 10TH ST
City,State,Zip: PITTSBURG, CA 94565-1806
Site ID: 398431
CERS ID: 10152487
CERS Description: Hazardous Waste Generator

HIST UST:
Name: PITTSBURG POWER PLANT
Address: 696 W 10TH ST
City,State,Zip: PITTSBURG, CA 94565
File Number: Not reported
URL: Not reported
Region: STATE
Facility ID: 00000029979
Facility Type: Other
Other Type: UTILITY
Contact Name: E.W. SIMPSON
Telephone: 4156827400
Owner Name: PACIFIC GAS AND ELECTRIC CO.
Owner Address: 77 BEALE STREET
Owner City,St,Zip: SAN FRANCISCO, CA 94106
Total Tanks: 0043

Tank Num: 001
Container Num: 001
Year Installed: 1952
Tank Capacity: 00000000
Tank Used for: PRODUCT
Type of Fuel: Not reported
Container Construction Thickness: 18
Leak Detection: Visual

Tank Num: 002
Container Num: 002
Year Installed: 1952
Tank Capacity: 00000000
Tank Used for: PRODUCT
Type of Fuel: Not reported
Container Construction Thickness: 18
Leak Detection: Visual

Tank Num: 003
Container Num: 003
Year Installed: 1952
Tank Capacity: 00000000
Tank Used for: PRODUCT
Type of Fuel: Not reported
Container Construction Thickness: 18
Leak Detection: Visual

NRG DELTA, LLC (Continued) **U001597931**

Tank Num:	004
Container Num:	004
Year Installed:	1952
Tank Capacity:	00000000
Tank Used for:	PRODUCT
Type of Fuel:	Not reported
Container Construction Thickness:	18
Leak Detection:	Visual

Tank Num:	005
Container Num:	005
Year Installed:	1959
Tank Capacity:	00000000
Tank Used for:	PRODUCT
Type of Fuel:	Not reported
Container Construction Thickness:	18
Leak Detection:	Visual

Tank Num:	006
Container Num:	006
Year Installed:	1959
Tank Capacity:	00000000
Tank Used for:	PRODUCT
Type of Fuel:	Not reported
Container Construction Thickness:	18
Leak Detection:	Visual

Tank Num:	007
Container Num:	007
Year Installed:	1979
Tank Capacity:	02500000
Tank Used for:	WASTE
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Visual

Tank Num:	008
Container Num:	008
Year Installed:	1973
Tank Capacity:	00800000
Tank Used for:	WASTE
Type of Fuel:	Not reported
Container Construction Thickness:	3
Leak Detection:	Visual, Stock Inventor, Groundwater Monitoring Well

Tank Num:	009
Container Num:	009
Year Installed:	1973
Tank Capacity:	00500000
Tank Used for:	WASTE
Type of Fuel:	Not reported
Container Construction Thickness:	3
Leak Detection:	Visual, Stock Inventor, Groundwater Monitoring Well

Tank Num:	010
Container Num:	010
Year Installed:	1973

NRG DELTA, LLC (Continued) **U001597931**

Tank Capacity:	13000000
Tank Used for:	WASTE
Type of Fuel:	Not reported
Container Construction Thickness:	3
Leak Detection:	Visual, Stock Inventor, Groundwater Monitoring Well
Tank Num:	011
Container Num:	015
Year Installed:	1979
Tank Capacity:	00100000
Tank Used for:	WASTE
Type of Fuel:	Not reported
Container Construction Thickness:	4
Leak Detection:	Visual, Stock Inventor, Groundwater Monitoring Well
Tank Num:	012
Container Num:	016
Year Installed:	Not reported
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Visual, Stock Inventor, Groundwater Monitoring Well
Tank Num:	013
Container Num:	017
Year Installed:	1952
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Visual
Tank Num:	014
Container Num:	018
Year Installed:	1952
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Visual
Tank Num:	015
Container Num:	019
Year Installed:	1952
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Visual
Tank Num:	016
Container Num:	020
Year Installed:	1952
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	Not reported

NRG DELTA, LLC (Continued) **U001597931**

Container Construction Thickness:	Not reported
Leak Detection:	Visual
Tank Num:	017
Container Num:	021
Year Installed:	1952
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	Not reported
Container Construction Thickness:	18
Leak Detection:	Visual
Tank Num:	018
Container Num:	022
Year Installed:	1952
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Visual, Pressure Test
Tank Num:	019
Container Num:	023
Year Installed:	1952
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Visual, Pressure Test
Tank Num:	020
Container Num:	024
Year Installed:	1952
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Visual, Pressure Test
Tank Num:	021
Container Num:	025
Year Installed:	1952
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Visual, Pressure Test
Tank Num:	022
Container Num:	026
Year Installed:	1952
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Visual, Pressure Test

NRG DELTA, LLC (Continued) **U001597931**

Tank Num:	023
Container Num:	027
Year Installed:	1952
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Visual, Pressure Test

Tank Num:	024
Container Num:	028
Year Installed:	1952
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Visual, Pressure Test

Tank Num:	025
Container Num:	030
Year Installed:	Not reported
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Visual

Tank Num:	026
Container Num:	011
Year Installed:	1981
Tank Capacity:	00000030
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Container Construction Thickness:	Not reported
Leak Detection:	Visual, Stock Inventor, Groundwater Monitoring Well

Tank Num:	027
Container Num:	012
Year Installed:	1979
Tank Capacity:	00140000
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Container Construction Thickness:	4
Leak Detection:	Visual, Stock Inventor, Groundwater Monitoring Well

Tank Num:	028
Container Num:	013
Year Installed:	1979
Tank Capacity:	00375000
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Container Construction Thickness:	3
Leak Detection:	Visual, Stock Inventor, Groundwater Monitoring Well

Tank Num:	029
Container Num:	014
Year Installed:	1979

NRG DELTA, LLC (Continued) **U001597931**

Tank Capacity:	00075000
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Container Construction Thickness:	3
Leak Detection:	Visual, Stock Inventor, Groundwater Monitoring Well
Tank Num:	030
Container Num:	029
Year Installed:	Not reported
Tank Capacity:	00000000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Container Construction Thickness:	Not reported
Leak Detection:	Visual
Tank Num:	031
Container Num:	031
Year Installed:	1969
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Container Construction Thickness:	Not reported
Leak Detection:	Visual
Tank Num:	032
Container Num:	032
Year Installed:	1969
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Container Construction Thickness:	Not reported
Leak Detection:	Visual
Tank Num:	033
Container Num:	033
Year Installed:	1979
Tank Capacity:	00000800
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Container Construction Thickness:	12
Leak Detection:	Visual
Tank Num:	034
Container Num:	034
Year Installed:	1974
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Container Construction Thickness:	Not reported
Leak Detection:	Visual
Tank Num:	035
Container Num:	035
Year Installed:	1974
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL

NRG DELTA, LLC (Continued) **U001597931**

Container Construction Thickness:	Not reported
Leak Detection:	Visual
Tank Num:	036
Container Num:	036
Year Installed:	1974
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Container Construction Thickness:	Not reported
Leak Detection:	Visual
Tank Num:	037
Container Num:	037
Year Installed:	Not reported
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Container Construction Thickness:	Not reported
Leak Detection:	Visual
Tank Num:	038
Container Num:	040
Year Installed:	Not reported
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Container Construction Thickness:	Not reported
Leak Detection:	Visual
Tank Num:	039
Container Num:	042
Year Installed:	Not reported
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Container Construction Thickness:	Not reported
Leak Detection:	Visual, Stock Inventor
Tank Num:	040
Container Num:	043
Year Installed:	Not reported
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Container Construction Thickness:	Not reported
Leak Detection:	Visual, Stock Inventor
Tank Num:	041
Container Num:	044
Year Installed:	Not reported
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Container Construction Thickness:	Not reported
Leak Detection:	Visual

NRG DELTA, LLC (Continued) **U001597931**

Tank Num:	042
Container Num:	045
Year Installed:	Not reported
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Container Construction Thickness:	Not reported
Leak Detection:	Visual

Tank Num:	043
Container Num:	046
Year Installed:	Not reported
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Container Construction Thickness:	Not reported
Leak Detection:	Visual, Stock Inventor

CERS TANKS:

Name:	GENON DELTA LLC
Address:	696 W 10TH ST
City,State,Zip:	PITTSBURG, CA 94565-1806
Site ID:	398431
CERS ID:	10152487
CERS Description:	Aboveground Petroleum Storage

CHMIRS:

Name:	Not reported
Address:	696 W. 10TH ST.
City,State,Zip:	PITTSBURG, CA 94565
OES Incident Number:	16-3910
OES notification:	06/28/2016
OES Date:	Not reported
OES Time:	Not reported
Date Completed:	**Not reported**
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA DOT PUC/ICC Number:	Not reported
Company Name:	Not reported

NRG DELTA, LLC (Continued) **U001597931**

Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	No
Waterway:	N/A
Spill Site:	Other
Cleanup By:	Contractor
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Not reported
Other:	Not reported
Type:	CHEMICAL
Measure:	Cu.Ft.
Other:	Not reported
Date/Time:	2200
Year:	2016
Agency:	NRG
Incident Date:	06/28/2016
Admin Agency:	Contra Costa County Health Services Department
Amount:	Not reported
Contained:	Yes
Site Type:	N/A
E Date:	Not reported
Substance:	Cation Resin and Anion Resin
Quantity Released:	81-108
Unknown:	Not reported
Substance #2:	Not reported
Substance #3:	Not reported
Evacuations:	Not reported
Number of Injuries:	Not reported
Number of Fatalities:	Not reported
#1 Pipeline:	No
#2 Pipeline:	No
#3 Pipeline:	No
#1 Vessel >= 300 Tons:	No
#2 Vessel >= 300 Tons:	No
#3 Vessel >= 300 Tons:	No
Evacs:	No
Injuries:	No
Fatals:	No
Comments:	Not reported
Description:	RP states: A sight glass on a vessel that hold resins broke near the bottom, releasing approximately 3-4 cubic yards of Cation Resin and Anion Resin to secondary containment. Secondary containment caught approximately 80 - 90% of the release. An additio
Name:	Not reported
Address:	696 W 10TH ST
City,State,Zip:	PITTSBURG, CA
OES Incident Number:	2-2625
OES notification:	05/16/2002
OES Date:	Not reported
OES Time:	Not reported
Date Completed:	**Not reported**

NRG DELTA, LLC (Continued) **U001597931**

Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA DOT PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	No
Waterway:	Not reported
Spill Site:	Not reported
Cleanup By:	Contractor
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	2002
Agency:	Pittsburg Power Plant
Incident Date:	5/5/200212:00:00 AM
Admin Agency:	Contra Costa County Health Services Dept.
Amount:	Not reported
Contained:	Yes
Site Type:	Utilities/Substation
E Date:	Not reported
Substance:	Lube oil
Gallons:	250
Unknown:	0
Substance #2:	Not reported
Substance #3:	Not reported
Evacuations:	0
Number of Injuries:	0
Number of Fatalities:	0
#1 Pipeline:	Not reported
#2 Pipeline:	Not reported
#3 Pipeline:	Not reported
#1 Vessel >= 300 Tons:	Not reported
#2 Vessel >= 300 Tons:	Not reported
#3 Vessel >= 300 Tons:	Not reported
Evacs:	Not reported

NRG DELTA, LLC (Continued) **U001597931**

Injuries:	Not reported
Fatals:	Not reported
Comments:	Not reported
Description:	Per caller, substance was released due to mechanical failure os a oil cooler. The release was contained on site.

EMI:

Name:	NRG DELTA, LLC
Address:	696 W 10TH STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	2013
County Code:	7
Air Basin:	SF
Facility ID:	12
Air District Name:	BA
SIC Code:	4911
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	4.063
Reactive Organic Gases Tons/Yr:	2.7041543
Carbon Monoxide Emissions Tons/Yr:	55.621
NOX - Oxides of Nitrogen Tons/Yr:	14.769
SOX - Oxides of Sulphur Tons/Yr:	0.84
Particulate Matter Tons/Yr:	4.415
Part. Matter 10 Micrometers and Smllr Tons/Yr:	4.314

Name:	NRG DELTA, LLC
Address:	696 W 10TH STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	2014
County Code:	7
Air Basin:	SF
Facility ID:	12
Air District Name:	BA
SIC Code:	4911
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3.067019381
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	32.370499597
NOX - Oxides of Nitrogen Tons/Yr:	9.096148091
SOX - Oxides of Sulphur Tons/Yr:	0.488801996
Particulate Matter Tons/Yr:	2.564486144
Part. Matter 10 Micrometers and Smllr Tons/Yr:	2.510592323

Name:	NRG DELTA, LLC
Address:	696 W 10TH STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	2015
County Code:	7
Air Basin:	SF
Facility ID:	12
Air District Name:	BA
SIC Code:	4911

NRG DELTA, LLC (Continued) **U001597931**

Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2.685914063
Reactive Organic Gases Tons/Yr:	2.531948281
Carbon Monoxide Emissions Tons/Yr:	21.026418501
NOX - Oxides of Nitrogen Tons/Yr:	6.94877703
SOX - Oxides of Sulphur Tons/Yr:	0.316926023
Particulate Matter Tons/Yr:	2.057370624
Part. Matter 10 Micrometers and Smllr Tons/Yr:	1.814324167

Name:	NRG DELTA, LLC
Address:	696 W 10TH STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	2016
County Code:	7
Air Basin:	SF
Facility ID:	12
Air District Name:	BA
SIC Code:	4911
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3.105435928
Reactive Organic Gases Tons/Yr:	2.0246805581
Carbon Monoxide Emissions Tons/Yr:	45.928311087
NOX - Oxides of Nitrogen Tons/Yr:	12.422849947
SOX - Oxides of Sulphur Tons/Yr:	0.693034991
Particulate Matter Tons/Yr:	3.505579225
Part. Matter 10 Micrometers and Smllr Tons/Yr:	3.487608446

Name:	NRG DELTA, LLC
Address:	696 W 10TH STREET
City,State,Zip:	PITTSBURG, CA 94565
Year:	2017
County Code:	7
Air Basin:	SF
Facility ID:	12
Air District Name:	BA
SIC Code:	4911
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1.003855972
Reactive Organic Gases Tons/Yr:	0.9989153295
Carbon Monoxide Emissions Tons/Yr:	0.03541439
NOX - Oxides of Nitrogen Tons/Yr:	0.162898733
SOX - Oxides of Sulphur Tons/Yr:	7.5516e-005
Particulate Matter Tons/Yr:	0.002347417
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.00224806

CA Financial Assurance 1:

Name:	PACIFIC GAS & ELETRIC - SHELL POND/CARBON BLACK AREA AND POWER PLANT (696 W 10TH STREET)
Address:	Not reported
City:	Not reported
EPA ID Number:	80001834

NRG DELTA, LLC (Continued) **U001597931**

Sudden Amount1:	Not reported
Non Sudden Amount1:	Not reported
Closure Mechanism:	Not reported
Closure Amount:	Not reported
Post Closure Mechanism:	Not reported
Post Closure Amount:	Not reported
Corrective Action Mechanism:	Not reported
Corrective Action Amount:	Not reported
Sudden Mechanism Type:	Not reported
Sudden Mechanism Amount:	Not reported
Non Sudden Mechanism Type:	Not reported
Non Sudden Mechanism Amount:	Not reported
O and M Mechanism Type:	LOC
O and M Amount:	$12,415,000.00
Closure Mechanism Date of Mechanism:	Not reported
Closure Mechanism Renewal Date:	Not reported
Closure Mechanism Provider:	Not reported
Postclosure Mechanism Date of Mechanism:	Not reported
Postclosure Mechanism Renewal Date:	Not reported
Postclosure Mechanism Provider:	Not reported
O and M Mechanism Date of Mechanism:	2020-04-23 00:00:00
O and M Mechanism Renewal Date:	Not reported
O and M Mechanism Provider:	Bank of America
Corrective Action Mechanism Date of Mechanism:	Not reported
Corrective Action Mechanism Renewal Date:	Not reported
Corrective Action Mechanism Provider:	Not reported
Sudden Mechanism Date of Mechanism:	Not reported
Sudden Mechanism Renewal Date:	Not reported
Sudden Mechanism Provider:	Not reported
Non-Sudden Mechanism Date of Mechanism:	Not reported
Non-Sudden Mechanism Renewal Date:	Not reported
Non-Sudden Mechanism Provider:	Not reported
Date Entered into EnviroStor:	2020-04-28 00:00:00
Authorization Type:	Cleanup
Comments:	STA #12261700 dated 5/16/19 w/Citibank

ICE:

Envirostor ID:	3002148
Name:	PITTSBURG GENERATING STATION
Address:	696 W 10TH ST
City,State,Zip:	PITTSBURG, CA 94565
EPA ID:	CAT080011695
Site Type:	INSPECTION
Facility Status:	No Action

Enforcement:

Action Type:	Consent Order with Enforcement and Settlement - Federal CA/FO (385)
Action Date:	01/06/2005

Inspection:

Action Type:	Compliance Evaluation Inspection - Treatment, Storage and Disposal
Action Date:	09/18/2002
Violation Class:	No Violations
RTC Date:	Not reported
Action Type:	Compliance Evaluation Inspection - Treatment, Storage and Disposal
Action Date:	11/30/2004

NRG DELTA, LLC (Continued) **U001597931**

Violation Class: Class 2
RTC Date: 12/03/2005

Action Type: Financial Records Review - Treatment, Storage and Disposal
Action Date: 01/29/2002
Violation Class: Class 1
RTC Date: 11/15/2002

Action Type: Operation and Maintenance - Treatment, Storage and Disposal
Action Date: 05/03/2004
Violation Class: Class 2
RTC Date: 05/11/2004

Action Type: Financial Records Review - Treatment, Storage and Disposal
Action Date: 10/12/2002
Violation Class: No Violations
RTC Date: Not reported

Action Type: Financial Records Review - Treatment, Storage and Disposal
Action Date: 06/28/2001
Violation Class: Class 1
RTC Date: 05/15/2002

Action Type: Financial Records Review - Treatment, Storage and Disposal
Action Date: 12/30/2004
Violation Class: No Violations
RTC Date: Not reported

Action Type: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Action Date: 05/24/2001
Violation Class: Class 2
RTC Date: 06/07/2001

Action Type: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Action Date: 01/17/2002
Violation Class: Class 2
RTC Date: 04/23/2002

HWP:
Name: PITTSBURG GENERATING STATION
Address: 696 W 10TH ST
City,State,Zip: PITTSBURG, CA 945651806
EPA Id: CAT080011695
Cleanup Status: CLOSED
Latitude: 38.02945
Longitude: -121.8984
Facility Type: Historical - Non-Operating
Facility Size: Not reported
Team: Not reported
Supervisor: Not reported
Site Code: 200187
Assembly District: 14
Senate District: 07
Public Information Officer: Not reported
Public Information Officer: Not reported

NRG DELTA, LLC (Continued) **U001597931**

Activities:

EPA Id: CAT080011695
Facility Type: Historical - Non-Operating
Unit Names: SURFSTR1 (GPRA Unit), SURFTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - RESPONSE TO 1ST NOD RECEIVED
Actual Date: 08/26/1993

EPA Id: CAT080011695
Facility Type: Historical - Non-Operating
Unit Names: SURFTRT1 (GPRA Unit)
Event Description: New Operating Permit - FINAL PERMIT (EFFECTIVE)
Actual Date: 05/09/1988

EPA Id: CAT080011695
Facility Type: Historical - Non-Operating
Unit Names: SURFSTR1 (GPRA Unit), SURFTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - 1ST NOTICE OF DEFICIENCY ISSUED
Actual Date: 08/06/1993

EPA Id: CAT080011695
Facility Type: Historical - Non-Operating
Unit Names: SURFSTR1 (GPRA Unit), SURFTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - DRAFT PERMIT RENEWAL
Actual Date: 10/07/1994

EPA Id: CAT080011695
Facility Type: Historical - Non-Operating
Unit Names: SURFSTR1 (GPRA Unit), SURFTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - RESPONSE TO 2ND NOD RECEIVED
Actual Date: 01/27/1994

EPA Id: CAT080011695
Facility Type: Historical - Non-Operating
Unit Names: SURFSTR1 (GPRA Unit), SURFTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - 3RD NOTICE OF DEFICIENCY ISSUED
Actual Date: 04/18/1994

EPA Id: CAT080011695
Facility Type: Historical - Non-Operating
Unit Names: SURFTRT1 (GPRA Unit)
Event Description: New Operating Permit - CALL-IN LETTER ISSUED
Actual Date: 05/08/1985

EPA Id: CAT080011695
Facility Type: Historical - Non-Operating
Unit Names: OSP1 (GPRA Unit), SURFSTR1 (GPRA Unit), SURFTRT1 (GPRA Unit)
Event Description: New Operating Permit - FINAL PERMIT (EFFECTIVE)
Actual Date: 09/29/1987

EPA Id: CAT080011695
Facility Type: Historical - Non-Operating
Unit Names: SURFSTR1 (GPRA Unit), SURFTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - FINAL PERMIT RENEWAL (EXPIRES)
Actual Date: 01/17/2005

EPA Id: CAT080011695
Facility Type: Historical - Non-Operating

NRG DELTA, LLC (Continued) **U001597931**

Unit Names: SURFSTR1 (GPRA Unit), SURFTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - PUBLIC COMMENT (BEGIN)
Actual Date: 10/07/1994

EPA Id: CAT080011695
Facility Type: Historical - Non-Operating
Unit Names: SURFSTR1 (GPRA Unit), SURFTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - 2ND NOTICE OF DEFICIENCY ISSUED
Actual Date: 11/09/1993

EPA Id: CAT080011695
Facility Type: Historical - Non-Operating
Unit Names: SURFSTR1 (GPRA Unit), SURFTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - FINAL PERMIT RENEWAL (EFFECTIVE)
Actual Date: 01/20/1995

EPA Id: CAT080011695
Facility Type: Historical - Non-Operating
Unit Names: SURFTRT1 (GPRA Unit)
Event Description: New Operating Permit - FINAL PERMIT (EXPIRES)
Actual Date: 05/08/1993

EPA Id: CAT080011695
Facility Type: Historical - Non-Operating
Unit Names: SURFSTR1 (GPRA Unit), SURFTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - FINAL PERMIT RENEWAL
Actual Date: 12/20/1994

EPA Id: CAT080011695
Facility Type: Historical - Non-Operating
Unit Names: OSP1 (GPRA Unit), SURFSTR1 (GPRA Unit), SURFTRT1 (GPRA Unit)
Event Description: New Operating Permit - FINAL PERMIT (EXPIRES)
Actual Date: 09/29/1997

EPA Id: CAT080011695
Facility Type: Historical - Non-Operating
Unit Names: SURFTRT1 (GPRA Unit)
Event Description: New Operating Permit - FINAL PERMIT
Actual Date: 05/09/1988

EPA Id: CAT080011695
Facility Type: Historical - Non-Operating
Unit Names: SURFSTR1 (GPRA Unit), SURFTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - APPLICATION PART B RECEIVED
Actual Date: 04/03/1992

EPA Id: CAT080011695
Facility Type: Historical - Non-Operating
Unit Names: SURFSTR1 (GPRA Unit), SURFTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - RESPONSE TO 3RD NOD RECEIVED
Actual Date: 05/17/1994

EPA Id: CAT080011695
Facility Type: Historical - Non-Operating
Unit Names: SURFSTR1 (GPRA Unit), SURFTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - FINAL PART A & PART B RECEIVED
Actual Date: 06/28/1994

NRG DELTA, LLC (Continued) **U001597931**

EPA Id: CAT080011695
Facility Type: Historical - Non-Operating
Unit Names: OSP1 (GPRA Unit), SURFSTR1 (GPRA Unit), SURFTRT1 (GPRA Unit)
Event Description: New Operating Permit - FINAL PERMIT
Actual Date: 09/29/1987

Closure:
EPA Id: CAT080011695
Facility Type: Historical - Non-Operating
Unit Names: OSP1 (GPRA Unit), SURFSTR1 (GPRA Unit), SURFTRT1 (GPRA Unit)
Event Description: Closure Final - RECEIVE CLOSURE CERTIFICATION
Actual Date: 01/31/2005

EPA Id: CAT080011695
Facility Type: Historical - Non-Operating
Unit Names: OSP1 (GPRA Unit), SURFSTR1 (GPRA Unit), SURFTRT1 (GPRA Unit)
Event Description: Closure Final - ISSUE CLOSURE VERIFICATION
Actual Date: 04/28/2005

EPA Id: CAT080011695
Facility Type: Historical - Non-Operating
Unit Names: OSP1 (GPRA Unit), SURFSTR1 (GPRA Unit), SURFTRT1 (GPRA Unit)
Event Description: Closure Final - 1ST NOTICE OF DEFICIENCY ISSUED
Actual Date: 09/16/2004

EPA Id: CAT080011695
Facility Type: Historical - Non-Operating
Unit Names: OSP1 (GPRA Unit), SURFSTR1 (GPRA Unit), SURFTRT1 (GPRA Unit)
Event Description: Closure Final - CLOSURE PLAN RECEIVED
Actual Date: 06/21/2004

Alias:
EPA Id: CAT080011695
Facility Type: Historical - Non-Operating
Alias Type: APN
Alias: 085-010-014

EPA Id: CAT080011695
Facility Type: Historical - Non-Operating
Alias Type: APN
Alias: 096-100-020

EPA Id: CAT080011695
Facility Type: Historical - Non-Operating
Alias Type: APN
Alias: 096-100-026

EPA Id: CAT080011695
Facility Type: Historical - Non-Operating
Alias Type: APN
Alias: 098-250-013

EPA Id: CAT080011695
Facility Type: Historical - Non-Operating
Alias Type: APN
Alias: 098-260-001

NRG DELTA, LLC (Continued) **U001597931**

EPA Id: CAT080011695
Facility Type: Historical - Non-Operating
Alias Type: APN
Alias: 098-260-003

EPA Id: CAT080011695
Facility Type: Historical - Non-Operating
Alias Type: Project Code (Site Code)
Alias: 200187

CONTRA COSTA CO. SITE LIST:
Name: GENON DELTA LLC
Address: 696 W 10TH ST
City: PITTSBURG
Facility ID: FA0032031
Billing Status: ACTIVE, BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: APSA: 100M GALLONS OR MORE
Region: CONTRA COSTA
Cupa Number: 729979

Name: GENON DELTA LLC
Address: 696 W 10TH ST
City: PITTSBURG
Facility ID: FA0032031
Billing Status: ACTIVE, BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HMBP: >10M-100M LBS
Region: CONTRA COSTA
Cupa Number: 729979

Name: GENON DELTA LLC
Address: 696 W 10TH ST
City: PITTSBURG
Facility ID: FA0032031
Billing Status: ACTIVE, BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HWG: LESS THAN 5 TONS/YEAR
Region: CONTRA COSTA
Cupa Number: 729979

Name: GENON DELTA LLC
Address: 696 W 10TH ST
City: PITTSBURG
Facility ID: FA0032031
Billing Status: INACTIVE, NON-BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: CALARP RMP
Region: CONTRA COSTA
Cupa Number: 729979

Name: GENON DELTA LLC
Address: 696 W 10TH ST
City: PITTSBURG
Facility ID: FA0032031
Billing Status: INACTIVE, NON-BILLABLE

NRG DELTA, LLC (Continued) **U001597931**

Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: CALARP: UNANNOUNCED INSPECTION PROGRAM
Region: CONTRA COSTA
Cupa Number: 729979

Name: GENON DELTA LLC
Address: 696 W 10TH ST
City: PITTSBURG
Facility ID: FA0032031
Billing Status: INACTIVE, NON-BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HWG: RCRA LQG LEGACY PROGRAM
Region: CONTRA COSTA
Cupa Number: 729979

Name: GENON DELTA LLC
Address: 696 W 10TH ST
City: PITTSBURG
Facility ID: FA0032031
Billing Status: INACTIVE, NON-BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: UNDERGROUND STORAGE TANK SITE
Region: CONTRA COSTA
Cupa Number: 729979

CERS:
Name: GENON DELTA LLC
Address: 696 W 10TH ST
City,State,Zip: PITTSBURG, CA 94565-1806
Site ID: 398431
CERS ID: 10152487
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 398431
Site Name: GenOn DELTA LLC
Violation Date: 06-12-2019
Citation: 22 CCR 15 66265.197 - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.197
Violation Description: Failure of owner or operator to properly close a hazardous waste tank system ensuring the minimization of further maintenance and that the required requirements have been met.
Violation Notes: Returned to compliance on 06/12/2019. OBSERVATION: Owner/Operator failed to properly notify the CUPA prior to the initiation of closure of a hazardous waste tank system per 22 CCR - 67383. CORRECTIVE ACTION: Notification requirement is not resolvable. Facility will/has submit photos/documentation to the CUPA demonstrating the hazardous waste tank system has been closed in accordance with the requirements of 22 CCR 15 66265.197, and facility has complied with the requirements of 22 CCR 15 66265.111. and 66265.114.
Violation Division: Contra Costa County Health Services Department
Violation Program: HW
Violation Source: CERS

Site ID: 398431
Site Name: GenOn DELTA LLC
Violation Date: 06-12-2019

NRG DELTA, LLC (Continued) **U001597931**

Citation:	HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description:	Failure to prepare an SPCC Plan that meets all applicable requirements.
Violation Notes:	Returned to compliance on 06/25/2019. OBSERVATION: Failure to prepare an SPCC Plan that meets all applicable requirements. The diesel fueling container is referred to as a permanently closed container in the SPCC Plan. However, it has not been properly permanently closed. CORRECTIVE ACTION: Complete or revise SPCC plan that meets all applicable requirements or properly permanently close the diesel container.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	APSA
Violation Source:	CERS
Site ID:	398431
Site Name:	GenOn DELTA LLC
Violation Date:	06-12-2019
Citation:	HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description:	"Failure to test or inspect each aboveground container for integrity based on industry standards as discussed in the SPCC Plan: 1. On a regular schedule. 2. After making material repairs. 3. Use non-destructive testing. 4. Inspect each containerG s supports, foundations, and outside for signs of deterioration, discharges, or accumulation of oil inside diked areas."
Violation Notes:	Returned to compliance on 07/12/2019. OBSERVATION: Failure to test or inspect each aboveground container for integrity based on industry standards. The SPCC Plan states that it is not possible to physically enter the fuel oil tanks and a comprehensive API 653 inspection is not possible. The plan does not provide environmental equivalence to meet the requirements. CORRECTIVE ACTION: State the reasons for non-conformance in your plan and describe in detail alternate methods and how you will achieve equivalent environmental protection. Or, test or inspect each aboveground container for integrity based on industry standards. Facility can update the SPCC Plan to do a risk based inspection in accordance with API standards. Maintain testing and inspection records.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	APSA
Violation Source:	CERS
Site ID:	398431
Site Name:	GenOn DELTA LLC
Violation Date:	04-24-2015
Citation:	HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description:	Business Plan Program - Release/Leaks/Spills - General
Violation Notes:	Returned to compliance on 07/21/2015.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	398431
Site Name:	GenOn DELTA LLC
Violation Date:	03-07-2008
Citation:	HSC 6.67 Multiple Sections - California Health and Safety Code,

NRG DELTA, LLC (Continued) **U001597931**

	Chapter 6.67, Section(s) Multiple Sections
Violation Description:	RCRA Large Quantity Generator Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 03/07/2008.
Violation Division:	Contra Costa County Health Services Department
Violation Program:	HWLQG
Violation Source:	CERS

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-07-2008
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Name: S.Khoo
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HWLQG
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-27-2009
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Name: Charles Nicholson; No violations observed
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-24-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-24-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HWLQG
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-24-2015
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	APSA
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-24-2015
Violations Found:	Yes

NRG DELTA, LLC (Continued) **U001597931**

Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	05-18-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	05-18-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HWLQG
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-12-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-12-2019
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-12-2019
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-08-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department

NRG DELTA, LLC (Continued) **U001597931**

Eval Program: CalARP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-11-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: CalARP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-15-2019
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: APSA
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-21-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: APSA
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-21-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-27-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-27-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

NRG DELTA, LLC (Continued) **U001597931**

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-07-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-07-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Enforcement Action:
Site ID: 398431
Site Name: GenOn DELTA LLC
Site Address: 696 W 10TH ST
Site City: PITTSBURG
Site Zip: 94565-1806
Enf Action Date: 03-07-2008
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HWLQG
Enf Action Source: CERS

Site ID: 398431
Site Name: GenOn DELTA LLC
Site Address: 696 W 10TH ST
Site City: PITTSBURG
Site Zip: 94565-1806
Enf Action Date: 04-24-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: APSA
Enf Action Source: CERS

Site ID: 398431
Site Name: GenOn DELTA LLC
Site Address: 696 W 10TH ST
Site City: PITTSBURG
Site Zip: 94565-1806
Enf Action Date: 04-24-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HMRRP
Enf Action Source: CERS

NRG DELTA, LLC (Continued) **U001597931**

Site ID: 398431
Site Name: GenOn DELTA LLC
Site Address: 696 W 10TH ST
Site City: PITTSBURG
Site Zip: 94565-1806
Enf Action Date: 06-12-2019
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: APSA
Enf Action Source: CERS

Site ID: 398431
Site Name: GenOn DELTA LLC
Site Address: 696 W 10TH ST
Site City: PITTSBURG
Site Zip: 94565-1806
Enf Action Date: 06-12-2019
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: HW
Enf Action Source: CERS

Affiliation:
Affiliation Type Desc: Environmental Contact
Entity Name: Steve Dawkin
Entity Title: Not reported
Affiliation Address: P.O. BOX 192
Affiliation City: PITTSBURG
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 94565
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: P.O. BOX 192
Affiliation City: PITTSBURG
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 94565
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: Tom Di Ciolli
Entity Title: Plant Manager
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

NRG DELTA, LLC (Continued) **U001597931**

Affiliation Type Desc:	Operator
Entity Name:	GENON DELTA, LLC PITTSBURG GENERATING STATION
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(925) 324-3569

Affiliation Type Desc:	Property Owner
Entity Name:	GENON DELTA, LLC
Entity Title:	Not reported
Affiliation Address:	P.O. BOX 192
Affiliation City:	PITTSBURG
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	94565
Affiliation Phone:	(925) 427-3332

Affiliation Type Desc:	CUPA District
Entity Name:	Contra Costa County Health Services Department
Entity Title:	Not reported
Affiliation Address:	4585 Pacheco BlvdSuite 100
Affiliation City:	Martinez
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94553
Affiliation Phone:	(925) 655-3200

Affiliation Type Desc:	Document Preparer
Entity Name:	Paige Muchmore
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	GENON DELTA, LLC
Entity Title:	Not reported
Affiliation Address:	P.O. BOX 192
Affiliation City:	PITTSBURG
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	94565
Affiliation Phone:	(925) 427-3332

Affiliation Type Desc:	Parent Corporation
Entity Name:	GenOn DELTA LLC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported

NRG DELTA, LLC (Continued) **U001597931**

Affiliation Zip: Not reported
Affiliation Phone: Not reported

Name: PITTSBURG GENERATING STATION
Address: 696 W 10TH ST
City,State,Zip: PITTSBURG, CA 945651806
Site ID: 188145
CERS ID: CAT080011695
CERS Description: Hazardous Waste

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-17-2002
Violations Found: Yes
Eval Type: DTSC Compliance Evaluation Inspection
Eval Notes: Compliance Evaluation Inspection - Treatment, Storage and Disposal Return To Compliance: 2002-04-23 00:00:00
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Information Request
Eval Date: 01-29-2002
Violations Found: Yes
Eval Type: DTSC Financial Records Review
Eval Notes: Financial Records Review - Treatment, Storage and Disposal Return To Compliance: 2002-11-15 00:00:00
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-03-2004
Violations Found: Yes
Eval Type: DTSC Operation and Maintenance Inspection
Eval Notes: Operation and Maintenance - Treatment, Storage and Disposal Return To Compliance: 2004-05-11 00:00:00
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-24-2001
Violations Found: Yes
Eval Type: DTSC Compliance Evaluation Inspection
Eval Notes: Compliance Evaluation Inspection - Treatment, Storage and Disposal Return To Compliance: 2001-06-07 00:00:00
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Information Request
Eval Date: 06-28-2001
Violations Found: Yes
Eval Type: DTSC Financial Records Review
Eval Notes: Financial Records Review - Treatment, Storage and Disposal Return To Compliance: 2002-05-15 00:00:00

NRG DELTA, LLC (Continued) **U001597931**

Eval Division:	Department of Toxic Substances Control
Eval Program:	DTSC_ENF
Eval Source:	ENVSTORHAZ
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-18-2002
Violations Found:	No
Eval Type:	DTSC Compliance Evaluation Inspection
Eval Notes:	Compliance Evaluation Inspection - Treatment, Storage and Disposal
Eval Division:	Department of Toxic Substances Control
Eval Program:	DTSC_ENF
Eval Source:	ENVSTORHAZ
Eval General Type:	Information Request
Eval Date:	10-12-2002
Violations Found:	No
Eval Type:	DTSC Financial Records Review
Eval Notes:	Financial Records Review - Treatment, Storage and Disposal
Eval Division:	Department of Toxic Substances Control
Eval Program:	DTSC_ENF
Eval Source:	ENVSTORHAZ
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-30-2004
Violations Found:	Yes
Eval Type:	DTSC Compliance Evaluation Inspection
Eval Notes:	Compliance Evaluation Inspection - Treatment, Storage and Disposal Return To Compliance: 2005-12-03 00:00:00
Eval Division:	Department of Toxic Substances Control
Eval Program:	DTSC_ENF
Eval Source:	ENVSTORHAZ
Eval General Type:	Information Request
Eval Date:	12-30-2004
Violations Found:	No
Eval Type:	DTSC Financial Records Review
Eval Notes:	Financial Records Review - Treatment, Storage and Disposal
Eval Division:	Department of Toxic Substances Control
Eval Program:	DTSC_ENF
Eval Source:	ENVSTORHAZ

Enforcement Action:

Site ID:	188145
Site Name:	PITTSBURG GENERATING STATION
Site Address:	696 W 10TH ST
Site City:	PITTSBURG
Site Zip:	945651806
Enf Action Date:	01-06-2005
Enf Action Type:	Federal Consent Order with Enforcement and Settlement
Enf Action Description:	Federal Consent Order with Enforcement and Settlement
Enf Action Notes:	Not reported
Enf Action Division:	Department of Toxic Substances Control
Enf Action Program:	DTSC_ENF
Enf Action Source:	ENVSTORHAZ

Affiliation:

NRG DELTA, LLC (Continued) **U001597931**

Affiliation Type Desc:	Facility Contact
Entity Name:	David Frandsen
Entity Title:	Not reported
Affiliation Address:	696 W 10TH ST
Affiliation City:	PITTSBURG
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94565
Affiliation Phone:	9254273479

Affiliation Type Desc:	Facility Owner
Entity Name:	NRG Delta, LLC
Entity Title:	Not reported
Affiliation Address:	696 W 10TH ST
Affiliation City:	PITTSBURG
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	945650000
Affiliation Phone:	9254273338

W126 **PG&E, PITTSBURG POWER PLANT** **CA Toxic Pits** **S100925058**
West **696 W. 10TH STREET** **N/A**
1/2-1 **PITTSBURG, CA 94565**
0.981 mi.
5182 ft. **Site 2 of 3 in cluster W**

Relative:
Lower

Actual:
8 ft.

TOXIC PITS:

Region:	02
Task #:	02008
Owner:	PG&E-PITTSBURG POWER PLANT
1/2 Mi Limit:	Y
Num. of Pits:	5
Cease Discharge Due:	06/30/88
Cease Discharge Complete:	/ /
Closure Due:	/ /
Closure Completed:	**/ /**
Status:	ACTIVE
Hydro Geological Assessment Report Due:	/ /
Final Hydro Geological Assessment Review Completed:	03/31/87

W127 **PITTSBURG GENERATING STATION** **SEMS** **1015730702**
West **696 W 10TH ST** **CORRACTS** **CAT080011695**
1/2-1 **PITTSBURG, CA 94565** **RCRA-TSDF**
0.981 mi. **RCRA-SQG**
5182 ft. **Site 3 of 3 in cluster W** **US FIN ASSUR**
2020 COR ACTION

Relative:
Lower

Actual:
8 ft.

SEMS:

Site ID:	0904753
EPA ID:	CAT080011695
Name:	PG&E-PITTSBURG POWER PLANT
Address:	696 W. 10TH STREET
Address 2:	Not reported
City,State,Zip:	PITTSBURG, CA 94565
Cong District:	08

PITTSBURG GENERATING STATION (Continued) **1015730702**

FIPS Code: 06013
Latitude: Not reported
Longitude: Not reported
FF: N
NPL: Not on the NPL
Non NPL Status: Deferred to RCRA (Subtitle C)

SEMS Detail:
Region: 09
Site ID: 0904753
EPA ID: CAT080011695
Site Name: PG&E-PITTSBURG POWER PLANT
NPL: N
FF: N
OU: 00
Action Code: DS
Action Name: DISCVRY
SEQ: 1
Start Date: 1992-12-29 05:00:00
Finish Date: 12/29/1992 5:00:00 AM
Qual: Not reported
Current Action Lead: EPA Perf

Region: 09
Site ID: 0904753
EPA ID: CAT080011695
Site Name: PG&E-PITTSBURG POWER PLANT
NPL: N
FF: N
OU: 00
Action Code: PA
Action Name: PA
SEQ: 1
Start Date: 2000-08-15 04:00:00
Finish Date: 3/23/2001 5:00:00 AM
Qual: D
Current Action Lead: St Perf

CORRACTS:
Name: PITTSBURG GENERATING STATION
Address: 696 W 10TH ST
Address 2: Not reported
Area Name: SWMUS 4.18 AND 4.12
Corrective Action: CA170
Actual Date: 2008-06-30 00:00:00.0
Air Release Indicator: Not reported
Groundwater Release Indicator: Not reported
Soil Release Indicator: Not reported
Surface Water Release Indicator: Not reported

Name: PITTSBURG GENERATING STATION
Address: 696 W 10TH ST
Address 2: Not reported
Area Name: SWMUS 4.18 AND 4.12
Corrective Action: CA350
Actual Date: 2000-09-01 00:00:00.0

PITTSBURG GENERATING STATION (Continued) **1015730702**

Air Release Indicator: Not reported
Groundwater Release Indicator: Not reported
Soil Release Indicator: Not reported
Surface Water Release Indicator: Not reported

Name: PITTSBURG GENERATING STATION
Address: 696 W 10TH ST
Address 2: Not reported
Area Name: SWMUS 4.18 AND 4.12
Corrective Action: CA380
Actual Date: 2000-06-27 00:00:00.0
Air Release Indicator: Not reported
Groundwater Release Indicator: Not reported
Soil Release Indicator: Not reported
Surface Water Release Indicator: Not reported

Name: PITTSBURG GENERATING STATION
Address: 696 W 10TH ST
Address 2: Not reported
Area Name: ENTIRE FACILITY
Corrective Action: CA050
Actual Date: 1986-09-24 00:00:00.0
Air Release Indicator: Not reported
Groundwater Release Indicator: Not reported
Soil Release Indicator: Not reported
Surface Water Release Indicator: Not reported

Name: PITTSBURG GENERATING STATION
Address: 696 W 10TH ST
Address 2: Not reported
Area Name: ENTIRE FACILITY
Corrective Action: CA070YE
Actual Date: 1986-09-24 00:00:00.0
Air Release Indicator: Not reported
Groundwater Release Indicator: Not reported
Soil Release Indicator: Not reported
Surface Water Release Indicator: Not reported

Name: PITTSBURG GENERATING STATION
Address: 696 W 10TH ST
Address 2: Not reported
Area Name: SWMUS 4.18 AND 4.12
Corrective Action: CA200
Actual Date: 1990-03-29 00:00:00.0
Air Release Indicator: Not reported
Groundwater Release Indicator: Not reported
Soil Release Indicator: Not reported
Surface Water Release Indicator: Not reported

Name: PITTSBURG GENERATING STATION
Address: 696 W 10TH ST
Address 2: Not reported
Area Name: 5 SWMUS: TANK, PITS, POND, SUMP, PAD
Corrective Action: CA200
Actual Date: 1990-03-29 00:00:00.0
Air Release Indicator: Not reported
Groundwater Release Indicator: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Soil Release Indicator: Not reported
Surface Water Release Indicator: Not reported

Name: PITTSBURG GENERATING STATION
Address: 696 W 10TH ST
Address 2: Not reported
Area Name: SWMUS 4.18 AND 4.12
Corrective Action: CA300
Actual Date: 1996-12-21 00:00:00.0
Air Release Indicator: Not reported
Groundwater Release Indicator: Not reported
Soil Release Indicator: Not reported
Surface Water Release Indicator: Not reported

Name: PITTSBURG GENERATING STATION
Address: 696 W 10TH ST
Address 2: Not reported
Area Name: SWMUS 4.18 AND 4.12
Corrective Action: CA100
Actual Date: 2004-01-22 00:00:00.0
Air Release Indicator: Not reported
Groundwater Release Indicator: Not reported
Soil Release Indicator: Not reported
Surface Water Release Indicator: Not reported

Name: PITTSBURG GENERATING STATION
Address: 696 W 10TH ST
Address 2: Not reported
Area Name: 5 SWMUS: TANK, PITS, POND, SUMP, PAD
Corrective Action: CA150
Actual Date: 1989-08-30 00:00:00.0
Air Release Indicator: Not reported
Groundwater Release Indicator: Not reported
Soil Release Indicator: Not reported
Surface Water Release Indicator: Not reported

Name: PITTSBURG GENERATING STATION
Address: 696 W 10TH ST
Address 2: Not reported
Area Name: SWMUS 4.18 AND 4.12
Corrective Action: CA600SR
Actual Date: 1998-05-28 00:00:00.0
Air Release Indicator: Not reported
Groundwater Release Indicator: Not reported
Soil Release Indicator: Not reported
Surface Water Release Indicator: Not reported

Click this hyperlink while viewing on your computer to access
34 additional CORRACTS: record(s) in the EDR Site Report.

RCRA-SQG:
Date Form Received by Agency: 2020-06-03 00:00:00.0
Handler Name: PITTSBURG GENERATING STATION
Handler Address: 696 W 10TH ST
Handler City,State,Zip: PITTSBURG, CA 94565
EPA ID: CAT080011695
Contact Name: STEVE DAWKIN

PITTSBURG GENERATING STATION (Continued) **1015730702**

Contact Address:	PO BOX 192
Contact City,State,Zip:	PITTSBURG, CA 94565
Contact Telephone:	925-324-3569
Contact Fax:	925-427-3535
Contact Email:	STEVE.DAWKIN@GENON.COM
Contact Title:	PLANT ENGINEER
EPA Region:	09
Land Type:	Private
Federal Waste Generator Description:	Small Quantity Generator
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities, Corrective Action Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	PO BOX 192
Mailing City,State,Zip:	PITTSBURG, CA 94565
Owner Name:	GENON DELTA, LLC
Owner Type:	Private
Operator Name:	GENON DELTA, LLC
Operator Type:	Private
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Land Disposal
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Land Disposal
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	Yes
Corrective Action Workload Universe:	Yes
Subject to Corrective Action Universe:	Yes
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	Yes
Corrective Action Priority Ranking:	No NCAPS ranking

PITTSBURG GENERATING STATION (Continued) **1015730702**

Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	Yes
Groundwater Controls Indicator:	Yes
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2020-06-03 17:19:54.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Biennial: List of Years
Year: 2017

Click Here for Biennial Reporting System Data:
Year: 2013

Click Here for Biennial Reporting System Data:
Year: 2009

Click Here for Biennial Reporting System Data:
Year: 2007

Click Here for Biennial Reporting System Data:
Year: 2005

Click Here for Biennial Reporting System Data:
Year: 2003

Click Here for Biennial Reporting System Data:
Year: 2001

Click Here for Biennial Reporting System Data:

Hazardous Waste Summary:

Waste Code:	D000
Waste Description:	Not Defined
Waste Code:	D001
Waste Description:	IGNITABLE WASTE
Waste Code:	D002
Waste Description:	CORROSIVE WASTE
Waste Code:	D003
Waste Description:	REACTIVE WASTE

PITTSBURG GENERATING STATION (Continued) **1015730702**

Waste Code: D004
Waste Description: ARSENIC

Waste Code: D005
Waste Description: BARIUM

Waste Code: D006
Waste Description: CADMIUM

Waste Code: D007
Waste Description: CHROMIUM

Waste Code: D008
Waste Description: LEAD

Waste Code: D009
Waste Description: MERCURY

Waste Code: D011
Waste Description: SILVER

Waste Code: D018
Waste Description: BENZENE

Waste Code: D022
Waste Description: CHLOROFORM

Waste Code: D035
Waste Description: METHYL ETHYL KETONE

Waste Code: F001
Waste Description: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F002
Waste Description: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F003
Waste Description: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS

PITTSBURG GENERATING STATION (Continued) **1015730702**

CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F005
Waste Description: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: U003
Waste Description: ACETONITRILE (I,T)

Waste Code: U044
Waste Description: CHLOROFORM (OR) METHANE, TRICHLORO-

Waste Code: U123
Waste Description: FORMIC ACID (C,T)

Waste Code: U239
Waste Description: BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	MIRANT DELTA, LLC
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	P.O.BOX 192
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	MIRANT DELTA, LLC
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	SOUTHERN ENERGY DELTA LLC
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Owner/Operator Address:	50 CALIFORNIA STREET STE 3220
Owner/Operator City,State,Zip:	SAN FRANCISCO, CA 94111
Owner/Operator Telephone:	415-283-2280
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	GENON DELTA, LLC
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	PO BOX 192
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	805-986-7241
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	THOMAS.DICIOLLI@GENON.COM
Owner/Operator Indicator:	Operator
Owner/Operator Name:	MIRANT DELTA, LLC.
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	NGR DELTA LLC
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	PO BOX 192
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	925-427-3513
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	PACIFIC GAS AND ELECTRIC COMPANY
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	77 BEALE STREET
Owner/Operator City,State,Zip:	CITY NOT REPORTED, CA 99999
Owner/Operator Telephone:	415-781-4211
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	NRG DELTA LLC

PITTSBURG GENERATING STATION (Continued) **1015730702**

Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	PO BOX 192
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	925-427-3513
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	GENON DELTA, LLC
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	PO BOX 192
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	805-986-7241
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	THOMAS.DICIOLLI@GENON.COM

Owner/Operator Indicator:	Owner
Owner/Operator Name:	MIRANT DELTA, LLC.
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	P O BOX 192
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	NRG DELTA LLC
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	P.O. BOX 192
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	925-427-3451
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	AMAN.SINGH@GENON.COM

Owner/Operator Indicator:	Owner
Owner/Operator Name:	MIRANT DELTA, LLC
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	P.O.BOX 192
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Owner/Operator Indicator:	Operator
Owner/Operator Name:	NRG DELTA LLC
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	696 WEST 10TH STREET
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	GENON DELTA, LLC
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	PO BOX 192
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	805-986-7241
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	THOMAS.DICIOLLI@GENON.COM

Owner/Operator Indicator:	Operator
Owner/Operator Name:	MIRANT DELTA, LLC
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	NGR DELTA LLC
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	MIRANT DELTA, LLC
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	P.O. BOX 190
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	NRG DELTA LLC
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	P.O. BOX 192
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	925-427-3451
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	AMAN.SINGH@GENON.COM
Owner/Operator Indicator:	Operator
Owner/Operator Name:	MIRANT DELTA, LLC
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	GENON DELTA, LLC
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	PO BOX 192
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	805-986-7241
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	THOMAS.DICIOLLI@GENON.COM
Owner/Operator Indicator:	Owner
Owner/Operator Name:	MIRANT DELTA, LLC.
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	P O BOX 192
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	MIRANT DELTA, LLC.
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Owner/Operator City,State,Zip: Not reported
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 2004-01-30 00:00:00.0
Handler Name: PITTSBURG POWER PLANT
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2006-02-06 00:00:00.0
Handler Name: PITTSBURG POWER PLANT
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2010-02-18 00:00:00.0
Handler Name: PITTSBURG POWER PLANT
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2014-03-01 00:00:00.0
Handler Name: PITTSBURG GENERATING STATION
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Electronic Manifest Broker: Not reported

Receive Date: 2018-02-20 00:00:00.0
Handler Name: PITTSBURG GENERATING STATION
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: No
Electronic Manifest Broker: No

Receive Date: 1996-09-01 00:00:00.0
Handler Name: PITTSBURG POWER PLANT
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2006-02-06 00:00:00.0
Handler Name: PITTSBURG POWER PLANT
Federal Waste Generator Description: Small Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2001-04-19 00:00:00.0
Handler Name: PITTSBURG POWER PLANT
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2018-11-28 00:00:00.0
Handler Name: PITTSBURG GENERATING STATION
Federal Waste Generator Description: Small Quantity Generator

PITTSBURG GENERATING STATION (Continued) **1015730702**

State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: No
Electronic Manifest Broker: No

Receive Date: 2019-08-12 00:00:00.0
Handler Name: PITTSBURG GENERATING STATION
Federal Waste Generator Description: Small Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: No
Electronic Manifest Broker: No

Receive Date: 2020-06-03 00:00:00.0
Handler Name: PITTSBURG GENERATING STATION
Federal Waste Generator Description: Small Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: No
Electronic Manifest Broker: No

Receive Date: 1990-04-13 00:00:00.0
Handler Name: PG&E PITTSBURG POWER PLANT
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 1992-03-31 00:00:00.0
Handler Name: PACIFIC GAS AND ELECTRIC COMPANY PITTSBU
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No

PITTSBURG GENERATING STATION (Continued) **1015730702**

Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 1994-03-31 00:00:00.0
Handler Name: PG & E PITTSBURG POWER PLANT
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 1996-02-22 00:00:00.0
Handler Name: PITTSBURG POWER PLANT
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 1999-03-04 00:00:00.0
Handler Name: PITTSBURG POWER PLANT
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2000-10-12 00:00:00.0
Handler Name: PITTSBURG POWER PLANT
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Receive Date: 2002-02-26 00:00:00.0
Handler Name: PITTSBURG POWER PLANT
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2008-02-14 00:00:00.0
Handler Name: PITTSBURG POWER PLANT
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 2211
NAICS Description: ELECTRIC POWER GENERATION, TRANSMISSION AND DISTRIBUTION

NAICS Code: 221112
NAICS Description: FOSSIL FUEL ELECTRIC POWER GENERATION

NAICS Code: 22133
NAICS Description: STEAM AND AIR-CONDITIONING SUPPLY

Facility Has Received Notices of Violation:
Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - General
Date Violation was Determined: 1990-08-17 00:00:00.0
Actual Return to Compliance Date: 1992-06-24 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 004
Date of Enforcement Action: 1990-12-27 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: INITIAL 3008(A) COMPLIANCE
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD IS-Ground-Water Monitoring
Date Violation was Determined:	2004-05-03 00:00:00.0
Actual Return to Compliance Date:	2004-05-11 00:00:00.0
Return to Compliance Qualifier:	Documented
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	200
Date of Enforcement Action:	2004-05-04 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	1993-11-18 00:00:00.0
Actual Return to Compliance Date:	1994-08-16 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	1994-02-03 00:00:00.0
Enforcement Identifier:	007
Date of Enforcement Action:	1993-11-18 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1990-08-17 00:00:00.0
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	003
Date of Enforcement Action:	1990-09-21 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Closure/Post-Closure
Date Violation was Determined:	1990-08-17 00:00:00.0
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	005
Date of Enforcement Action:	1992-02-19 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: 42000
Paid Amount: 42000
Final Count: 1
Final Amount: 42000

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: LDR - General
Date Violation was Determined: 1992-03-27 00:00:00.0
Actual Return to Compliance Date: 1993-09-21 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 1992-06-25 00:00:00.0
Enforcement Identifier: 006
Date of Enforcement Action: 1992-05-06 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Closure/Post-Closure
Date Violation was Determined:	1990-08-17 00:00:00.0
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	004
Date of Enforcement Action:	1990-12-27 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	INITIAL 3008(A) COMPLIANCE
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	1993-11-18 00:00:00.0
Actual Return to Compliance Date:	1994-08-16 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	1994-02-03 00:00:00.0
Enforcement Identifier:	007
Date of Enforcement Action:	1993-11-18 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: EPA
Violation Short Description: TSD - Financial Requirements
Date Violation was Determined: 1991-11-18 00:00:00.0
Actual Return to Compliance Date: 1993-10-12 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Closure/Post-Closure
Date Violation was Determined:	1990-08-17 00:00:00.0
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	003
Date of Enforcement Action:	1990-09-21 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Financial Requirements
Date Violation was Determined:	2002-01-29 00:00:00.0
Actual Return to Compliance Date:	2002-11-15 00:00:00.0
Return to Compliance Qualifier:	Documented
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	245
Date of Enforcement Action:	2005-01-06 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: SINGLE SITE CA/FO
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: 50000
Paid Amount: Not reported
Final Count: 1
Final Amount: 50000

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - General
Date Violation was Determined: 1994-08-18 00:00:00.0
Actual Return to Compliance Date: 1994-08-18 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 1994-12-29 00:00:00.0
Enforcement Identifier: 008
Date of Enforcement Action: 1994-08-18 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	2008-03-07 00:00:00.0
Actual Return to Compliance Date:	2008-03-07 00:00:00.0
Return to Compliance Qualifier:	Documented
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	601
Date of Enforcement Action:	2008-03-07 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Contingency Plan and Emergency Procedures
Date Violation was Determined:	2001-05-24 00:00:00.0
Actual Return to Compliance Date:	2001-06-07 00:00:00.0
Return to Compliance Qualifier:	Documented
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	200
Date of Enforcement Action:	2001-05-24 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: LDR - General
Date Violation was Determined: 1990-08-17 00:00:00.0
Actual Return to Compliance Date: 1992-06-24 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 003
Date of Enforcement Action: 1990-09-21 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Transporters - HW Discharges
Date Violation was Determined:	2002-01-17 00:00:00.0
Actual Return to Compliance Date:	2002-04-23 00:00:00.0
Return to Compliance Qualifier:	Documented
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	200
Date of Enforcement Action:	2002-02-28 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	2004-08-19 00:00:00.0
Actual Return to Compliance Date:	2004-09-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	501
Date of Enforcement Action:	2004-08-19 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	LDR - General
Date Violation was Determined:	1990-08-17 00:00:00.0
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	004
Date of Enforcement Action:	1990-12-27 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	INITIAL 3008(A) COMPLIANCE
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1992-03-27 00:00:00.0
Actual Return to Compliance Date:	1993-09-21 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	1992-06-25 00:00:00.0
Enforcement Identifier:	006
Date of Enforcement Action:	1992-05-06 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Found Violation:	Yes
Agency Which Determined Violation:	EPA
Violation Short Description:	TSD - Financial Requirements
Date Violation was Determined:	1992-06-24 00:00:00.0
Actual Return to Compliance Date:	1993-10-12 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - Financial Requirements
Date Violation was Determined: 2002-01-29 00:00:00.0
Actual Return to Compliance Date: 2002-11-15 00:00:00.0
Return to Compliance Qualifier: Documented
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 200
Date of Enforcement Action: 2002-03-12 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1993-11-18 00:00:00.0
Actual Return to Compliance Date:	1994-08-16 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	1994-02-03 00:00:00.0
Enforcement Identifier:	007
Date of Enforcement Action:	1993-11-18 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Financial Requirements
Date Violation was Determined:	2001-06-28 00:00:00.0
Actual Return to Compliance Date:	2002-05-15 00:00:00.0
Return to Compliance Qualifier:	Documented
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	245
Date of Enforcement Action:	2005-01-06 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: SINGLE SITE CA/FO
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: 50000
Paid Amount: Not reported
Final Count: 1
Final Amount: 50000

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - Manifest/Records/Reporting
Date Violation was Determined: 2001-05-24 00:00:00.0
Actual Return to Compliance Date: 2001-06-07 00:00:00.0
Return to Compliance Qualifier: Documented
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 200
Date of Enforcement Action: 2001-05-24 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1992-03-27 00:00:00.0
Actual Return to Compliance Date:	1993-09-21 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	1992-06-25 00:00:00.0
Enforcement Identifier:	006
Date of Enforcement Action:	1992-05-06 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - General
Date Violation was Determined: 1989-08-28 00:00:00.0
Actual Return to Compliance Date: 1989-11-20 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 1989-11-14 00:00:00.0
Enforcement Identifier: 002
Date of Enforcement Action: 1989-10-05 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General Facility Standards
Date Violation was Determined:	2001-05-24 00:00:00.0
Actual Return to Compliance Date:	2001-06-07 00:00:00.0
Return to Compliance Qualifier:	Documented
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	200
Date of Enforcement Action:	2001-05-24 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - General
Date Violation was Determined: 1993-11-18 00:00:00.0
Actual Return to Compliance Date: 1994-08-16 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 1994-02-03 00:00:00.0
Enforcement Identifier: 007
Date of Enforcement Action: 1993-11-18 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1990-08-17 00:00:00.0
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	005
Date of Enforcement Action:	1992-02-19 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	42000
Paid Amount:	42000
Final Count:	1
Final Amount:	42000

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD IS-Ground-Water Monitoring
Date Violation was Determined:	1987-08-01 00:00:00.0
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	EPA
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - Financial Requirements
Date Violation was Determined: 2001-06-28 00:00:00.0
Actual Return to Compliance Date: 2002-05-15 00:00:00.0
Return to Compliance Qualifier: Documented
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	LDR - General
Date Violation was Determined:	1990-08-17 00:00:00.0
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	005
Date of Enforcement Action:	1992-02-19 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	42000
Paid Amount:	42000
Final Count:	1
Final Amount:	42000

Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General Facility Standards
Date Violation was Determined:	2004-11-30 00:00:00.0
Actual Return to Compliance Date:	2005-12-03 00:00:00.0
Return to Compliance Qualifier:	Documented
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	210
Date of Enforcement Action:	2004-11-30 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD IS-Ground-Water Monitoring
Date Violation was Determined: 1990-10-19 00:00:00.0
Actual Return to Compliance Date: 1992-06-24 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 005
Date of Enforcement Action: 1992-02-19 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: 42000
Paid Amount: 42000
Final Count: 1
Final Amount: 42000

PITTSBURG GENERATING STATION (Continued) **1015730702**

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1992-03-27 00:00:00.0
Actual Return to Compliance Date:	1993-09-21 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	1992-06-25 00:00:00.0
Enforcement Identifier:	006
Date of Enforcement Action:	1992-05-06 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	1994-08-18 00:00:00.0
Actual Return to Compliance Date:	1998-02-10 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	1994-12-29 00:00:00.0
Enforcement Identifier:	008
Date of Enforcement Action:	1994-08-18 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD IS-Ground-Water Monitoring
Date Violation was Determined:	1990-10-19 00:00:00.0
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	004
Date of Enforcement Action:	1990-12-27 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: INITIAL 3008(A) COMPLIANCE
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - General
Date Violation was Determined: 1989-08-28 00:00:00.0
Actual Return to Compliance Date: 1989-11-20 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 1989-11-14 00:00:00.0
Enforcement Identifier: 002
Date of Enforcement Action: 1989-10-05 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Evaluation Action Summary:

Evaluation Date:	1991-08-28 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	1990-08-17 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	2004-05-03 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	OPERATION AND MAINTENANCE INSPECTION
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2004-05-11 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	1993-09-21 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-08-16 00:00:00.0
Scheduled Compliance Date:	1994-02-03 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	2002-11-15 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	NOT A SIGNIFICANT NON-COMPLIER

PITTSBURG GENERATING STATION (Continued) **1015730702**

Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	1990-08-17 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	1990-08-17 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	1992-02-11 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1993-09-21 00:00:00.0
Scheduled Compliance Date:	1992-06-25 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	2015-04-24 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 2017-05-18 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: Not reported
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1990-08-01 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1990-08-17 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1992-06-24 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1993-09-21 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1994-08-16 00:00:00.0
Scheduled Compliance Date: 1994-02-03 00:00:00.0
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1991-11-18 00:00:00.0

PITTSBURG GENERATING STATION (Continued) **1015730702**

Evaluation Responsible Agency:	EPA Contractor/Grantee
Found Violation:	Yes
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	R9EPA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1993-10-12 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	1990-08-17 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	2002-01-29 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2002-11-15 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	1994-08-16 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-08-18 00:00:00.0
Scheduled Compliance Date:	1994-12-29 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	2008-03-07 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Actual Return to Compliance Date:	2008-03-07 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2001-05-24 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2001-06-07 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1990-08-17 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2002-01-17 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2002-04-23 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2004-08-19 00:00:00.0
Evaluation Responsible Agency:	State Contractor/Grantee
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2004-09-13 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Former Citation:	Not reported
Evaluation Date:	1998-02-10 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	GROUNDWATER MONITORING EVALUATION
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1990-08-17 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1992-02-11 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1993-09-21 00:00:00.0
Scheduled Compliance Date:	1992-06-25 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1988-05-25 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1992-06-24 00:00:00.0
Evaluation Responsible Agency:	EPA Contractor/Grantee
Found Violation:	Yes

PITTSBURG GENERATING STATION (Continued) **1015730702**

Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	R9EPA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1993-10-12 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2009-03-27 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2002-01-29 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2002-11-15 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1993-09-21 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-08-16 00:00:00.0
Scheduled Compliance Date:	1994-02-03 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2001-06-28 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2002-05-15 00:00:00.0
Scheduled Compliance Date:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2001-05-24 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2001-06-07 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1992-02-11 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1993-09-21 00:00:00.0
Scheduled Compliance Date:	1992-06-25 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1988-02-02 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1989-08-28 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1989-11-20 00:00:00.0
Scheduled Compliance Date:	1989-11-14 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Evaluation Date:	2001-05-24 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2001-06-07 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	2002-10-12 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	1993-09-21 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-08-16 00:00:00.0
Scheduled Compliance Date:	1994-02-03 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	1990-08-17 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	1987-08-01 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	GROUNDWATER MONITORING EVALUATION
Evaluation Responsible Person Identifier:	R9STA

PITTSBURG GENERATING STATION (Continued) **1015730702**

Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2001-06-28 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2002-05-15 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1996-06-05 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	OPERATION AND MAINTENANCE INSPECTION
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1990-08-17 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2003-09-12 00:00:00.0
Evaluation Responsible Agency:	State Contractor/Grantee
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 2004-11-30 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: Not reported
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 2005-12-03 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1988-05-25 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1990-10-19 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: OPERATION AND MAINTENANCE INSPECTION
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1992-06-24 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1992-02-11 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1993-09-21 00:00:00.0
Scheduled Compliance Date: 1992-06-25 00:00:00.0
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 2002-09-18 00:00:00.0
Evaluation Responsible Agency: State

PITTSBURG GENERATING STATION (Continued) **1015730702**

Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	2001-06-28 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	SIGNIFICANT NON-COMPLIER
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	1996-06-25 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	1994-08-16 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1998-02-10 00:00:00.0
Scheduled Compliance Date:	1994-12-29 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	2004-12-30 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1989-08-16 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1990-10-19 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	OPERATION AND MAINTENANCE INSPECTION
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1989-08-28 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1989-11-20 00:00:00.0
Scheduled Compliance Date:	1989-11-14 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

RCRA-SQG:

Date Form Received by Agency:	2020-06-03 00:00:00.0
Handler Name:	PITTSBURG GENERATING STATION
Handler Address:	696 W 10TH ST
Handler City,State,Zip:	PITTSBURG, CA 94565
EPA ID:	CAT080011695
Contact Name:	STEVE DAWKIN
Contact Address:	PO BOX 192
Contact City,State,Zip:	PITTSBURG, CA 94565
Contact Telephone:	925-324-3569
Contact Fax:	925-427-3535
Contact Email:	STEVE.DAWKIN@GENON.COM
Contact Title:	PLANT ENGINEER
EPA Region:	09
Land Type:	Private
Federal Waste Generator Description:	Small Quantity Generator
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities, Corrective Action Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	PO BOX 192
Mailing City,State,Zip:	PITTSBURG, CA 94565
Owner Name:	GENON DELTA, LLC
Owner Type:	Private
Operator Name:	GENON DELTA, LLC
Operator Type:	Private
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Land Disposal
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Land Disposal
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

202 GPRA Corrective Action Baseline:	Yes
Corrective Action Workload Universe:	Yes
Subject to Corrective Action Universe:	Yes
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	Yes
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	Yes
Groundwater Controls Indicator:	Yes
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2020-06-03 17:19:54.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Biennial: List of Years
Year: 2017

Click Here for Biennial Reporting System Data:
Year: 2013

Click Here for Biennial Reporting System Data:
Year: 2009

Click Here for Biennial Reporting System Data:
Year: 2007

Click Here for Biennial Reporting System Data:
Year: 2005

Click Here for Biennial Reporting System Data:
Year: 2003

Click Here for Biennial Reporting System Data:
Year: 2001

Click Here for Biennial Reporting System Data:

Hazardous Waste Summary:
Waste Code: D000
Waste Description: Not Defined

Waste Code: D001
Waste Description: IGNITABLE WASTE

PITTSBURG GENERATING STATION (Continued) **1015730702**

Waste Code: D002
Waste Description: CORROSIVE WASTE

Waste Code: D003
Waste Description: REACTIVE WASTE

Waste Code: D004
Waste Description: ARSENIC

Waste Code: D005
Waste Description: BARIUM

Waste Code: D006
Waste Description: CADMIUM

Waste Code: D007
Waste Description: CHROMIUM

Waste Code: D008
Waste Description: LEAD

Waste Code: D009
Waste Description: MERCURY

Waste Code: D011
Waste Description: SILVER

Waste Code: D018
Waste Description: BENZENE

Waste Code: D022
Waste Description: CHLOROFORM

Waste Code: D035
Waste Description: METHYL ETHYL KETONE

Waste Code: F001
Waste Description: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F002
Waste Description: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

PITTSBURG GENERATING STATION (Continued) **1015730702**

Waste Code: F003
Waste Description: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F005
Waste Description: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: U003
Waste Description: ACETONITRILE (I,T)

Waste Code: U044
Waste Description: CHLOROFORM (OR) METHANE, TRICHLORO-

Waste Code: U123
Waste Description: FORMIC ACID (C,T)

Waste Code: U239
Waste Description: BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	MIRANT DELTA, LLC
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	P.O.BOX 192
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	MIRANT DELTA, LLC
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Owner/Operator Indicator:	Owner
Owner/Operator Name:	SOUTHERN ENERGY DELTA LLC
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	50 CALIFORNIA STREET STE 3220
Owner/Operator City,State,Zip:	SAN FRANCISCO, CA 94111
Owner/Operator Telephone:	415-283-2280
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	GENON DELTA, LLC
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	PO BOX 192
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	805-986-7241
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	THOMAS.DICIOLLI@GENON.COM

Owner/Operator Indicator:	Operator
Owner/Operator Name:	MIRANT DELTA, LLC.
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	NGR DELTA LLC
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	PO BOX 192
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	925-427-3513
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	PACIFIC GAS AND ELECTRIC COMPANY
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	77 BEALE STREET
Owner/Operator City,State,Zip:	CITY NOT REPORTED, CA 99999
Owner/Operator Telephone:	415-781-4211
Owner/Operator Telephone Ext:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	NRG DELTA LLC
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	PO BOX 192
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	925-427-3513
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	GENON DELTA, LLC
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	PO BOX 192
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	805-986-7241
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	THOMAS.DICIOLLI@GENON.COM
Owner/Operator Indicator:	Owner
Owner/Operator Name:	MIRANT DELTA, LLC.
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	P O BOX 192
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	NRG DELTA LLC
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	P.O. BOX 192
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	925-427-3451
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	AMAN.SINGH@GENON.COM
Owner/Operator Indicator:	Owner
Owner/Operator Name:	MIRANT DELTA, LLC
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	P.O.BOX 192

PITTSBURG GENERATING STATION (Continued) **1015730702**

Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	NRG DELTA LLC
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	696 WEST 10TH STREET
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	GENON DELTA, LLC
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	PO BOX 192
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	805-986-7241
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	THOMAS.DICIOLLI@GENON.COM
Owner/Operator Indicator:	Operator
Owner/Operator Name:	MIRANT DELTA, LLC
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	NGR DELTA LLC
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	MIRANT DELTA, LLC
Legal Status:	Private

PITTSBURG GENERATING STATION (Continued) **1015730702**

Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	P.O. BOX 190
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	NRG DELTA LLC
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	P.O. BOX 192
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	925-427-3451
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	AMAN.SINGH@GENON.COM
Owner/Operator Indicator:	Operator
Owner/Operator Name:	MIRANT DELTA, LLC
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	GENON DELTA, LLC
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	PO BOX 192
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	805-986-7241
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	THOMAS.DICIOLLI@GENON.COM
Owner/Operator Indicator:	Owner
Owner/Operator Name:	MIRANT DELTA, LLC.
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	P O BOX 192
Owner/Operator City,State,Zip:	PITTSBURG, CA 94565
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Owner/Operator Indicator:	Operator
Owner/Operator Name:	MIRANT DELTA, LLC.
Legal Status:	Private
Date Became Current:	1999-04-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	2004-01-30 00:00:00.0
Handler Name:	PITTSBURG POWER PLANT
Federal Waste Generator Description:	Large Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Receive Date:	2006-02-06 00:00:00.0
Handler Name:	PITTSBURG POWER PLANT
Federal Waste Generator Description:	Large Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Receive Date:	2010-02-18 00:00:00.0
Handler Name:	PITTSBURG POWER PLANT
Federal Waste Generator Description:	Large Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Receive Date:	2014-03-01 00:00:00.0
Handler Name:	PITTSBURG GENERATING STATION
Federal Waste Generator Description:	Large Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No

PITTSBURG GENERATING STATION (Continued) **1015730702**

Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2018-02-20 00:00:00.0
Handler Name: PITTSBURG GENERATING STATION
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: No
Electronic Manifest Broker: No

Receive Date: 1996-09-01 00:00:00.0
Handler Name: PITTSBURG POWER PLANT
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2006-02-06 00:00:00.0
Handler Name: PITTSBURG POWER PLANT
Federal Waste Generator Description: Small Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2001-04-19 00:00:00.0
Handler Name: PITTSBURG POWER PLANT
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No

PITTSBURG GENERATING STATION (Continued) **1015730702**

Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2018-11-28 00:00:00.0
Handler Name: PITTSBURG GENERATING STATION
Federal Waste Generator Description: Small Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: No
Electronic Manifest Broker: No

Receive Date: 2019-08-12 00:00:00.0
Handler Name: PITTSBURG GENERATING STATION
Federal Waste Generator Description: Small Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: No
Electronic Manifest Broker: No

Receive Date: 2020-06-03 00:00:00.0
Handler Name: PITTSBURG GENERATING STATION
Federal Waste Generator Description: Small Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: No
Electronic Manifest Broker: No

Receive Date: 1990-04-13 00:00:00.0
Handler Name: PG&E PITTSBURG POWER PLANT
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 1992-03-31 00:00:00.0
Handler Name: PACIFIC GAS AND ELECTRIC COMPANY PITTSBU

PITTSBURG GENERATING STATION (Continued) **1015730702**

Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 1994-03-31 00:00:00.0
Handler Name: PG & E PITTSBURG POWER PLANT
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 1996-02-22 00:00:00.0
Handler Name: PITTSBURG POWER PLANT
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 1999-03-04 00:00:00.0
Handler Name: PITTSBURG POWER PLANT
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2000-10-12 00:00:00.0
Handler Name: PITTSBURG POWER PLANT
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No

PITTSBURG GENERATING STATION (Continued) **1015730702**

Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2002-02-26 00:00:00.0
Handler Name: PITTSBURG POWER PLANT
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2008-02-14 00:00:00.0
Handler Name: PITTSBURG POWER PLANT
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 2211
NAICS Description: ELECTRIC POWER GENERATION, TRANSMISSION AND DISTRIBUTION

NAICS Code: 221112
NAICS Description: FOSSIL FUEL ELECTRIC POWER GENERATION

NAICS Code: 22133
NAICS Description: STEAM AND AIR-CONDITIONING SUPPLY

Facility Has Received Notices of Violation:
Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - General
Date Violation was Determined: 1990-08-17 00:00:00.0
Actual Return to Compliance Date: 1992-06-24 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 004
Date of Enforcement Action: 1990-12-27 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: INITIAL 3008(A) COMPLIANCE
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD IS-Ground-Water Monitoring
Date Violation was Determined: 2004-05-03 00:00:00.0
Actual Return to Compliance Date: 2004-05-11 00:00:00.0
Return to Compliance Qualifier: Documented
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 200
Date of Enforcement Action: 2004-05-04 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - General
Date Violation was Determined: 1993-11-18 00:00:00.0
Actual Return to Compliance Date: 1994-08-16 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 1994-02-03 00:00:00.0
Enforcement Identifier: 007
Date of Enforcement Action: 1993-11-18 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - General
Date Violation was Determined: 1990-08-17 00:00:00.0
Actual Return to Compliance Date: 1992-06-24 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 003
Date of Enforcement Action: 1990-09-21 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - Closure/Post-Closure
Date Violation was Determined: 1990-08-17 00:00:00.0
Actual Return to Compliance Date: 1992-06-24 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 005
Date of Enforcement Action: 1992-02-19 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: 42000
Paid Amount: 42000
Final Count: 1
Final Amount: 42000

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: LDR - General
Date Violation was Determined: 1992-03-27 00:00:00.0
Actual Return to Compliance Date: 1993-09-21 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 1992-06-25 00:00:00.0
Enforcement Identifier: 006
Date of Enforcement Action: 1992-05-06 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - Closure/Post-Closure
Date Violation was Determined: 1990-08-17 00:00:00.0
Actual Return to Compliance Date: 1992-06-24 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 004
Date of Enforcement Action: 1990-12-27 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: INITIAL 3008(A) COMPLIANCE
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - General
Date Violation was Determined: 1993-11-18 00:00:00.0
Actual Return to Compliance Date: 1994-08-16 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 1994-02-03 00:00:00.0
Enforcement Identifier: 007
Date of Enforcement Action: 1993-11-18 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: EPA
Violation Short Description: TSD - Financial Requirements
Date Violation was Determined: 1991-11-18 00:00:00.0
Actual Return to Compliance Date: 1993-10-12 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - Closure/Post-Closure
Date Violation was Determined: 1990-08-17 00:00:00.0
Actual Return to Compliance Date: 1992-06-24 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 003
Date of Enforcement Action: 1990-09-21 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - Financial Requirements
Date Violation was Determined: 2002-01-29 00:00:00.0
Actual Return to Compliance Date: 2002-11-15 00:00:00.0
Return to Compliance Qualifier: Documented
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 245
Date of Enforcement Action: 2005-01-06 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: SINGLE SITE CA/FO
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: 50000
Paid Amount: Not reported
Final Count: 1
Final Amount: 50000

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - General
Date Violation was Determined: 1994-08-18 00:00:00.0
Actual Return to Compliance Date: 1994-08-18 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 1994-12-29 00:00:00.0
Enforcement Identifier: 008
Date of Enforcement Action: 1994-08-18 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - General
Date Violation was Determined: 2008-03-07 00:00:00.0
Actual Return to Compliance Date: 2008-03-07 00:00:00.0
Return to Compliance Qualifier: Documented
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 601
Date of Enforcement Action: 2008-03-07 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - Contingency Plan and Emergency Procedures
Date Violation was Determined: 2001-05-24 00:00:00.0
Actual Return to Compliance Date: 2001-06-07 00:00:00.0
Return to Compliance Qualifier: Documented
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 200
Date of Enforcement Action: 2001-05-24 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: LDR - General
Date Violation was Determined: 1990-08-17 00:00:00.0
Actual Return to Compliance Date: 1992-06-24 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 003
Date of Enforcement Action: 1990-09-21 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Transporters - HW Discharges
Date Violation was Determined: 2002-01-17 00:00:00.0
Actual Return to Compliance Date: 2002-04-23 00:00:00.0
Return to Compliance Qualifier: Documented
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 200
Date of Enforcement Action: 2002-02-28 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - General
Date Violation was Determined: 2004-08-19 00:00:00.0
Actual Return to Compliance Date: 2004-09-13 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 501
Date of Enforcement Action: 2004-08-19 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: LDR - General
Date Violation was Determined: 1990-08-17 00:00:00.0
Actual Return to Compliance Date: 1992-06-24 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 004
Date of Enforcement Action: 1990-12-27 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: INITIAL 3008(A) COMPLIANCE
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - General
Date Violation was Determined: 1992-03-27 00:00:00.0
Actual Return to Compliance Date: 1993-09-21 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 1992-06-25 00:00:00.0
Enforcement Identifier: 006
Date of Enforcement Action: 1992-05-06 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	EPA
Violation Short Description:	TSD - Financial Requirements
Date Violation was Determined:	1992-06-24 00:00:00.0
Actual Return to Compliance Date:	1993-10-12 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Financial Requirements
Date Violation was Determined:	2002-01-29 00:00:00.0
Actual Return to Compliance Date:	2002-11-15 00:00:00.0
Return to Compliance Qualifier:	Documented
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	200
Date of Enforcement Action:	2002-03-12 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - General
Date Violation was Determined: 1993-11-18 00:00:00.0
Actual Return to Compliance Date: 1994-08-16 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 1994-02-03 00:00:00.0
Enforcement Identifier: 007
Date of Enforcement Action: 1993-11-18 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - Financial Requirements
Date Violation was Determined: 2001-06-28 00:00:00.0
Actual Return to Compliance Date: 2002-05-15 00:00:00.0
Return to Compliance Qualifier: Documented
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 245
Date of Enforcement Action: 2005-01-06 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: SINGLE SITE CA/FO
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: 50000
Paid Amount: Not reported
Final Count: 1
Final Amount: 50000

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - Manifest/Records/Reporting
Date Violation was Determined: 2001-05-24 00:00:00.0
Actual Return to Compliance Date: 2001-06-07 00:00:00.0
Return to Compliance Qualifier: Documented
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 200
Date of Enforcement Action: 2001-05-24 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - General
Date Violation was Determined: 1992-03-27 00:00:00.0
Actual Return to Compliance Date: 1993-09-21 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 1992-06-25 00:00:00.0
Enforcement Identifier: 006
Date of Enforcement Action: 1992-05-06 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - General
Date Violation was Determined: 1989-08-28 00:00:00.0
Actual Return to Compliance Date: 1989-11-20 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 1989-11-14 00:00:00.0
Enforcement Identifier: 002
Date of Enforcement Action: 1989-10-05 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General Facility Standards
Date Violation was Determined:	2001-05-24 00:00:00.0
Actual Return to Compliance Date:	2001-06-07 00:00:00.0
Return to Compliance Qualifier:	Documented
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	200
Date of Enforcement Action:	2001-05-24 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - General
Date Violation was Determined: 1993-11-18 00:00:00.0
Actual Return to Compliance Date: 1994-08-16 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 1994-02-03 00:00:00.0
Enforcement Identifier: 007
Date of Enforcement Action: 1993-11-18 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1990-08-17 00:00:00.0
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	005
Date of Enforcement Action:	1992-02-19 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	42000
Paid Amount:	42000
Final Count:	1
Final Amount:	42000
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD IS-Ground-Water Monitoring
Date Violation was Determined:	1987-08-01 00:00:00.0
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	EPA
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - Financial Requirements
Date Violation was Determined: 2001-06-28 00:00:00.0
Actual Return to Compliance Date: 2002-05-15 00:00:00.0
Return to Compliance Qualifier: Documented
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	LDR - General
Date Violation was Determined:	1990-08-17 00:00:00.0
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	005
Date of Enforcement Action:	1992-02-19 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	42000
Paid Amount:	42000
Final Count:	1
Final Amount:	42000

Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General Facility Standards
Date Violation was Determined:	2004-11-30 00:00:00.0
Actual Return to Compliance Date:	2005-12-03 00:00:00.0
Return to Compliance Qualifier:	Documented
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	210
Date of Enforcement Action:	2004-11-30 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD IS-Ground-Water Monitoring
Date Violation was Determined:	1990-10-19 00:00:00.0
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	005
Date of Enforcement Action:	1992-02-19 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Proposed Amount: Not reported
Final Monetary Amount: 42000
Paid Amount: 42000
Final Count: 1
Final Amount: 42000

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - General
Date Violation was Determined: 1992-03-27 00:00:00.0
Actual Return to Compliance Date: 1993-09-21 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 1992-06-25 00:00:00.0
Enforcement Identifier: 006
Date of Enforcement Action: 1992-05-06 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	1994-08-18 00:00:00.0
Actual Return to Compliance Date:	1998-02-10 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	1994-12-29 00:00:00.0
Enforcement Identifier:	008
Date of Enforcement Action:	1994-08-18 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD IS-Ground-Water Monitoring
Date Violation was Determined:	1990-10-19 00:00:00.0
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	004
Date of Enforcement Action:	1990-12-27 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: INITIAL 3008(A) COMPLIANCE
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - General
Date Violation was Determined: 1989-08-28 00:00:00.0
Actual Return to Compliance Date: 1989-11-20 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 1989-11-14 00:00:00.0
Enforcement Identifier: 002
Date of Enforcement Action: 1989-10-05 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Evaluation Action Summary:

Evaluation Date:	1991-08-28 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	1990-08-17 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	2004-05-03 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	OPERATION AND MAINTENANCE INSPECTION
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2004-05-11 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	1993-09-21 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-08-16 00:00:00.0
Scheduled Compliance Date:	1994-02-03 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Former Citation:	Not reported
Evaluation Date:	2002-11-15 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	NOT A SIGNIFICANT NON-COMPLIER
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1990-08-17 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1990-08-17 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1992-02-11 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1993-09-21 00:00:00.0
Scheduled Compliance Date:	1992-06-25 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2015-04-24 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No

PITTSBURG GENERATING STATION (Continued) **1015730702**

Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2017-05-18 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1990-08-01 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1990-08-17 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1993-09-21 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-08-16 00:00:00.0
Scheduled Compliance Date:	1994-02-03 00:00:00.0

PITTSBURG GENERATING STATION (Continued) **1015730702**

Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1991-11-18 00:00:00.0
Evaluation Responsible Agency:	EPA Contractor/Grantee
Found Violation:	Yes
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	R9EPA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1993-10-12 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1990-08-17 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2002-01-29 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2002-11-15 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1994-08-16 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-08-18 00:00:00.0
Scheduled Compliance Date:	1994-12-29 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Evaluation Date:	2008-03-07 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2008-03-07 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	2001-05-24 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2001-06-07 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	1990-08-17 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	2002-01-17 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2002-04-23 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	2004-08-19 00:00:00.0
Evaluation Responsible Agency:	State Contractor/Grantee
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2004-09-13 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	1998-02-10 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	GROUNDWATER MONITORING EVALUATION
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	1990-08-17 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	1992-02-11 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1993-09-21 00:00:00.0
Scheduled Compliance Date:	1992-06-25 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	1988-05-25 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1992-06-24 00:00:00.0
Evaluation Responsible Agency:	EPA Contractor/Grantee
Found Violation:	Yes
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	R9EPA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1993-10-12 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2009-03-27 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2002-01-29 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2002-11-15 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1993-09-21 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-08-16 00:00:00.0
Scheduled Compliance Date:	1994-02-03 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2001-06-28 00:00:00.0
Evaluation Responsible Agency:	State

PITTSBURG GENERATING STATION (Continued) **1015730702**

Found Violation:	Yes
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2002-05-15 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	2001-05-24 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2001-06-07 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	1992-02-11 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1993-09-21 00:00:00.0
Scheduled Compliance Date:	1992-06-25 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	1988-02-02 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	1989-08-28 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1989-11-20 00:00:00.0

PITTSBURG GENERATING STATION (Continued) **1015730702**

Scheduled Compliance Date:	1989-11-14 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2001-05-24 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2001-06-07 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2002-10-12 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1993-09-21 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-08-16 00:00:00.0
Scheduled Compliance Date:	1994-02-03 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1990-08-17 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Evaluation Date:	1987-08-01 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	GROUNDWATER MONITORING EVALUATION
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	2001-06-28 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2002-05-15 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	1996-06-05 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	OPERATION AND MAINTENANCE INSPECTION
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	1990-08-17 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	2003-09-12 00:00:00.0
Evaluation Responsible Agency:	State Contractor/Grantee
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	2004-11-30 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2005-12-03 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	1988-05-25 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	1990-10-19 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	OPERATION AND MAINTENANCE INSPECTION
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	1992-02-11 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1993-09-21 00:00:00.0
Scheduled Compliance Date:	1992-06-25 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2002-09-18 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2001-06-28 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	SIGNIFICANT NON-COMPLIER
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1996-06-25 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1994-08-16 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1998-02-10 00:00:00.0
Scheduled Compliance Date:	1994-12-29 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2004-12-30 00:00:00.0
Evaluation Responsible Agency:	State

PITTSBURG GENERATING STATION (Continued) **1015730702**

Found Violation:	No
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	1989-08-16 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	1990-10-19 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	OPERATION AND MAINTENANCE INSPECTION
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1992-06-24 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	1989-08-28 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1989-11-20 00:00:00.0
Scheduled Compliance Date:	1989-11-14 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

PITTSBURG GENERATING STATION (Continued) **1015730702**

US FIN ASSUR:

Name:	PITTSBURG GENERATING STATION
Address:	696 W 10TH ST
City,State,Zip:	PITTSBURG, CA 94565
EPA ID:	CAT080011695
County:	Not reported
Mechanism type:	I
Mechanism Type Description:	INSURANCE
Cost estimate:	5184645
Face value:	13184645
Effective date:	2006-04-02 00:00:00
Provider:	AEGISL
EPA region:	9

Name:	PITTSBURG GENERATING STATION
Address:	696 W 10TH ST
City,State,Zip:	PITTSBURG, CA 94565
EPA ID:	CAT080011695
County:	Not reported
Mechanism type:	I
Mechanism Type Description:	INSURANCE
Cost estimate:	8000000
Face value:	13184645
Effective date:	2006-04-02 00:00:00
Provider:	AEGISL
EPA region:	9

2020 COR ACTION:

EPA ID:	CAT080011695
Region:	9
Action:	Not reported

Count: 2 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
PITTSBURG	1003878923	PG&E GAS PLANT PITTSBURG	APPROX 1/2 MI E HARBOR/8TH	94565	SEMS-ARCHIVE
WEST PITTSBURG	S100833504	PACIFIC GAS AND ELECTRIC/SHELL - W	WILLOW PASS/ROAD	94565	CA BOND EXP. PLAN

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 02/09/2021
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 01/14/2021
Next Scheduled EDR Contact: 04/12/2021
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 02/09/2021
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 01/14/2021
Next Scheduled EDR Contact: 04/12/2021
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 02/09/2021
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 01/14/2021
Next Scheduled EDR Contact: 04/12/2021
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 04/03/2019
Date Data Arrived at EDR: 04/05/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 12/23/2020
Next Scheduled EDR Contact: 04/12/2021
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 35

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 01/14/2021
Next Scheduled EDR Contact: 04/26/2021
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 35

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 01/14/2021
Next Scheduled EDR Contact: 04/26/2021
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/14/2020
Date Data Arrived at EDR: 12/17/2020
Date Made Active in Reports: 12/22/2020
Number of Days to Update: 5

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 12/17/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 12/14/2020
Date Data Arrived at EDR: 12/17/2020
Date Made Active in Reports: 12/22/2020
Number of Days to Update: 5

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/17/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/14/2020
Date Data Arrived at EDR: 12/17/2020
Date Made Active in Reports: 12/22/2020
Number of Days to Update: 5

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/17/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/14/2020
Date Data Arrived at EDR: 12/17/2020
Date Made Active in Reports: 12/22/2020
Number of Days to Update: 5

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/17/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/14/2020
Date Data Arrived at EDR: 12/17/2020
Date Made Active in Reports: 12/22/2020
Number of Days to Update: 5

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/17/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 11/11/2020
Date Data Arrived at EDR: 11/17/2020
Date Made Active in Reports: 02/09/2021
Number of Days to Update: 84

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 02/08/2021
Next Scheduled EDR Contact: 05/24/2021
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 10/28/2020
Date Data Arrived at EDR: 11/05/2020
Date Made Active in Reports: 11/18/2020
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 11/05/2020
Next Scheduled EDR Contact: 03/08/2021
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 10/28/2020
Date Data Arrived at EDR: 11/05/2020
Date Made Active in Reports: 11/18/2020
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 11/05/2020
Next Scheduled EDR Contact: 03/08/2021
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/14/2020
Date Data Arrived at EDR: 12/15/2020
Date Made Active in Reports: 12/22/2020
Number of Days to Update: 7

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 12/15/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Quarterly

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 10/26/2020
Date Data Arrived at EDR: 10/26/2020
Date Made Active in Reports: 01/13/2021
Number of Days to Update: 79

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/26/2021
Next Scheduled EDR Contact: 05/10/2021
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 10/26/2020
Date Data Arrived at EDR: 10/26/2020
Date Made Active in Reports: 01/13/2021
Number of Days to Update: 79

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/26/2021
Next Scheduled EDR Contact: 05/10/2021
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 11/09/2020
Date Data Arrived at EDR: 11/10/2020
Date Made Active in Reports: 01/14/2021
Number of Days to Update: 65

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 02/09/2021
Next Scheduled EDR Contact: 05/24/2021
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)

Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/04/2020
Date Data Arrived at EDR: 12/04/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 76

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 12/04/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Quarterly

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land

Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/29/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/15/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/26/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 78
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)
Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/04/2020
Date Data Arrived at EDR: 12/04/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 76
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/04/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35
Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36
Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11
Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17
Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: No Update Planned

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 07/21/2020
Date Data Arrived at EDR: 09/03/2020
Date Made Active in Reports: 11/25/2020
Number of Days to Update: 83
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 01/04/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Varies

MILITARY UST SITES: Military UST Sites (GEOTRACKER)
Military ust sites

Date of Government Version: 12/04/2020
Date Data Arrived at EDR: 12/04/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 76
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/04/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Varies

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases

UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 09/03/2020
Date Data Arrived at EDR: 09/08/2020
Date Made Active in Reports: 12/03/2020
Number of Days to Update: 86

Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 12/08/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Varies

UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 12/04/2020
Date Data Arrived at EDR: 12/04/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 76

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 12/04/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities

A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69

Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 12/09/2020
Next Scheduled EDR Contact: 03/29/2021
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/03/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 12/15/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/29/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 85

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/26/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 78

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 12/15/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 10/26/2020
Date Data Arrived at EDR: 10/26/2020
Date Made Active in Reports: 01/13/2021
Number of Days to Update: 79

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/26/2021
Next Scheduled EDR Contact: 05/10/2021
Data Release Frequency: Quarterly

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfieds Sites Listing
A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 09/21/2020
Date Data Arrived at EDR: 09/22/2020
Date Made Active in Reports: 12/11/2020
Number of Days to Update: 80

Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 12/17/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 09/14/2020
Date Data Arrived at EDR: 09/15/2020
Date Made Active in Reports: 12/10/2020
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 12/11/2020
Next Scheduled EDR Contact: 03/29/2021
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database
Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 01/25/2021
Next Scheduled EDR Contact: 05/10/2021
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 12/07/2020
Date Data Arrived at EDR: 12/08/2020
Date Made Active in Reports: 02/22/2021
Number of Days to Update: 76

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 12/08/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 11/23/2020
Date Data Arrived at EDR: 11/23/2020
Date Made Active in Reports: 02/08/2021
Number of Days to Update: 77

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 02/08/2021
Next Scheduled EDR Contact: 05/24/2021
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 01/25/2021
Next Scheduled EDR Contact: 05/10/2021
Data Release Frequency: Varies

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 01/19/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 01/29/2021
Next Scheduled EDR Contact: 05/10/2021
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 03/18/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/22/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 10/26/2020
Date Data Arrived at EDR: 10/26/2020
Date Made Active in Reports: 01/13/2021
Number of Days to Update: 79

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/26/2021
Next Scheduled EDR Contact: 05/10/2021
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 06/30/2019
Date Data Arrived at EDR: 05/28/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 01/19/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Varies

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

CERS HAZ WASTE: CERS HAZ WASTE

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 10/19/2020
Date Data Arrived at EDR: 10/19/2020
Date Made Active in Reports: 01/07/2021
Number of Days to Update: 80

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 01/20/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Quarterly

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 03/18/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/22/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: Quarterly

PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 12/07/2020
Date Data Arrived at EDR: 12/08/2020
Date Made Active in Reports: 02/22/2021
Number of Days to Update: 76

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/08/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Varies

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 05/20/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/06/2020
Number of Days to Update: 78

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 02/22/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing
Aboveground storage tank sites

Date of Government Version: 11/05/2020
Date Data Arrived at EDR: 11/06/2020
Date Made Active in Reports: 01/26/2021
Number of Days to Update: 81

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 02/01/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Varies

CERS TANKS: California Environmental Reporting System (CERS) Tanks
List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 10/19/2020
Date Data Arrived at EDR: 10/19/2020
Date Made Active in Reports: 01/07/2021
Number of Days to Update: 80

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 01/20/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Quarterly

CA FID UST: Facility Inventory Database
The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS: Environmental Liens Listing
A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 11/24/2020
Date Data Arrived at EDR: 11/30/2020
Date Made Active in Reports: 02/10/2021
Number of Days to Update: 72

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 11/23/2020
Next Scheduled EDR Contact: 03/15/2021
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 35

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 01/14/2021
Next Scheduled EDR Contact: 04/12/2021
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 11/30/2020
Date Data Arrived at EDR: 12/01/2020
Date Made Active in Reports: 02/12/2021
Number of Days to Update: 73
Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 12/01/2020
Next Scheduled EDR Contact: 03/15/2021
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 09/20/2020
Date Data Arrived at EDR: 09/22/2020
Date Made Active in Reports: 12/14/2020
Number of Days to Update: 83
Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 12/17/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 09/30/2020
Date Data Arrived at EDR: 10/19/2020
Date Made Active in Reports: 01/07/2021
Number of Days to Update: 80
Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 01/20/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/04/2020
Date Data Arrived at EDR: 12/04/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 76
Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/04/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/04/2020
Date Data Arrived at EDR: 12/04/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 76
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/04/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/14/2020
Date Data Arrived at EDR: 12/17/2020
Date Made Active in Reports: 12/22/2020
Number of Days to Update: 5

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/17/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 09/29/2020
Date Data Arrived at EDR: 11/17/2020
Date Made Active in Reports: 01/25/2021
Number of Days to Update: 69

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 02/17/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 01/15/2021
Next Scheduled EDR Contact: 04/26/2021
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 01/07/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 02/09/2021
Next Scheduled EDR Contact: 05/24/2021
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 09/21/2020
Date Data Arrived at EDR: 09/22/2020
Date Made Active in Reports: 12/14/2020
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 12/17/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 02/02/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 02/05/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/17/2020
Date Made Active in Reports: 09/10/2020
Number of Days to Update: 85

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 12/18/2020
Next Scheduled EDR Contact: 03/29/2021
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 08/14/2020
Date Made Active in Reports: 11/04/2020
Number of Days to Update: 82

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 02/02/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 10/19/2020
Date Data Arrived at EDR: 10/19/2020
Date Made Active in Reports: 01/04/2021
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 01/21/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 35

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 01/14/2021
Next Scheduled EDR Contact: 03/15/2021
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 11/02/2020
Date Data Arrived at EDR: 11/12/2020
Date Made Active in Reports: 01/25/2021
Number of Days to Update: 74

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 01/19/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 34

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 01/14/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Quarterly

PADS: PCB Activity Database System
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 10/09/2019
Date Data Arrived at EDR: 10/11/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 70

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 01/08/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/30/2020
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/05/2020
Date Data Arrived at EDR: 08/10/2020
Date Made Active in Reports: 10/08/2020
Number of Days to Update: 59

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 01/19/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 12/01/2020
Date Made Active in Reports: 02/09/2021
Number of Days to Update: 70
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 12/01/2020
Next Scheduled EDR Contact: 03/15/2021
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 11/30/2020
Next Scheduled EDR Contact: 03/15/2021
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 02/05/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 01/08/2021
Next Scheduled EDR Contact: 04/12/2021
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 01/27/2021
Next Scheduled EDR Contact: 05/10/2021
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 09/30/2020
Date Data Arrived at EDR: 10/08/2020
Date Made Active in Reports: 01/04/2021
Number of Days to Update: 88

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 01/04/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/22/2020
Date Made Active in Reports: 11/20/2020
Number of Days to Update: 151

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 12/23/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 01/08/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 02/02/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 02/18/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 02/09/2021
Number of Days to Update: 26

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 01/14/2021
Next Scheduled EDR Contact: 04/12/2021
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 11/24/2020
Date Data Arrived at EDR: 11/30/2020
Date Made Active in Reports: 01/25/2021
Number of Days to Update: 56

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 11/24/2020
Next Scheduled EDR Contact: 03/15/2021
Data Release Frequency: Quarterly

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 11/03/2020
Date Data Arrived at EDR: 11/23/2020
Date Made Active in Reports: 01/25/2021
Number of Days to Update: 63

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 11/23/2020
Next Scheduled EDR Contact: 03/08/2021
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 05/06/2020
Date Data Arrived at EDR: 05/27/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 78

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 11/25/2020
Next Scheduled EDR Contact: 03/08/2021
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 11/25/2020
Next Scheduled EDR Contact: 03/08/2021
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 09/16/2020
Date Data Arrived at EDR: 09/17/2020
Date Made Active in Reports: 12/10/2020
Number of Days to Update: 84

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 12/10/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 11/04/2020
Date Data Arrived at EDR: 12/01/2020
Date Made Active in Reports: 01/25/2021
Number of Days to Update: 55

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 12/01/2020
Next Scheduled EDR Contact: 03/15/2021
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 11/03/2020
Date Data Arrived at EDR: 11/17/2020
Date Made Active in Reports: 02/09/2021
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 11/17/2020
Next Scheduled EDR Contact: 03/08/2021
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ECHO: Enforcement & Compliance History Information
ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 10/03/2020
Date Data Arrived at EDR: 10/06/2020
Date Made Active in Reports: 01/04/2021
Number of Days to Update: 90

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 01/08/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites
A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 07/02/2020
Date Made Active in Reports: 09/17/2020
Number of Days to Update: 77

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 01/15/2021
Next Scheduled EDR Contact: 04/26/2021
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing
This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 11/13/2020
Date Data Arrived at EDR: 11/13/2020
Date Made Active in Reports: 01/25/2021
Number of Days to Update: 73

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 02/17/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan
Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List
The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 06/22/2020
Date Data Arrived at EDR: 06/22/2020
Date Made Active in Reports: 09/04/2020
Number of Days to Update: 74

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 12/17/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Quarterly

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing
list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/14/2019
Date Made Active in Reports: 07/17/2019
Number of Days to Update: 64

Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 02/12/2021
Next Scheduled EDR Contact: 05/24/2021
Data Release Frequency: Varies

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 11/23/2020
Date Data Arrived at EDR: 11/24/2020
Date Made Active in Reports: 02/10/2021
Number of Days to Update: 78

Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 11/23/2020
Next Scheduled EDR Contact: 03/15/2021
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 11/23/2020
Date Data Arrived at EDR: 11/25/2020
Date Made Active in Reports: 02/10/2021
Number of Days to Update: 77

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 11/23/2020
Next Scheduled EDR Contact: 03/15/2021
Data Release Frequency: Annually

DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 11/17/2020
Date Data Arrived at EDR: 11/18/2020
Date Made Active in Reports: 02/04/2021
Number of Days to Update: 78

Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 02/22/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: Varies

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 06/16/2020
Date Made Active in Reports: 08/28/2020
Number of Days to Update: 73

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 12/18/2020
Next Scheduled EDR Contact: 03/29/2021
Data Release Frequency: Varies

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 10/16/2020
Date Data Arrived at EDR: 10/19/2020
Date Made Active in Reports: 01/07/2021
Number of Days to Update: 80

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 01/20/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 10/13/2020
Date Data Arrived at EDR: 10/14/2020
Date Made Active in Reports: 01/04/2021
Number of Days to Update: 82

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 01/22/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 11/12/2020
Date Data Arrived at EDR: 11/13/2020
Date Made Active in Reports: 01/29/2021
Number of Days to Update: 77

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 02/08/2021
Next Scheduled EDR Contact: 05/24/2021
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 04/15/2020
Date Made Active in Reports: 07/02/2020
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 01/05/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 11/13/2020
Date Data Arrived at EDR: 11/13/2020
Date Made Active in Reports: 02/01/2021
Number of Days to Update: 80

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 02/17/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 11/13/2020
Date Data Arrived at EDR: 11/13/2020
Date Made Active in Reports: 02/01/2021
Number of Days to Update: 80

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/17/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 10/05/2020
Date Data Arrived at EDR: 10/06/2020
Date Made Active in Reports: 12/23/2020
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 01/05/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing
A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 12/07/2020
Date Data Arrived at EDR: 12/08/2020
Date Made Active in Reports: 02/22/2021
Number of Days to Update: 76
Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 12/08/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing
The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 10/30/2020
Date Data Arrived at EDR: 12/01/2020
Date Made Active in Reports: 02/12/2021
Number of Days to Update: 73
Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 12/01/2020
Next Scheduled EDR Contact: 03/15/2021
Data Release Frequency: Varies

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 11/09/2020
Date Data Arrived at EDR: 11/10/2020
Date Made Active in Reports: 01/27/2021
Number of Days to Update: 78
Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 02/09/2021
Next Scheduled EDR Contact: 05/24/2021
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing
A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 11/30/2020
Date Data Arrived at EDR: 12/01/2020
Date Made Active in Reports: 02/12/2021
Number of Days to Update: 73
Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 12/01/2020
Next Scheduled EDR Contact: 03/15/2021
Data Release Frequency: Quarterly

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 12/07/2020
Date Data Arrived at EDR: 12/08/2020
Date Made Active in Reports: 02/22/2021
Number of Days to Update: 76
Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 12/08/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 12/07/2020
Date Data Arrived at EDR: 12/09/2020
Date Made Active in Reports: 12/10/2020
Number of Days to Update: 1
Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 12/07/2020
Next Scheduled EDR Contact: 03/29/2021
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UIC: UIC Listing
A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 02/01/2021
Date Data Arrived at EDR: 02/19/2021
Date Made Active in Reports: 02/22/2021
Number of Days to Update: 3

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 02/18/2021
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)
Underground control injection sites

Date of Government Version: 12/04/2020
Date Data Arrived at EDR: 12/04/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 76

Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/04/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing
Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 11/19/2019
Date Data Arrived at EDR: 01/07/2020
Date Made Active in Reports: 03/09/2020
Number of Days to Update: 62

Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 01/08/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Varies

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: No Update Planned

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 12/15/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)
Military privatized sites

Date of Government Version: 12/04/2020
Date Data Arrived at EDR: 12/04/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 76

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/04/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)
Projects sites

Date of Government Version: 12/04/2020
Date Data Arrived at EDR: 12/04/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 76

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/04/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Varies

WDR: Waste Discharge Requirements Listing

In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Date of Government Version: 12/07/2020
Date Data Arrived at EDR: 12/08/2020
Date Made Active in Reports: 02/22/2021
Number of Days to Update: 76

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 12/08/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Quarterly

CIWQS: California Integrated Water Quality System

The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 11/30/2020
Date Data Arrived at EDR: 12/01/2020
Date Made Active in Reports: 02/12/2021
Number of Days to Update: 73

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 12/01/2020
Next Scheduled EDR Contact: 03/01/2021
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data

The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 10/19/2020
Date Data Arrived at EDR: 10/19/2020
Date Made Active in Reports: 01/07/2021
Number of Days to Update: 80

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 01/20/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 12/04/2020
Date Data Arrived at EDR: 12/04/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 76

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/04/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 12/04/2020
Date Data Arrived at EDR: 12/04/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 76

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/04/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Varies

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)
Produced water ponds sites

Date of Government Version: 12/04/2020
Date Data Arrived at EDR: 12/04/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 76
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/04/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)
Sampling point - public sites

Date of Government Version: 12/04/2020
Date Data Arrived at EDR: 12/04/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 76
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/04/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Varies

WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)
Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 12/04/2020
Date Data Arrived at EDR: 12/04/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 76
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/04/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Varies

PCS INACTIVE: Listing of Inactive PCS Permits
An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 11/05/2014
Date Data Arrived at EDR: 01/06/2015
Date Made Active in Reports: 05/06/2015
Number of Days to Update: 120
Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 01/04/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Semi-Annually

HWTS: Hazardous Waste Tracking System
DTSC maintains the Hazardous Waste Tracking System that stores ID number information since the early 1980s and manifest data since 1993. The system collects both manifest copies from the generator and destination facility.

Date of Government Version: 10/13/2020
Date Data Arrived at EDR: 10/14/2020
Date Made Active in Reports: 11/03/2020
Number of Days to Update: 20
Source: Department of Toxic Substances Control
Telephone: 916-324-2444
Last EDR Contact: 01/19/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Varies

PCS ENF: Enforcement data
No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29
Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 12/30/2020
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Varies

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 11/25/2020
Next Scheduled EDR Contact: 03/08/2021
Data Release Frequency: Varies

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 01/04/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Semi-Annually

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

CS ALAMEDA: Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2019
Date Data Arrived at EDR: 01/11/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 53

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 01/04/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 10/01/2020
Date Data Arrived at EDR: 10/06/2020
Date Made Active in Reports: 12/23/2020
Number of Days to Update: 78

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 01/04/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List
Cupa Facility List

Date of Government Version: 10/19/2020
Date Data Arrived at EDR: 10/22/2020
Date Made Active in Reports: 01/12/2021
Number of Days to Update: 82

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 02/01/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA BUTTE: CUPA Facility Listing
Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 12/30/2020
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 12/15/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 12/24/2020
Number of Days to Update: 8

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 12/15/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/06/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 78

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

SL CONTRA COSTA: Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 10/19/2020
Date Data Arrived at EDR: 10/22/2020
Date Made Active in Reports: 01/13/2021
Number of Days to Update: 83

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 01/25/2021
Next Scheduled EDR Contact: 05/10/2021
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 08/13/2020
Date Made Active in Reports: 10/22/2020
Number of Days to Update: 70

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 01/25/2021
Next Scheduled EDR Contact: 05/10/2021
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 10/22/2020
Date Data Arrived at EDR: 11/03/2020
Date Made Active in Reports: 01/20/2021
Number of Days to Update: 78

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 02/08/2021
Next Scheduled EDR Contact: 05/10/2021
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA FRESNO: CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 10/02/2020
Date Data Arrived at EDR: 10/06/2020
Date Made Active in Reports: 12/22/2020
Number of Days to Update: 77

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 01/15/2021
Next Scheduled EDR Contact: 04/12/2021
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA GLENN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 01/19/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List
CUPA facility list.

Date of Government Version: 11/18/2020
Date Data Arrived at EDR: 11/19/2020
Date Made Active in Reports: 02/04/2021
Number of Days to Update: 77

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List
Cupa facility list.

Date of Government Version: 10/14/2020
Date Data Arrived at EDR: 10/15/2020
Date Made Active in Reports: 01/05/2021
Number of Days to Update: 82

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 01/19/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

INYO COUNTY:

CUPA INYO: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Varies

KERN COUNTY:

CUPA KERN: CUPA Facility List
A listing of sites included in the Kern County Hazardous Material Business Plan.

Date of Government Version: 10/29/2020
Date Data Arrived at EDR: 10/30/2020
Date Made Active in Reports: 01/15/2021
Number of Days to Update: 77

Source: Kern County Public Health
Telephone: 661-321-3000
Last EDR Contact: 02/01/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Varies

UST KERN: Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 01/19/2021
Date Data Arrived at EDR: 01/21/2021
Date Made Active in Reports: 01/28/2021
Number of Days to Update: 7

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 02/01/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 05/11/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List
Cupa facility list

Date of Government Version: 08/13/2020
Date Data Arrived at EDR: 08/13/2020
Date Made Active in Reports: 10/23/2020
Number of Days to Update: 71

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 01/11/2021
Next Scheduled EDR Contact: 04/26/2021
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List
Cupa facility list

Date of Government Version: 07/31/2020
Date Data Arrived at EDR: 08/21/2020
Date Made Active in Reports: 11/09/2020
Number of Days to Update: 80

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

LOS ANGELES COUNTY:

AOCONCERN: Key Areas of Concerns in Los Angeles County
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office. Date of Government Version: 3/30/2009 Exide Site area is a cleanup plan of lead-impacted soil surrounding the former Exide Facility as designated by the DTSC. Date of Government Version: 7/17/2017

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: N/A
Telephone: N/A
Last EDR Contact: 12/09/2020
Next Scheduled EDR Contact: 03/29/2021
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 10/19/2020
Date Data Arrived at EDR: 10/20/2020
Date Made Active in Reports: 01/12/2021
Number of Days to Update: 84

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 01/04/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 10/09/2020
Date Data Arrived at EDR: 10/09/2020
Date Made Active in Reports: 12/29/2020
Number of Days to Update: 81

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 01/12/2021
Next Scheduled EDR Contact: 04/26/2021
Data Release Frequency: Varies

LF LOS ANGELES CITY: City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 08/17/2020
Date Made Active in Reports: 11/05/2020
Number of Days to Update: 80

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 01/11/2021
Next Scheduled EDR Contact: 04/26/2021
Data Release Frequency: Varies

LOS ANGELES AST: Active & Inactive AST Inventory
A listing of active & inactive above ground petroleum storage tank site locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58
Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 12/18/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Varies

LOS ANGELES CO LF METHANE: Methane Producing Landfills
This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 04/30/2012
Date Data Arrived at EDR: 04/17/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 42
Source: Los Angeles County Department of Public Works
Telephone: 626-458-6973
Last EDR Contact: 01/15/2021
Next Scheduled EDR Contact: 04/26/2021
Data Release Frequency: No Update Planned

LOS ANGELES HM: Active & Inactive Hazardous Materials Inventory
A listing of active & inactive hazardous materials facility locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58
Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 12/18/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Varies

LOS ANGELES UST: Active & Inactive UST Inventory
A listing of active & inactive underground storage tank site locations and underground storage tank historical sites, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58
Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 12/18/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Varies

SITE MIT LOS ANGELES: Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 07/20/2020
Date Data Arrived at EDR: 10/09/2020
Date Made Active in Reports: 12/29/2020
Number of Days to Update: 81
Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 01/12/2021
Next Scheduled EDR Contact: 04/26/2021
Data Release Frequency: Annually

UST EL SEGUNDO: City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21
Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 10/07/2020
Next Scheduled EDR Contact: 01/25/2021
Data Release Frequency: No Update Planned

UST LONG BEACH: City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 04/22/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 65

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 01/19/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 09/11/2020
Date Data Arrived at EDR: 10/07/2020
Date Made Active in Reports: 12/23/2020
Number of Days to Update: 77

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 01/19/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 08/10/2020
Date Data Arrived at EDR: 08/12/2020
Date Made Active in Reports: 10/23/2020
Number of Days to Update: 72

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Varies

MARIN COUNTY:

UST MARIN: Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 29

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 12/21/2020
Next Scheduled EDR Contact: 04/12/2021
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 02/04/2021
Date Data Arrived at EDR: 02/09/2021
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 9

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 01/29/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 11/16/2020
Date Data Arrived at EDR: 11/23/2020
Date Made Active in Reports: 02/08/2021
Number of Days to Update: 77

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 02/22/2021
Next Scheduled EDR Contact: 06/06/3021
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 07/13/2020
Date Data Arrived at EDR: 07/15/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 16

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 12/21/2020
Next Scheduled EDR Contact: 04/12/2021
Data Release Frequency: Varies

NAPA COUNTY:

LUST NAPA: Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 02/22/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 09/05/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 02/22/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 10/26/2020
Date Data Arrived at EDR: 10/28/2020
Date Made Active in Reports: 01/15/2021
Number of Days to Update: 79

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 01/25/2021
Next Scheduled EDR Contact: 05/10/2021
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 09/01/2020
Date Data Arrived at EDR: 11/05/2020
Date Made Active in Reports: 01/26/2021
Number of Days to Update: 82

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/01/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 09/01/2020
Date Data Arrived at EDR: 11/06/2020
Date Made Active in Reports: 01/26/2021
Number of Days to Update: 81

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/05/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 09/01/2020
Date Data Arrived at EDR: 11/03/2020
Date Made Active in Reports: 01/21/2021
Number of Days to Update: 79

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/02/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Quarterly

PLACER COUNTY:

MS PLACER: Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 11/24/2020
Date Data Arrived at EDR: 11/24/2020
Date Made Active in Reports: 11/25/2020
Number of Days to Update: 1

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 11/23/2020
Next Scheduled EDR Contact: 03/15/2021
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/26/2019
Number of Days to Update: 64

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 01/19/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

RIVERSIDE COUNTY:

LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 10/06/2020
Date Data Arrived at EDR: 10/07/2020
Date Made Active in Reports: 11/03/2020
Number of Days to Update: 27

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 12/09/2020
Next Scheduled EDR Contact: 03/29/2021
Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 10/06/2020
Date Data Arrived at EDR: 10/07/2020
Date Made Active in Reports: 11/03/2020
Number of Days to Update: 27
Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 12/09/2020
Next Scheduled EDR Contact: 03/29/2021
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS SACRAMENTO: Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 02/18/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 76
Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 12/30/2020
Next Scheduled EDR Contact: 04/12/2021
Data Release Frequency: Quarterly

ML SACRAMENTO: Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 02/24/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/17/2020
Number of Days to Update: 78
Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 12/30/2020
Next Scheduled EDR Contact: 04/12/2021
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List
Cupa facility list

Date of Government Version: 10/28/2020
Date Data Arrived at EDR: 10/30/2020
Date Made Active in Reports: 01/15/2021
Number of Days to Update: 77
Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 02/01/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

PERMITS SAN BERNARDINO: Hazardous Material Permits
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 11/16/2020
Date Data Arrived at EDR: 11/18/2020
Date Made Active in Reports: 02/04/2021
Number of Days to Update: 78
Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 02/01/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

HMMD SAN DIEGO: Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 11/30/2020
Date Data Arrived at EDR: 12/01/2020
Date Made Active in Reports: 02/16/2021
Number of Days to Update: 77

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 12/01/2020
Next Scheduled EDR Contact: 03/15/2021
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/01/2020
Date Data Arrived at EDR: 11/23/2020
Date Made Active in Reports: 02/08/2021
Number of Days to Update: 77

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 01/19/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

SAN DIEGO CO LOP: Local Oversight Program Listing

A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 07/14/2020
Date Data Arrived at EDR: 07/16/2020
Date Made Active in Reports: 09/29/2020
Number of Days to Update: 75

Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 02/01/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

SAN DIEGO CO SAM: Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 11/23/2020
Next Scheduled EDR Contact: 03/15/2021
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

CUPA SAN FRANCISCO CO: CUPA Facility Listing

Cupa facilities

Date of Government Version: 11/05/2020
Date Data Arrived at EDR: 11/06/2020
Date Made Active in Reports: 01/27/2021
Number of Days to Update: 82

Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 02/01/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Varies

LUST SAN FRANCISCO: Local Oversite Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 02/01/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: No Update Planned

UST SAN FRANCISCO: Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/05/2020
Date Data Arrived at EDR: 11/06/2020
Date Made Active in Reports: 01/26/2021
Number of Days to Update: 81

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 02/01/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 12/09/2020
Next Scheduled EDR Contact: 03/29/2021
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List
Cupa Facility List.

Date of Government Version: 11/12/2020
Date Data Arrived at EDR: 11/13/2020
Date Made Active in Reports: 02/01/2021
Number of Days to Update: 80

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 02/20/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 64

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 12/11/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Annually

LUST SAN MATEO: Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019
Date Data Arrived at EDR: 03/29/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 61

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 12/01/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA SANTA BARBARA: CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List
Cupa facility list

Date of Government Version: 11/20/2020
Date Data Arrived at EDR: 11/23/2020
Date Made Active in Reports: 02/05/2021
Number of Days to Update: 74

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Varies

HIST LUST SANTA CLARA: HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LUST SANTA CLARA: LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 02/22/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 11/03/2020
Date Data Arrived at EDR: 11/05/2020
Date Made Active in Reports: 01/26/2021
Number of Days to Update: 82

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 02/15/2021
Next Scheduled EDR Contact: 05/16/2021
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA SANTA CRUZ: CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA SHASTA: CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Varies

SOLANO COUNTY:

LUST SOLANO: Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 08/13/2019
Number of Days to Update: 68

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 06/03/2019
Next Scheduled EDR Contact: 03/15/2021
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 12/03/2020
Date Data Arrived at EDR: 12/03/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 77

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 12/03/2020
Next Scheduled EDR Contact: 03/15/2021
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 12/15/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 12/23/2020
Number of Days to Update: 7

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 12/15/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Varies

LUST SONOMA: Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 09/18/2020
Date Data Arrived at EDR: 09/22/2020
Date Made Active in Reports: 12/14/2020
Number of Days to Update: 83

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 12/15/2020
Next Scheduled EDR Contact: 04/05/2021
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 10/01/2020
Date Data Arrived at EDR: 10/06/2020
Date Made Active in Reports: 12/22/2020
Number of Days to Update: 77

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 01/11/2021
Next Scheduled EDR Contact: 04/26/2021
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 11/23/2020
Date Data Arrived at EDR: 11/24/2020
Date Made Active in Reports: 02/10/2021
Number of Days to Update: 78

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 11/23/2020
Next Scheduled EDR Contact: 03/15/2021
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 08/11/2020
Date Data Arrived at EDR: 08/12/2020
Date Made Active in Reports: 10/26/2020
Number of Days to Update: 75

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 02/01/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 10/14/2020
Date Data Arrived at EDR: 10/15/2020
Date Made Active in Reports: 01/05/2021
Number of Days to Update: 82

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 01/19/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 10/30/2020
Date Data Arrived at EDR: 11/03/2020
Date Made Active in Reports: 01/20/2021
Number of Days to Update: 78

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 02/01/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA TUOLUMNE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 01/19/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Varies

VENTURA COUNTY:

BWT VENTURA: Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 09/28/2020
Date Data Arrived at EDR: 10/22/2020
Date Made Active in Reports: 01/12/2021
Number of Days to Update: 82
Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 01/19/2021
Next Scheduled EDR Contact: 05/02/2021
Data Release Frequency: Quarterly

LF VENTURA: Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 12/21/2020
Next Scheduled EDR Contact: 04/12/2021
Data Release Frequency: No Update Planned

LUST VENTURA: Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 02/08/2021
Next Scheduled EDR Contact: 05/24/2021
Data Release Frequency: No Update Planned

MED WASTE VENTURA: Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 09/28/2020
Date Data Arrived at EDR: 10/22/2020
Date Made Active in Reports: 01/12/2021
Number of Days to Update: 82
Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 01/20/2021
Next Scheduled EDR Contact: 05/03/2021
Data Release Frequency: Quarterly

UST VENTURA: Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 12/01/2020
Date Data Arrived at EDR: 12/08/2020
Date Made Active in Reports: 02/22/2021
Number of Days to Update: 76
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 12/08/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Quarterly

YOLO COUNTY:

UST YOLO: Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 12/21/2020
Date Data Arrived at EDR: 12/23/2020
Date Made Active in Reports: 01/04/2021
Number of Days to Update: 12
Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 12/20/2020
Next Scheduled EDR Contact: 04/11/2021
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 01/26/2021
Date Data Arrived at EDR: 01/28/2021
Date Made Active in Reports: 02/03/2021
Number of Days to Update: 6

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 01/25/2021
Next Scheduled EDR Contact: 05/10/2021
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 08/10/2020
Date Data Arrived at EDR: 10/20/2020
Date Made Active in Reports: 11/02/2020
Number of Days to Update: 13

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 02/12/2021
Next Scheduled EDR Contact: 05/24/2021
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 01/08/2021
Next Scheduled EDR Contact: 04/19/2021
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 04/29/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 72

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 01/29/2021
Next Scheduled EDR Contact: 05/10/2021
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 01/11/2021
Next Scheduled EDR Contact: 04/26/2021
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 10/02/2019
Date Made Active in Reports: 12/10/2019
Number of Days to Update: 69

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 02/09/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 12/03/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

420 EAST 3RD STREET
420 EAST 3RD STREET
PITTSBURG, CA 94565

TARGET PROPERTY COORDINATES

Latitude (North):	38.030244 - 38° 1' 48.88''
Longitude (West):	121.878868 - 121° 52' 43.92''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	598395.9
UTM Y (Meters):	4209558.0
Elevation:	15 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5619720 HONKER BAY, CA
Version Date:	2012
Northeast Map:	5619678 ANTIOCH NORTH, CA
Version Date:	2012

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

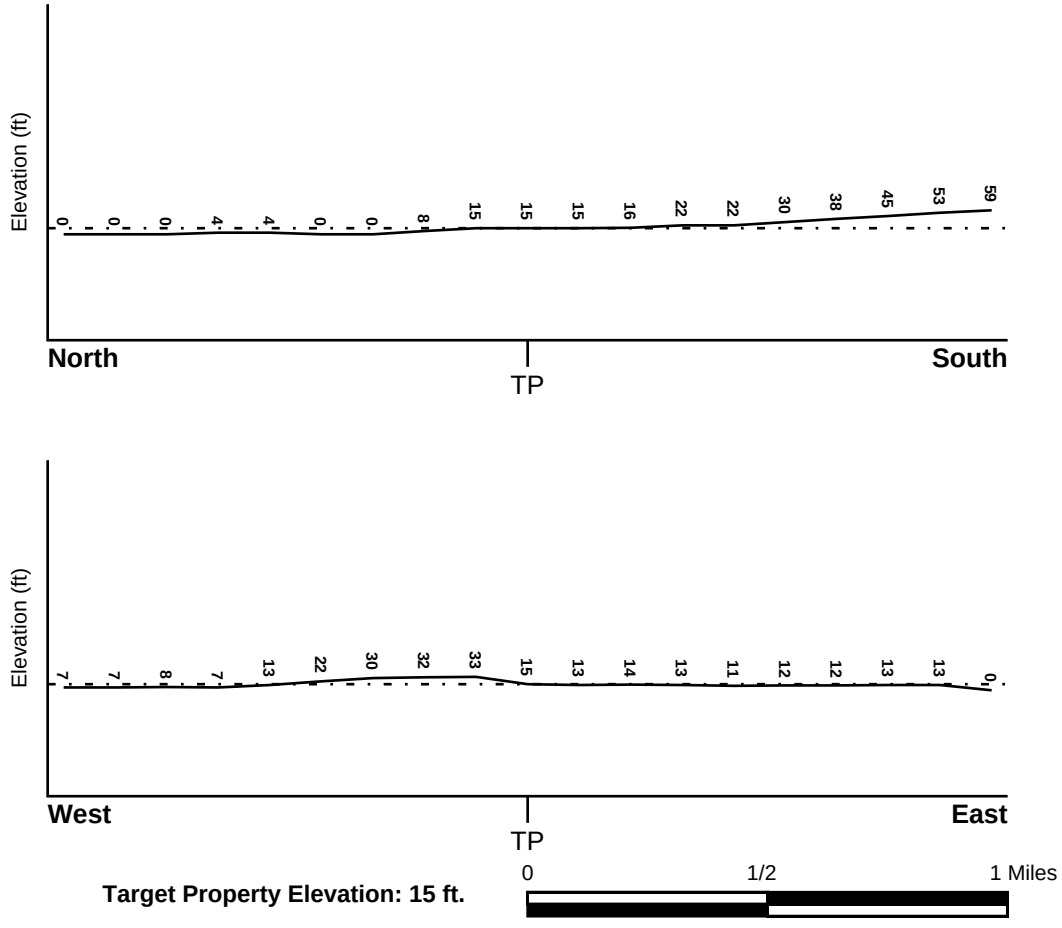
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General NE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
06013C0119G	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06013C0117G	FEMA FIRM Flood data
06013C0136G	FEMA FIRM Flood data
06013C0138G	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
HONKER BAY	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
4	1/8 - 1/4 Mile SSW	Not Reported
104	1/2 - 1 Mile West	N
1G	1/2 - 1 Mile West	N
3G	1/8 - 1/4 Mile SSW	Not Reported

For additional site information, refer to Physical Setting Source Map Findings.

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

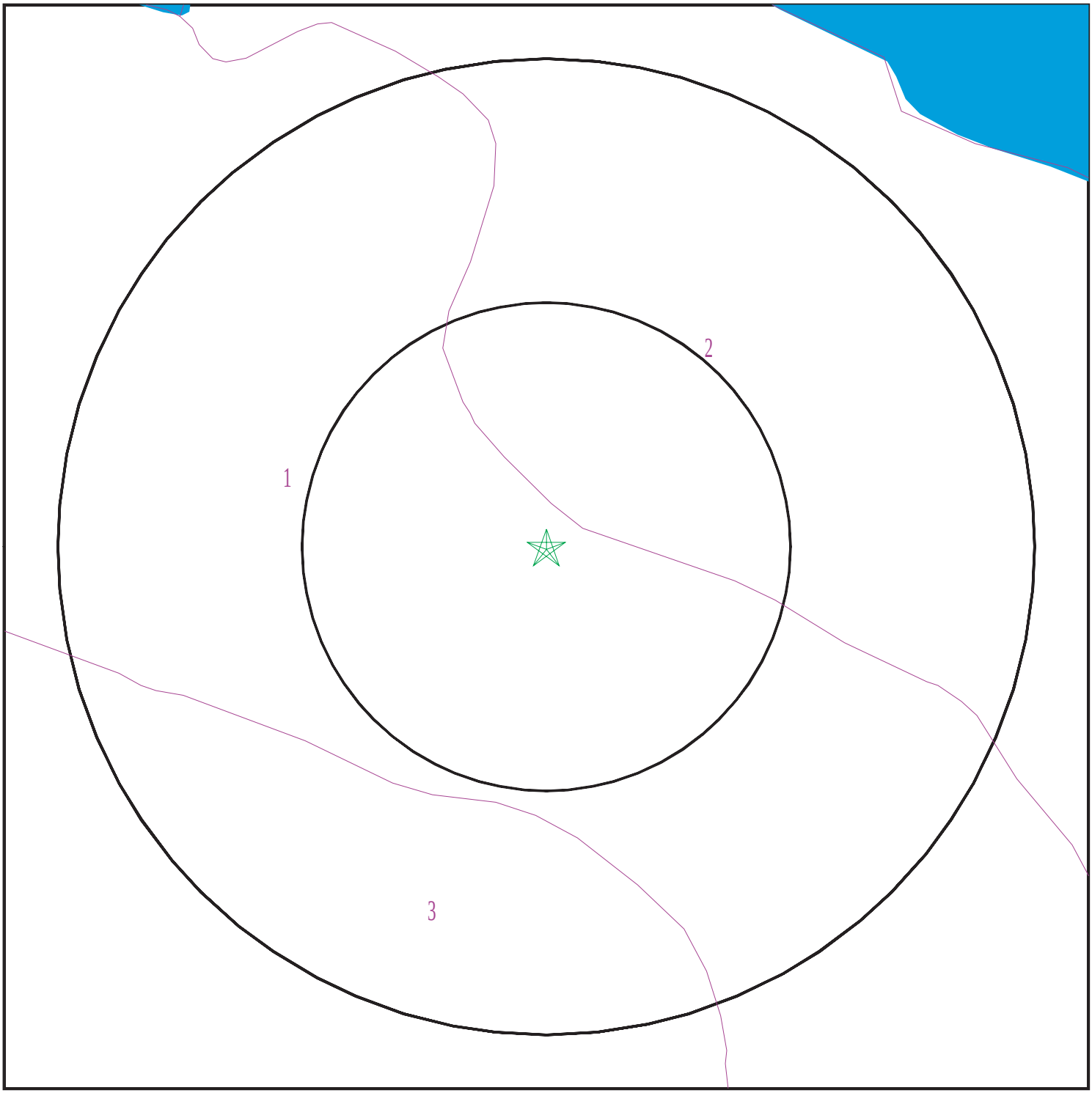
Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 6377157.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	420 East 3rd Street	CLIENT:	GSI Environmental
ADDRESS:	420 East 3rd Street Pittsburg CA 94565	CONTACT:	Jennifer Duffield
LAT/LONG:	38.030244 / 121.878868	INQUIRY #:	6377157.2s
		DATE:	February 23, 2021 11:06 am

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: RINCON

Soil Surface Texture: clay loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9
2	11 inches	29 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9
3	29 inches	59 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9

Soil Map ID: 2

Soil Component Name: CLEAR LAKE

Soil Surface Texture: clay

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Poorly drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	29 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 1.4 Min: 0.42	Max: 8.4 Min: 7.4
2	29 inches	59 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 1.4 Min: 0.42	Max: 8.4 Min: 7.4

Soil Map ID: 3

Soil Component Name: CAPAY

Soil Surface Texture: clay

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	35 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 1.4 Min: 0.42	Max: 8.4 Min: 6.6
2	35 inches	51 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 1.4 Min: 0.42	Max: 8.4 Min: 6.6
3	51 inches	72 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 1.4 Min: 0.42	Max: 8.4 Min: 6.6

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
O105	USGS40000186561	1/2 - 1 Mile SSW
O109	USGS40000186558	1/2 - 1 Mile SSW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
F21	CA0706039	1/4 - 1/2 Mile WSW

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	CAEDF0000044716	1/8 - 1/4 Mile ESE
A2	CAEDF0000095636	1/8 - 1/4 Mile SSE
B3	CAEDF0000094552	1/8 - 1/4 Mile ESE
A5	CAEDF0000002677	1/8 - 1/4 Mile SE
B6	CAEDF0000060337	1/4 - 1/2 Mile ESE
C7	CAEDF0000111001	1/4 - 1/2 Mile East
D8	CAEDF0000117193	1/4 - 1/2 Mile SE
D9	CAEDF0000113548	1/4 - 1/2 Mile SE
D10	CAEDF0000055997	1/4 - 1/2 Mile SE
C11	CAEDF0000056581	1/4 - 1/2 Mile ENE
12	CAEDF0000090534	1/4 - 1/2 Mile ENE
D13	CAEDF0000143204	1/4 - 1/2 Mile SE
C14	CAEDF0000035307	1/4 - 1/2 Mile ENE
E15	CAEDF0000055133	1/4 - 1/2 Mile WSW
E16	CAEDF0000018871	1/4 - 1/2 Mile West
F17	CAEDF0000011552	1/4 - 1/2 Mile WSW
E18	CAEDF0000112981	1/4 - 1/2 Mile WSW
C19	CAEDF0000095461	1/4 - 1/2 Mile ENE
F20	CAEDF0000116608	1/4 - 1/2 Mile WSW
E22	CAEDF0000071068	1/4 - 1/2 Mile WSW
E23	CAEDF0000068648	1/4 - 1/2 Mile WSW
F24	CAEDF0000037187	1/4 - 1/2 Mile WSW
E25	CAEDF0000139365	1/4 - 1/2 Mile WSW
F26	CAEDF0000037893	1/4 - 1/2 Mile WSW
E28	CAEDF0000018601	1/4 - 1/2 Mile WSW
E29	CAEDF0000107909	1/4 - 1/2 Mile WSW
F30	CAEDF0000127012	1/4 - 1/2 Mile WSW
F31	CAEDF0000010815	1/4 - 1/2 Mile WSW
F32	CAEDF0000117553	1/4 - 1/2 Mile WSW
F33	CAEDF0000074721	1/4 - 1/2 Mile WSW
F34	CAEDF0000141619	1/4 - 1/2 Mile WSW
E35	CAEDF0000045354	1/4 - 1/2 Mile WSW
E36	CAEDF0000117614	1/4 - 1/2 Mile WSW
F37	CAEDF0000008626	1/4 - 1/2 Mile WSW
F38	CAEDF0000089632	1/4 - 1/2 Mile WSW

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
F39	CAEDF0000072213	1/4 - 1/2 Mile WSW
F40	CAEDF0000044818	1/4 - 1/2 Mile WSW
F41	CAEDF0000105329	1/4 - 1/2 Mile WSW
F42	CAEDF0000140431	1/4 - 1/2 Mile WSW
F43	CAEDF0000096808	1/4 - 1/2 Mile WSW
F44	CAEDF0000034303	1/4 - 1/2 Mile WSW
F45	CAEDF0000142317	1/4 - 1/2 Mile WSW
F46	CAEDF0000048105	1/4 - 1/2 Mile WSW
47	CAEDF0000129582	1/4 - 1/2 Mile ENE
F48	CAEDF0000039440	1/4 - 1/2 Mile WSW
F49	CAEDF0000128194	1/4 - 1/2 Mile WSW
F50	CAEDF0000008112	1/4 - 1/2 Mile WSW
F51	CAEDF0000124958	1/4 - 1/2 Mile WSW
G52	CAEDF0000086726	1/4 - 1/2 Mile WSW
F53	CAEDF0000114912	1/4 - 1/2 Mile WSW
G54	CAEDF0000043691	1/4 - 1/2 Mile WSW
F55	CAEDF0000126421	1/4 - 1/2 Mile WSW
F56	CAEDF0000073220	1/4 - 1/2 Mile WSW
F57	CAEDF0000009302	1/4 - 1/2 Mile WSW
G58	CAEDF0000102917	1/4 - 1/2 Mile WSW
G59	CAEDF0000079284	1/4 - 1/2 Mile SW
G60	CAEDF0000057130	1/4 - 1/2 Mile WSW
G61	CAEDF0000090408	1/4 - 1/2 Mile WSW
G62	CAEDF0000075949	1/4 - 1/2 Mile WSW
G63	CAEDF0000057732	1/4 - 1/2 Mile WSW
G64	CAEDF0000047705	1/4 - 1/2 Mile SW
G65	CAEDF0000087308	1/4 - 1/2 Mile WSW
G66	CAEDF0000053526	1/4 - 1/2 Mile WSW
G67	CAEDF0000081791	1/4 - 1/2 Mile SW
G68	CAEDF0000006276	1/4 - 1/2 Mile WSW
H69	CAEDF0000002747	1/4 - 1/2 Mile SSE
H70	CAEDF0000100867	1/4 - 1/2 Mile SSE
G71	CAEDF0000082127	1/4 - 1/2 Mile SW
H72	CAEDF0000032374	1/4 - 1/2 Mile SSE
G73	CAEDF0000115367	1/4 - 1/2 Mile WSW
G74	CAEDF0000136771	1/4 - 1/2 Mile WSW
I75	CAEDF0000009492	1/4 - 1/2 Mile East
J76	CAEDF0000065308	1/4 - 1/2 Mile ESE
I77	CAEDF0000088797	1/4 - 1/2 Mile East
J78	CAEDF0000138029	1/4 - 1/2 Mile ESE
J79	CAEDF0000049952	1/4 - 1/2 Mile East
J80	CAEDF0000065711	1/4 - 1/2 Mile ESE
J81	CAEDF0000066655	1/4 - 1/2 Mile ESE
K82	54	1/4 - 1/2 Mile SW
I83	CAEDF0000086498	1/4 - 1/2 Mile East
K84	CAEDF0000119199	1/2 - 1 Mile SW
K85	CAEDF0000103979	1/2 - 1 Mile SW
K86	CAEDF0000049477	1/2 - 1 Mile SW
K87	CAEDF0000108104	1/2 - 1 Mile SW
L88	CAEDF0000036857	1/2 - 1 Mile East
89	CAEDF0000070628	1/2 - 1 Mile SE
M90	CAEDF0000109638	1/2 - 1 Mile SW

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
L91	CAEDF0000068043	1/2 - 1 Mile East
M92	CAEDF0000070100	1/2 - 1 Mile SW
93	CAEDF0000102670	1/2 - 1 Mile East
L94	CAEDF0000020793	1/2 - 1 Mile East
N95	CAEDF0000023075	1/2 - 1 Mile SE
N96	CAEDF0000104758	1/2 - 1 Mile SE
N97	CAEDF0000056678	1/2 - 1 Mile SE
N98	CAEDF0000106089	1/2 - 1 Mile SE
99	CAEDF0000124374	1/2 - 1 Mile East
100	CAEDF0000080919	1/2 - 1 Mile ESE
101	CAEDF0000076796	1/2 - 1 Mile ESE
102	CADDW0000008385	1/2 - 1 Mile SW
103	CAEDF0000065220	1/2 - 1 Mile East
O106	CAUSGSN00008771	1/2 - 1 Mile SSW
P107	CAEDF0000016184	1/2 - 1 Mile ESE
P108	CAEDF0000124612	1/2 - 1 Mile ESE
110	CAEDF0000076443	1/2 - 1 Mile East
O111	CAUSGSN00000926	1/2 - 1 Mile SSW
Q112	CAEDF0000060212	1/2 - 1 Mile ESE
Q113	CAEDF0000128430	1/2 - 1 Mile ESE

OTHER STATE DATABASE INFORMATION

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	CAOG14000007400	1/4 - 1/2 Mile NNW

PHYSICAL SETTING SOURCE MAP - 6377157.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

0 1/4 1/2 1 Miles

- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

N

SITE NAME:	420 East 3rd Street	CLIENT:	GSI Environmental
ADDRESS:	420 East 3rd Street Pittsburg CA 94565	CONTACT:	Jennifer Duffield
		INQUIRY #:	6377157.2s
LAT/LONG:	38.030244 / 121.878868	DATE:	February 23, 2021 11:06 am

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number

1
ESE
1/8 - 1/4 Mile
Lower

CA WELLS **CAEDF0000044716**

Well ID:	L10008749441-M-10	Well Type:	MONITORING
Source:	EDF	Other Name:	M-10
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10008749441&assigned_name=M-10&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10008749441&assigned_name=M-10		

A2
SSE
1/8 - 1/4 Mile
Lower

CA WELLS **CAEDF0000095636**

Well ID:	L10008749441-M-02	Well Type:	MONITORING
Source:	EDF	Other Name:	M-02
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10008749441&assigned_name=M-02&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10008749441&assigned_name=M-02		

B3
ESE
1/8 - 1/4 Mile
Higher

CA WELLS **CAEDF0000094552**

Well ID:	L10008749441-M-08	Well Type:	MONITORING
Source:	EDF	Other Name:	M-08
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10008749441&assigned_name=M-08&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10008749441&assigned_name=M-08		

4
SSW
1/8 - 1/4 Mile
Higher

AQUIFLOW **64762**

Site ID:	71224
Groundwater Flow:	Not Reported
Shallow Water Depth:	Not Reported
Deep Water Depth:	Not Reported
Average Water Depth:	11
Date:	09/04/1991

A5
SE
1/8 - 1/4 Mile
Higher

CA WELLS **CAEDF0000002677**

Well ID:	L10008749441-M-03	Well Type:	MONITORING
Source:	EDF	Other Name:	M-03

GAMA PFAS Testing: Not Reported
Groundwater Quality Data: https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10008749441&assigned_name=M-03&store_num=
GeoTracker Data: https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10008749441&assigned_name=M-03

B6
ESE **CA WELLS** **CAEDF0000060337**
1/4 - 1/2 Mile
Higher

Well ID: L10008749441-M-09 Well Type: MONITORING
Source: EDF Other Name: M-09
GAMA PFAS Testing: Not Reported
Groundwater Quality Data: https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10008749441&assigned_name=M-09&store_num=
GeoTracker Data: https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10008749441&assigned_name=M-09

C7
East **CA WELLS** **CAEDF0000111001**
1/4 - 1/2 Mile
Lower

Well ID: L10005305018-N-01A Well Type: MONITORING
Source: EDF Other Name: N-01A
GAMA PFAS Testing: Not Reported
Groundwater Quality Data: https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10005305018&assigned_name=N-01A&store_num=
GeoTracker Data: https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10005305018&assigned_name=N-01A

D8
SE **CA WELLS** **CAEDF0000117193**
1/4 - 1/2 Mile
Higher

Well ID: L10008749441-M-04S Well Type: MONITORING
Source: EDF Other Name: M-04S
GAMA PFAS Testing: Not Reported
Groundwater Quality Data: https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10008749441&assigned_name=M-04S&store_num=
GeoTracker Data: https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10008749441&assigned_name=M-04S

D9
SE **CA WELLS** **CAEDF0000113548**
1/4 - 1/2 Mile
Higher

Well ID: L10008749441-M-04D Well Type: MONITORING
Source: EDF Other Name: M-04D
GAMA PFAS Testing: Not Reported
Groundwater Quality Data: https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10008749441&assigned_name=M-04D&store_num=

GeoTracker Data: https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10008749441&assigned_name=M-04D

D10
SE
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000055997**

Well ID:	L10008749441-M-04	Well Type:	MONITORING
Source:	EDF	Other Name:	M-04
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10008749441&assigned_name=M-04&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10008749441&assigned_name=M-04		

C11
ENE
1/4 - 1/2 Mile
Lower

CA WELLS **CAEDF0000056581**

Well ID:	SL0601387949-MW-4S	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-4S
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=SL0601387949&assigned_name=MW-4S&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=SL0601387949&assigned_name=MW-4S		

12
ENE
1/4 - 1/2 Mile
Lower

CA WELLS **CAEDF0000090534**

Well ID:	SL0601387949-MW-7S	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-7S
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=SL0601387949&assigned_name=MW-7S&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=SL0601387949&assigned_name=MW-7S		

D13
SE
1/4 - 1/2 Mile
Lower

CA WELLS **CAEDF0000143204**

Well ID:	L10008749441-M-05	Well Type:	MONITORING
Source:	EDF	Other Name:	M-05
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10008749441&assigned_name=M-05&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10008749441&assigned_name=M-05		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

C14
ENE
1/4 - 1/2 Mile
Lower

CA WELLS **CAEDF0000035307**

Well ID:	SL0601387949-MW-3	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-3
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=SL0601387949&assigned_name=MW-3&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=SL0601387949&assigned_name=MW-3		

E15
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000055133**

Well ID:	T0601300541-GMW-17	Well Type:	MONITORING
Source:	EDF	Other Name:	GMW-17
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601300541&assigned_name=GMW-17&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601300541&assigned_name=GMW-17		

E16
West
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000018871**

Well ID:	T0601300541-GMW-18	Well Type:	MONITORING
Source:	EDF	Other Name:	GMW-18
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601300541&assigned_name=GMW-18&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601300541&assigned_name=GMW-18		

F17
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000011552**

Well ID:	T0601359176-P-2	Well Type:	MONITORING
Source:	EDF	Other Name:	P-2
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601359176&assigned_name=P-2&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601359176&assigned_name=P-2		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

E18
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000112981**

Well ID:	T0601300541-GMW-16	Well Type:	MONITORING
Source:	EDF	Other Name:	GMW-16
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601300541&assigned_name=GMW-16&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601300541&assigned_name=GMW-16		

C19
ENE
1/4 - 1/2 Mile
Lower

CA WELLS **CAEDF0000095461**

Well ID:	SL0601387949-MW-2S	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-2S
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=SL0601387949&assigned_name=MW-2S&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=SL0601387949&assigned_name=MW-2S		

F20
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000116608**

Well ID:	T0601359176-GMW-1	Well Type:	MONITORING
Source:	EDF	Other Name:	GMW-1
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601359176&assigned_name=GMW-1&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601359176&assigned_name=GMW-1		

F21
WSW
1/4 - 1/2 Mile
Higher

FRDS PWS **CA0706039**

PWS ID:	CA0706039	PWS type:	System Owner/Responsible Party
PWS name:	HARRIS YACHT HARBOR INC	PWS address:	Not Reported
PWS city:	PITTSBURG	PWS state:	CA
PWS zip:	94565	PWS ID:	CA0706039
Activity status:	Active	Date system activated:	7706
Date system deactivated:	Not Reported	Retail population:	00000025
System name:	HARRIS YACHT HARBOR	System address:	HARRIS YACHT HARBOR INC
System address:	RT 1 BOX 56	System city:	PITTSBURG
System state:	CA	System zip:	94565

Population served:	Under 101 Persons	Treatment:	Untreated
Latitude:	380141	Longitude:	1215300

E22
WSW **CA WELLS** **CAEDF0000071068**
1/4 - 1/2 Mile
Higher

Well ID:	T0601300541-GMW-13	Well Type:	MONITORING
Source:	EDF	Other Name:	GMW-13
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601300541&assigned_name=GMW-13&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601300541&assigned_name=GMW-13		

E23
WSW **CA WELLS** **CAEDF0000068648**
1/4 - 1/2 Mile
Higher

Well ID:	T0601359176-P-1	Well Type:	MONITORING
Source:	EDF	Other Name:	P-1
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601359176&assigned_name=P-1&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601359176&assigned_name=P-1		

F24
WSW **CA WELLS** **CAEDF0000037187**
1/4 - 1/2 Mile
Higher

Well ID:	T0601359176-P-3	Well Type:	MONITORING
Source:	EDF	Other Name:	P-3
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601359176&assigned_name=P-3&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601359176&assigned_name=P-3		

E25
WSW **CA WELLS** **CAEDF0000139365**
1/4 - 1/2 Mile
Higher

Well ID:	T0601300541-GMW-12	Well Type:	MONITORING
Source:	EDF	Other Name:	GMW-12
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601300541&assigned_name=GMW-12&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601300541&assigned_name=GMW-12		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

F26
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000037893**

Well ID:	T0601359176-GMW-4	Well Type:	MONITORING
Source:	EDF	Other Name:	GMW-4
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601359176&assigned_name=GMW-4&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601359176&assigned_name=GMW-4		

F27
WSW
1/4 - 1/2 Mile
Higher

AQUIFLOW **66346**

Site ID:	70726
Groundwater Flow:	Not Reported
Shallow Water Depth:	23.29
Deep Water Depth:	32.52
Average Water Depth:	Not Reported
Date:	03/14/1988

E28
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000018601**

Well ID:	T0601300541-GMW-11	Well Type:	MONITORING
Source:	EDF	Other Name:	GMW-11
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601300541&assigned_name=GMW-11&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601300541&assigned_name=GMW-11		

E29
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000107909**

Well ID:	T0601300541-GMW-23	Well Type:	MONITORING
Source:	EDF	Other Name:	GMW-23
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601300541&assigned_name=GMW-23&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601300541&assigned_name=GMW-23		

F30
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000127012**

Well ID:	T0601300541-GMW-22	Well Type:	MONITORING
Source:	EDF	Other Name:	GMW-22

GAMA PFAS Testing: Not Reported
Groundwater Quality Data: https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601300541&assigned_name=GMW-22&store_num=
GeoTracker Data: https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601300541&assigned_name=GMW-22

F31
WSW **CA WELLS** **CAEDF0000010815**
1/4 - 1/2 Mile
Higher

Well ID: T0601359176-GMW-3 Well Type: MONITORING
Source: EDF Other Name: GMW-3
GAMA PFAS Testing: Not Reported
Groundwater Quality Data: https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601359176&assigned_name=GMW-3&store_num=
GeoTracker Data: https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601359176&assigned_name=GMW-3

F32
WSW **CA WELLS** **CAEDF0000117553**
1/4 - 1/2 Mile
Higher

Well ID: T0601359176-GMW-2 Well Type: MONITORING
Source: EDF Other Name: GMW-2
GAMA PFAS Testing: Not Reported
Groundwater Quality Data: https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601359176&assigned_name=GMW-2&store_num=
GeoTracker Data: https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601359176&assigned_name=GMW-2

F33
WSW **CA WELLS** **CAEDF0000074721**
1/4 - 1/2 Mile
Higher

Well ID: T0601382732-MW18 Well Type: MONITORING
Source: EDF Other Name: MW18
GAMA PFAS Testing: Not Reported
Groundwater Quality Data: https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601382732&assigned_name=MW18&store_num=
GeoTracker Data: https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601382732&assigned_name=MW18

F34
WSW **CA WELLS** **CAEDF0000141619**
1/4 - 1/2 Mile
Higher

Well ID: T0601382732-MW19 Well Type: MONITORING
Source: EDF Other Name: MW19
GAMA PFAS Testing: Not Reported
Groundwater Quality Data: https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601382732&assigned_name=MW19&store_num=

GeoTracker Data: https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601382732&assigned_name=MW19

E35
WSW **CA WELLS** **CAEDF0000045354**
1/4 - 1/2 Mile
Higher

Well ID:	T0601300541-GMW-14	Well Type:	MONITORING
Source:	EDF	Other Name:	GMW-14
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601300541&assigned_name=GMW-14&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601300541&assigned_name=GMW-14		

E36
WSW **CA WELLS** **CAEDF0000117614**
1/4 - 1/2 Mile
Higher

Well ID:	T0601300541-GMW-15	Well Type:	MONITORING
Source:	EDF	Other Name:	GMW-15
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601300541&assigned_name=GMW-15&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601300541&assigned_name=GMW-15		

F37
WSW **CA WELLS** **CAEDF0000008626**
1/4 - 1/2 Mile
Higher

Well ID:	T0601359176-P-4	Well Type:	MONITORING
Source:	EDF	Other Name:	P-4
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601359176&assigned_name=P-4&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601359176&assigned_name=P-4		

F38
WSW **CA WELLS** **CAEDF0000089632**
1/4 - 1/2 Mile
Higher

Well ID:	T0601300541-GMW-19	Well Type:	MONITORING
Source:	EDF	Other Name:	GMW-19
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601300541&assigned_name=GMW-19&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601300541&assigned_name=GMW-19		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

F39
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000072213**

Well ID:	T0601300541-GMW-2	Well Type:	MONITORING
Source:	EDF	Other Name:	GMW-2
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601300541&assigned_name=GMW-2&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601300541&assigned_name=GMW-2		

F40
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000044818**

Well ID:	T0601382732-MW3	Well Type:	MONITORING
Source:	EDF	Other Name:	MW3
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601382732&assigned_name=MW3&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601382732&assigned_name=MW3		

F41
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000105329**

Well ID:	T0601382732-MW4	Well Type:	MONITORING
Source:	EDF	Other Name:	MW4
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601382732&assigned_name=MW4&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601382732&assigned_name=MW4		

F42
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000140431**

Well ID:	T0601300541-GMW-1	Well Type:	MONITORING
Source:	EDF	Other Name:	GMW-1
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601300541&assigned_name=GMW-1&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601300541&assigned_name=GMW-1		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

F43
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000096808**

Well ID:	T0601300541-GMW-20	Well Type:	MONITORING
Source:	EDF	Other Name:	GMW-20
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601300541&assigned_name=GMW-20&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601300541&assigned_name=GMW-20		

F44
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000034303**

Well ID:	T0601382732-MW17	Well Type:	MONITORING
Source:	EDF	Other Name:	MW17
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601382732&assigned_name=MW17&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601382732&assigned_name=MW17		

F45
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000142317**

Well ID:	T0601300541-GMW-5	Well Type:	MONITORING
Source:	EDF	Other Name:	GMW-5
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601300541&assigned_name=GMW-5&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601300541&assigned_name=GMW-5		

F46
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000048105**

Well ID:	T0601382732-MW2	Well Type:	MONITORING
Source:	EDF	Other Name:	MW2
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601382732&assigned_name=MW2&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601382732&assigned_name=MW2		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

47
ENE
1/4 - 1/2 Mile
Lower

CA WELLS **CAEDF0000129582**

Well ID:	SL0601387949-MW-6S	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-6S
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=SL0601387949&assigned_name=MW-6S&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=SL0601387949&assigned_name=MW-6S		

F48
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000039440**

Well ID:	T0601300541-GMW-4	Well Type:	MONITORING
Source:	EDF	Other Name:	GMW-4
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601300541&assigned_name=GMW-4&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601300541&assigned_name=GMW-4		

F49
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000128194**

Well ID:	T0601382732-MW9	Well Type:	MONITORING
Source:	EDF	Other Name:	MW9
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601382732&assigned_name=MW9&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601382732&assigned_name=MW9		

F50
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000008112**

Well ID:	T0601382732-MW1	Well Type:	MONITORING
Source:	EDF	Other Name:	MW1
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601382732&assigned_name=MW1&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601382732&assigned_name=MW1		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

F51
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000124958**

Well ID:	T0601300541-GMW-21	Well Type:	MONITORING
Source:	EDF	Other Name:	GMW-21
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601300541&assigned_name=GMW-21&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601300541&assigned_name=GMW-21		

G52
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000086726**

Well ID:	T0601382732-MW12	Well Type:	MONITORING
Source:	EDF	Other Name:	MW12
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601382732&assigned_name=MW12&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601382732&assigned_name=MW12		

F53
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000114912**

Well ID:	T0601300541-GMW-8	Well Type:	MONITORING
Source:	EDF	Other Name:	GMW-8
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601300541&assigned_name=GMW-8&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601300541&assigned_name=GMW-8		

G54
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000043691**

Well ID:	T0601382732-MW8	Well Type:	MONITORING
Source:	EDF	Other Name:	MW8
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601382732&assigned_name=MW8&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601382732&assigned_name=MW8		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

F55
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000126421**

Well ID:	T0601382732-MW16	Well Type:	MONITORING
Source:	EDF	Other Name:	MW16
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601382732&assigned_name=MW16&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601382732&assigned_name=MW16		

F56
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000073220**

Well ID:	T0601382732-MW20	Well Type:	MONITORING
Source:	EDF	Other Name:	MW20
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601382732&assigned_name=MW20&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601382732&assigned_name=MW20		

F57
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000009302**

Well ID:	T0601382732-EW-1	Well Type:	MONITORING
Source:	EDF	Other Name:	EW-1
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601382732&assigned_name=EW-1&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601382732&assigned_name=EW-1		

G58
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000102917**

Well ID:	T0601382732-MW15	Well Type:	MONITORING
Source:	EDF	Other Name:	MW15
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601382732&assigned_name=MW15&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601382732&assigned_name=MW15		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

G59
SW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000079284**

Well ID:	T0601300089-RMW3	Well Type:	MONITORING
Source:	EDF	Other Name:	RMW3
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601300089&assigned_name=RMW3&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601300089&assigned_name=RMW3		

G60
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000057130**

Well ID:	T0601300541-GMW-9	Well Type:	MONITORING
Source:	EDF	Other Name:	GMW-9
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601300541&assigned_name=GMW-9&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601300541&assigned_name=GMW-9		

G61
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000090408**

Well ID:	T0601300541-GMW-10	Well Type:	MONITORING
Source:	EDF	Other Name:	GMW-10
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601300541&assigned_name=GMW-10&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601300541&assigned_name=GMW-10		

G62
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000075949**

Well ID:	T0601382732-MW11	Well Type:	MONITORING
Source:	EDF	Other Name:	MW11
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601382732&assigned_name=MW11&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601382732&assigned_name=MW11		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

G63
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000057732**

Well ID:	T0601382732-MW7	Well Type:	MONITORING
Source:	EDF	Other Name:	MW7
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601382732&assigned_name=MW7&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601382732&assigned_name=MW7		

G64
SW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000047705**

Well ID:	T0601300089-RMW4	Well Type:	MONITORING
Source:	EDF	Other Name:	RMW4
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601300089&assigned_name=RMW4&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601300089&assigned_name=RMW4		

G65
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000087308**

Well ID:	T0601382732-MW14	Well Type:	MONITORING
Source:	EDF	Other Name:	MW14
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601382732&assigned_name=MW14&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601382732&assigned_name=MW14		

G66
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000053526**

Well ID:	T0601382732-MW6	Well Type:	MONITORING
Source:	EDF	Other Name:	MW6
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601382732&assigned_name=MW6&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601382732&assigned_name=MW6		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

G67
SW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000081791**

Well ID:	T0601300089-RMW1	Well Type:	MONITORING
Source:	EDF	Other Name:	RMW1
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601300089&assigned_name=RMW1&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601300089&assigned_name=RMW1		

G68
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000006276**

Well ID:	T0601382732-MW10	Well Type:	MONITORING
Source:	EDF	Other Name:	MW10
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601382732&assigned_name=MW10&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601382732&assigned_name=MW10		

H69
SSE
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000002747**

Well ID:	L10008749441-M-01F	Well Type:	MONITORING
Source:	EDF	Other Name:	M-01F
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10008749441&assigned_name=M-01F&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10008749441&assigned_name=M-01F		

H70
SSE
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000100867**

Well ID:	L10008749441-M-01GR	Well Type:	MONITORING
Source:	EDF	Other Name:	M-01GR
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10008749441&assigned_name=M-01GR&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10008749441&assigned_name=M-01GR		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

G71
SW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000082127**

Well ID:	T0601300089-RMW2	Well Type:	MONITORING
Source:	EDF	Other Name:	RMW2
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601300089&assigned_name=RMW2&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601300089&assigned_name=RMW2		

H72
SSE
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000032374**

Well ID:	L10008749441-M-01DR	Well Type:	MONITORING
Source:	EDF	Other Name:	M-01DR
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10008749441&assigned_name=M-01DR&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10008749441&assigned_name=M-01DR		

G73
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000115367**

Well ID:	T0601382732-MW13	Well Type:	MONITORING
Source:	EDF	Other Name:	MW13
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601382732&assigned_name=MW13&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601382732&assigned_name=MW13		

G74
WSW
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000136771**

Well ID:	T0601382732-MW5	Well Type:	MONITORING
Source:	EDF	Other Name:	MW5
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601382732&assigned_name=MW5&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601382732&assigned_name=MW5		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

I75
East
1/4 - 1/2 Mile
Lower

CA WELLS **CAEDF0000009492**

Well ID:	L10005305018-N-02R	Well Type:	MONITORING
Source:	EDF	Other Name:	N-02R
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10005305018&assigned_name=N-02R&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10005305018&assigned_name=N-02R		

J76
ESE
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000065308**

Well ID:	L10005305018-PZ-03	Well Type:	MONITORING
Source:	EDF	Other Name:	PZ-03
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10005305018&assigned_name=PZ-03&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10005305018&assigned_name=PZ-03		

I77
East
1/4 - 1/2 Mile
Lower

CA WELLS **CAEDF0000088797**

Well ID:	L10005305018-PZ-02	Well Type:	MONITORING
Source:	EDF	Other Name:	PZ-02
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10005305018&assigned_name=PZ-02&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10005305018&assigned_name=PZ-02		

J78
ESE
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000138029**

Well ID:	L10005305018-I-1-08D	Well Type:	MONITORING
Source:	EDF	Other Name:	I-1-08D
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10005305018&assigned_name=I-1-08D&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10005305018&assigned_name=I-1-08D		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

J79
East
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000049952**

Well ID:	L10005305018-PZ-01	Well Type:	MONITORING
Source:	EDF	Other Name:	PZ-01
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10005305018&assigned_name=PZ-01&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10005305018&assigned_name=PZ-01		

J80
ESE
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000065711**

Well ID:	L10005305018-PZ-04	Well Type:	MONITORING
Source:	EDF	Other Name:	PZ-04
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10005305018&assigned_name=PZ-04&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10005305018&assigned_name=PZ-04		

J81
ESE
1/4 - 1/2 Mile
Higher

CA WELLS **CAEDF0000066655**

Well ID:	L10005305018-EW-01	Well Type:	MONITORING
Source:	EDF	Other Name:	EW-01
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10005305018&assigned_name=EW-01&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10005305018&assigned_name=EW-01		

K82
SW
1/4 - 1/2 Mile
Higher

CA WELLS **54**

Seq:	54	Prim sta c:	01N/01E-17G01 M
Frds no:	0710008003	County:	07
District:	04	User id:	ENG
System no:	0710008	Water type:	G
Source nam:	BALLPARK WELL	Station ty:	WELL/AMBNT/MUN/INTAKE
Latitude:	380130.0	Longitude:	1215300.0
Precision:	4	Status:	AR
Comment 1:	Not Reported	Comment 2:	Not Reported
Comment 3:	Not Reported	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported

Comment 7:	Not Reported		
System no:	0710008	System nam:	Pittsburg
Hqname:	Not Reported	Address:	65 CIVIC AVENUE
City:	PITTSBURG	State:	Not Reported
Zip:	94565	Zip ext:	Not Reported
Pop serv:	48700	Connection:	14117
Area serve:	PITTSBURG		

I83
East
1/4 - 1/2 Mile
Lower

CA WELLS **CAEDF0000086498**

Well ID:	L10005305018-N-02A	Well Type:	MONITORING
Source:	EDF	Other Name:	N-02A
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10005305018&assigned_name=N-02A&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10005305018&assigned_name=N-02A		

K84
SW
1/2 - 1 Mile
Higher

CA WELLS **CAEDF0000119199**

Well ID:	T0601300216-MW-2	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-2
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601300216&assigned_name=MW-2&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601300216&assigned_name=MW-2		

K85
SW
1/2 - 1 Mile
Higher

CA WELLS **CAEDF0000103979**

Well ID:	T0601300216-MW-3	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-3
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601300216&assigned_name=MW-3&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601300216&assigned_name=MW-3		

K86
SW
1/2 - 1 Mile
Higher

CA WELLS **CAEDF0000049477**

Well ID:	T0601300216-EW-1	Well Type:	MONITORING
Source:	EDF	Other Name:	EW-1

GAMA PFAS Testing: Not Reported
Groundwater Quality Data: https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601300216&assigned_name=EW-1&store_num=
GeoTracker Data: https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601300216&assigned_name=EW-1

K87
SW
1/2 - 1 Mile
Higher

CA WELLS **CAEDF0000108104**

Well ID: T0601300216-MW-1 Well Type: MONITORING
Source: EDF Other Name: MW-1
GAMA PFAS Testing: Not Reported
Groundwater Quality Data: https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601300216&assigned_name=MW-1&store_num=
GeoTracker Data: https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601300216&assigned_name=MW-1

L88
East
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000036857**

Well ID: L10005305018-N-03A Well Type: MONITORING
Source: EDF Other Name: N-03A
GAMA PFAS Testing: Not Reported
Groundwater Quality Data: https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10005305018&assigned_name=N-03A&store_num=
GeoTracker Data: https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10005305018&assigned_name=N-03A

89
SE
1/2 - 1 Mile
Higher

CA WELLS **CAEDF0000070628**

Well ID: L10005305018-C-03 Well Type: MONITORING
Source: EDF Other Name: C-03
GAMA PFAS Testing: Not Reported
Groundwater Quality Data: https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10005305018&assigned_name=C-03&store_num=
GeoTracker Data: https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10005305018&assigned_name=C-03

M90
SW
1/2 - 1 Mile
Higher

CA WELLS **CAEDF0000109638**

Well ID: T0601300216-MW-4 Well Type: MONITORING
Source: EDF Other Name: MW-4
GAMA PFAS Testing: Not Reported
Groundwater Quality Data: https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601300216&assigned_name=MW-4&store_num=

GeoTracker Data: https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601300216&assigned_name=MW-4

L91
East
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000068043**

Well ID: L10005305018-N-03
Well Type: MONITORING
Source: EDF
Other Name: N-03
GAMA PFAS Testing: Not Reported
Groundwater Quality Data: https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10005305018&assigned_name=N-03&store_num=
GeoTracker Data: https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10005305018&assigned_name=N-03

M92
SW
1/2 - 1 Mile
Higher

CA WELLS **CAEDF0000070100**

Well ID: T0601300216-MW-5
Well Type: MONITORING
Source: EDF
Other Name: MW-5
GAMA PFAS Testing: Not Reported
Groundwater Quality Data: https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0601300216&assigned_name=MW-5&store_num=
GeoTracker Data: https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0601300216&assigned_name=MW-5

93
East
1/2 - 1 Mile
Higher

CA WELLS **CAEDF0000102670**

Well ID: L10005305018-I-2-04
Well Type: MONITORING
Source: EDF
Other Name: I-2-04
GAMA PFAS Testing: Not Reported
Groundwater Quality Data: https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10005305018&assigned_name=I-2-04&store_num=
GeoTracker Data: https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10005305018&assigned_name=I-2-04

L94
East
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000020793**

Well ID: L10005305018-MW-01
Well Type: MONITORING
Source: EDF
Other Name: MW-01
GAMA PFAS Testing: Not Reported
Groundwater Quality Data: https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10005305018&assigned_name=MW-01&store_num=
GeoTracker Data: https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10005305018&assigned_name=MW-01

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

N95
SE
1/2 - 1 Mile
Higher

CA WELLS **CAEDF0000023075**

Well ID:	L10005305018-C-11	Well Type:	MONITORING
Source:	EDF	Other Name:	C-11
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10005305018&assigned_name=C-11&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10005305018&assigned_name=C-11		

N96
SE
1/2 - 1 Mile
Higher

CA WELLS **CAEDF0000104758**

Well ID:	L10005305018-C-11D	Well Type:	MONITORING
Source:	EDF	Other Name:	C-11D
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10005305018&assigned_name=C-11D&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10005305018&assigned_name=C-11D		

N97
SE
1/2 - 1 Mile
Higher

CA WELLS **CAEDF0000056678**

Well ID:	L10005305018-C-11A	Well Type:	MONITORING
Source:	EDF	Other Name:	C-11A
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10005305018&assigned_name=C-11A&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10005305018&assigned_name=C-11A		

N98
SE
1/2 - 1 Mile
Higher

CA WELLS **CAEDF0000106089**

Well ID:	L10005305018-C-04	Well Type:	MONITORING
Source:	EDF	Other Name:	C-04
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10005305018&assigned_name=C-04&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10005305018&assigned_name=C-04		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

99
East
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000124374**

Well ID:	L10005305018-N-04	Well Type:	MONITORING
Source:	EDF	Other Name:	N-04
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10005305018&assigned_name=N-04&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10005305018&assigned_name=N-04		

100
ESE
1/2 - 1 Mile
Higher

CA WELLS **CAEDF0000080919**

Well ID:	L10005305018-I-2-01	Well Type:	MONITORING
Source:	EDF	Other Name:	I-2-01
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10005305018&assigned_name=I-2-01&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10005305018&assigned_name=I-2-01		

101
ESE
1/2 - 1 Mile
Higher

CA WELLS **CAEDF0000076796**

Well ID:	L10005305018-I-1-01	Well Type:	MONITORING
Source:	EDF	Other Name:	I-1-01
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10005305018&assigned_name=I-1-01&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10005305018&assigned_name=I-1-01		

102
SW
1/2 - 1 Mile
Higher

CA WELLS **CADDW0000008385**

Well ID:	0710008-003	Well Type:	MUNICIPAL
Source:	Department of Health Services		
Other Name:	BALLPARK WELL	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DHS&samp_date=&global_id=&assigned_name=0710008-003&store_num=		
GeoTracker Data:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

103
East
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000065220**

Well ID:	L10005305018-N-05	Well Type:	MONITORING
Source:	EDF	Other Name:	N-05
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10005305018&assigned_name=N-05&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10005305018&assigned_name=N-05		

104
West
1/2 - 1 Mile
Lower

AQUIFLOW **64767**

Site ID:	70507
Groundwater Flow:	N
Shallow Water Depth:	7
Deep Water Depth:	8
Average Water Depth:	Not Reported
Date:	04/05/1990

O105
SSW
1/2 - 1 Mile
Higher

FED USGS **USGS40000186561**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	002N001E17K001M	Type:	Well
Description:	Not Reported	HUC:	18050001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Quaternary Alluvium	Aquifer Type:	Not Reported
Construction Date:	1970	Well Depth:	190
Well Depth Units:	ft	Well Hole Depth:	190
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	40	Level reading date:	1982-09-23
Feet below surface:	52.80	Feet to sea level:	Not Reported
Note:	A nearby site that taps the same aquifer was being pumped.		
Level reading date:	1982-04-29	Feet below surface:	49.79
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1981-09-17	Feet below surface:	66.93
Feet to sea level:	Not Reported		
Note:	A nearby site that taps the same aquifer was being pumped.		
Level reading date:	1981-04-20	Feet below surface:	52.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1980-09-24	Feet below surface:	52.6
Feet to sea level:	Not Reported		
Note:	A nearby site that taps the same aquifer had been pumped recently.		
Level reading date:	1980-04-11	Feet below surface:	51.3

Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1979-09-24	Feet below surface:	53.10
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1979-04-17	Feet below surface:	52.45
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1978-09-27	Feet below surface:	52.99
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1978-04-20	Feet below surface:	51.76
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1977-09-14	Feet below surface:	53.20
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1977-04-28	Feet below surface:	52.30
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1976-09-16	Feet below surface:	52.89
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1975-04-08	Feet below surface:	51.70
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1974-03-12	Feet below surface:	51.85
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1973-12-20	Feet below surface:	53.11
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1973-10-03	Feet below surface:	53.38
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1973-05-24	Feet below surface:	52.16
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1973-03-22	Feet below surface:	51.89
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1973-02-23	Feet below surface:	52.06
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1973-01-24	Feet below surface:	52.55
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1972-11-14	Feet below surface:	53.26
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1972-09-23	Feet below surface:	53.76
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1972-09-20	Feet below surface:	54.04
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1972-07-19	Feet below surface:	53.63
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1972-04-27	Feet below surface:	54.15
Feet to sea level:	Not Reported	Note:	The site had been pumped recently.

Level reading date:	1972-03-23	Feet below surface:	53.39
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1972-01-19	Feet below surface:	53.34
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1971-11-24	Feet below surface:	53.43
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1971-10-28	Feet below surface:	53.46
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1971-09-22	Feet below surface:	53.79
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1971-08-25	Feet below surface:	53.44
Feet to sea level:	Not Reported	Note:	The site had been pumped recently.
Level reading date:	1971-07-21	Feet below surface:	53.61
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1971-04-22	Feet below surface:	52.59
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1971-03-24	Feet below surface:	52.54
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1971-03-04	Feet below surface:	52.76
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1971-01-27	Feet below surface:	52.58
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1970-12-22	Feet below surface:	52.76
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1970-11-24	Feet below surface:	53.21
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1970-10-29	Feet below surface:	53.22
Feet to sea level:	Not Reported	Note:	Not Reported

O106
SSW
1/2 - 1 Mile
Higher

CA WELLS **CAUSGSN00008771**

Well ID:	USGS-380107121530201	Well Type:	UNK
Source:	United States Geological Survey		
Other Name:	USGS-380107121530201	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=USGSNEW&samp_date=&global_id=&assigned_name=USGS-380107121530201&store_num=		
GeoTracker Data:	Not Reported		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

P107
ESE
1/2 - 1 Mile
Higher

CA WELLS **CAEDF0000016184**

Well ID:	L10005305018-I-1-02	Well Type:	MONITORING
Source:	EDF	Other Name:	I-1-02
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10005305018&assigned_name=I-1-02&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10005305018&assigned_name=I-1-02		

P108
ESE
1/2 - 1 Mile
Higher

CA WELLS **CAEDF0000124612**

Well ID:	L10005305018-I-2-02	Well Type:	MONITORING
Source:	EDF	Other Name:	I-2-02
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10005305018&assigned_name=I-2-02&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10005305018&assigned_name=I-2-02		

O109
SSW
1/2 - 1 Mile
Higher

FED USGS **USGS40000186558**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	002N001E17K002M	Type:	Well
Description:	Not Reported	HUC:	18050001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Quaternary Alluvium	Aquifer Type:	Not Reported
Construction Date:	19780101	Well Depth:	190
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

110
East
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000076443**

Well ID:	L10005305018-N-06	Well Type:	MONITORING
Source:	EDF	Other Name:	N-06
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10005305018&assigned_name=N-06&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10005305018&assigned_name=N-06		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

O111
SSW
1/2 - 1 Mile
Higher

CA WELLS **CAUSGSN00000926**

Well ID:	USGS-380104121530001	Well Type:	UNK
Source:	United States Geological Survey		
Other Name:	USGS-380104121530001	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=USGSNEW&samp_date=&global_id=&assigned_name=USGS-380104121530001&store_num=		
GeoTracker Data:	Not Reported		

Q112
ESE
1/2 - 1 Mile
Higher

CA WELLS **CAEDF0000060212**

Well ID:	L10005305018-I-2-03	Well Type:	MONITORING
Source:	EDF	Other Name:	I-2-03
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10005305018&assigned_name=I-2-03&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10005305018&assigned_name=I-2-03		

Q113
ESE
1/2 - 1 Mile
Higher

CA WELLS **CAEDF0000128430**

Well ID:	L10005305018-I-1-04	Well Type:	MONITORING
Source:	EDF	Other Name:	I-1-04
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10005305018&assigned_name=I-1-04&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10005305018&assigned_name=I-1-04		

1G
West
1/2 - 1 Mile
Lower

AQUIFLOW **64767**

Site ID:	70507
Groundwater Flow:	N
Shallow Water Depth:	7
Deep Water Depth:	8
Average Water Depth:	Not Reported
Date:	04/05/1990

2G
WSW
1/4 - 1/2 Mile
Lower

AQUIFLOW **66346**

Site ID:	70726
Groundwater Flow:	Not Reported
Shallow Water Depth:	23.29
Deep Water Depth:	32.52
Average Water Depth:	Not Reported
Date:	03/14/1988

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation			Database	EDR ID Number
3G **SSW** **1/8 - 1/4 Mile** **Lower**	Site ID:	71224	**AQUIFLOW**	**64762**
	Groundwater Flow:	Not Reported		
	Shallow Water Depth:	Not Reported		
	Deep Water Depth:	Not Reported		
	Average Water Depth:	11		
	Date:	09/04/1991		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

1
NNW **OIL_GAS** **CAOG14000007400**
1/4 - 1/2 Mile

API #:	0401300275	Well #:	1
Well Status:	Plugged	Well Type:	Dry Hole
Lease Name:	Brown's Island Unit	Field Name:	Any Field
Area Name:	Any Area	GIS Source:	hud
Confidential Well:	N	Directionally Drilled:	N
Spud Date:	12/14/1963		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
94565	29	2

Federal EPA Radon Zone for CONTRA COSTA County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 94565

Number of sites tested: 4

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.375 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

OTHER STATE DATABASE INFORMATION

Groundwater Ambient Monitoring & Assessment Program
State Water Resources Control Board
Telephone: 916-341-5577
The GAMA Program is Californias comprehensive groundwater quality monitoring program. GAMA collects data by testing the untreated, raw water in different types of wells for naturally-occurring and man-made chemicals. The GAMA data includes Domestic, Monitoring and Municipal well types from the following sources, Department of Water Resources, Department of Heath Services, EDF, Agricultural Lands, Lawrence Livermore National Laboratory, Department of Pesticide Regulation, United States Geological Survey, Groundwater Ambient Monitoring and Assessment Program and Local Groundwater Projects.

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

California Oil and Gas Well Locations
Source: Dept of Conservation, Geologic Energy Management Division
Telephone: 916-323-1779
Oil and Gas well locations in the state.

California Earthquake Fault Lines
Source: California Division of Mines and Geology
The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

RADON

State Database: CA Radon
Source: Department of Public Health
Telephone: 916-210-8558
Radon Database for California

PHYSICAL SETTING SOURCE RECORDS SEARCHED

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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GSI ENVIRONMENTAL

PHASE I ENVIRONMENTAL SITE ASSESSMENT
FORMER JOHNS MANVILLE PLANT SITE
420 EAST 3RD STREET
PITTSBURG, CALIFORNIA

Integral Communities

Appendix B

Site Photographs



Photo 1. View of entire Site, looking southeast.



Photo 2.View of entire Site, looking northwest.

Note: Photos taken on 3/10/21.

Integral Communities - Pittsburg
420 E. 3rd Street
Pittsburg, California 94565

By: KJH	Date: 3/21/21	Project :5785
GSI ENVIRONMENTAL		Photos **1 & 2**



Photo 3. Unmarked 55-gallon steel drum (with lid) and various trash debris at northwest corner of Site, looking northwest.



Photo 4. Unmarked 55-gallon steel drums (with lids) within bermed area at southeast corner of Site, looking southeast.

Note: Photos taken on 3/10/21.

Integral Communities - Pittsburg
420 E. 3rd Street
Pittsburg, California 94565

By: KJH	Date: 3/21/21	Project :5785
GSI ENVIRONMENTAL		Photos **3 & 4**



Photo 5. Example of a pool of water on north-south trending gravel road on western side of Site, looking north.



Photo 6. Example of grated drain located at the southeastern boundary of the site, looking east.

Note: Photos taken on 3/10/21.

Integral Communities - Pittsburg
420 E. 3rd Street
Pittsburg, California 94565

By: KJH	Date: 3/21/21	Project :5785
GSI ENVIRONMENTAL		Photos **5 & 6**



Photo 7. Burned area located in the south-central area of the Site, looking east.



Photo 8. Close-up of burned area showing charred tire and other small charred debris.

Note: Photos taken on 3/10/21.

Integral Communities - Pittsburg
420 E. 3rd Street
Pittsburg, California 94565

By: KJH	Date: 3/21/21	Project :5785
GSI ENVIRONMENTAL		Photos **7 & 8**



Photo 9. Stairway leading to piping and valve system at the west-central boundary of Site, looking west.



Photo 10. Close-up of piping and valve system at the west-central boundary of Site, looking west.

Note: Photos taken on 3/10/21.

Integral Communities - Pittsburg
420 E. 3rd Street
Pittsburg, California 94565

By: KJH	Date: 3/21/21	Project :5785
GSI ENVIRONMENTAL		Photos **9 & 10**



Photo 11. Ground-level polyvinyl chloride (PVC) piping running along southwestern boundary of Site, presumably associated with the piping and valve system shown in Photos 9 and 10.



Photo 12. Semi-buried, irregularly-shaped steel plate located in the north-central area of Site.

Note: Photos taken on 3/10/21.

Integral Communities - Pittsburg
420 E. 3rd Street
Pittsburg, California 94565

By: KJH	Date: 3/21/21	Project :5785
GSI ENVIRONMENTAL		Photos **11 & 12**



Photo 13. Abandoned boring back-filled with cement grout, located in the east-central area of Site.



Photo 14. Drainage system, piping, and pest-control boxes distributed throughout the eastern bermed area, looking east.

Note: Photos taken on 3/10/21.

Integral Communities - Pittsburg
420 E. 3rd Street
Pittsburg, California 94565

By: KJH	Date: 3/21/21	Project :5785
GSI ENVIRONMENTAL		Photos **13 & 14**



Photo 15. Example of pest control boxes located within the eastern bermed area.



Photo 16. Transformer located outsite of Site boundaries, within the grassy area between the bermed area and Harbor Street.

Note: Photos taken on 3/10/21.

Integral Communities - Pittsburg
420 E. 3rd Street
Pittsburg, California 94565

By: KJH	Date: 3/21/21	Project :5785
GSI ENVIRONMENTAL		Photos **15 & 16**



Photo 17. Abandoned piping at northern boundary of Site, looking north.



Photo 18. Abandoned electrical box along northern fence-line, looking northeast.

Note: Photos taken on 3/10/21.

Integral Communities - Pittsburg
420 E. 3rd Street
Pittsburg, California 94565

By: KJH	Date: 3/21/21	Project :5785
GSI ENVIRONMENTAL		Photos **17 & 18**



Photo 19. Gate system and abandoned piping (shown in Photo 17) located at the northern boundary of Site, looking northwest.



Photo 20.View of industrial facilities to the east of Site, looking east.

Note: Photos taken on 3/10/21.

Integral Communities - Pittsburg
420 E. 3rd Street
Pittsburg, California 94565

By: KJH	Date: 3/21/21	Project :5785
GSI ENVIRONMENTAL		Photos **19 & 20**



Photo 21. View of empty lot to the north of Site, looking northwest.

Note: Photo taken on 3/10/21.

Integral Communities - Pittsburg
420 E. 3rd Street
Pittsburg, California 94565

By: KJH	Date: 3/21/21	Project :5785
GSI ENVIRONMENTAL		Photo **21**

GSI ENVIRONMENTAL

PHASE I ENVIRONMENTAL SITE ASSESSMENT
FORMER JOHNS MANVILLE PLANT SITE
420 EAST 3RD STREET
PITTSBURG, CALIFORNIA

Integral Communities

Appendix C

Sanborn Fire Insurance Maps

420 East 3rd Street

420 East 3rd Street

Pittsburg, CA 94565

Inquiry Number: 6377157.3

February 22, 2021

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

02/22/21

Site Name:

420 East 3rd Street
420 East 3rd Street
Pittsburg, CA 94565
EDR Inquiry # 6377157.3

Client Name:

GSI Environmental
155 Grand Avenue, Suite 704
OAKLAND, CA 94612
Contact: Jennifer Duffield

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by GSI Environmental were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # AC02-4701-85D9

PO # TBD

Project 420 East 3rd Street

Maps Provided:

1966
1958
1949
1927

Sanborn® Library search results

Certification #: AC02-4701-85D9

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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Sanborn Sheet Key

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

1966 Source Sheets



Volume 1, Sheet 7
1966

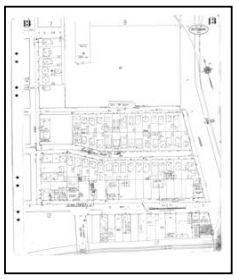


Volume 1, Sheet 8
1966



Volume 1, Sheet 13
1966

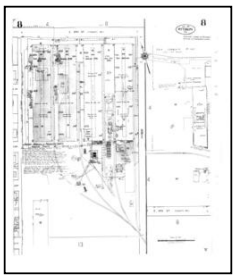
1958 Source Sheets



Volume 1, Sheet 13
1958



Volume 1, Sheet 7
1958



Volume 1, Sheet 8
1958

1949 Source Sheets



Volume 1, Sheet 7
1949



Volume 1, Sheet 8
1949

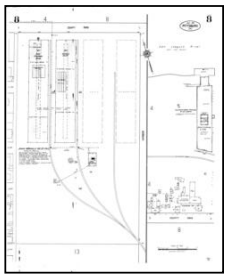


Volume 1, Sheet 13
1949

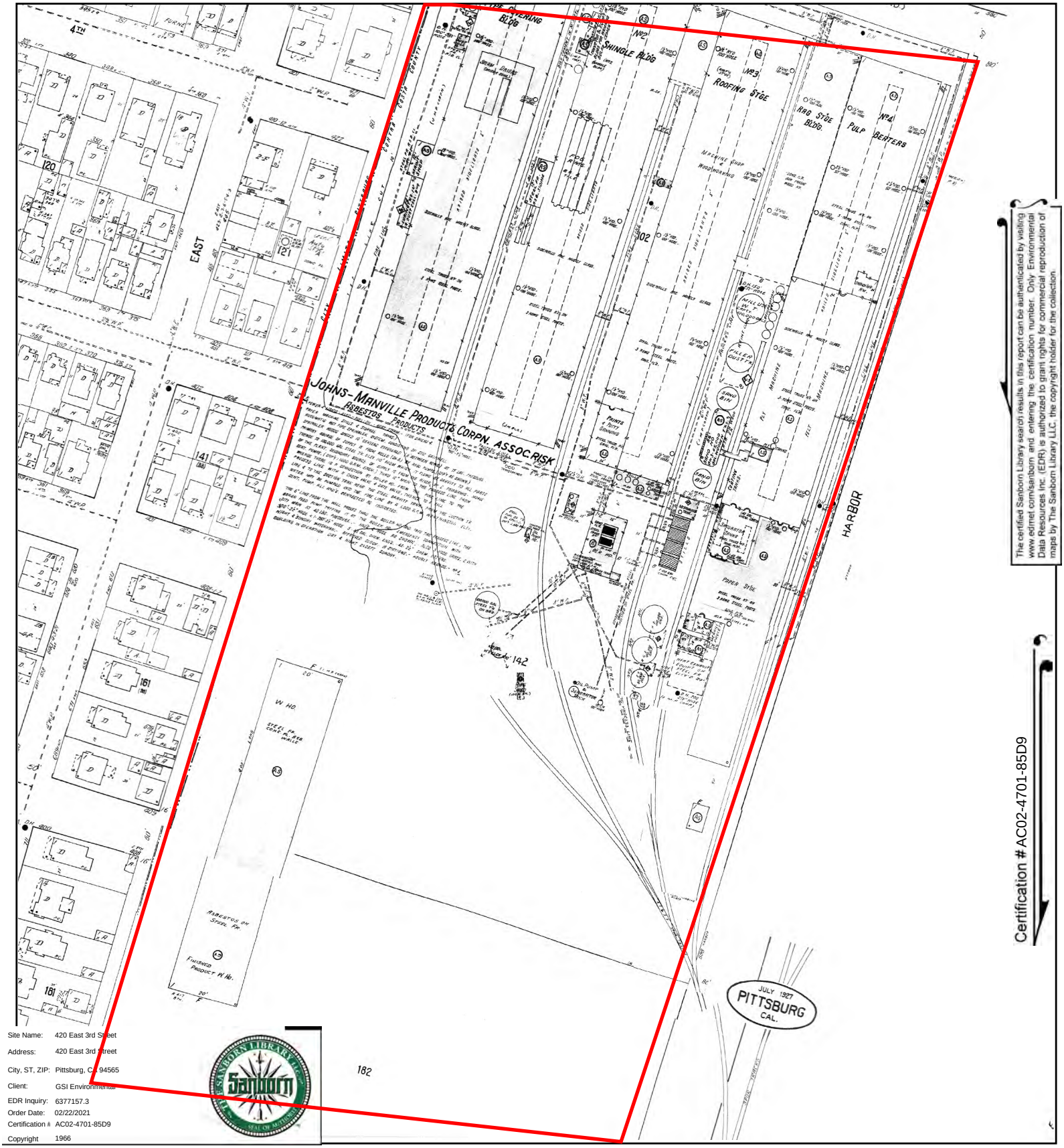
1927 Source Sheets



Volume 1, Sheet 7
1927



Volume 1, Sheet 8
1927



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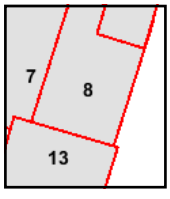
Certification # AC02-4701-85D9

Site Name: 420 East 3rd Street
Address: 420 East 3rd Street
City, ST, ZIP: Pittsburg, CA 94565
Client: GSI Environmental
EDR Inquiry: 6377157.3
Order Date: 02/22/2021
Certification #: AC02-4701-85D9
Copyright: 1966

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

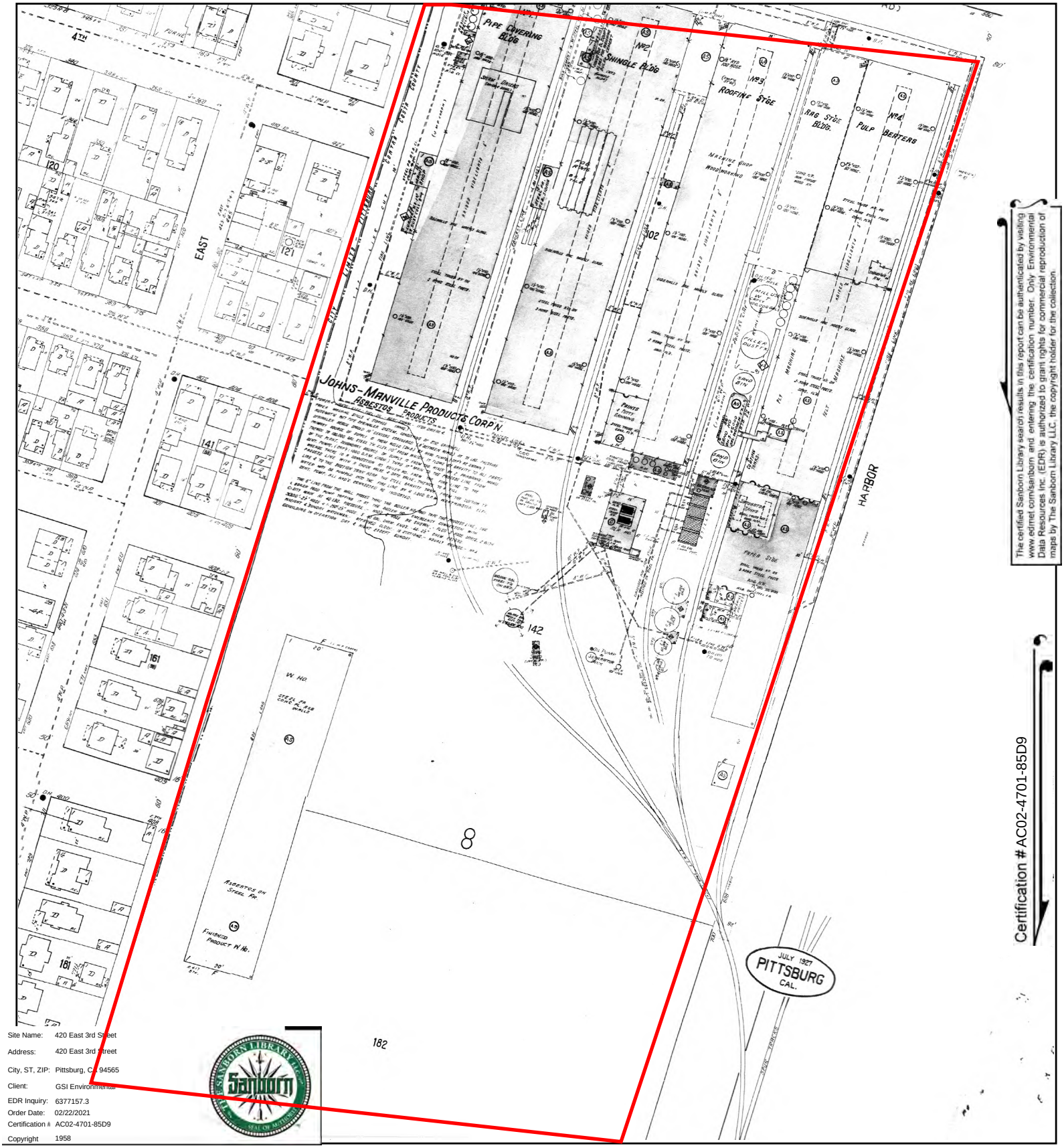
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Volume 1, Sheet 13
Volume 1, Sheet 8
Volume 1, Sheet 7

N



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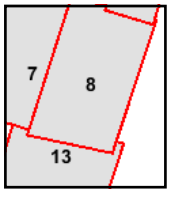
Certification # AC02-4701-85D9

Site Name: 420 East 3rd Street
Address: 420 East 3rd Street
City, ST, ZIP: Pittsburg, CA 94565
Client: GSI Environmental
EDR Inquiry: 6377157.3
Order Date: 02/22/2021
Certification #: AC02-4701-85D9
Copyright: 1958

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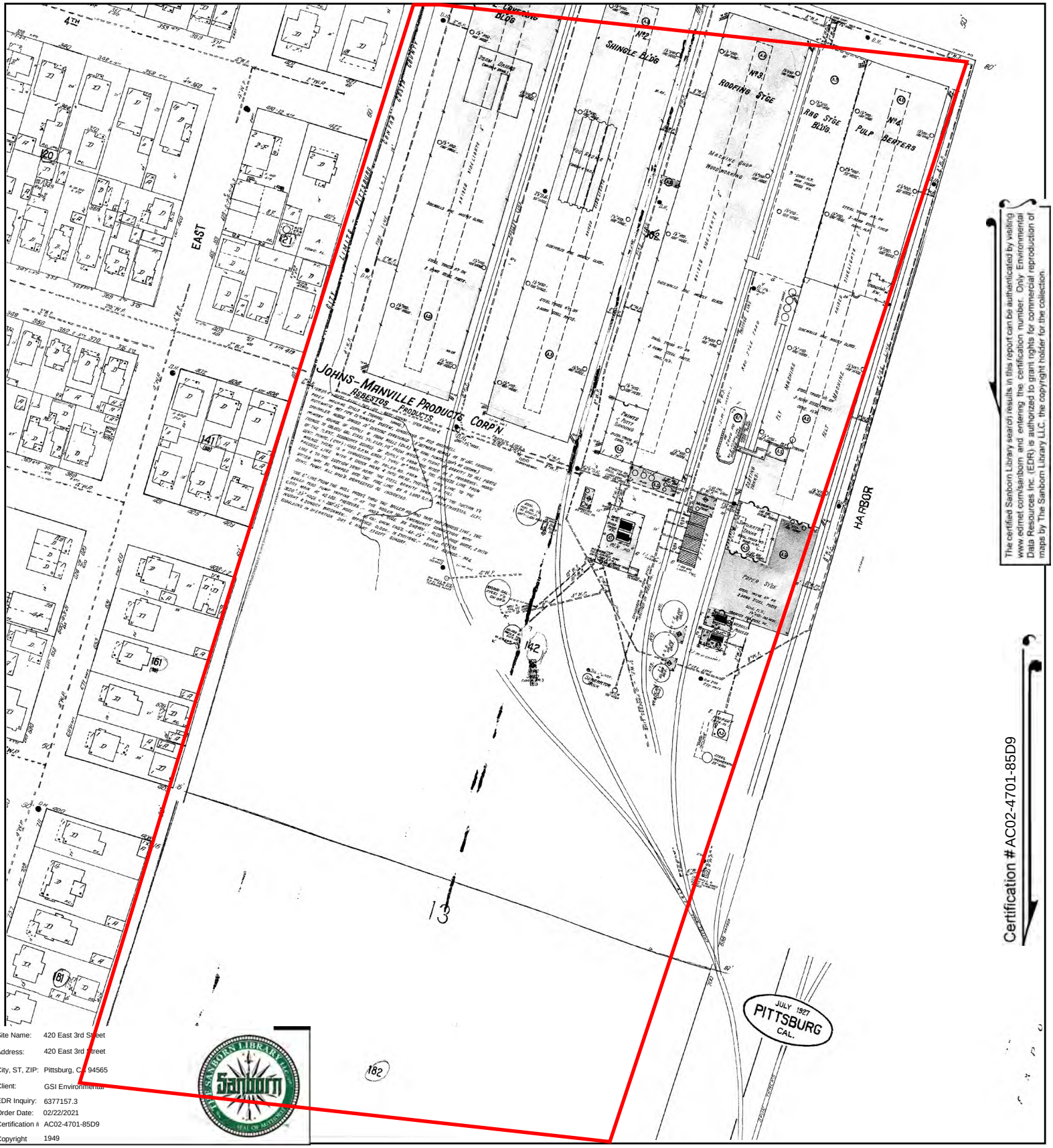
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Volume 1, Sheet 8
Volume 1, Sheet 7
Volume 1, Sheet 13

N



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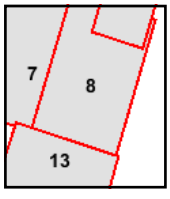
Certification # AC02-4701-85D9

Site Name: 420 East 3rd Street
Address: 420 East 3rd Street
City, ST, ZIP: Pittsburg, CA 94565
Client: GSI Environmental
EDR Inquiry: 6377157.3
Order Date: 02/22/2021
Certification #: AC02-4701-85D9
Copyright: 1949

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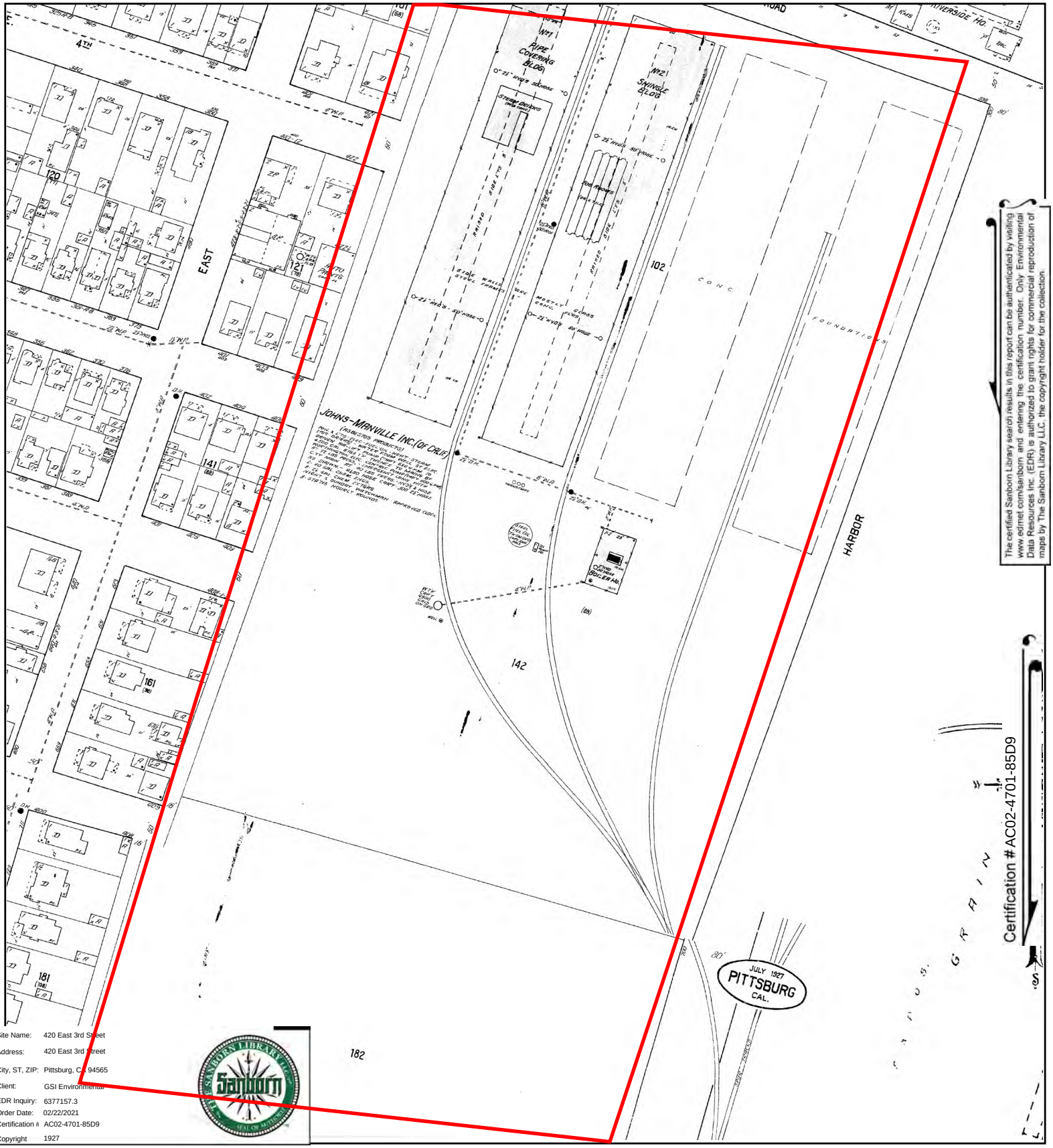
0 Feet 150 300 600





Volume 1, Sheet 13
Volume 1, Sheet 8
Volume 1, Sheet 7

N



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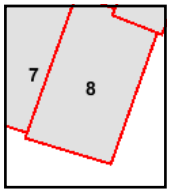
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Site Name: 420 East 3rd Street
Address: 420 East 3rd Street
City, ST, ZIP: Pittsburg, CA 94565
Client: GSI Environmental
EDR Inquiry: 6377157.3
Order Date: 02/22/2021
Certification #: AC02-4701-85D9
Copyright: 1927

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

0 Feet 150 300 600





Volume 1, Sheet 8
Volume 1, Sheet 7

N

PHASE I ENVIRONMENTAL SITE ASSESSMENT
FORMER JOHNS MANVILLE PLANT SITE
420 EAST 3RD STREET
PITTSBURG, CALIFORNIA

Integral Communities

Appendix D

Topographic Maps

420 East 3rd Street

420 East 3rd Street

Pittsburg, CA 94565

Inquiry Number: 6377157.4

February 22, 2021

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

02/22/21

Site Name:

420 East 3rd Street
420 East 3rd Street
Pittsburg, CA 94565
EDR Inquiry # 6377157.4

Client Name:

GSI Environmental
155 Grand Avenue, Suite 704
OAKLAND, CA 94612
Contact: Jennifer Duffield

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by GSI Environmental were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# TBD

Project: 420 East 3rd Street

Coordinates:

Latitude:	38.030244 38° 1' 49" North
Longitude:	-121.878868 -121° 52' 44" West
UTM Zone:	Zone 10 North
UTM X Meters:	598393.48
UTM Y Meters:	4209763.78
Elevation:	15.00' above sea level

Maps Provided:

2012
1997
1978, 1980
1973
1968
1953
1918
1908
1907

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Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2012 Source Sheets

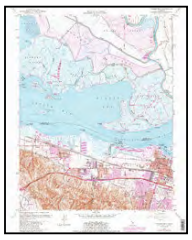


Antioch North
2012
7.5-minute, 24000



Honker Bay
2012
7.5-minute, 24000

1997 Source Sheets



Honker Bay
1997
7.5-minute, 24000
Aerial Photo Revised 1997

1978, 1980 Source Sheets



Antioch North
1978
7.5-minute, 24000
Aerial Photo Revised 1974



Honker Bay
1980
7.5-minute, 24000
Aerial Photo Revised 1979

1973 Source Sheets



Honker Bay
1973
7.5-minute, 24000
Aerial Photo Revised 1973

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1968 Source Sheets

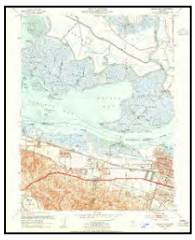


Antioch North
1968
7.5-minute, 24000
Aerial Photo Revised 1968

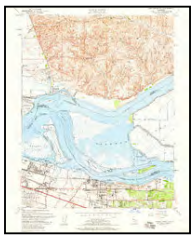


Honker Bay
1968
7.5-minute, 24000
Aerial Photo Revised 1968

1953 Source Sheets



Honker Bay
1953
7.5-minute, 24000
Aerial Photo Revised 1949

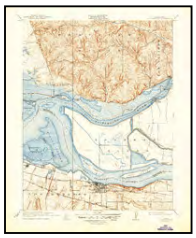


Antioch North
1953
7.5-minute, 24000
Aerial Photo Revised 1949

1918 Source Sheets



Honker Bay
1918
7.5-minute, 31680



Collinsville
1918
7.5-minute, 31680

1908 Source Sheets



Antioch
1908
15-minute, 62500

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

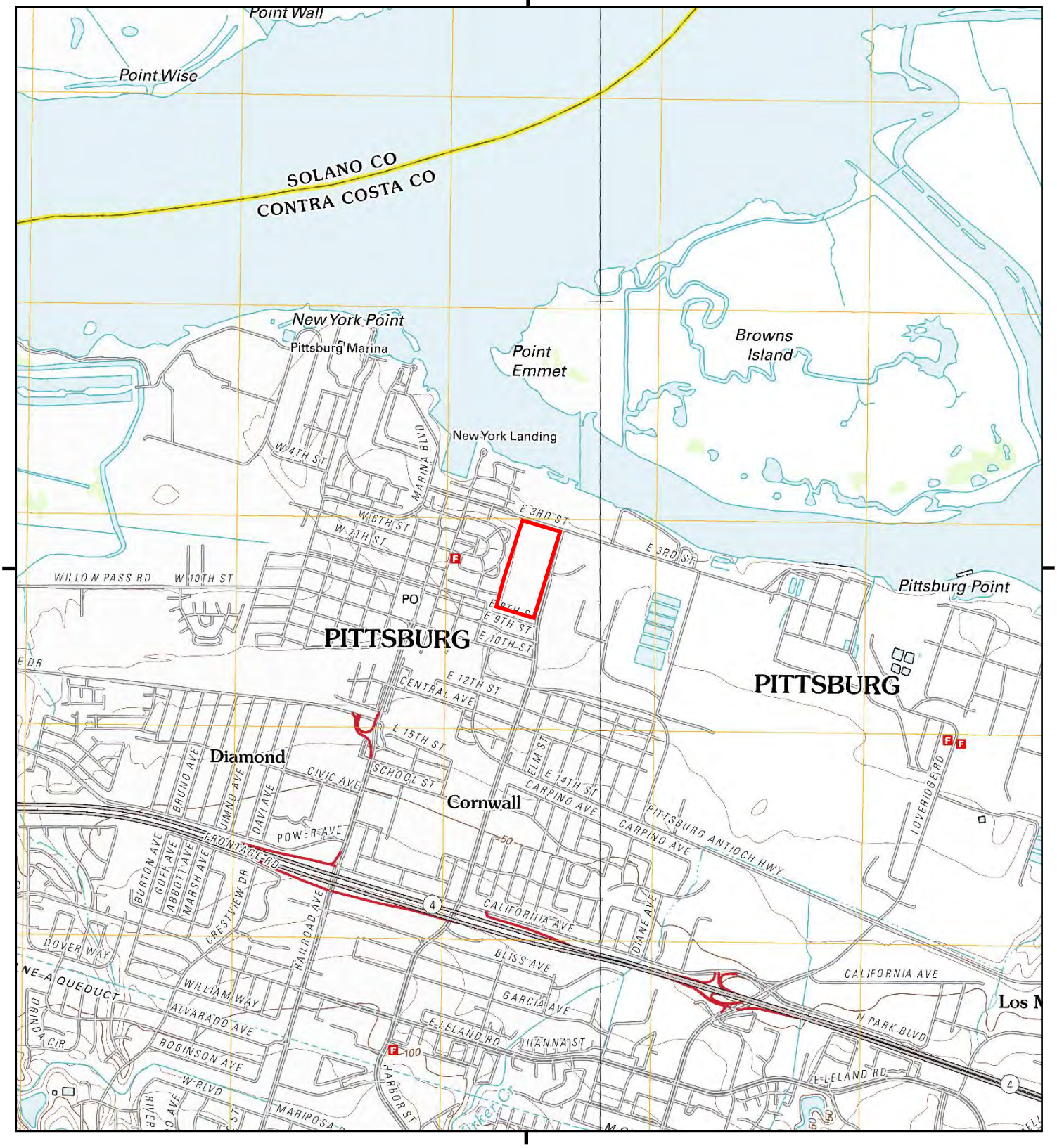
1907 Source Sheets



Antioch
1907
15-minute, 62500

Historical Topo Map

2012



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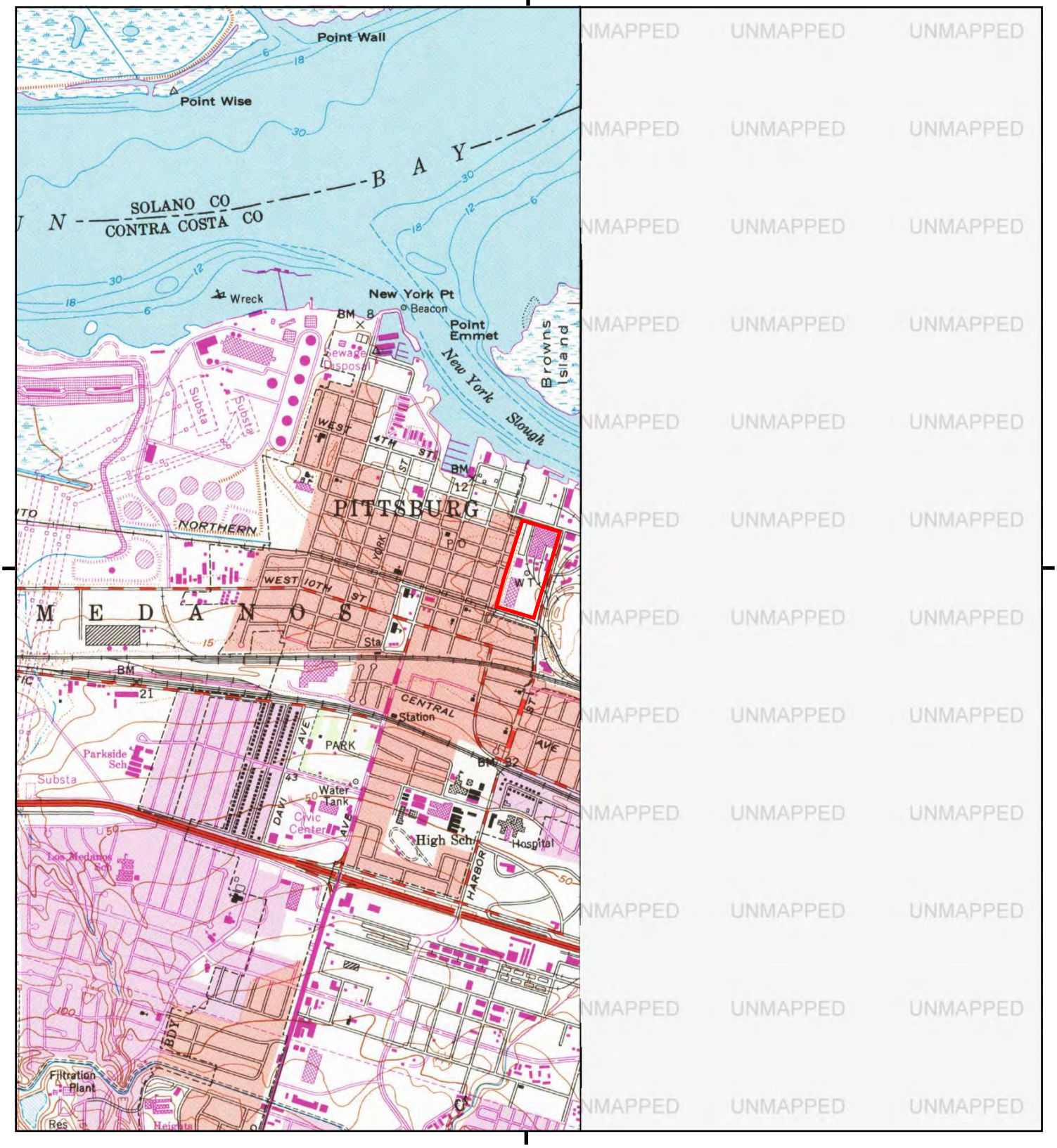
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Honker Bay, 2012, 7.5-minute
NE, Antioch North, 2012, 7.5-minute

SITE NAME: 420 East 3rd Street
ADDRESS: 420 East 3rd Street
Pittsburg, CA 94565
CLIENT: GSI Environmental

N



This report includes information from the following map sheet(s).

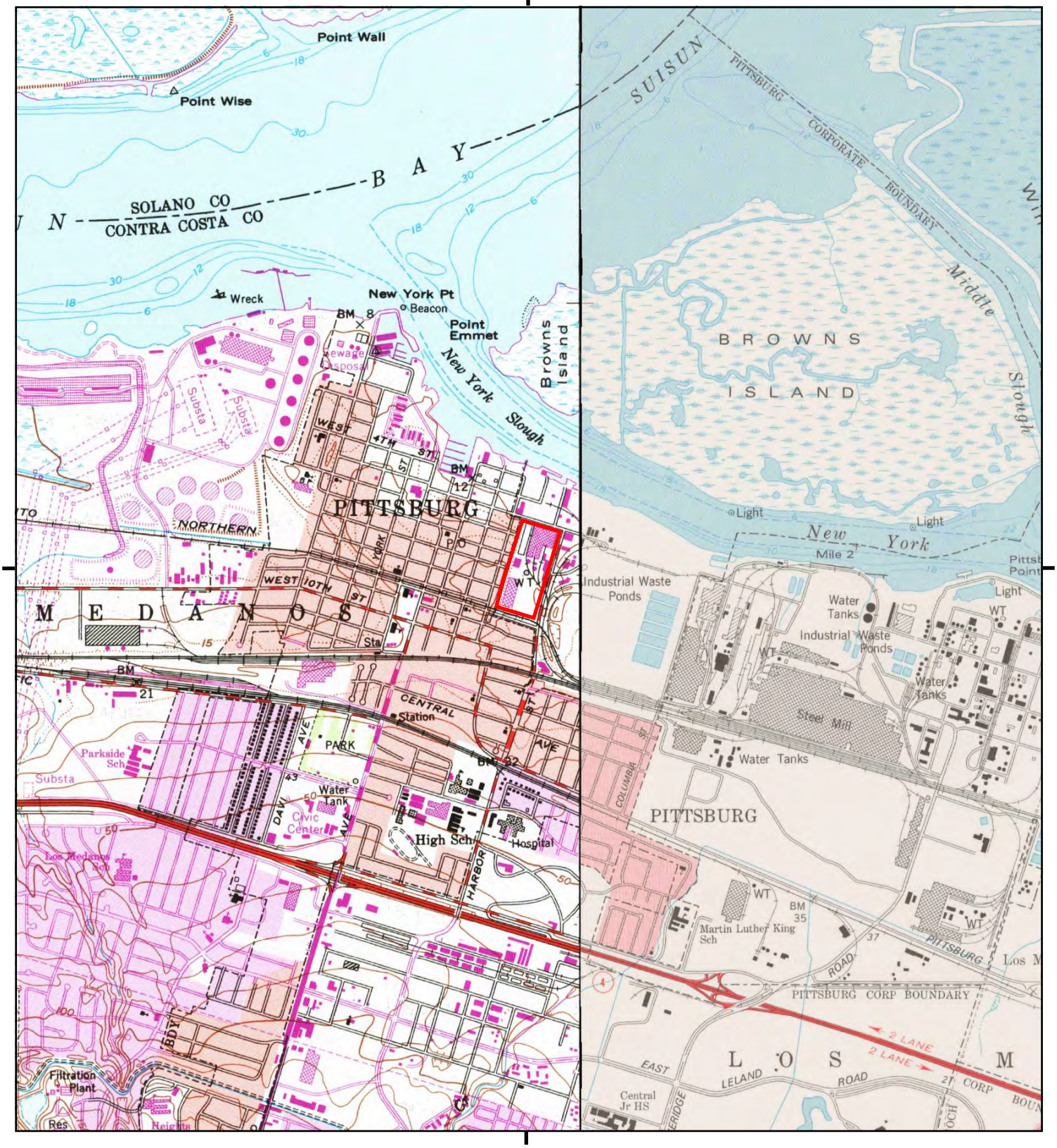
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NW N NE
W E
SW S SE

TP, Honker Bay, 1997, 7.5-minute

SITE NAME: 420 East 3rd Street
ADDRESS: 420 East 3rd Street
Pittsburg, CA 94565
CLIENT: GSI Environmental

N



This report includes information from the following map sheet(s).

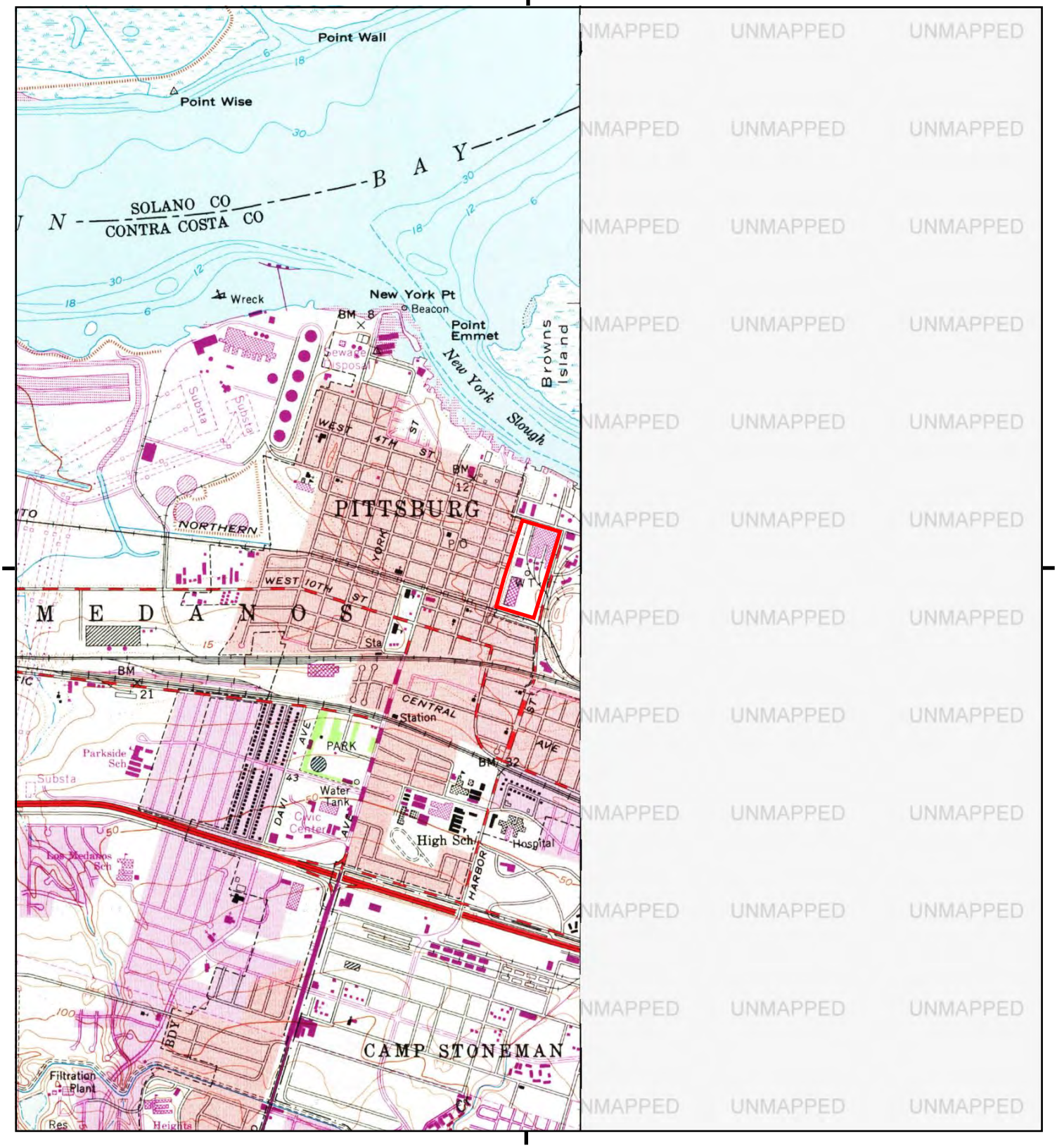
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NW N NE
W E
SW S SE

TP, Honker Bay, 1980, 7.5-minute
NE, Antioch North, 1978, 7.5-minute

SITE NAME: 420 East 3rd Street
ADDRESS: 420 East 3rd Street
Pittsburg, CA 94565
CLIENT: GSI Environmental

N



This report includes information from the following map sheet(s).

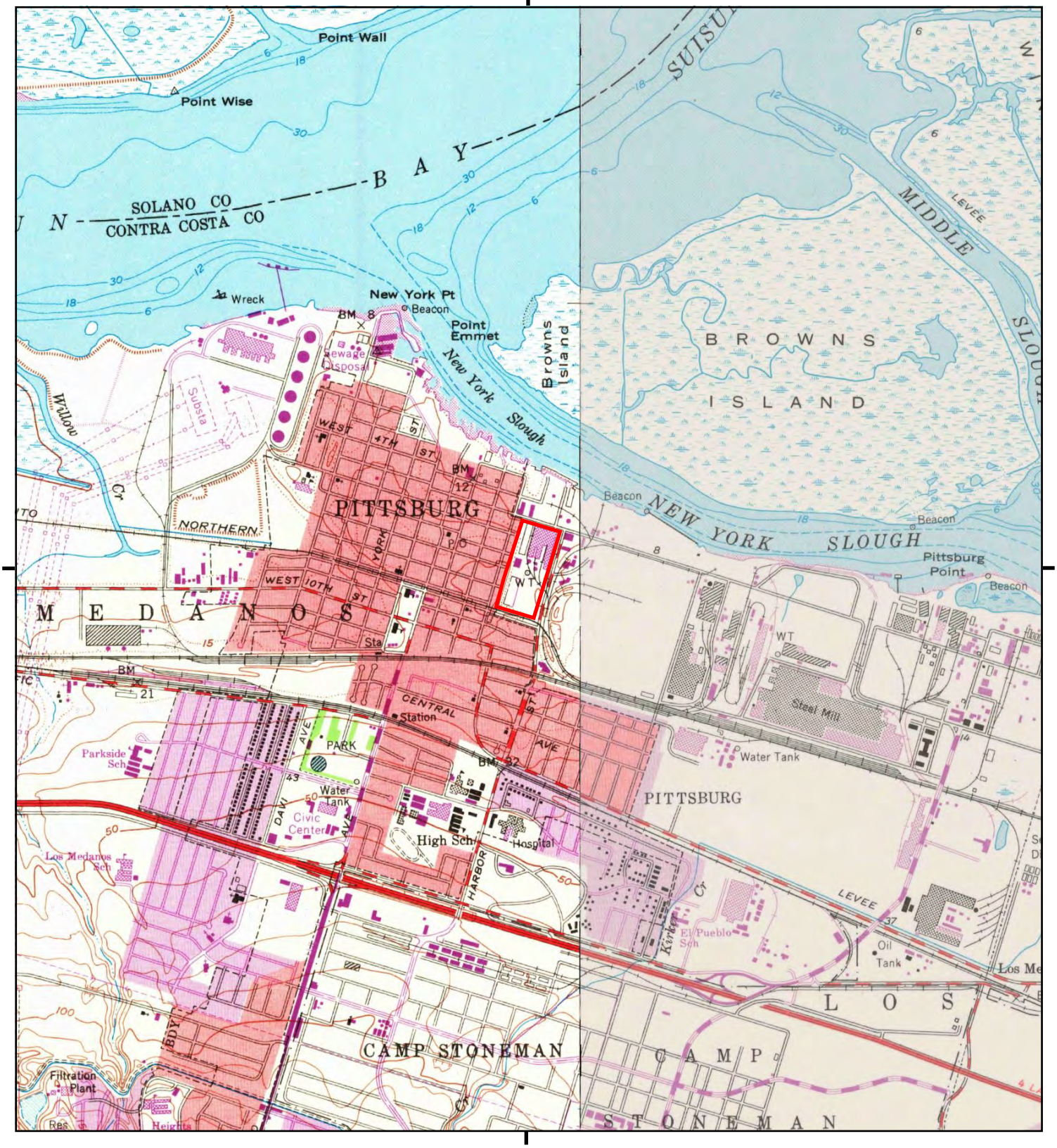
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Honker Bay, 1973, 7.5-minute

SITE NAME: 420 East 3rd Street
ADDRESS: 420 East 3rd Street
Pittsburg, CA 94565
CLIENT: GSI Environmental

N



This report includes information from the following map sheet(s).

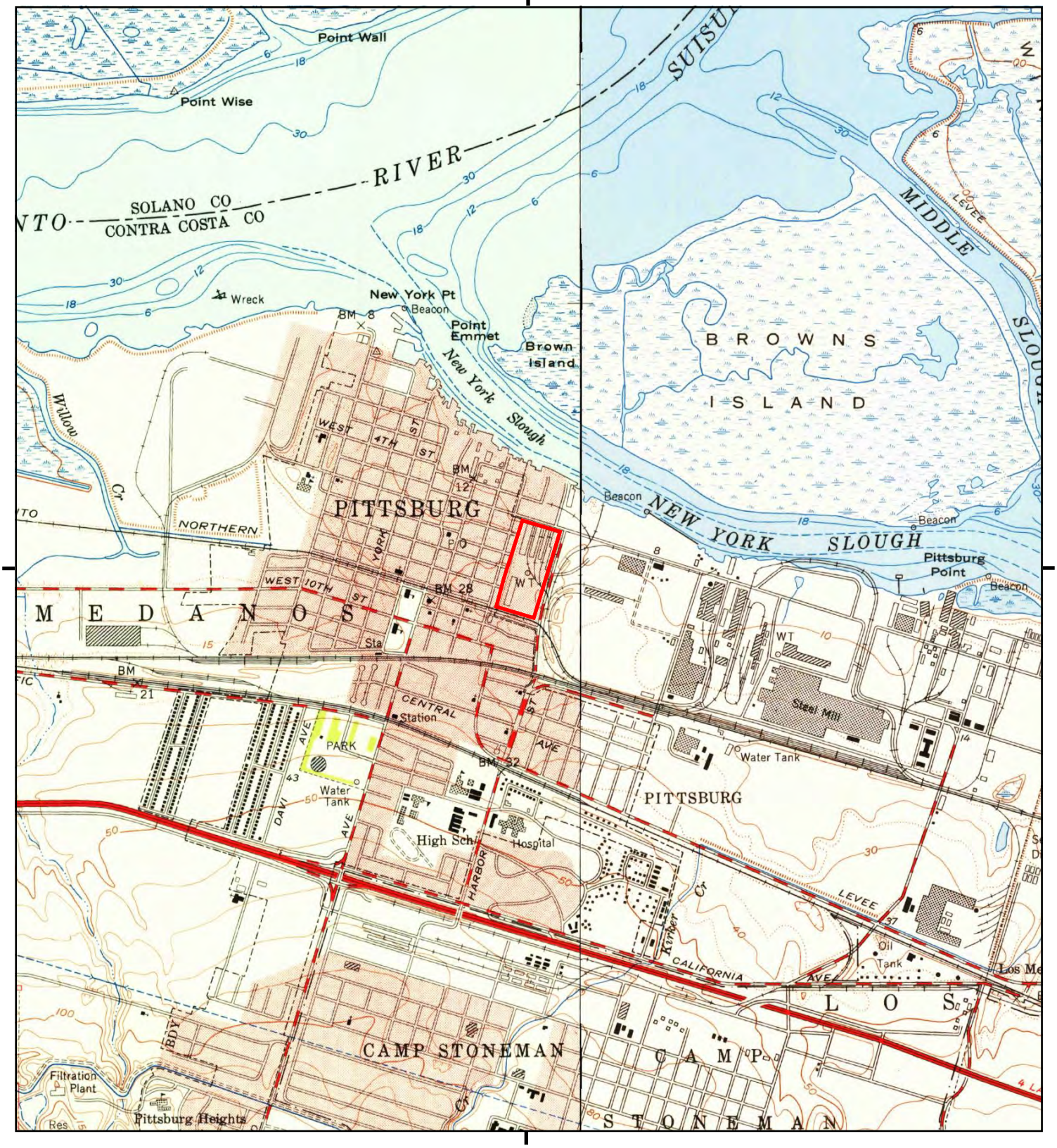
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Honker Bay, 1968, 7.5-minute
NE, Antioch North, 1968, 7.5-minute

SITE NAME: 420 East 3rd Street
ADDRESS: 420 East 3rd Street
Pittsburg, CA 94565
CLIENT: GSI Environmental

N



This report includes information from the following map sheet(s).

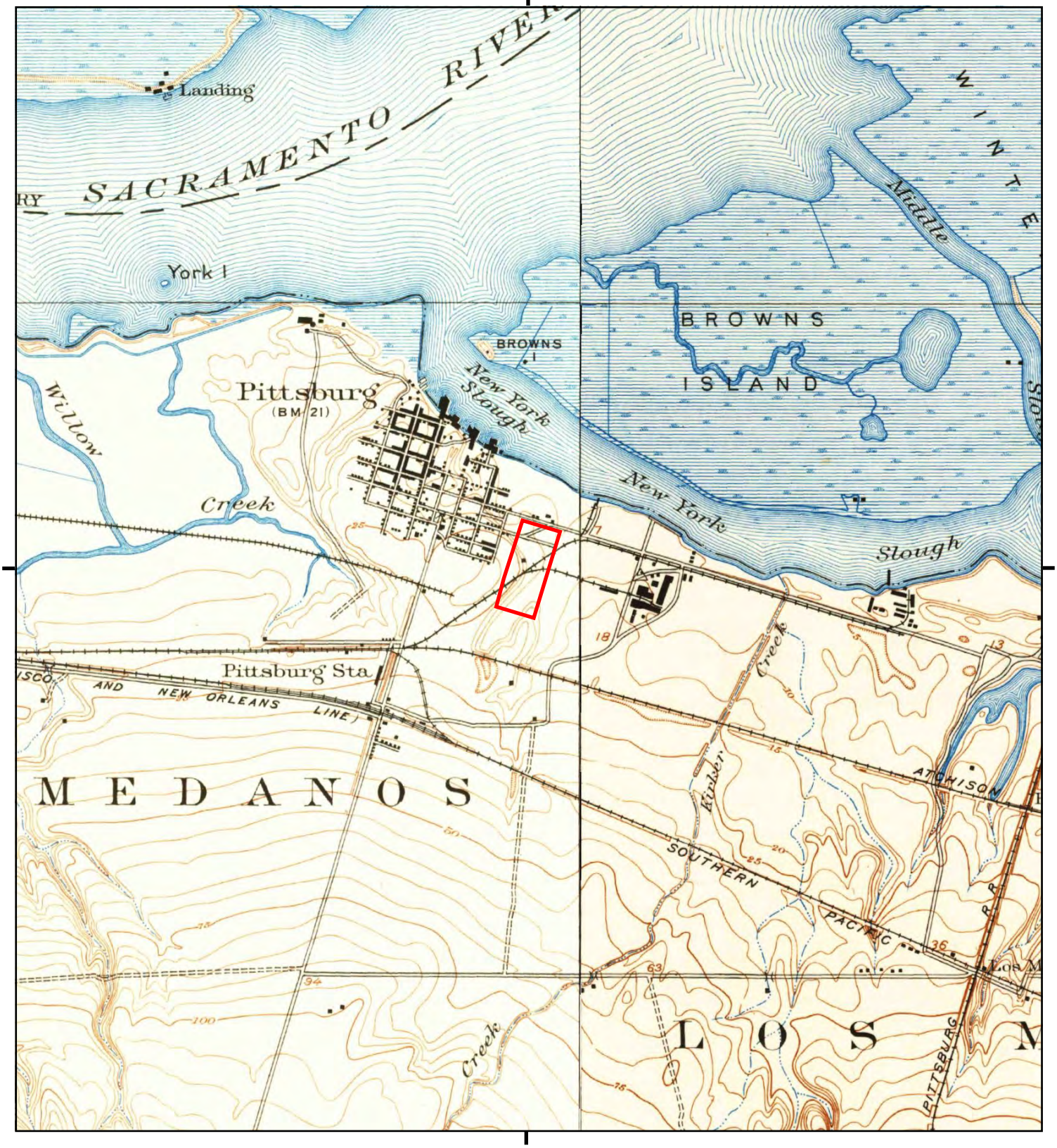
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NW N NE
W E
SW S SE

TP, Honker Bay, 1953, 7.5-minute
NE, Antioch North, 1953, 7.5-minute

SITE NAME: 420 East 3rd Street
ADDRESS: 420 East 3rd Street
Pittsburg, CA 94565
CLIENT: GSI Environmental

N



This report includes information from the following map sheet(s).

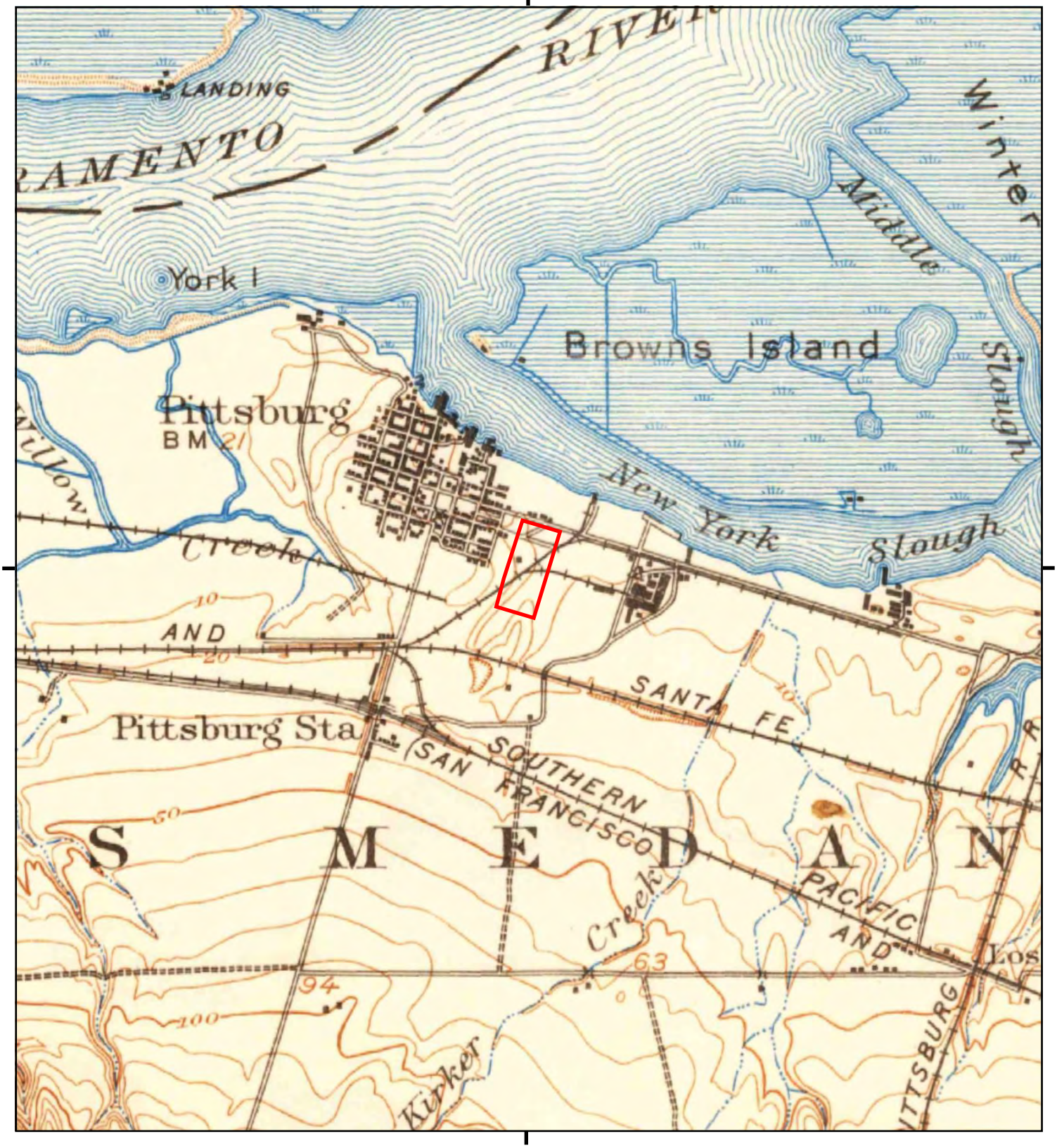
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Honker Bay, 1918, 7.5-minute
NE, Collinsville, 1918, 7.5-minute

SITE NAME: 420 East 3rd Street
ADDRESS: 420 East 3rd Street
Pittsburg, CA 94565
CLIENT: GSI Environmental

N



This report includes information from the following map sheet(s).

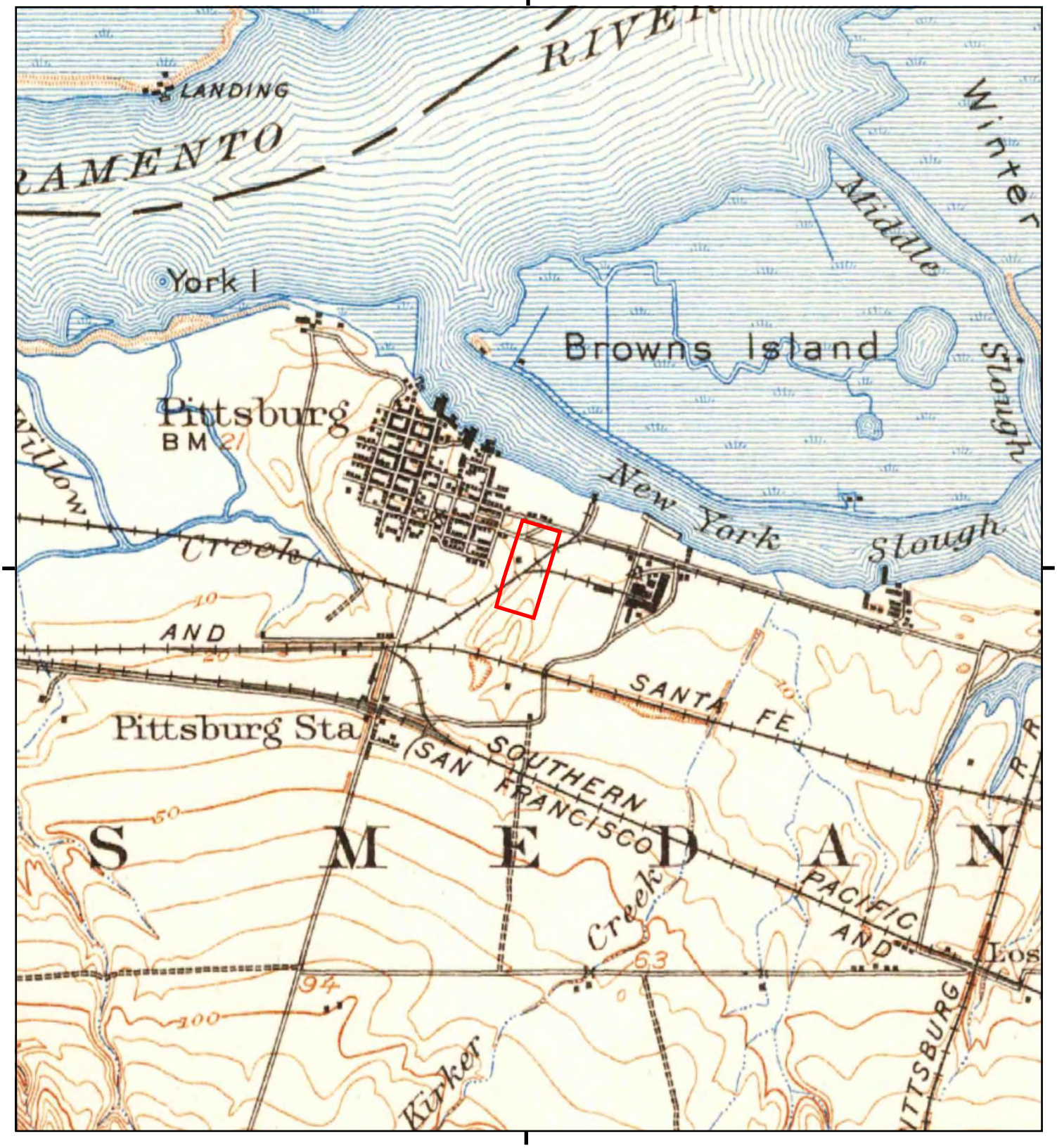
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Antioch, 1908, 15-minute

SITE NAME: 420 East 3rd Street
ADDRESS: 420 East 3rd Street
Pittsburg, CA 94565
CLIENT: GSI Environmental

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Antioch, 1907, 15-minute

SITE NAME: 420 East 3rd Street
ADDRESS: 420 East 3rd Street
Pittsburg, CA 94565
CLIENT: GSI Environmental

N

GSI ENVIRONMENTAL

PHASE I ENVIRONMENTAL SITE ASSESSMENT
FORMER JOHNS MANVILLE PLANT SITE
420 EAST 3RD STREET
PITTSBURG, CALIFORNIA

Integral Communities

Appendix E

Aerial Photographs

420 East 3rd Street

420 East 3rd Street

Pittsburg, CA 94565

Inquiry Number: 6377157.8

February 23, 2021

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

02/23/21

Site Name:

420 East 3rd Street
420 East 3rd Street
Pittsburg, CA 94565
EDR Inquiry # 6377157.8

Client Name:

GSI Environmental
155 Grand Avenue, Suite 704
OAKLAND, CA 94612
Contact: Jennifer Duffield

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
1998	1"=500'	Flight Date: August 22, 1998	USDA
1993	1"=500'	Acquisition Date: January 01, 1993	USGS/DOQQ
1984	1"=500'	Flight Date: June 08, 1984	USDA
1979	1"=500'	Flight Date: August 16, 1979	USDA
1966	1"=500'	Flight Date: May 15, 1966	USDA
1963	1"=500'	Flight Date: July 15, 1963	EDR Proprietary Aerial Viewpoint
1959	1"=500'	Flight Date: May 15, 1959	USDA
1952	1"=500'	Flight Date: August 02, 1952	USDA
1939	1"=500'	Flight Date: July 25, 1939	USDA

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INQUIRY #: 6377157.8
YEAR: 2016
= 500'
N
EDR


INQUIRY #: 6377157.8
YEAR: 2012
= 500'
N
EDR


INQUIRY #: 6377157.8
YEAR: 2009
= 500'
N
EDR


INQUIRY #: 6377157.8
YEAR: 2006
= 500'
N
EDR


INQUIRY #: 6377157.8
YEAR: 1998
= 500'
N
EDR



INQUIRY #: 6377157.8

YEAR: 1993

= 500'

N

EDR

Subject boundary not shown because it exceeds image extent or image is not georeferenced.



INQUIRY #: 6377157.8

YEAR: 1984

= 500'

N

EDR


INQUIRY #: 6377157.8
YEAR: 1979
= 500'
N
EDR


INQUIRY #: 6377157.8
YEAR: 1966
= 500'
N
EDR


INQUIRY #: 6377157.8
YEAR: 1963
= 500'
N
EDR


INQUIRY #: 6377157.8
YEAR: 1959
= 500'
N
EDR



INQUIRY #: 6377157.8

YEAR: 1952

= 500'

N

EDR



INQUIRY #: 6377157.8

YEAR: 1939

= 500'

N

EDR

PHASE I ENVIRONMENTAL SITE ASSESSMENT
FORMER JOHNS MANVILLE PLANT SITE
420 EAST 3RD STREET
PITTSBURG, CALIFORNIA

Integral Communities

Appendix F

City Directories

420 East 3rd Street
420 East 3rd Street
Pittsburg, CA 94565

Inquiry Number: 6377157.5
February 25, 2021

The EDR-City Directory Image Report

EDR® Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Executive Summary

Findings

City Directory Images

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Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

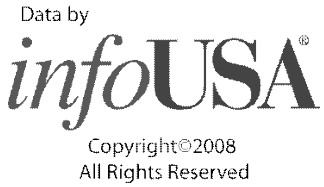
DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2017	☑	☐	EDR Digital Archive
2014	☑	☐	EDR Digital Archive
2010	☑	☐	EDR Digital Archive
2005	☑	☐	EDR Digital Archive
2000	☑	☐	EDR Digital Archive
1995	☑	☐	EDR Digital Archive
1992	☑	☐	EDR Digital Archive
1989	☑	☐	Haines Criss-Cross Directory
1985	☑	☐	Haines Criss-Cross Directory
1980	☑	☐	Haines Criss-Cross Directory
1975	☑	☐	Haines Criss-Cross Directory

FINDINGS

TARGET PROPERTY STREET

420 East 3rd Street
Pittsburg, CA 94565

Year	*CD Image*	*Source*
E 3RD ST		
2017	pg A1	EDR Digital Archive
2014	pg A2	EDR Digital Archive
2010	pg A3	EDR Digital Archive
2005	pg A4	EDR Digital Archive
2000	pg A5	EDR Digital Archive
1995	pg A6	EDR Digital Archive
1992	pg A7	EDR Digital Archive
1989	pg A8	Haines Criss-Cross Directory
1989	pg A9	Haines Criss-Cross Directory
1985	pg A10	Haines Criss-Cross Directory
1980	pg A11	Haines Criss-Cross Directory
1975	pg A12	Haines Criss-Cross Directory

FINDINGS

CROSS STREETS

No Cross Streets Identified

City Directory Images

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

E 3RD ST 2017

120	CARAMIA
156	MORRISON LAW FIRM
158	HOA ACCOUNTING SERVICES
	NEW WAY MANAGEMENT SERVICES
160	BOOKS WITH NUMBERS
	CALIFORNIA CAPITAL REALTY
	FOGIE CONSTRUCTION INC
	NEW DECADE REALTY
	THE LAD FOUNDATION
200	BELLA MOLINO INDUSTRIES
	SKYVIEW NOODLESKYVIEW NOODLE
218	JOHNS, SARAH
228	STARKS, MONTGOMERY D
238	LUCAS, VARNER
248	VALENCIA, LIDUVINA
308	BERGGREN, BRYAN E
318	SMITH, DOCK
328	LOPEZ, MARIA E
338	BERGERON, DONALD A
358	LOWE, AARON T
368	WESTCOTT, TIMOTHY M
388	SANTANA, EDUARDO
408	ELLINGBERG, DIEMA M
598	COLLISION REPAIR
707	KOCH CARBON INC
895	PITTSBURG WATER VIEW PROPERTIES LLC
900	UNITED SPIRAL PIPE

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

E 3RD ST 2014

110	KYRAS CLOSET
120	CARAMIA
156	MORRISON LAW FIRM
158	HOA ACCOUNTING SERVICES
	NEW WAY MANAGEMENT SERVICES
160	ADT AUTHORIZED DEALER
	BOOKS WITH NUMBERS
	CALIFORNIA CAPITAL REALTY
	FOGIE CONSTRUCTION INC
	NEW DECADE REALTY
	THE CREDIT COACH INC
	THE LAD FOUNDATION
200	E J PHAIR BREWING COMPANY
218	CABERO, ELMER C
228	STARKS, MONTGOMERY D
238	HERNANDEZ-SANCHEZ, MIGUEL A
248	PRADO, FRANCISCO J
258	OCCUPANT UNKNOWN,
308	BERGGREN, BRYAN E
318	SMITH, DOCK
328	PLOUSE, LAURA
338	BERGERON, DONALD A
348	JONES, MONIQUE J
358	LOWE, AARON T
368	SMITH, LAJANESE M
378	YOUNG, RICKY
388	OCCUPANT UNKNOWN,
398	OCCUPANT UNKNOWN,
408	ELLINBERG, DEANDRE A
598	CALIFORNIA SMOGS
	COLLISION REPAIR
	DISHLATINO
707	KOCH CARBON INC
900	UNITED SPIRAL PIPE

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

E 3RD ST 2010

120	CARAMIA
156	MORRISON LAW FIRM
158	FOGLE CONSTRUCTION INC
	NEW DECADE REALTY
160	ALLSTATE INSURANCE CO
	FIRST CONTINENTAL MORTAGES
	JAMES MILLER & ASSOC
	RTR INVESTMENT CONSULTANTS
	S S FINANCIAL CORP INC
	THOMAS, DEMETRA
218	CABERO, ELMER C
238	HERNANDEZ, MIGUEL
	HERNANDEZ-SANCHEZ, MIGUEL A
258	OCCUPANT UNKNOWN,
308	RICHARDSON, L T
318	TIMS, SHAWN D
328	RASMUSSEN, MATTHEW A
348	OCCUPANT UNKNOWN,
358	LOWE, AARON T
368	GARCIA, JENNIFER A
378	MATTHEWS-YOUNG, LINDA J
388	OCCUPANT UNKNOWN,
398	MYERS, LEROY
408	ELLINGBERG, DIEMA M
595	TESORO
598	COLLISION REPAIR
	MOLINA SMOG TESTERS
	TECH AUTO CTR
707	A J EDMOND CO
	KOCH CARBON INC
895	GWF POWER SYSTEMS CO

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

E 3RD ST 2005

110	NEW DECADE REALTY
120	1ST CREDENTIAL MORTGAGE
160	EMERSON CONSULTING GROUP
	HOME INSTEAD SENIOR CARE
	IMPERIAL CAPITAL FUNDING & REALTY
190	U S GLASS & ALUMINUM INC
200	LIBERTY HOTEL RESTAURANT
228	ROJAS, MARIO T
238	ALLEN, ARTHUR R
248	PRADO, FRANCISCO J
258	SALEH, KHALIL
302	SIDDIQI, YAHYA A
308	MAHMUD, AHMAD
318	PEACE OF MIND WDNG & EVENT PLA
	PEACE OF MIND WEDDINGS AND EVENT PLA
	TIMS, SHAWN
328	RASMUSSEN, MATTHEW A
338	AYALA, NILDA
348	EDWARDS, WAYLAND A
358	DECASTRO, ANTHONY
378	CEBUANO, VALENTIN
388	MARTINEZ, MAURICE V
398	A DUCTS PURIFICATION
	NUNEZ, JOSE O
408	GENERAL X PRESS HANDYMAN SERVICE
	GENERAL X PRESS HANDYMAN SRVC
	NELSON, CURTIS L
598	COLLISION REPAIR
	MOLINA AUTO CENTER
	MORALES ADOLFO
707	A J EDMOND CO
	KOCH CARBON LLC

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

E 3RD ST 2000

158 EAST BAY PERINATAL COUNCIL
OCCUPANT UNKNOWN,
160 MILLER JAMES ARCHITECT
200 LIBERTY HOTEL RESTAURANT
302 CARDINALE BREAD & BAKING COMPANY
595 DIABLO SERVICE CORPORATION
598 K & S AUTO BODY SHOP & PAINT
600 MANVILLE CORP ROOF MATERIALS DIST SALES OFFICE
ROOFING MATERIALS DISTRICT SALES OFFICE
895 GWF POWER SYSTEMS COMPANY INCORPORATED

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

E 3RD ST 1995

120	DAVID M JOHNSON MD
160	ONE UP NATURAL FOODS INC
190	U S GLASS
200	LIBERTY HOTEL RESTAURANT
302	CARDINALE BAKERY
595	DIABLO SERVICES
598	PITTSBURG TRANSMISSIONS REPAIR

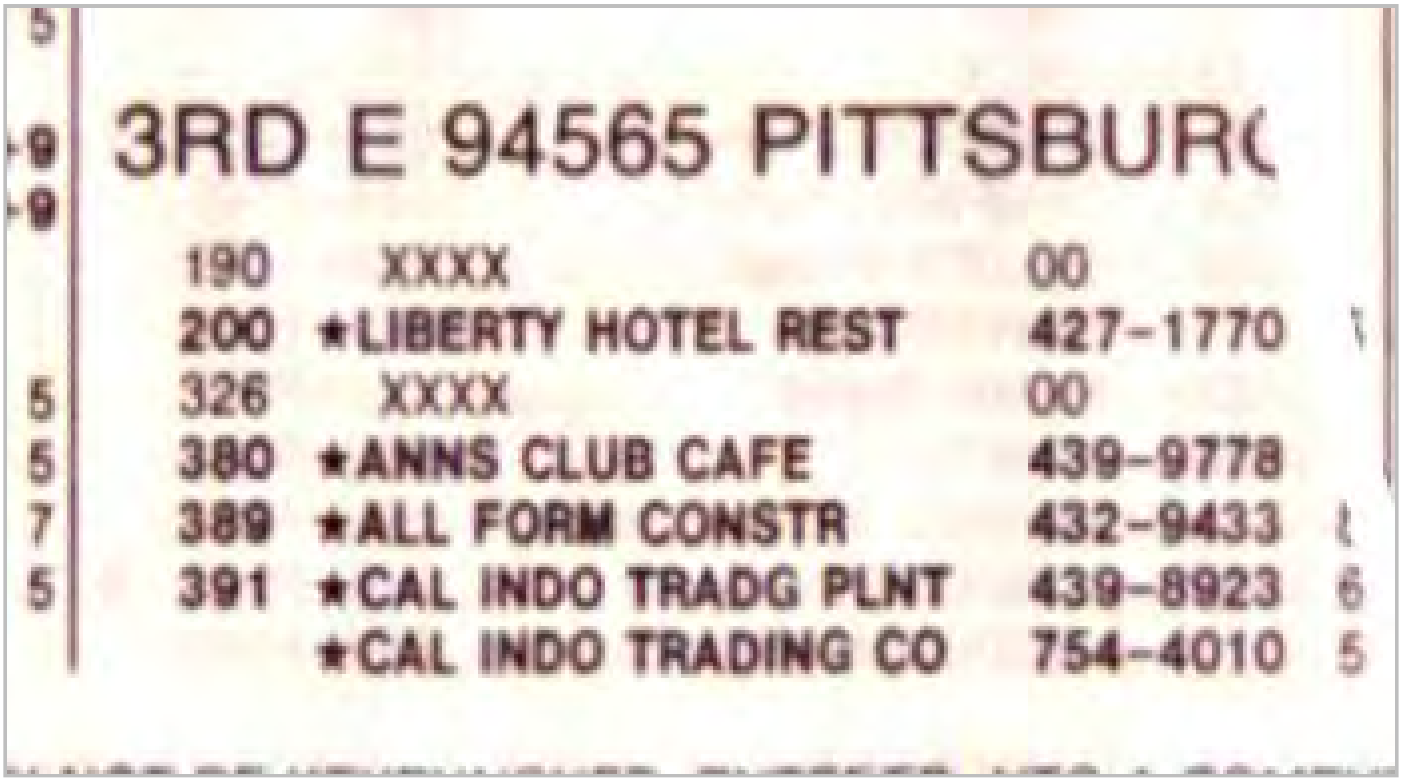
Target Street	Cross Street	Source
✓	-	EDR Digital Archive

E 3RD ST 1992

200 LIBERTY HOTEL REST
355 BUTLER, ESSIE
380 ANNS CLUB CAFE
389 ALL FORM CONSTR
391 CAL INDO TRADG PLNT
595 DIABLO SERVICE CORP
598 PITTSBG TRNSMSN RPR
600 HESS DOOR&WINDOW CO
ROOFING MTRLS SLS

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

E 3RD ST 1989

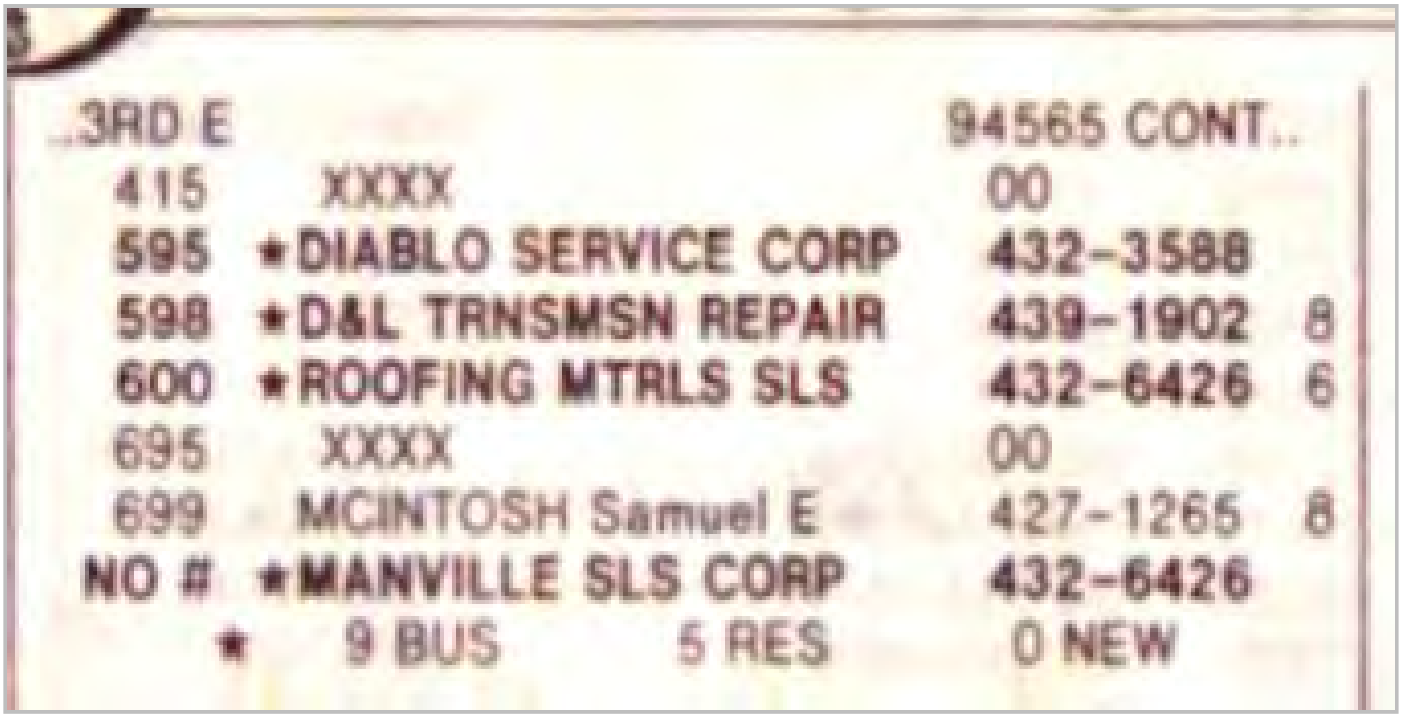


3RD E 94565 PITTSBUR(

190	XXXX	00	
200	★LIBERTY HOTEL REST	427-1770	
326	XXXX	00	
380	★ANNS CLUB CAFE	439-9778	
389	★ALL FORM CONSTR	432-9433	
391	★CAL INDO TRADG PLNT	439-8923	
	★CAL INDO TRADING CO	754-4010	

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

E 3RD ST 1989



..3RD E 94565 CONT..

415	XXXX	00
595	*DIABLO SERVICE CORP	432-3588
598	*D&L TRNSMSN REPAIR	439-1902 8
600	*ROOFING MTRLS SLS	432-6426 6
695	XXXX	00
699	MCINTOSH Samuel E	427-1265 8
NO #	*MANVILLE SLS CORP	432-6426

* 9 BUS 5 RES 0 NEW

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

E 3RD ST 1985



3RD E 94565 PITTSBURG

190	XXXX	00	
200	XXXX	00	
326	XXXX	00	
380	ANNS CLUB CAFE	439-9778	
389	XXXX	00	
391	ALLFORM CONSTRUCTN	432-9433	4
	CAL INDO TRADING CO	754-4010	+5
415	XXXX	00	
595	DIABLO SERVICE CORP	432-3588	
600	DELZER PIPELINE	439-3555	9
	UNITD TRANS	432-6196	+5
695	XXXX	00	
NO #	MANVILLE BLDG PRODS	432-6426	
NO #	MANVILLE EMP CT UN	432-6426	4

* 8 BUS 6 RES 2 NEW

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

E 3RD ST 1980

3RD E 94565 PITTSBURG

190	XXXX	00
200	XXXX	00
326	XXXX	00
334	ANAYA ANACLETO	432-6811 8
380★	ANNS CLUB CAFE	439-9779
389★	WALNT CRK ROOFING	439-8912+0
415	XXXX	00
595★	DIABLO SERVICE CORP	432-3588
600★	DELZER PIPELINE	439-3555 9
689★	THREE D SAND CO	432-1202+0
695	LEE MIKE	432-0206+0
NO #★	CAMALL TRUCKING INC	439-2600 7
NO #★	JOHNS MANVILLE PROD	432-8426
NO #★	OWL CONSTRUCTORS	432-3482+0
★	8 BUS 6 RES	4 NEW

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

E 3RD ST 1975

3RD E 94565 PITTSBURG

80	XXXX	00
151	XXXX	00
155	XXXX	00
190*	JET TIRE SERVICE	432-2988
200*	BRENTS LIBERTY HOTL	439-5753+5
253	XXXX	00
287*	FRANKS LIQUORS	439-9773
298	XXXX	00
325*	BROWNS GARAGE	439-9717+5
326	XXXX	00
365	NAVARRO LEONARD	432-0549
371	XXXX	00
375	VINNING EVERETT	439-1938 2
379	XXXX	00
380*	ANNS CLUB CAFE	439-9778
412	XXXX	00
415	BRYANT LEILA	439-9046
	CHATMAN WILLIE	439-1344+5
	SMITH JOSIE MAE	439-2954+5
595*	DIABLO SERV CORP	432-3588
600*	DALCO FREIGHT LINES	439-2021+5
NO #	* JOHNS MANVILLE PRD	689-6680+5
NO #	* JOHNS MANVILLE PROD	432-6426
NO #	* KOUYMAN TRUCKING CO	439-2121 4
NO #	* TEXACO BULK PLANT	432-4200
NO #	WARREN RICHARD W	432-4200 4

* 11 BUS 15 RES 6 NEW

PHASE I ENVIRONMENTAL SITE ASSESSMENT
FORMER JOHNS MANVILLE PLANT SITE
420 EAST 3RD STREET
PITTSBURG, CALIFORNIA

Integral Communities

Appendix G

User-Supplied Documents

ARCADIS Design & Consultancy for natural and built assets

Pittsburg River Park, LLC

REVISED FIVE-YEAR REVIEW REPORT

Former Plant Site and North Parcel

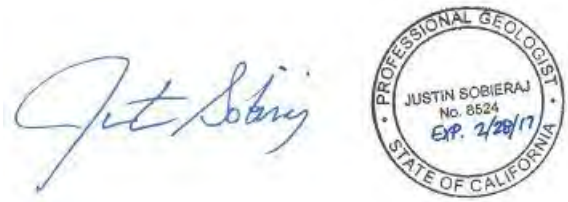
Former Johns Manville Facility
420 East Third Street
Pittsburg, California

December 14, 2016

Sean Maurel

Environmental Engineer

Salvador Mendoza, P.G.
Certified Asbestos Consultant No. 03-3386
Senior Geologist



Justin Sobieraj, P.G. (8524)
Senior Geologist

REVISED FIVE-YEAR REVIEW REPORT

Former Plant Site and North Parcel

Former Johns Manville Facility
420 East Third Street
Pittsburg, California

Prepared for:

Pittsburg River Park, LLC

Prepared by:

Arcadis U.S., Inc.
100 Smith Ranch Road
Suite 329
San Rafael
California 94903
Tel 415 491 4530
Fax 415 491 4532
www.Arcadis.com

Our Ref.:

EM009587.0019

Date:

December 14, 2016

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Table 2 – Air Monitoring Analytical Results

FIGURES

Figure 1 – Site Vicinity Map

Figure 2 – North Parcel Test Pit and Air Monitoring Locations

Figure 3 – Berm Parcel Test Pit and Air Monitoring Locations

APPENDICES

Appendix A Historical Inspection Reports (included as a CD)

Appendix B Field Notes

Appendix C-1 Air Monitoring Locations Photo Log

Appendix C-2 North Parcel Photo Log

Appendix C-3 Berm Parcel Photo Log

Appendix D Laboratory Reports for Air Monitoring Samples

1 INTRODUCTION

On behalf of Pittsburg River Park, LLC (PRPLLC), Arcadis U.S., Inc. (Arcadis) has prepared this Revised Five-Year Review Report ("Report") to confirm that the human health and the environment continue to be adequately protected by the remediation systems in place at the former Johns Manville Facility located at 420 East Third Street in Pittsburg, California (Figure 1). Investigation activities included evaluation of the engineered cap at the North Parcel and the engineered containment berm cap (Berm Parcel) located along the eastern portion of the former Johns Manville Plant Site (former Plant Site). This is the fourth Five-Year Review Report prepared for the North Parcel and the first for the Berm Parcel. The first Five-Year Review for the North Parcel was prepared by Harding ESE, Inc. (Harding [2001b]), the second report was prepared by Environmental Resources Management-West, Inc. (ERM [2006a]), and the third report was prepared by Arcadis (2012). This fourth Five-Year Review was performed in accordance with the Five-Year Review Work Plan (Work Plan; Arcadis 2015), submitted to the California Department of Toxic Substances Control (DTSC) on December 21, 2015, the comments received from the DTSC in its the *Comments on Five-Year Review Work Plan* correspondence dated February 25, 2016 (DTSC 2016a), and the comments received from the DTSC regarding the Five-Year Review Report in their letter dated October 12, 2016 (DTSC 2016b).

This Five-Year Review was implemented as required by and in accordance with the following documents:

- Operation and Maintenance (O&M) Agreement for the former Plant Site between PRPLLC and the DTSC, signed September 25, 2009 (DTSC 2009a); and
- O&M Agreement for the former Johns Manville Property (North Parcel) between PRPLLC and the DTSC, also signed September 25, 2009 (DTSC 2009b).

A modified schedule was approved to align the Five-Year Reviews for both the North Parcel and Berm Parcel into one event, which took place between March 29 and March 31, 2016.

2 BACKGROUND

The former Johns Manville Facility consists of two distinct parcels located at the approximate intersection of East Third Street and Harbor Street in Pittsburg, California. These properties are shown on Figure 1.

2.1 North Parcel

The North Parcel is an approximately 4.2-acre parcel located north of the former Plant Site between (and bounded by) New York Slough to the north and East Third Street to the south (Figures 1 and 2). The North Parcel is currently vacant land and the zoning for the North Parcel is industrial.

The North Parcel was reportedly used by Johns Manville for the storage of asbestos-containing products prior to shipment. As a result of this historical site use, asbestos-containing material (ACM) was deposited onto the ground. Johns Manville performed various investigations to assess the lateral and vertical extent of ACM at the North Parcel. The results of these investigations led to the development of a remedial approach that included placing an engineered cap over the parcel to prevent future direct exposure to ACM at the North Parcel. Under a Voluntary Cleanup Agreement (VCA), Johns Manville personnel

oversaw routine operation and maintenance inspections in accordance with the Final Operations and Maintenance Plan, Asbestos Soil Cap, Johns Manville Pittsburg Plant – North Parcel Site, Pittsburg, California (O&M Plan; Harding 2001a). PRPLLC purchased the property in October 2004 and entered into a VCA with the DTSC in 2005 (DTSC 2005). In 2006, ERM prepared a revised O&M Plan when they submitted to the DTSC the Final Operation and Maintenance Plan North Parcel, Former Johns Manville Plant, Pittsburg, California (Final O&M Plan; ERM 2006b), which has been followed to date. The Final O&M Plan for the North Parcel is included in the 2009 O&M Agreement between the DTSC and PRPLLC (DTSC 2009b).

2.1.1 Summary of Remedial Activities

In 1986, Harding Lawson Associates (HLA) prepared a Remedial Investigation/Feasibility Study (RI/FS) for the North Parcel (HLA 1986). The RI/FS indicated that ACM was present on approximately 3.6 acres of the 4.2-acre parcel in concentrations greater than 1 percent by weight. The DTSC classified ACM as a California-regulated hazardous waste if it is friable and contains 1 percent or more asbestos. Windblown dispersal of particulates was identified as the most significant potential exposure risk, and an engineered cap was chosen as the most appropriate solution to mitigate this exposure pathway. In the 1986 RI/FS additional remedial action alternatives were assessed, including soil removal and other cover alternatives; however, the soil cap was chosen based on effectiveness, economic factors, and because it was most consistent with Johns Manville's long-term land use plans (HLA 1986). In a letter dated December 11, 1986, the DTSC concurred that a soil cap would provide adequate protection from potential airborne asbestos exposure, providing the cap was installed properly.

The engineered cap construction was performed between December 1987 and March 1988. HLA oversaw the engineered cap construction by E.G. Alves Construction Company, Inc., and was present on site to observe construction activities and conduct field and laboratory testing to ensure that fill material and its placement were in compliance with the engineered cap design specifications.

2.1.2 Description of Engineered Cap

The construction plans and technical specifications for the engineered cap were prepared by HLA and documented in the Property Restoration Construction Observations report (HLA 1988), and included:

- Scarifying, moisture conditioning, and compacting of the existing ground surface;
- Placing a minimum 9-inch to greater than 24-inch-thick layer of engineered fill to form a continuous cover over the ACM, and grading the cover material to facilitate drainage;
- Installing an automated sprinkler system;
- Hydroseeding the engineered cap with a grass seed mixture appropriate to climatic and soil conditions; and
- Constructing a fence around the perimeter to prevent public access to the North Parcel.

According to the grading plan, the slope of the engineered cap ranges from 0.5 to 10 percent, which promotes general sheet flow of irrigation and/or storm water runoff to the east and west of the North Parcel.

A swale along the western edge of the North Parcel, running generally south to north, collects and directs surface runoff towards a catch basin. The remedial action meets the requirement of the Bay Area Air Quality Management District (BAAQMD) Regulation 11, Rule 2, Section 305.3 (BAAQMD 1998) and the Code of Federal Regulations (CFR) Title 40, Part 61, Subpart M, National Emission Standards for Hazardous Air Pollutants, Section 151 (CFR 1990). Both regulations require that inactive asbestos waste disposal sites are covered with a minimum of 6 inches of compacted, non-asbestos material with a vegetation cover, grown and maintained on the area to prevent asbestos exposure.

A permanent irrigation system was installed at the North Parcel at the time the engineered cap was completed to provide water for vegetation support and maintenance. The original irrigation system fell into disrepair and was replaced in July 2005. The current system consists of an aboveground polyvinyl chloride piping irrigation system, including four control stations and a total of 34 irrigation heads. The system includes four timer-activated, battery-operated valves so that the system can be operated at night to minimize evaporation. The system is configured such that routine mowing can be performed.

2.1.3 Operation and Maintenance

Initially, inspection of the engineered cap was performed periodically by Johns Manville, then changed to quarterly, pursuant to the 2001 O&M Plan (Harding 2001a). In 2004, inspections were changed to a semiannual inspection schedule conducted at the end of the second quarter (June) and fourth quarter (December) of each calendar year (ERM 2006b and DTSC 2009b). The objective of these inspections is to evaluate signs of erosion, settlement, cracking, poor and/or unusually discolored vegetation, and animal intrusion. Maintenance has consisted of mowing, fertilizing, and reseeding the vegetative cover as needed. Aside from minimal disturbance by burrowing animals (corrected and detailed in various semiannual monitoring reports), and a one-time cap repair following a utility truck leaving ruts in the engineered cap in 2006, which was described in the *Second Five-Year Review North Parcel Remedial Action Former Johns Manville North Parcel* (ERM 2006a), there has not been any other damage to the cap requiring corrective actions. The above-mentioned issues were promptly addressed by filling in the cap with clean fill and seeded to meet surrounding cap conditions.

In December 2007, the DTSC and PRPLLC entered into a *Land Use Covenant* (Contra Costa County Recorder Office 2007) for the North Parcel. The *Land Use Covenant* prohibits the use of the property for residential and other sensitive uses and requires that a *Soil Management Plan* and a *Health and Safety Plan* be submitted and approved by the DTSC prior to conducting any activities that will disturb the integrity of the engineered cap (such as excavation or trenching). In addition, the DTSC and PRPLLC entered into an *O&M Agreement* in September 2009 (DTSC 2009b). The O&M Agreement outlines the monitoring requirements, including conducting Five-Year Reviews of the North Parcel.

Five-Year Reviews have been performed at the North Parcel in 2001, 2006, and 2011 (Appendix A). In each review, field investigations included a site inspections, excavation of test pits, and air monitoring. The thickness of the engineered cap was visually examined in test pits, hand dug with shovels and/or hand augers, and found to range from 9 to 24 inches thick, which was consistent with the *Property Restoration Construction Observations* report (HLA 1988). Air monitoring was performed before, during, and occasionally after the test pits were properly backfilled and compacted using hand-tampers to quantify the presence of any airborne asbestos released from these activities. Airborne asbestos was not detected during any of the prior *Five-Year Review* events. Due to the field verified cap thicknesses, the lack of

airborne asbestos, and condition of the engineered cap, these Five-Year Reviews concluded that the engineered cap was in good condition, effectively protecting human and environmental health, and that there was no need to amend the approved *Final O&M Plan*.

Semiannual inspections of the cap have occurred continuously since the last Five-Year Review in 2011, and results of these inspections have been documented in semiannual O&M reports (Appendix A). No significant damage or issues has been identified during the 2016 inspection at the North Parcel since the previous Five-Year Review in 2011.

2.2 Former Plant Site and Berm Parcel

The former Plant Site, which contains the Berm Parcel, is located approximately 1,000 feet south of New York Slough (Figure 1). This 21-acre former Plant Site is bounded to the north by East Third Street, and a Tesoro petroleum coke facility; to the east by Harbor Street, several small light-industrial businesses, and USS-POSCO Industries; to the south by a City of Pittsburg park; and to the west by residential properties. The Johns Manville facility at this site was used for the manufacturing of commercial roofing materials until 2003, when it terminated operations.

2.2.1 Summary of Remedial Activities

A review of Johns Manville's historical operations, as well as site-wide investigation data, indicated that the areas of potential concern at the former Plant Site were a former evaporation pond and several additional areas of concern that were discovered while abatement and demolition activities were being conducted. ERM, on behalf of PRPLLC, assessed the remediation alternatives, documented in the *Final Remedial Action Plan* (ERM 2006c), and determined the most effective course of remedial action for the former Plant Site would be the construction of engineered containment berms along the eastern boundary of the former Plant Site. The details of the construction of the berms were summarized in the *Remedial Design and Implementation Plan* (RDIP; ERM 2006d), and in the Levine Fricke, Inc. (LFR; now Arcadis), *Addendum to the Remedial Design and Implementation Plan* (ARDIP; LFR 2007). During site remediation, heavy equipment was used to scrap all areas of the site found to have ACM and placed the ACM and soil into a trench along the eastern boundary of the former Plant Site. The placed ACM and soil was then capped by hydrocarbon-impacted soil, as approved by the DTSC in the ARDIP (LFR 2007). This provided a more significant cap for the asbestos-impacted soil, and allowed the hydrocarbon-impacted soil to be a greater distance from native soil, which it could potentially leach into. Clean low-permeability soil was then added to the top of the soil mound to create the capped, vegetated berms. The berms consist of two distinct segments referred to below as the "northern" and "southern" berms (Figure 3). Ongoing maintenance and monitoring has been continuously performed in accordance with the *Berm Parcel O&M Agreement* (DTSC 2009a).

2.2.2 Description of Engineered Cap

The various components and characteristics of the containment berms were detailed in the RDIP and ARDIP (ERM 2006d and LFR 2007, respectively) and are summarized in this section. Based on calculations completed by Winzler & Kelly, a licensed engineering company, approximately 64,400 cubic yards of ACM and total petroleum hydrocarbon (TPH)-containing soil were placed in the containment berms.

The construction plans and technical specifications for the berms, as described in the RDIP and the ARDIP (ERM 2006d and LFR 2007, respectively), included:

- Excavating a trench to approximately 10 feet below ground surface (bgs) beneath the entire length of the berm to accommodate the placement of ACM below grade;
- Backfilling the trench with ACM below grade, and TPH-affected material above grade;
- Capping the berm with a Tensar® product, a common engineered grid material used for the reinforcement of soil in construction and slope stability. In addition to providing additional structural integrity to the berm, the Tensar® product fabric also serves as a visual demarcation between affected soil and the 2-foot-thick clean soil cap;
- Constructing drainage swales adjacent to the berm and graded such that collected storm-water runoff drains towards catch basins;
- Installing an automated irrigation system;
- Installing low-maintenance landscaping in accordance with the City of Pittsburg requirements; and
- Constructing perimeter fencing to prevent public access to the former Plant Site.

Initially a 10-foot-deep trench was excavated in sections along the entire length of each berm. The trench was filled with ACM along the length of each berm section. To provide access directly from Harbor Street, a 58-foot-wide access roadway was constructed between the two berm sections. ACM was placed in the bottom of the trench up to a height even with the native grade elevations (ground surface). TPH-containing material was then placed above the native grade over the ACM to create the berm sections. As documented in Appendix B, the south berm is approximately 296 feet long, while the north berm is approximately 1,072 feet long. Both berms are approximately 85 feet wide at the base and extend approximately 10 feet above the elevation of the adjacent sidewalk area of the City of Pittsburg Harbor Street right of way (8 feet of waste material and 2 feet of clean cover). A minimum buffer distance of 1 to 3 feet exists between the limits of the berm and public rights of way or private streets or utilities. Access to the berms is restricted by a fence, with locking gates to provide controlled access for inspection and routine maintenance. The fence and all posted warning signs comply with the City of Pittsburg Municipal Code requirements.

In the ARDIP (LFR 2007), the construction plans and technical specifications for the berms were modified slightly to accommodate a larger volume of ACM encountered at the former Plant Site. Specifically, the ARDIP described plans for a western expansion of the berms by approximately 10 feet (LFR 2007). The height and northern, southern, and eastern dimensions of the berms were not modified. In addition, the indicator layer, to be placed between the affected soil and the 2-foot-thick clean soil cover, was changed to a Tensar® product (from a Mirafi™ product called for in the RAP and RDIP [ERM 2006c and ERM 2006d, respectively]). Treadwell & Rollo (the Geotechnical Engineer contracted by PRPLLC) recommended the substitution of the Tensar® product to increase contact/adhesion between the waste material and the clean cover material.

2.2.3 Operation and Maintenance

In 2009, the DTSC and PRPLLC entered into a *Land Use Covenant* (Contra Costa County Recorder Office 2009) for the Former Plant Site, which includes the Berm parcel. The *Land Use Covenant* prohibits the use of the property for residential and other sensitive uses and requires that a *Soil Management Plan* and a *Health and Safety Plan* be submitted and approved by the DTSC prior to conducting any activities that will disturb the integrity of the engineered cap (such as excavation or trenching). In addition, the DTSC and PRPLLC entered into an *O&M Agreement* in September 2009 (DTSC 2009a).

Since 2008, PRPLLC has retained professional landscaping contractors to conduct routine maintenance at the berm, to adjust and repair the irrigation system, maintain the fence, mow and maintain the berm cover (vegetation), and repair ground surface issues including areas of differential settlement and burrows created by rodents (gophers and ground squirrels).

From 2008 to 2012, the condition of the berms has been monitored (inspected), and reports documenting the condition of the berms have been prepared and submitted to DTSC on a quarterly basis in accordance with the *Berm Parcel O&M Agreement* (DTSC 2009a). In 2012, the reporting schedule was revised to a semiannual schedule as approved by the DTSC (DTSC 2012).

As anticipated, the most common maintenance issues have been associated with repairing burrows created by rodents. To date, observations made during the inspections and associated reports indicated that the rodents are burrowing into the clean 2-foot thick cover of imported soil. The Tensar® material, installed between the clean cover and the impacted fill material encapsulated within the berm has not been observed in the rodent burrows or burrow spoil piles during any of the inspections.

The DTSC requested and subsequently approved a *Rodent Mitigation Plan* (RMP; Arcadis 2013) on October 18, 2013 (DTSC 2013). The RMP was implemented to curb the number of burrowing rodents noted on the Berm Parcel. Poison bait stations were utilized to reduce ground squirrel populations and a Passive Exhaust Rodent Control method was used to exterminate gophers and any remaining ground squirrels. RMP inspections initially took place weekly and were reported in memoranda submitted the DTSC. In 2014, the RMP inspections were revised to quarterly and findings have been documented in the semiannual O&M reports (Appendix A).

Semiannual inspections of the cap have occurred continuously since the initiation of the Berm Parcel O&M Agreement (DTSC 2009a), and findings have been documented in Semiannual O&M Reports (Appendix A). No significant damage or issues have been identified at the Berm Parcel.

3 FIVE-YEAR REVIEW ACTIVITIES

The following activities were conducted to confirm that the human health and the environment continue to be adequately protected by the existing engineered caps at the North and the Berm Parcels. The activities were conducted in accordance with the approved *Health and Safety Plan* and the *Work Plan* (Arcadis 2015).

3.1 Site Inspection & Cap Thickness Evaluation

The site inspection conducted as part of the Five-Year Review consisted of a site-walk and visual examination of the engineered caps performed on March 29, 2016, consistent with the requirements outlined in the approved *Work Plan* (Arcadis 2015). Field notes, including a field-drawn sketch showing the approximate cap contours and test pit locations, are included as Appendix B. An additional inspection checklist was not required for this review because a full site-wide semiannual inspection was performed in December 2015, rodent inspections occur quarterly, and the site landscaping company, Blue Wagon, visits the site on approximately a monthly basis to perform a site inspection (Appendix A).

In addition to the March 29, 2016 site inspection, Arcadis excavated nine shallow test pits on the North Parcel and eight test pits on the Berm Parcel on March 30, 2016, for a total of 17 test locations. Table 1 summarizes the cap inspection results, and Figures 2 and 3 present the test pit locations at the North and Berm Parcels, respectively. The locations of the test pits were selected using a process that considered spatial planning and field observations. The parcels were initially subdivided into approximately equal parts to ensure the entire parcel was investigated. Each subdivided unit was evaluated based on field observations of areas that appear to have eroded or thinned within each unit, thereby giving the most conservative estimates of engineered cap integrity.

The *Conditional Approval Letter* (DTSC 2016a) recommended that consideration be given to the installation of permanent monuments to help measure engineered cap thickness at the same locations over time. However, due to concerns that the site rodent populations may burrow under permanent monument features as shelter, Arcadis recommended that each test pit location be surveyed using a global positioning system (GPS) to allow for each test pit location to be relocated during future inspection activities. The use of GPS was approved by the DTSC in a March 22, 2016 email (DTSC 2016c). The GPS coordinates for each location are provided in Table 1 and illustrated on Figures 2 and 3.

As performed during previous Five-Year Reviews, the engineered cap at the North Parcel was hand excavated to verify engineered cap thickness. The shallow test pits extended from the ground surface to the top of the waste-fill materials. The thickness of the engineered cap based on the original design standards described in the *Property Restoration Construction Observations* report (HLA 1988) was at a minimum of 9 inches when installed.

During previous site visits to the Berm Parcel, Arcadis identified that the upper sections of the sloped berms have been the areas most impacted by erosion and rodents. The flat portions of the site appear relatively unchanged, and the lower level of the berm slopes appear to receive soil that have been deposited from the upper berm areas. To verify that the engineered cap on the Berm Parcel is in compliance with the thickness specifications detailed in the ARDIP (LFR 2007), each test pit was dug to a maximum of 24 inches bgs, or until the Tensar® product was reached (Figure 3).

A hand auger was used to excavate the test pits to limit soil disturbance and dust generation. During excavation activities, water was sprayed down the hole and on the soil cuttings to limit dust generation. Photographs were taken to document each test pit's location and depth. Photographs of air monitoring locations are included as Appendix C-1, photographs of North Parcel test pit locations are included as Appendix C-2, and photographs of Berm Parcel test pit locations are included as Appendix C-3. After the field personnel identified and documented the thickness of the engineered cap, a hand shovel was used to

replace and re-compact the soil in 2- to 3-inch lifts. Any vegetation removed from the surface was replaced and watered.

3.2 Air Monitoring

During the engineered cap inspections and thickness evaluation activities, between March 29 and March 31, 2016, Arcadis conducted air monitoring at each parcel to confirm that the engineered cap remains effective in preventing the release of airborne asbestos fibers. Air monitoring sample results provide data regarding the presence of asbestos if released during the test pit excavation activities. The air monitoring was performed prior to the engineered cap thickness evaluation to establish a baseline data set (March 29, 2016), on the day of the cap thickness evaluation activities to quantify any generated asbestos (March 30, 2016), and the day after the cap thickness evaluation to ensure the cap was properly repaired (March 31, 2016).

Air monitoring samples were collected within the breathing zones at approximately 5 feet above ground surface and along the North Parcel and Berm Parcel perimeter fence lines. The sample locations were determined in the field based on the prevailing wind directions; one sample location placed upwind, and the remaining locations placed down and cross wind. Additionally, one duplicate air sample was collected on the downwind perimeter of the Berm Parcel. Photographs of all air monitoring locations are provided in Appendix C-1.

Samples were collected using air monitoring pumps fitted with 0.45-micron mixed cellulose ester cassettes consistent with *National Institute of Occupational Safety and Health* guidelines. The air monitoring samples were collected over an 8-hour period with the flow rate of the air monitoring pumps set at approximately 3 liters per minute. The samples were submitted to EMSL Analytical, Inc., an approved California-certified laboratory, for asbestos analysis using United States Environmental Protection Agency (EPA) Level II transmission electron microscopy (TEM) for asbestos.

3.3 Community Involvement

As outlined in the approved Work Plan (Arcadis 2015), the DTSC was responsible for producing the community involvement and notification documentation and distributing, as necessary, to local municipalities. Community involvement and notification documentation was not provided by the DTSC to PRPLLC; therefore, hard copies of any community involvement and notification documents were not provided by PRPLLC to the public local library, as discussed in the Work Plan (Arcadis 2015).

4 FIVE-YEAR REVIEW RESULTS

The following are the results for the engineered cap evaluations and the air monitoring performed before, during, and after the cap evaluation at the North and Berm Parcels. General site conditions observed at the North and Berm Parcels on March 29, 2016 are described in the *Semiannual Operation and Maintenance Report for the North Parcel and Former Plant Site* (Arcadis 2016; Appendix A), which was submitted to DTSC under separate cover on January 22, 2016.

4.1 North Parcel Site Inspection and Engineered Cap Thickness Evaluation Results

At the North Parcel, the engineered cap was found to be in good condition; there were no visible signs of surficial damage or thinning. The ground surface was in good condition with no visible signs of rutting or erosion. Vegetation throughout the site was also in good condition and regularly maintained.

In accordance with the *Work Plan* (Arcadis 2015), Arcadis field personnel oriented the nine test pit locations in a rough grid pattern to verify engineered cap thickness in all areas of the parcel. A hand auger was used to excavate each test pit. The excavated material was stockpiled next to each test pit. Soil descriptions were logged during excavation and photographs were taken of the spoils of the test pits (Appendix C-2). Once completed, soil from each pit was replaced in approximately 2- to 3-inch lifts and each excavation was individually compacted.

Each test pit was excavated to approximately 24 inches bgs, or until contact with native soil was reached, to verify that the engineered cap met the minimum stated thickness of 9 inches and the minimum cap thickness of 6 inches (CFR 1990 and BAAQMD 1998). Table 1 presents engineered cap thickness data from each test pit. Figure 2 is a map showing the locations of the test pits, as well as measured engineered cap thickness at each test pit location. The excavations were terminated at contact with native soil, which was indicated by an abrupt transition from a dark yellowish brown (Munsell Soil Color Chart classification system [Munsell] 10 YR 4/4) clay cap material to a very dark grayish brown (Munsell 10 YR 3/2) loam.

The measured engineered cap thickness ranged between approximately 11 and 23 inches bgs. Results from the observations made at each test pit indicated that the cap maintained a thickness of greater than 9 inches in all areas of the site except at Boring 7 (Figure 2). Boring 7 was advanced at the edge of the engineered cap and was terminated at approximately 8.5 inches bgs due to the presence of a hard, black resinous tar material. This material may be former paving along the tapered edge of the engineered cap. Boring 7 may have been advanced just outside the limits the engineered cap requirements, as it was along the eastern boundary of the engineered cap near the on-site road. Therefore, Boring 8 was advanced as a step-out 10 feet west of Boring 7, and the measured engineered cap thickness of 12 inches was consistent with that seen at the remainder of the test pit locations. Photographs taken during the North Parcel cap thickness evaluation are provided as Appendix C.

4.2 Berm Parcel Site Inspection and Engineered Cap Thickness Evaluation Results

In general, the engineered cap at the Berm Parcel appeared to be in good condition with few signs of surficial damage or thinning. Erosion tended to be localized in nature, and were limited to areas of high-grade slope, such as the upper portion of the berms. Vegetative cover throughout the site was observed to be in good condition.

In accordance with the Work Plan (Arcadis 2015), Arcadis field personnel oriented the entire berm parcel in a rough grid pattern of eight segments to verify engineered cap thickness in all areas of the parcel, and then focused each test pit in the area of each segment which visually appeared to be the thinnest or eroded. A hand auger was used to excavate each test pit. The excavated material was stockpiled next to

each pit. Soil descriptions were logged during excavation and photographs were taken of the spoils of the test pits (Appendix C-3). Once complete, soil from each pit was replaced in approximately 2- to 3-inch lifts, each individually compacted while water was added using a Hudson Sprayer to limit dust and increase compaction

Each test pit was excavated until contact with the fabric liner, or a minimum of 24-inches bgs. Table 1 presents engineered cap thickness data from each test pit. Figure 3 is a map showing the locations of the test pits which were focused in areas that visually appeared to be relatively thinner or showed signs of erosion. The measured cap thicknesses of the test pits performed within the extent of the erosional feature (as shown on Figure 3) as well as in typical areas of the cap all were found to exceed the cap thickness requirements of 6 inches (CFR 1990 and BAAQMD 1998). Measured engineered cap thickness at the north berm ranged between approximately 11.5 and 22-inches. Borings were advanced to a depth of approximately 24 inches at the south berm and the geotextile liner was not encountered, indicating full engineered cap design thickness has been maintained at this berm. The erosional features identified on the berms were limited to several feet in aerial extent and were not found to be a cause of concern to the cap integrity or to environmental and human health and safety. Future semiannual inspections will focus on these areas as well as the rest of the berm to identify changes to these apparent erosional features. Photographs taken during the thickness evaluation are provided as Appendix C-3.

4.3 Air Monitoring Results

Arcadis conducted 3 days of air monitoring during the inspection: the day prior to the engineered cap thickness evaluation, the day of the evaluation, and the day after the evaluation, per the guidance of the DTSC (DTSC 2016).

The air samples were submitted for asbestos analysis using EPA Level II TEM. Analytical results are provided in Table 2 and Appendix D. In 27 samples, asbestos fibers were not detected at or exceeding their laboratory reporting limit of 16 structures per square millimeter (S/mm^2) of air. Two samples (NP-E-032916 and NP-N-032916) collected during baseline sampling from the North Parcel on March 29, 2016, had asbestos detections at 16 and 62 S/mm^2 of air, respectively.

Arcadis requested that the laboratory further assess these two samples using the *National Institute of Occupational Safety and Health* test method 7402 in order for the results to be compared to the *California Occupational Safety and Health Administration* (Cal/OSHA) permissible exposure level (29 C.F.R., Toxic and Hazardous Substances, Standard 1910.1001 [Asbestos], Appendix C [1]). These two samples were reported by the laboratory as not containing fibers at or exceeding the reporting limit of 0.002 fiber per cubic centimeter of air. As a result, the air samples did not exceed the EPA's post-abatement clearance criterion of 70 S/mm^2 nor the Cal/OSHA permissible exposure level of 0.1 fiber per cubic centimeter of air (EPA 1989). Given these results, and the lack of asbestos detection during the advancement of test pits and the day following, these data conclude that asbestos fibers are not being released excess of the EPA or Cal/OSHA guidance values from the engineered cap at the North and Berm Parcels.

5 TECHNICAL ASSESSMENT AND RECOMMENDATIONS

The test pits excavated as part of the engineered cap thickness evaluation on both the North and Berm parcels confirmed that the engineered soil caps are in good condition and exceed the minimum cap

thickness of 6 inches (CFR 1990 and BAAQMD 1998). Based on the following evidence, modification of the existing *O&M Agreement* (DTSC 2009a) is not necessary and that the caps continue to function as designed and intended:

- No early indicators of potential remedy problems were identified.
- Visual examination and air monitoring data verifies that the engineered caps are providing adequate protection from the buried asbestos and digging into the engineered cap did not result in the exceedance of current EPA or Cal/OSHA published guidance values for airborne fibers.
- There have been no changes in the source mass, land use, exposure pathway or assumptions, toxicity data, or any other information that could affect the intended or actual protectiveness of the engineered caps (e.g., sea-level rise, meteorological conditions, earthquakes).
- There are no ongoing issues with the engineered caps at either parcel, and previous minor issues were all corrected expeditiously without environmental or public health exposure. Details can be found in the associated semiannual monitoring report for that time period included in Appendix A.
- There are no unresolved problems with any regulatory agencies, such as local government or tribes.

The current O&M procedures are expected to be continued for the next five-year period and will continue to include the following:

- Vegetation mowing/clearing;
- Site inspections covering site access, irrigation and vegetation coverage, erosion or settling issues, rodent monitoring and mitigation, and trash removal;
- Semiannual reports submitted to the DTSC presenting findings from quarterly site investigations; and
- An updated Five-Year Review Work Plan, which is anticipated to be submitted to DTSC in December 2020.

5.1 Protectiveness Statement

Based on the results of the activities conducted during this Five-Year Review, the engineered soil caps at the North and Berm Parcels continue to function as designed and are protective of human health and the environment. PRPLLC, as the responsible party for the future implementation of actions that will ensure protectiveness., and will continue to monitor the site and report findings to the DTSC as defined in the O&M Agreements (DTSC 2009a and 2009b).

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TABLES

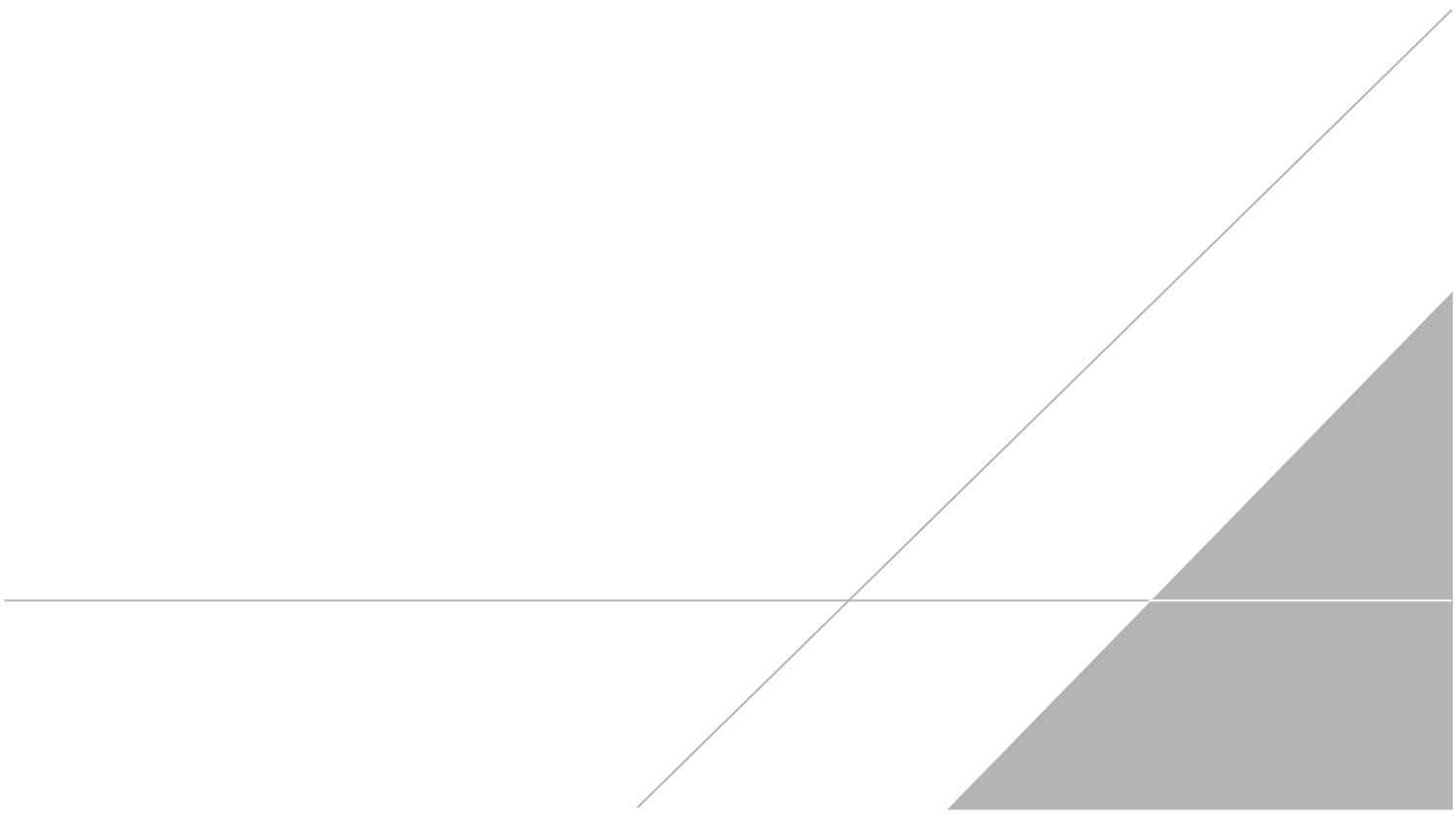


Table 1
Site Engineered Cap Inspection Results
PRP Five-Year Review Report

Boring ID	Latitude (WGS 84)	Longitude (WGS 84)	Comments	Cap Thickness (inches bgs)	Total boring depth (inches bgs)	Photo Location
North Parcel						
1	38.0344191	-121.8788493	Low-lying area - looks like water pools at this location. Interface indicated by transition from imported soil (Dark Yellowish Brown [10 YR 4/4] Clay) to native soil (Very Dark Grayish Brown [10 YR 3/2] Loam).	13	14	Appendix B.2; Figures 1-3
2	38.0339314	-121.8789870	Slightly elevated berm (~6-8 inches). Top 2 inches mottled with native and imported soil. Interface indicated by transition from yellow brown clay to dark loam as described above.	12	13	Appendix B.2; Figures 4-6
3	38.0336903	-121.8792300	Lower area towards apparent edge of cap. Interface indicated by color/composition transition as described above.	11	12	Appendix B.2; Figures 7-9
4	38.0333720	-121.8789937	Lower area, just off of elevated berm. Same components as noted above, though mottled distribution. Indistinct transition.	23	24	Appendix B.2; Figures 10-13
5	38.0335024	-121.8786658	Low-lying depression (~5-6 inches). Interface indicated by color/composition transition as described above.	17	18	Appendix B.2; Figures 14-16
6	38.0337309	-121.8784888	Low -lying area. Less mottling, more clay rich upper layer. Interface indicated by color/composition transition as described above.	12	13	Appendix B.2; Figures 17-19
7	38.0338601	-121.8781512	Boring advanced at apparent edge of cap. Hard resinous black tar/asphalt material encountered at 8.5 inches bgs. Unable to advance further.	Unknown	8.5	Appendix B.2; Figure 20
8	38.0338700	-121.8781870	Stepped in 10 feet west from boring 7. Did not encounter tar/asphalt material, reached interface with native soil.	11	12	Appendix B.2; Figures 21-22
9	38.0341321	-121.8784581	No apparent erosion. Location chosen to evaluate uninvestigated portion of cap. Interface indicated by color/composition transition as described above.	12	13	Appendix B.2; Figures 23-25
Berm Parcel						
1	38.0316085	-121.8774299	Low area at edge of berm top. Recent gopher mounds present. Irrigation head ~3 feet away, pipe 1.5 feet away. Boring advanced to contact with fabric liner.	18	18	Appendix B.3; Figures 1-2
2	38.0315700	-121.8773097	Similar to boring 1, no recent mounds. ~6 feet from sprinkler head and 2 ft. from pipe.	19	19	Appendix B.3; Figures 3-4
3	38.0307710*	-121.8778100*	Localized low area (~7.5 inches below surrounding area). No current erosion, no burrows present. 2 feet from irrigation line, 10 ft. from heads.	11.5	11.5	Appendix B.3; Figures 5-6
4	38.0305197	-121.8778302	Localized ~3-5 ft. oval low-lying area. Old burrows present. 3 feet from irrigation line and 4 feet from sprinkler head.	18	18	Appendix B.3; Figures 7-8
5	38.0299248	-121.8780645	Middle of berm chosen, no low-lying areas present.	22	22	Appendix B.3; Figures 9-10
6	38.0292520	-121.8782723	Western flank of North Berm. Head scarp area with old slump below.	17.5	17.5	Appendix B.3; Figures 11-12
7	38.0286105	-121.8785825	Middle of berm chosen, no low-lying areas present. Boring advanced to 24 inches, but no fabric liner encountered.	Not encountered	24	Appendix B.3; Figures 13-14
8	38.0282560*	-121.8786220*	Southeastern corner of berm flank. Top area appears evenly thinned, and lower flank appears thickened. Soil color change at 21 inches bgs, boring advanced to 24 inches bgs but fabric liner not encountered.	Not encountered	24	Appendix B.3; Figures 15-16

NOTES
* = Coordinates adjusted due to field instrumentation inaccuracy. Coordinates identified using Google Earth to match approximate location.
bgs = below ground surface.
WGS = World Geodetic System

Table 2
Air Monitoring Analytical Results
PRP Five-Year Review Report

Sample ID	Sample Date	Location	Comments	TEM Results[1] (S/mm^2)	EPA's Post Abetment Clearance Criteria for Schools[2] (S/mm^2)	NIOSH 7402 Results[3] (F/cc)	OSHA 8-hour PEL[4] (F/cc)	Photo Location
North Parcel								
NP-N-032916	3/29/2016	Upwind	North fence; near shed and shoreline	62	*70*	<0.002	*0.1*	Appendix B.1; Figure 5
NP-E-032916	3/29/2016	Downwind	East fence, off gravel access path	16	*70*	<0.002	*0.1*	Appendix B.1; Figure 6
NP-W-032916	3/29/2016	Upwind	West fence; shared boundary with residences	<16	*70*	NA	*0.1*	Appendix B.1; Figure 7
NP-S-032916	3/29/2016	Downwind	South fence; border with open lot	<16	*70*	NA	*0.1*	Appendix B.1; Figure 8
NP-N-033016	3/30/2016	Upwind	North fence; near shed and shoreline	<16	*70*	NA	*0.1*	--
NP-E-033016	3/30/2016	Downwind	East fence, off gravel access path.	<16	*70*	NA	*0.1*	--
NP-W-033016	3/30/2016	Upwind	West fence; shared boundary with residences	<16	*70*	NA	*0.1*	--
NP-S-033016	3/30/2016	Downwind	South fence; border with open lot	<16	*70*	NA	*0.1*	--
NP-N-033116	3/31/2016	Upwind	North fence; near shed and shoreline	<16	*70*	NA	*0.1*	--
NP-E-033116	3/31/2016	Downwind	East fence, off gravel access path	<16	*70*	NA	*0.1*	--
NP-W-033116	3/31/2016	Upwind	West fence; shared boundary with residences	<16	*70*	NA	*0.1*	--
NP-S-033116	3/31/2016	Downwind	South fence; border with open lot	<16	*70*	NA	*0.1*	--
Berm Parcel								
BP-N-032916	3/29/2016	Upwind	North fence of North Berm	<16	*70*	NA	*0.1*	Appendix B.1; Figure 1
BP-E-032916	3/29/2016	Downwind	East fence of North Berm	<16	*70*	NA	*0.1*	Appendix B.1; Figure 2
Dup-032916	3/29/2016	Downwind	BP-E-032916 duplicate sample	<16	*70*	NA	*0.1*	Appendix B.1; Figure 2
BP-W-032916	3/29/2016	Upwind	West fence of North Berm	<16	*70*	NA	*0.1*	Appendix B.1; Figure 3
BP-S-032916	3/29/2016	Downwind	South fence of South Berm	<16	*70*	NA	*0.1*	Appendix B.1; Figure 4
BP-N-033016	3/30/2016	Upwind	North fence of North Berm	<16	*70*	NA	*0.1*	--
BP-E-033016	3/30/2016	Downwind	East fence of North Berm	<16	*70*	NA	*0.1*	--
Dup-033016	3/30/2016	Downwind	BP-E-033016 duplicate sample	<16	*70*	NA	*0.1*	--
BP-W-033016	3/30/2016	Upwind	West fence of North Berm	<16	*70*	NA	*0.1*	--
BP-S-033016	3/30/2016	Downwind	South fence of South Berm	<16	*70*	NA	*0.1*	--
BP-N-033116	3/31/2016	Upwind	North fence of North Berm	<16	*70*	NA	*0.1*	--
BP-E-033116	3/31/2016	Downwind	East fence of North Berm	<16	*70*	NA	*0.1*	--
Dup-033116	3/31/2016	Downwind	BP-E-033116 duplicate sample	<16	*70*	NA	*0.1*	--
BP-W-033116	3/31/2016	Upwind	West fence of North Berm	<16	*70*	NA	*0.1*	--
BP-S-033116	3/31/2016	Downwind	South fence of South Berm	<16	*70*	NA	*0.1*	--

NOTES:

1 Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM), Selected Area Electron Diffraction (SAED), and Energy Dispersive X-Ray Microanalysis (EDX) - Performed by EPA Level II Method in Structures per cubic centimeter (S/cc).

2 Environmental Protection Agency (EPA) Guidelines for Conducting the AHERA TEM Clearance Test to Determine Completion of an Asbestos Abatement Project.

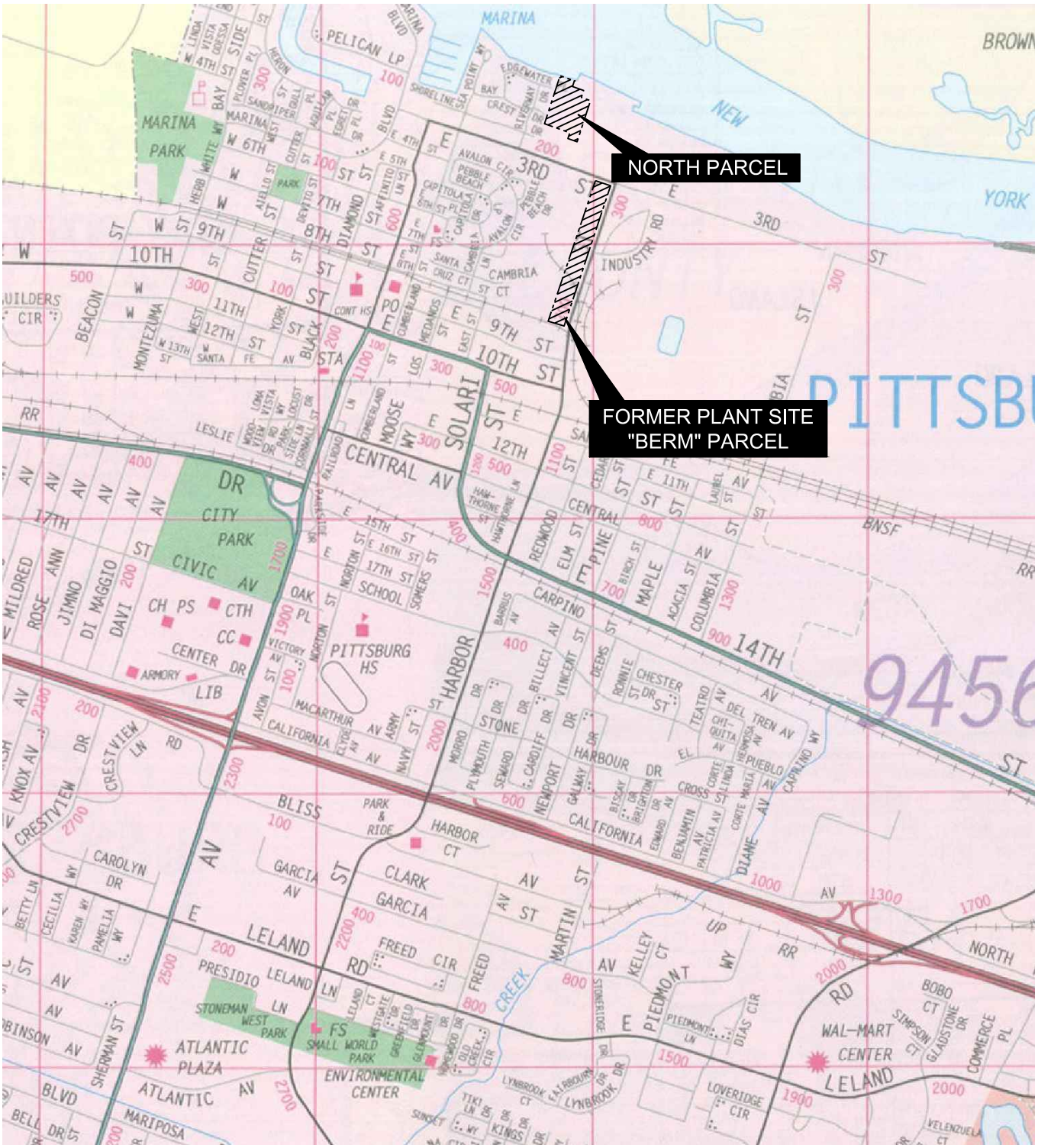
3 Asbestos Analysis of Air Samples by Transmission Electron Microscopy via NIOSH Method 7402 in fibers per cubic centimeter (F/cc) of air.

4 29 Code of Federal Regulations (CFR), Toxic and Hazardous Substances, Standard 1910.1001 (Asbestos), Appendix C (1)

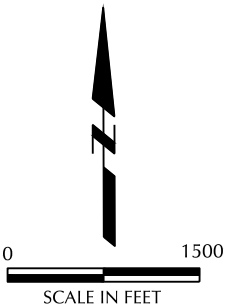
NA Not Analyzed due to non-detect result of the TEM analysis

< less than laboratory analytical reporting limit

FIGURES



SOURCE: THOMAS BROS MAP 2000



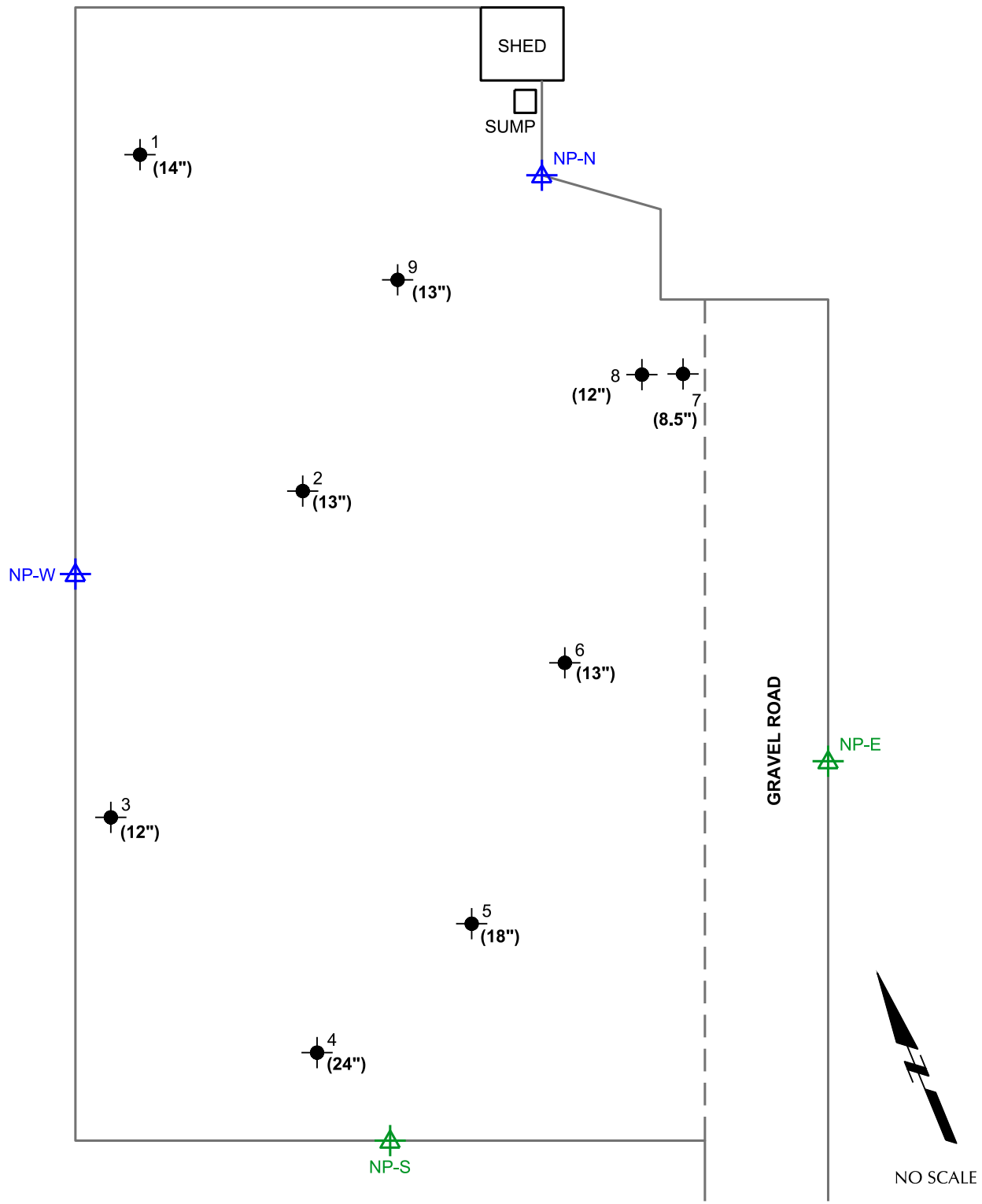
PITTSBURG RIVER PARK, LLC
PITTSBURG, CALIFORNIA

SITE VICINITY MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE
1

CITY:(Reqd) DIV/GROUP:(Reqd) DB:(Reqd) LD:(Opt) PIC:(Opt) PM:(Reqd) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\Emeryville\AVD\2016\2016063O\EM009587\0014\00001\DWG\EM009587 N01.dwg LAYOUT: 1 SAVED: 12/7/2016 9:23 AM ACADVER: 19.1S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 12/7/2016 9:32 AM BY: REYES, ALEC



LEGEND

NP-N	UPWIND AIR MONITORING LOCATION
NP-E	DOWNWIND AIR MONITORING LOCATION
1	EXPLORATORY BORING LOCATION
(13")	THICKNESS OF CAP (INCHES BELOW GROUND SURFACE)

PITTSBURG RIVER PARK, LLC
NORTH PARCEL

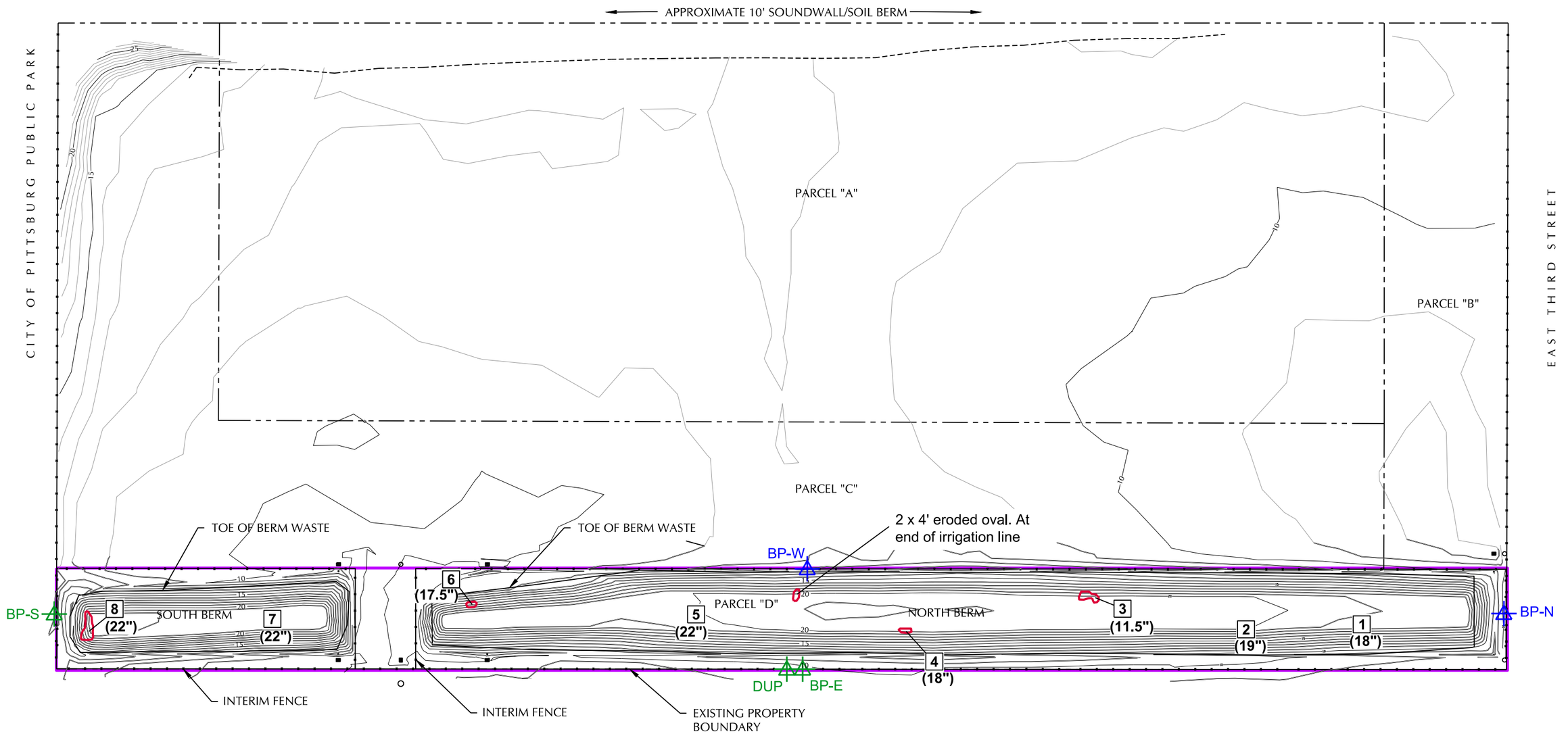
NORTH PARCEL TEST PIT AND AIR MONITORING LOCATIONS

ARCADIS Design & Consultancy for natural and built assets

FIGURE 2

CITY:(Reqd) DIV/GROUP:(Reqd) DB:(Reqd) LD:(Opt) PIC:(Opt) PM:(Reqd) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\Emeryville\ACT\EM009587\0019\00002\DWG\EM009587 B02.dwg LAYOUT: 2 SAVED: 12/7/2016 9:09 AM ACADVER: 19.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 12/7/2016 9:21 AM BY: REYES, ALEC

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G:\ENVCAD\Emeryville\ACT\EM009587\0019\00002\DWG\EM009587 B03.dwg LAYOUT: 3 SAVED: 12/7/2016 9:59 AM ACADVER: 19.1S (LMS TECH) PAGESETUP:
XREFS: IMAGES: PROJECTNAME: ---
PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 12/7/2016 4:18 PM BY: REYES, ALEC



LEGEND

- 6-FOOT GALVANIZED CHAIN-LINK FENCE
- PARCEL BOUNDARY
- "BERM" PARCEL BOUNDARY
- FINAL GRADE CONTOURS
- CATCH BASIN

- BP-N — UPWIND AIR MONITORING LOCATION
- BP-S — DOWNWIND AIR MONITORING LOCATION
- [1] — EXPLORATORY BORING LOCATION
- APPROXIMATE EXTENT OF EROSIONAL FEATURE
- (18") — THICKNESS OF CAP (INCHES BELOW GROUND SURFACE)

0 100 Feet

BASED ON TOPOGRAPHY PROVIDED BY: WINZLER&KELLY

FORMER JOHNS MANVILLE PLANT
420 EAST 3RD STREET
PITTSBURG, CALIFORNIA

BERM PARCEL TEST PIT AND AIR MONITORING LOCATIONS

ARCADIS Design & Consultancy for natural and built assets

FIGURE 3

APPENDIX A

Historical Inspection Reports (included as a CD)

APPENDIX B

Field Notes

CITY:(Reqd) DIV/GROUP:(Reqd) DB:(Reqd) LD:(Opt) PIC:(Opt) PM:(Reqd) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\Emeryville\ACTIEM009783\001\200\01\Item\Details\DWG\EM009783 D01.dwg LAYOUT: 2 SAVED: 9/25/2013 12:07 PM ACADVER: 18.1S (LMS TECH)
XREFS: IMAGES: PROJECTNAME: — PAGESETUP: --- PLOTSTYLETABLE: LFR STANDARD.CTB PLOTTED: 9/25/2013 12:12 PM BY: REYES, ALEC

APPROXIMATE 10' SOUNDWALL/SOIL BERM

CITY OF PITTSBURG PUBLIC PARK

EAST THIRD STREET

PARCEL "A"

PARCEL "B"

PARCEL "C"

PARCEL "D"

TOE OF BERM WASTE

TOE OF BERM WASTE

SOUTH BERM

NORTH BERM

INTERIM FENCE

INTERIM FENCE

EXISTING PROPERTY BOUNDARY

- MAUREL — 3/24/16
  - SITE IS NEARLY 100% VEGETATED
  - RECENTLY MOWED
  - SOME NEW GOPHER ACTIVITY — PRIMARILY IN THE AREA AROUND THE SWALE ON THE EAST SIDE OF THE BERMS
  - NO BURROWS (NEW OR OLD) OBSERVED
  - WATER TO SITE IS SHUT OFF — BUT VERIFIED VALVE BOXES/CONTROLS ARE STILL FUNCTIONING

- ENTRANCE GATE BENT AND PULLED OPEN ENOUGH FOR A PERSON TO PASS THROUGH
- NO GRAFFITI, AND NO SIGNIFICANT TRASH OBSERVED, HOWEVER

8' / 4' — Top edge of berm

⑤ 38.0299248
-121.8780645
Middle of section chosen. No Low areas.
= Approx average Cap Top.
22" to fabric

CONTROL FAULT FLASHING SCREEN

7x4' Eroded low area oval. At end of Irrg Line

② 38.0286105
-121.8785825
No low areas so top middle to get average
Fabric — soil change @ 21"
No Fabric to 24"

③ 38.0313336
-121.8781790
- Localized low area. (~7.5" lower than surroundings)
- No current erosion
- No burrows
- 2' from irrigation Line
- 10' from heads
- Fabric @ 11.5"

① 38.0316085
-121.8774299
Low area @ edge of berm top. ~~Current~~ Recent gopher mounds. Irrigation head 3' away. Pipe 1.5' away.
Fabric @ 18"

⑧ 38.0285715
-121.8786169
SE corner of flank top appears evenly thinned & lower flank appears thickened.
Soil color change @ 21"
No fabric to 24"

⑥ 38.0292528
-121.8782723
- Western flank
- Head scarp area & slump below (old)
- 17.5" to Fabric

④ 38.0318197
-121.8778077 / 8778302
- Localized ~3'x5' oval low area
- old burrows @ location
- 3' from irrigation line & 4' from head
- Fabric @ 18"

⑦ 38.0315700
-121.8773097
- similar as ①
- No recent mounds
- 6' from sprinkler head & 2' from pipe
- Fabric @ 19"

EXPLANATION:

- 6-FOOT GALVANIZED CHAIN-LINK FENCE
- PARCEL BOUNDARY
- 15 — FINAL GRADE CONTOURS
- CATCH BASIN
- AER MONITORING STATION
- BROKEN SPRINKLER HEAD
- M — OLD/ABANDONED GOPHER MOUND
- NM — NEW GOPHER MOUND
- IC — IRRIGATION CONTROL BOX

BP-S — BP-W — BP-N — BP-E

0 100 Feet

BASED ON TOPOGRAPHY PROVIDED BY: WINZLER&KELLY

FORMER JOHNS MANVILLE PLANT
420 EAST 3RD STREET
PITTSBURG, CALIFORNIA

POST-REMEDIATION SITE LAYOUT

ARCADIS

FIGURE 2

22"

1050

ARCADIS

SUBJECT: PITTSBURG RIVER PARCEL LLC

NORTH PARCEL INVESTIGATION

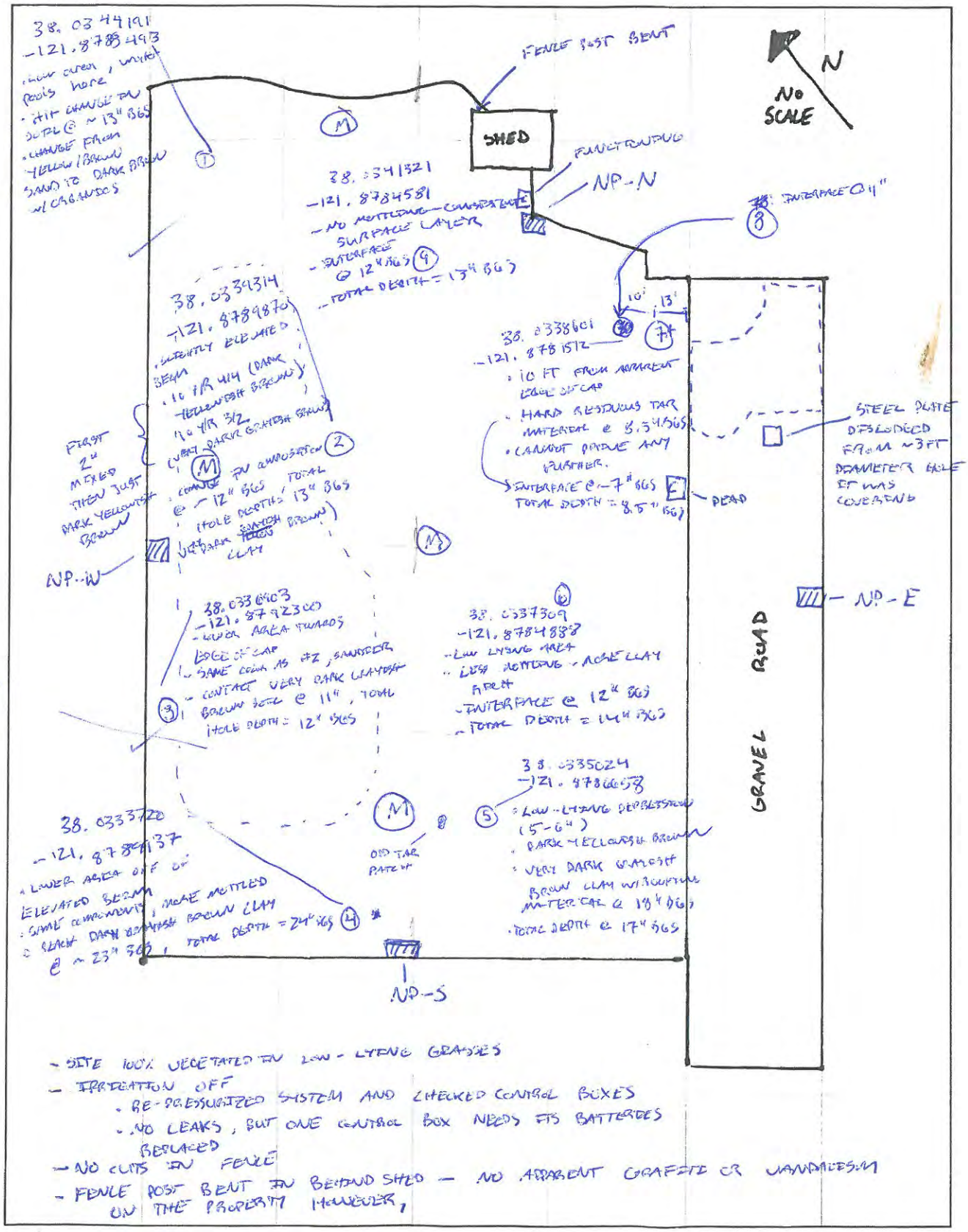
JOB NO: EM009587

BY: DATE:

CHKD: DATE:

PAGE

SHEET 1/1



APPENDIX D

Laboratory Reports for Air Monitoring Samples

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com cinnasblab@EMSL.com

EMSL Order:	041608428
CustomerID:	ACAD78AC
CustomerPO:	EM0095870019
ProjectID:	

Attn: **Robert Moniz**
ARCADIS U.S., Inc.
2999 Oak Road
Suite 300
Walnut Creek, CA 94597

Phone:	(720) 244-4931
Fax:	
Received:	04/04/16 9:00 AM
Analysis Date:	4/6/2016
Collected:	

Project: **EM009587.0019 / PRP**

Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM), Selected Area Electron Diffraction (SAED), and Energy Dispersive X-Ray Microanalysis (EDX) - Performed by EPA Level II Method.

Sample	Volume (liters)	Asbestos Type(s)	# Structures Asbestos	# Structures Non-Asb.	Analytical Sensitivity (S/cc)	Concentration (S/mm²)	Concentration S/cc	Notes
NP-N-032916 *041608428-0001*	1446	Chrysotile	4	8	0.0041	62.00	0.0170	
NP-E-032916 *041608428-0002*	1440	Chrysotile	1	2	0.0042	16.00	0.0042	
NP-W-032916 *041608428-0003*	1452	None Detected		0	0.0041	<16.00	<0.0041	
NP-S-032916 *041608428-0004*	1458	None Detected		0	0.0041	<16.00	<0.0041	
BP-N-032916 *041608428-0005*	1455	None Detected		0	0.0041	<16.00	<0.0041	
BP-E-032916 *041608428-0006*	1470	None Detected		0	0.0041	<16.00	<0.0041	
BP-W-032916 *041608428-0007*	1476	None Detected		0	0.0041	<16.00	<0.0041	

Analyst(s)

Patrick Carr (9) *William Nguyen (17)*
Wayne Froehlich (1)

Benjamin Ellis, Laboratory Manager
or other approved signatory

Disclaimers: The laboratory is not responsible for data reported in structures/cc, which is dependent on volume collected by non-laboratory personnel. This report may not be duplicated, except in full, without written permission by EMSL Analytical, Inc. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. This report relates only to the samples reported above. Quality control data (including 95% confidence limits and laboratory and analysts' accuracy and precision) is available upon request. The test results contained within this report meet the requirements of NELAC unless otherwise noted. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, NYS ELAP 10872, PA ID# 68-00367

Initial report from 04/06/2016 14:47:27

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com cinnasblab@EMSL.com

EMSL Order:	041608428
CustomerID:	ACAD78AC
CustomerPO:	EM0095870019
ProjectID:	

Attn: **Robert Moniz**
ARCADIS U.S., Inc.
2999 Oak Road
Suite 300
Walnut Creek, CA 94597

Phone: (720) 244-4931
Fax:
Received: 04/04/16 9:00 AM
Analysis Date: 4/6/2016
Collected:

Project: **EM009587.0019 / PRP**

Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM), Selected Area Electron Diffraction (SAED), and Energy Dispersive X-Ray Microanalysis (EDX) - Performed by EPA Level II Method.

Sample	Volume (liters)	Asbestos Type(s)	# Structures Asbestos	# Structures Non-Asb.	Analytical Sensitivity (S/cc)	Concentration (S/mm²)	Concentration S/cc	Notes
BP-S-032916 *041608428-0008*	1500	None Detected		1	0.0040	<16.00	<0.0040	
DUP-032916 *041608428-0009*	1470	None Detected		0	0.0041	<16.00	<0.0041	
NP-N-033016 *041608428-0010*	1485	None Detected		0	0.0040	<16.00	<0.0040	
NP-E-033016 *041608428-0011*	1485	None Detected		0	0.0040	<16.00	<0.0040	
NP-W-033016 *041608428-0012*	1485	None Detected		0	0.0040	<16.00	<0.0040	
NP-S-033016 *041608428-0013*	1485	None Detected		0	0.0040	<16.00	<0.0040	
BP-N-033016 *041608428-0014*	1500	None Detected		0	0.0040	<16.00	<0.0040	

Analyst(s)

Patrick Carr (9) *William Nguyen (17)*
Wayne Froehlich (1)

Benjamin Ellis, Laboratory Manager
or other approved signatory

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Initial report from 04/06/2016 14:47:27

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com cinnasblab@EMSL.com

EMSL Order:	041608428
CustomerID:	ACAD78AC
CustomerPO:	EM0095870019
ProjectID:	

Attn: **Robert Moniz**
ARCADIS U.S., Inc.
2999 Oak Road
Suite 300
Walnut Creek, CA 94597

Phone: (720) 244-4931
Fax:
Received: 04/04/16 9:00 AM
Analysis Date: 4/6/2016
Collected:

Project: **EM009587.0019 / PRP**

Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM), Selected Area Electron Diffraction (SAED), and Energy Dispersive X-Ray Microanalysis (EDX) - Performed by EPA Level II Method.

Sample	Volume (liters)	Asbestos Type(s)	# Structures Asbestos	# Structures Non-Asb.	Analytical Sensitivity (S/cc)	Concentration (S/mm²)	Concentration S/cc	Notes
BP-E-03316 *041608428-0015*	1455	None Detected		0	0.0041	<16.00	<0.0041	
BP-W-03316 *041608428-0016*	1440	None Detected		0	0.0042	<16.00	<0.0042	
BP-S-033016 *041608428-0017*	1515	None Detected		0	0.0040	<16.00	<0.0040	
DUP-033016 *041608428-0018*	1515	None Detected		0	0.0040	<16.00	<0.0040	
NP-N-033116 *041608428-0019*	1440	None Detected		0	0.0042	<16.00	<0.0042	
NP-E-033116 *041608428-0020*	1440	None Detected		1	0.0042	<16.00	<0.0042	
NP-W-033116 *041608428-0021*	1440	None Detected		0	0.0042	<16.00	<0.0042	

Analyst(s)

Patrick Carr (9) *William Nguyen (17)*
Wayne Froehlich (1)

Benjamin Ellis, Laboratory Manager
or other approved signatory

Disclaimers: The laboratory is not responsible for data reported in structures/cc, which is dependent on volume collected by non-laboratory personnel. This report may not be duplicated, except in full, without written permission by EMSL Analytical, Inc. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. This report relates only to the samples reported above. Quality control data (including 95% confidence limits and laboratory and analysts' accuracy and precision) is available upon request. The test results contained within this report meet the requirements of NELAC unless otherwise noted. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, NYS ELAP 10872, PA ID# 68-00367

Initial report from 04/06/2016 14:47:27

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com cinnasblab@EMSL.com

EMSL Order:	041608428
CustomerID:	ACAD78AC
CustomerPO:	EM0095870019
ProjectID:	

Attn: **Robert Moniz**
ARCADIS U.S., Inc.
2999 Oak Road
Suite 300
Walnut Creek, CA 94597

Phone: (720) 244-4931
Fax:
Received: 04/04/16 9:00 AM
Analysis Date: 4/6/2016
Collected:

Project: **EM009587.0019 / PRP**

Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM), Selected Area Electron Diffraction (SAED), and Energy Dispersive X-Ray Microanalysis (EDX) - Performed by EPA Level II Method.

Sample	Volume (liters)	Asbestos Type(s)	# Structures Asbestos	# Structures Non-Asb.	Analytical Sensitivity (S/cc)	Concentration (S/mm²)	Concentration S/cc	Notes
NP-S-033116 *041608428-0022*	1440	None Detected		0	0.0042	<16.00	<0.0042	
BP-N-033116 *041608428-0023*	1440	None Detected		0	0.0042	<16.00	<0.0042	
BP-E-033116 *041608428-0024*	1455	None Detected		0	0.0041	<16.00	<0.0041	
BP-W-033116 *041608428-0025*	1440	None Detected		0	0.0042	<16.00	<0.0042	
BP-S-033116 *041608428-0026*	1470	None Detected		0	0.0041	<16.00	<0.0041	
DUP-033116 *041608428-0027*	1455	None Detected		0	0.0041	<16.00	<0.0041	

Analyst(s)

Patrick Carr (9) *William Nguyen (17)*
Wayne Froehlich (1)

Benjamin Ellis, Laboratory Manager
or other approved signatory

Disclaimers: The laboratory is not responsible for data reported in structures/cc, which is dependent on volume collected by non-laboratory personnel. This report may not be duplicated, except in full, without written permission by EMSL Analytical, Inc. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. This report relates only to the samples reported above. Quality control data (including 95% confidence limits and laboratory and analysts' accuracy and precision) is available upon request. The test results contained within this report meet the requirements of NELAC unless otherwise noted. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, NYS ELAP 10872, PA ID# 68-00367

Initial report from 04/06/2016 14:47:27

THIS IS THE LAST PAGE OF THE REPORT.

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com cinnasblab@EMSL.com

EMSL Order:	041608428
CustomerID:	ACAD78AC
CustomerPO:	EM0095870019
ProjectID:	

Attn: **Robert Moniz**
ARCADIS U.S., Inc.
2999 Oak Road
Suite 300
Walnut Creek, CA 94597

Phone:	(720) 244-4931
Fax:	
Received:	04/04/16 9:00 AM
Analysis Date:	4/12/2016
Collected:	

Project: **EM009587.0019 / PRP**

Test Report: Asbestos Analysis of Air Samples by Transmission Electron Microscopy via NIOSH Method 7402

Sample	Volume (Liters)	Non Asbestos Fibers	PCM F/cc	Asbestos Type(s)	Asbestos Fibers	Asbestos % of total	7402 Adjusted (TEM) F/cc	Notes
NP-N-032916 *041608428-0001*	1446	0	0.000	Chrysotile	1	100	**<0.002**	
NP-E-032916 *041608428-0002*	1440	0	0.000			0	**<0.002**	

NIOSH 7402 method only reports fibers > 5µm in length and > 0.25µm in width.
This method requires a minimum of 2 field blank analyses per set.The above results are not blank corrected
Average number of asbestos fibers on field blanks: n/a
Average number of non-asbestos fibers on field blanks: n/a

Analyst(s)
Patrick Carr (2)

Benjamin Ellis, Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL is not responsible for data reported in fibers/cc, which is dependent on volume collected by non-laboratory personnel. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. The test results contained within this report meet the requirements of NELAP unless otherwise noted. Samples received in good condition unless otherwise noted. The analyses above were performed with a JOEL 100 CX II Transmission Electron Microscope (TEM) outfitted with a PGT/iXRF Energy Dispersive X-Ray Analysis (EDXA) System.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036, PA ID# 68-00367

Initial report from 04/12/2016 14:57:39

THIS IS THE LAST PAGE OF THE REPORT.

041608428

ARCADIS
Infrastructure · Water · Environment · Buildings

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 2

Lab Work Order #

Send Results to:

Contact & Company Name: ARCADIS
Telephone: (925) 296-7839
Address: 2999 OAK ROAD, STE 300
Fax:
City: WALNUT CREEK State: CA Zip: 94597
E-mail Address: Robert.Moniz@arcadis.com
Project Name/Location (City, State): PRP
Project #: EM009587.0019
Sampler's Printed Name: SEAN MAUREL
Sampler's Signature:

Preservative	—							
Filtered (✓)	—							
# of Containers	1							
Container Information	CASSETTE							

PARAMETER ANALYSIS & METHOD

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil | SE - Sediment | NL - NAPL/Oil
W - Water | SL - Sludge | SW - Sample Wipe
T - Tissue | A - Air | Other: _____

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	ASBESTOS EPA LEVEL II TEM							REMARKS VOLUME (L)
NP-N-032916	3/29/16				CASSETTE	X							1446
NP-E-032916						X							1440
NP-W-032916						X							1452
NP-S-032916						X							1458
BP-N-032916						X							1455
BP-E-032916						X							1470
BP-W-032916						X							1476
BP-S-032916						X							1500
DUP-032916	3/29/16					X							1470
NP-N-033016	3/30/16					X							1485
NP-E-033016						X							1485
NP-W-033016						X							1485
NP-S-033016						X							1485
BP-N-033016						X							1500

16 APR -4 AM 10:04

Special Instructions/Comments:
72 HR TAT

☐ Special QA/QC Instructions(✓):

27 (DAP)

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name:	Cooler Custody Seal (✓)	Printed Name: SEAN MAUREL	Printed Name: Brittany Beath	Printed Name:	Printed Name:
☐ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature: BBeath	Signature:	Signature:
Specify Turnaround Requirements:	Sample Receipt:	Firm: ARCADIS	Firm/Courier: Fedex	Firm/Courier:	Firm:
Shipping Tracking #:	Condition/Cooler Temp: _____	Date/Time: 4/1/16 @ 1330	Date/Time: 4/4/16 9am	Date/Time:	Date/Time:

20730826 CofC AR Form 01 12 2007

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

OrderID: 041608428

Page 1 Of 2

041608428

ARCADIS
Infrastructure · Water · Environment · Buildings

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 2 of 2

Lab Work Order #

Send Results to:

Contact & Company Name: ARCADIS	Telephone: (925) 296-7839
Address: 2999 OAK RD., STE 300	Fax:
City: WALNUT CREEK State: CA Zip: 94597	E-mail Address: Robert.Moniz@arcadis.com
Project Name/Location (City, State): PRP	Project #: EM009587.0019
Sampler's Printed Name: SEAN MAUBEL	Sampler's Signature:

Keys

Preservation Key:
A H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1 40 ml Vial
2 1 L Amber
3 250 ml Plastic
4 500 ml Plastic
5 Encore
6. 2 oz. Glass
7 4 oz. Glass
8. 8 oz. Glass
9 Other: _____
10. Other: _____

Matrix Key:
SO - Soil
W - Water
T - Tissue
SE - Sediment
SL - Sludge
A - Air
NL - NAPL/Oil
SW - Sample Wipe
Other: _____

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	PARAMETER ANALYSIS & METHOD: Asbestos EPA Level II TEM	REMARKS / VOLUME (L)
BP-E-033016	3/30/16				CASSETTE	—	—	1	CASSETTE	X	1515
BP-W-033016	↓				↓					X	1506
BP-S-033016										X	1515
DUP-033016	3/31/16									X	1515
NP-N-033116	3/31/16									X	1440
NP-E-033116										X	1440
NP-W-033116										X	1440
NP-S-033116										X	1440
BP-N-033116										X	1440
BP-E-033116										X	1455
BP-W-033116										X	1440
BP-S-033116										X	1470
DUP-033116	↓				↓					X	1455

16 APR -4 AM 10:04

Special Instructions/Comments:

72 HR TAT

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name:	Cooler Custody Seal (✓)	Printed Name: SEAN MAUBEL	Printed Name:	Printed Name:	Printed Name:
☐ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements:	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm:
Shipping Tracking #:	Condition/Cooler Temp: _____	Date/Time: 4/1/16 @ 1330	Date/Time:	Date/Time:	Date/Time:

20730826 CofC AR Form 01 12.2007

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

OrderID: 041608428

Page 2 Of 2

Arcadis U.S., Inc.

100 Smith Ranch Road

Suite 329

San Rafael, California 94903

Tel 415 491 4530

Fax 415 491 4532

www.arcadis.com

ARCADIS Design & Consultancy for natural and built assets

Ms. Megan Indermill
California Department of Toxic Substances Control
Brownfields and Environmental Restoration
700 Heinz Avenue, Suite 200
Berkeley, 94710-2721

Arcadis U.S., Inc.
100 Smith Ranch Road
Suite 329
San Rafael
California 94903
Tel 415 491 4530
Fax 415 491 4532
www.arcadis.com

Environment

Subject:

Notification Memorandum: Environmental Due Diligence Investigation Results
Former Johns Manville Plant Site
420 East Third Street
Pittsburg, California

Date:
November 20, 2017

Contact:
Justin Sobieraj

Phone:
415.858.8310

Email:
Justin.Sobieraj@arcadis.com

Our ref:
EM009587.0016

Dear Ms. Indermill:

On behalf of Pittsburg River Park, LLC (PRPLLC), Arcadis U.S., Inc. (Arcadis) has prepared this notification memorandum reporting the results of the environmental due diligence investigation completed at the Former Johns Manville Plant Site located at 420 East Third Street in Pittsburg, California (the Site) which includes the Plant site, the North parcel, and the Access parcel. This memorandum summarizes the results of the soil gas, groundwater, and soil investigations performed by PES Environmental, Inc. (PES) on behalf of Making Waves Academy and Foundation (Making Waves). Investigation activities were performed by PES during the period of September 29 through October 11, 2017. The activities and results described below were provided by Making Waves/PES in a draft work plan and analytical results tables, respectively. Neither Arcadis nor any representative of PRPLLC participated in the due diligence investigation.

Soil-Gas Sampling

Based on field reports, PES performed a soil-gas investigation in accordance with the procedures outlined in the *Advisory for Active Soil Gas Investigations* published by DTSC, the California Regional Water Quality Control Board (RWQCB), Los Angeles region and the California RWQCB, San Francisco Bay

Region dated July 2015[1]. Seven temporary soil-gas probes at the North parcel, one soil-gas probe at the Access parcel, and 16 soil-gas probes at the Plant parcel were installed to evaluate soil-gas conditions. Soil-gas probe locations are shown on Attachment 1. The soil-gas samples were analyzed by an on-site mobile laboratory for volatile organic compounds (VOCs) and total petroleum hydrocarbons as gasoline (TPH-g) using U.S. Environmental Protection Agency (U.S. EPA) Test Method 8260B.

Results

All VOC and TPH-g soil-gas sample results were reported to be less than the RWQCB Tier 1 Soil Gas Environmental Screening Levels (ESLs)[2] (see Attachment 2). VOCs and TPH-g in soil gas are known Site constituents. The PES VOC and TPH soil gas sample results are consistent with the soil-gas sample results collected during the January 2008 post-remediation soil gas sampling activity[3].

Groundwater Sampling

Based on field reports, PES collected grab groundwater samples at five locations on the Plant parcel, one location on the North parcel (in the eastern access roadway), and one location on the Access parcel (see Attachment 1). The grab groundwater boreholes were advanced, using truck-mounted direct-push technology, to approximately 5- to 10-feet below first encountered groundwater. Once the desired depth was reached, a 0.75-inch diameter schedule 40 polyvinyl chloride (PVC) well casing fitted with a 5- to 10-foot section of factory-slotted PVC well screen was lowered into the outer casing. The outer casing was then retracted to expose the well screen to the saturated soil. The grab groundwater samples were then collected using a small-diameter, stainless-steel or Teflon™ bailer. The grab groundwater samples were immediately decanted from the bailer into appropriate laboratory-supplied sample bottles. The groundwater samples were analyzed for the following:

- TPHg by U.S. EPA Method 8015B;
- Total Petroleum Hydrocarbons as diesel/motor oil (TPHd/mo) by U.S. EPA Method 8015B, with and without silica gel cleanup;
- VOCs by U.S. EPA Method 8260B; and
- Semi-volatile Organic Compounds (SVOCs) by U.S. EPA Method 8270C.

Results

The results of PES' grab groundwater investigation generally are consistent with the results of historical site investigations. PES grab groundwater sample analysis indicated the presence of TPHd, SVOCs, and VOCs in groundwater with TPHd, tetrachloroethylene, diethyl phthalate, and 1,1-dichloroethene (1,1-

[1] DTSC, 2015. *Advisory - Active Soil Gas Investigations*. July
[2] 2016 Regional Water Quality Control Board, San Francisco Bay Region (SFRWQCB) Soil Gas Tier 1 Environmental Screening Levels (ESLs) (Rev. 3). February
[3] 2008 LFR. Remedial Action Completion Report. October.

DCE) exceeding their Tier 1 ESL. Historically, site investigations reported that groundwater contained oil and grease, benzene, toluene, ethylbenzene, and other VOCs at varying concentrations. The single exceedance of PCE and 1,1-DCE was from an upgradient Plant site grab groundwater sample (GB7), and is likely associated with known off-site chlorinated VOC release sources not associated with the Johns Manville facility or operations. It should be noted that the Site is subject to a Land Use Covenant (LUC) which prohibits the use of groundwater across the entire Site. The PES grab groundwater sample results are consistent with the grab groundwater sample results collected during the January 2008 post-remediation grab groundwater sampling activity[4]. Comparisons of the January 2008 and recent PES grab groundwater VOCs and TPH analytical results indicate that natural attenuation has effectively reduced concentrations over time and will continue to do so in the future.

Asbestos Soil Sampling Activity

Based on field reports, soil samples were reportedly collected by PES for analysis of asbestos from 18 locations on the Plant parcel and three locations on the Access parcel (see Attachment 1). According to PES, the locations were selected in areas where no historical asbestos data existed. Each sample was collected using hand tools at approximately 6 inches below ground surface (bgs) and placed into a laboratory provided glass sample jar. The samples were analyzed for asbestos by fiber count by Polarized Light Microscopy (PLM; EPA/600/R-93/116) 1,200-point count. Sample results with detections were confirmed by Transmission Electron Microscopy (TEM; EPA/600/R-93/116).

Of the 21 samples analyzed the highest concentrations were reported at the Access Road sample SS3 (0.58%), and the Plant Site sample SS16 (0.25%; see Attachment 2).

Conclusions

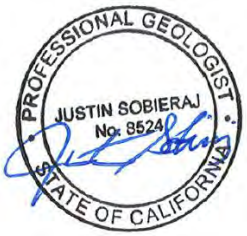
The results of the PES investigation are consistent with historical investigation and remediation results at the Plant Site, and consistent with the comprehensive remedial action completed at the Plant Site in 2007. The Access Road was not incorporated into the historical remediation of the Plant Site or the North Parcel as there was no known hazardous materials use or stored on that parcel. The reported concentration is less than the 1% concentration that is the Cal/OSHA and Cal/EPA definition of a hazardous materials or waste.

If you have any questions or need more information regarding this notification and action plan , please call Mr. Justin Sobieraj of Arcadis at 415.858.8310 or Mr. Mike Singer of PRPLLC at 860.214.7195.

[4] 2008 LFR. Remedial Action Completion Report. October.

Sincerely,

Arcadis U.S., Inc.



Justin Sobieraj, P.G. (8524)

Senior Geologist

Enclosures:

Attachment 1: PES Investigation Figures

Attachment 2: PES Investigation Tables

Copies:

Mr. Mike Singer – PRPLLC

Mr. Neal Drawas – MMA Environmental

ATTACHMENT 1: PES INVESTIGATION FIGURES



PES Environmental, Inc.
Engineering & Environmental Services

Site Location
Phase II Investigation
East 3rd Street Properties
Pittsburg, California

PLATE
1

999.014.01.004	99901401004_SL_1-4	DRAFT	10/17
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

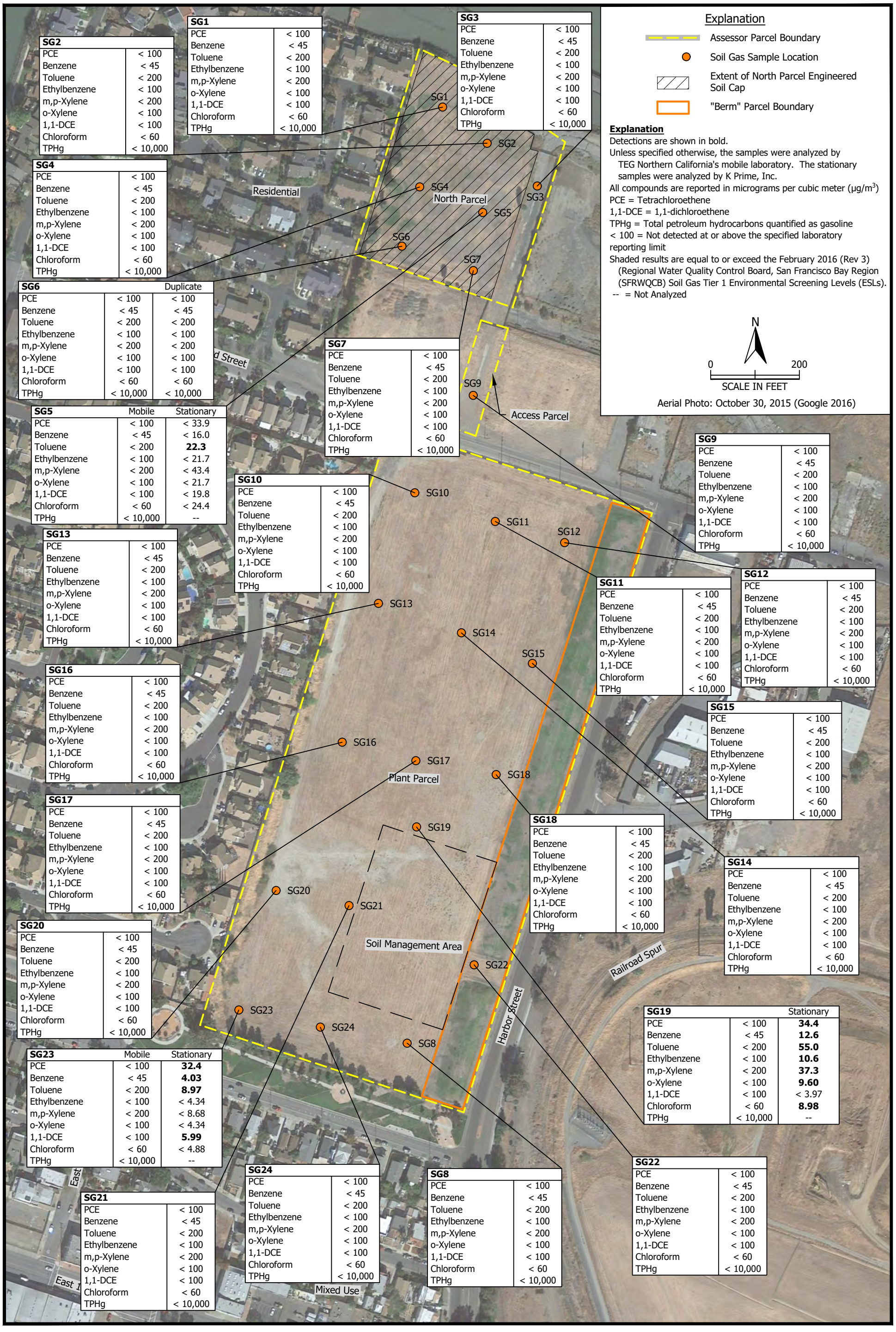


PES Environmental, Inc.
Engineering & Environmental Services

Asbestos Soil Sample Locations and Analytical Result
Phase II Investigation
East 3rd Street Properties
Pittsburg, California

PLATE
2

999.014.01.004	99901401004_SL_1-4	DRAFT	10/17
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



SG1	
PCE	< 100
Benzene	< 45
Toluene	< 200
Ethylbenzene	< 100
m,p-Xylene	< 200
o-Xylene	< 100
1,1-DCE	< 100
Chloroform	< 60
TPHg	< 10,000

SG2	
PCE	< 100
Benzene	< 45
Toluene	< 200
Ethylbenzene	< 100
m,p-Xylene	< 200
o-Xylene	< 100
1,1-DCE	< 100
Chloroform	< 60
TPHg	< 10,000

SG3	
PCE	< 100
Benzene	< 45
Toluene	< 200
Ethylbenzene	< 100
m,p-Xylene	< 200
o-Xylene	< 100
1,1-DCE	< 100
Chloroform	< 60
TPHg	< 10,000

SG4	
PCE	< 100
Benzene	< 45
Toluene	< 200
Ethylbenzene	< 100
m,p-Xylene	< 200
o-Xylene	< 100
1,1-DCE	< 100
Chloroform	< 60
TPHg	< 10,000

SG6		Duplicate
PCE	< 100	< 100
Benzene	< 45	< 45
Toluene	< 200	< 200
Ethylbenzene	< 100	< 100
m,p-Xylene	< 200	< 200
o-Xylene	< 100	< 100
1,1-DCE	< 100	< 100
Chloroform	< 60	< 60
TPHg	< 10,000	< 10,000

SG7	
PCE	< 100
Benzene	< 45
Toluene	< 200
Ethylbenzene	< 100
m,p-Xylene	< 200
o-Xylene	< 100
1,1-DCE	< 100
Chloroform	< 60
TPHg	< 10,000

SG5	Mobile	Stationary
PCE	< 100	< 33.9
Benzene	< 45	< 16.0
Toluene	< 200	**22.3**
Ethylbenzene	< 100	< 21.7
m,p-Xylene	< 200	< 43.4
o-Xylene	< 100	< 21.7
1,1-DCE	< 100	< 19.8
Chloroform	< 60	< 24.4
TPHg	< 10,000	--

SG10	
PCE	< 100
Benzene	< 45
Toluene	< 200
Ethylbenzene	< 100
m,p-Xylene	< 200
o-Xylene	< 100
1,1-DCE	< 100
Chloroform	< 60
TPHg	< 10,000

SG9	
PCE	< 100
Benzene	< 45
Toluene	< 200
Ethylbenzene	< 100
m,p-Xylene	< 200
o-Xylene	< 100
1,1-DCE	< 100
Chloroform	< 60
TPHg	< 10,000

SG13	
PCE	< 100
Benzene	< 45
Toluene	< 200
Ethylbenzene	< 100
m,p-Xylene	< 200
o-Xylene	< 100
1,1-DCE	< 100
Chloroform	< 60
TPHg	< 10,000

SG11	
PCE	< 100
Benzene	< 45
Toluene	< 200
Ethylbenzene	< 100
m,p-Xylene	< 200
o-Xylene	< 100
1,1-DCE	< 100
Chloroform	< 60
TPHg	< 10,000

SG12	
PCE	< 100
Benzene	< 45
Toluene	< 200
Ethylbenzene	< 100
m,p-Xylene	< 200
o-Xylene	< 100
1,1-DCE	< 100
Chloroform	< 60
TPHg	< 10,000

SG16	
PCE	< 100
Benzene	< 45
Toluene	< 200
Ethylbenzene	< 100
m,p-Xylene	< 200
o-Xylene	< 100
1,1-DCE	< 100
Chloroform	< 60
TPHg	< 10,000

SG15	
PCE	< 100
Benzene	< 45
Toluene	< 200
Ethylbenzene	< 100
m,p-Xylene	< 200
o-Xylene	< 100
1,1-DCE	< 100
Chloroform	< 60
TPHg	< 10,000

SG17	
PCE	< 100
Benzene	< 45
Toluene	< 200
Ethylbenzene	< 100
m,p-Xylene	< 200
o-Xylene	< 100
1,1-DCE	< 100
Chloroform	< 60
TPHg	< 10,000

SG18	
PCE	< 100
Benzene	< 45
Toluene	< 200
Ethylbenzene	< 100
m,p-Xylene	< 200
o-Xylene	< 100
1,1-DCE	< 100
Chloroform	< 60
TPHg	< 10,000

SG14	
PCE	< 100
Benzene	< 45
Toluene	< 200
Ethylbenzene	< 100
m,p-Xylene	< 200
o-Xylene	< 100
1,1-DCE	< 100
Chloroform	< 60
TPHg	< 10,000

SG20	
PCE	< 100
Benzene	< 45
Toluene	< 200
Ethylbenzene	< 100
m,p-Xylene	< 200
o-Xylene	< 100
1,1-DCE	< 100
Chloroform	< 60
TPHg	< 10,000

SG19		Stationary
PCE	< 100	**34.4**
Benzene	< 45	**12.6**
Toluene	< 200	**55.0**
Ethylbenzene	< 100	**10.6**
m,p-Xylene	< 200	**37.3**
o-Xylene	< 100	**9.60**
1,1-DCE	< 100	< 3.97
Chloroform	< 60	**8.98**
TPHg	< 10,000	--

SG23	Mobile	Stationary
PCE	< 100	**32.4**
Benzene	< 45	**4.03**
Toluene	< 200	**8.97**
Ethylbenzene	< 100	< 4.34
m,p-Xylene	< 200	< 8.68
o-Xylene	< 100	< 4.34
1,1-DCE	< 100	**5.99**
Chloroform	< 60	< 4.88
TPHg	< 10,000	--

SG24	
PCE	< 100
Benzene	< 45
Toluene	< 200
Ethylbenzene	< 100
m,p-Xylene	< 200
o-Xylene	< 100
1,1-DCE	< 100
Chloroform	< 60
TPHg	< 10,000

SG8	
PCE	< 100
Benzene	< 45
Toluene	< 200
Ethylbenzene	< 100
m,p-Xylene	< 200
o-Xylene	< 100
1,1-DCE	< 100
Chloroform	< 60
TPHg	< 10,000

SG22	
PCE	< 100
Benzene	< 45
Toluene	< 200
Ethylbenzene	< 100
m,p-Xylene	< 200
o-Xylene	< 100
1,1-DCE	< 100
Chloroform	< 60
TPHg	< 10,000

SG21	
PCE	< 100
Benzene	< 45
Toluene	< 200
Ethylbenzene	< 100
m,p-Xylene	< 200
o-Xylene	< 100
1,1-DCE	< 100
Chloroform	< 60
TPHg	< 10,000

PES Environmental, Inc.
Engineering & Environmental Services

Soil Gas Sample Locations and Analytical Results
Phase II Investigation
East 3rd Street Properties
Pittsburg, California

PLATE
3

999.014.01.004	99901401004_SL_1-4	DRAFT	10/17
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

Explanation

- Assessor Parcel Boundary
- Grab Groundwater Sample Location
- Extent of North Parcel Engineered Soil Cap
- "Berm" Parcel Boundary

Explanation

Detections are shown in bold.
All compounds are reported in micrograms per liter (µg/L)
PCE = Tetrachloroethene
TCE = Trichloroethene
cis-1,2-DCE = cis-1,2-dichloroethene
trans-1,2-DCE = trans-1,2-dichloroethene
VC = Vinyl Chloride
1,1-DCE = 1,1-dichloroethene
DEP = Diethyl Phthalate
TPHd = Total petroleum hydrocarbons quantified as diesel
TPHmo = Total petroleum hydrocarbons quantified as motor oil
< 0.50 = Not detected at or above the specified laboratory reporting limit
92 (760 H) = Result with and without (in parenthesis) a silica gel clean-up
H = Sample was prepped or analyzed beyond the specified holding time
Shaded results are equal to or exceed the February 2016 (Rev 3) Regional Water Quality Control Board, San Francisco Bay Region (SFRWQCB) Groundwater Tier 1 Environmental Screening Levels (ESLs)

N

0 200

SCALE IN FEET

Aerial Photo: October 30, 2015 (Google 2016)

GB1	
PCE	< 0.50
TCE	< 0.50
cis-1,2-DCE	< 0.50
VC	< 0.50
1,1-DCE	< 0.50
DEP	**5.0**
TPHd	**92 (760 H)**
TPHmo	< 99 **(570 H)**

GB2	
PCE	< 0.50
TCE	< 0.50
cis-1,2-DCE	< 0.50
VC	< 0.50
1,1-DCE	< 0.50
DEP	< 5.1
TPHd	< 50 **(180 H)**
TPHmo	< 100 **(140 H)**

GB3	
PCE	< 0.50
TCE	< 0.50
cis-1,2-DCE	< 0.50
VC	< 0.50
1,1-DCE	< 0.50
DEP	< 5.2
TPHd	< 54 **(280 H)**
TPHmo	< 110 **(180 H)**

GB4	
PCE	< 0.50
TCE	< 0.50
cis-1,2-DCE	< 0.50
VC	< 0.50
1,1-DCE	< 0.50
DEP	< 5.1
TPHd	< 64 **(210 H)**
TPHmo	< 130 **(180 H)**

GB5		Duplicate
PCE	< 0.50	< 0.50
TCE	< 0.50	< 0.50
cis-1,2-DCE	< 0.50	< 0.50
VC	< 0.50	< 0.50
1,1-DCE	< 0.50	< 0.50
DEP	< 5.0	< 5.1
TPHd	< 52 **(380 H)**	< 50 **(400 H)**
TPHmo	< 100 **(200 H)**	< 100 **(200 H)**

GB6	
PCE	< 0.50
TCE	< 0.50
cis-1,2-DCE	< 0.50
VC	< 0.50
1,1-DCE	< 0.50
DEP	<5.1
TPHd	< 50 **(2,400 H)**
TPHmo	< 100 **(870 H)**

GB7	
PCE	**9.3**
TCE	**1.8**
cis-1,2-DCE	**1.1**
VC	< 0.50
1,1-DCE	**8.8**
DEP	< 5.1
TPHd	< 50 **(260 H)**
TPHmo	< 100 **(350 H)**

PES Environmental, Inc.
Engineering & Environmental Services

Grab Groundwater Sample Locations and Analytical Results
Phase II Investigation
East 3rd Street Properties
Pittsburg, California

PLATE 4

999.014.01.004	99901401004_SL_1-4	DRAFT	10/17
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ATTACHMENT 1: PES INVESTIGATION TABLES

Table 1
Summary of Analytical Results for Asbestos in Soil
East 3rd Street Properties
Pittsburg, California

Sample Location	Depth (feet bgs)	Date Collected	PLM Analysis (1,200-points) (Area %)	TEM Analysis (Weight %)
SS1	0.5	10/04/17	ND	--
SS2	0.5	10/04/17	ND	--
SS3	0.5	10/04/17	**0.58**	**0.13**
SS4	0.5	10/04/17	**0.083**	**0.043**
SS5	0.5	10/04/17	**< 0.083**	**0.034**
SS6	0.5	10/04/17	ND	--
SS7	0.5	10/04/17	ND	--
SS8	0.5	10/04/17	ND	--
SS9	0.5	10/04/17	ND	--
SS10	0.5	10/04/17	ND	--
SS11	0.5	10/04/17	ND	--
SS12	0.5	10/04/17	ND	--
SS13	0.5	10/04/17	**0.083**	**0.015**
SS14	0.5	10/04/17	ND	--
SS15	0.5	10/04/17	ND	--
SS16	0.5	10/04/17	**0.25**	**0.014**
SS17	0.5	10/04/17	ND	--
SS18	0.5	10/04/17	**< 0.083**	**0.060**
SS19	0.5	10/04/17	ND	--
SS20	0.5	10/04/17	ND	--
SS21	0.5	10/04/17	**0.083**	**0.055**

Detections are shown in **bold**.

Abbreviations:

bgs = Below ground surface.

0.58% = Area percent of chrysotile asbestos detected in sample.

ND = Not detected at or above the laboratory reporting limit.

< 0.083% = Chrysotile asbestos was observed during scanning, but no points were countable (asbestos is below the detection limit of the method).

-- = Not analyzed.

Table 2
Summary of Grab Groundwater Analytical Results - VOCs, SVOCs, and TPH
East 3rd Street Properties
Pittsburg, California

Sample Location	Sample Identification	Screen Interval (feet bgs)	Date Collected	VOCs								SVOCs		TPH		
				PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)	1,1-DCA (µg/L)	1,1-DCE (µg/L)	Other VOCs (µg/L)	Diethyl Phthalate (µg/L)	Other SVOCs (µg/L)	TPHg (µg/L)	TPHd (µg/L)	TPHmo (µg/L)
GB1	GB1-GW	10 to 20	09/29/17	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	All ND	**5.0**	All ND	< 50	**92 (760 H)**	< 99 **(570 H)**
GB2	GB2-GW	5 to 15	09/29/17	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	All ND	< 5.1	All ND	< 50	< 50 **(180 H)**	< 100 **(140 H)**
GB3	GB3-GW	5 to 15	10/02/17	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	All ND	< 5.2	All ND	< 50	< 54 **(280 H)**	< 110 **(180 H)**
GB4	GB4-GW	5 to 15	10/02/17	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	All ND	< 5.1	All ND	< 50	< 64 **(210 H)**	< 130 **(180 H)**
GB5	GB5-GW	5 to 15	10/02/17	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	All ND	< 5.0	All ND	< 50	< 52 **(380 H)**	< 100 **(200 H)**
	GB5-GW-DUP	5 to 15	10/02/17	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	All ND	< 5.1	All ND	< 50	< 50 **(400 H)**	< 100 **(200 H)**
GB6	GB6-GW	5 to 15	10/02/17	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	All ND	< 5.1	All ND	< 50	< 50 **(2,400 H)**	< 100 **(870 H)**
GB7	GB7-GW	5 to 15	10/02/17	**9.3**	**1.8**	**1.1**	< 0.50	< 0.50	< 0.50	**8.8**	All ND	< 5.1	All ND	< 50	< 50 **(260 H)**	< 100 **(350 H)**
Tier 1 Groundwater ESL (Note 1)				3.0	5.0	6.0	10	0.061	5.0	3.2	N/A	1.5	N/A	100	100	50,000
Ecological Aquatic Habitat Goal Levels: Fresh Water Ecotox (Note 2)				120	360	590	590	780	47	25	N/A	1.5	N/A	440	640	NE
Ecological Aquatic Habitat Goal Levels: Salt Water Ecotox (Note 2)				230	200	22,000	22,000	NE	NE	22,000	N/A	1.7	N/A	3,700	640	NE

Detections are shown in **bold**.
Results equal to or exceeding Tier 1 ESLs are shaded.
Abbreviations:
bgs = Below ground surface.
TPHg = Total petroleum hydrocarbons quantified as gasoline by U.S. EPA Method 8260B/CA_LUFTMS.
TPHd = Total petroleum hydrocarbons quantified as diesel by U.S. EPA Method 8015B.
TPHmo = Total petroleum hydrocarbons quantified as motor oil by U.S. EPA Method 8015B.
VOCs = Volatile organic compounds by U.S. EPA Method 8260B.
SVOCs = Semi-volatile organic compounds by U.S. EPA Method 8270C.
PCE = Tetrachloroethene.
TCE = Trichloroethene.
cis-1,2-DCE = cis-1,2-dichloroethene.
trans-1,2-DCE = trans-1,2-dichloroethene.
1,1-DCE = 1,1-dichloroethene.
1,1-DCA = 1,1-dichloroethane.
µg/L = Micrograms per Liter.
< 0.50 = Not detected at or above the specified laboratory reporting limit.
All ND = No analyzed compounds detected above the laboratory reporting limits.
DUP = Duplicate sample.
92 (760 H) = Result with and without (in parenthesis) a silica gel clean-up.
H = Sample was prepped or analyzed beyond the specified holding time.
N/A = Not applicable.
NE = Not established.
-- = Not analyzed.
Notes:
1. ESL = February 2016 Regional Water Quality Control Board, San Francisco Bay Region (SFRWQCB) Groundwater Tier 1 Environmental Screening Levels (ESLs).
2. February 2016 SFRWQCB Aquatic Habitat Goal Levels for Freshwater and Saltwater Ecological Toxicity.

Table 3
Summary of Soil Gas Analytical Results
East 3rd Street Properties
Pittsburg, California

Sample Location	Sample Identification	Date Collected	Sample Depth (feet bgs)	Mobile or Stationary Lab (Notes 2, 3)	TPH (Gasoline Range) ($\mu g/m^3$)	Volatile Organic Compounds									1,1-DFA (Leak Check Compound) (ppmV)
						PCE ($\mu g/m^3$)	Benzene ($\mu g/m^3$)	Toluene ($\mu g/m^3$)	Ethyl-benzene ($\mu g/m^3$)	m,p-Xylene ($\mu g/m^3$)	o-Xylene ($\mu g/m^3$)	1,1-DCE ($\mu g/m^3$)	Chloroform ($\mu g/m^3$)	Other VOCs ($\mu g/m^3$)	
SG1	SG1	10/10/17	4.9	Mobile	< 10,000	< 100	< 45	< 200	< 100	< 200	< 100	< 100	< 60	All ND	< 3.7
SG2	SG2	10/10/17	4.9	Mobile	< 10,000	< 100	< 45	< 200	< 100	< 200	< 100	< 100	< 60	All ND	< 3.7
SG3	SG3	10/11/17	4.9	Mobile	< 10,000	< 100	< 45	< 200	< 100	< 200	< 100	< 100	< 60	All ND	< 3.7
SG4	SG4	10/10/17	4.9	Mobile	< 10,000	< 100	< 45	< 200	< 100	< 200	< 100	< 100	< 60	All ND	< 3.7
SG5	SG5	10/10/17	4.9	Mobile	< 10,000	< 100	< 45	< 200	< 100	< 200	< 100	< 100	< 60	All ND	< 3.7
	SG5	10/10/17	4.9	Stationary	--	< 33.9	< 16.0	**22.3**	< 21.7	< 43.4	< 21.7	< 19.8	< 24.4	All ND	< 10.0
SG6	SG6	10/11/17	4.9	Mobile	< 10,000	< 100	< 45	< 200	< 100	< 200	< 100	< 100	< 60	All ND	< 3.7
	SG6 dup	10/11/17	4.9	Mobile	< 10,000	< 100	< 45	< 200	< 100	< 200	< 100	< 100	< 60	All ND	< 3.7
SG7	SG7	10/11/17	4.9	Mobile	< 10,000	< 100	< 45	< 200	< 100	< 200	< 100	< 100	< 60	All ND	< 3.7
SG8	SG8	10/09/17	4.9	Mobile	< 10,000	< 100	< 45	< 200	< 100	< 200	< 100	< 100	< 60	All ND	< 3.7
SG9	SG9	10/11/17	4.9	Mobile	< 10,000	< 100	< 45	< 200	< 100	< 200	< 100	< 100	< 60	All ND	< 3.7
SG10	SG10	10/10/17	4.9	Mobile	< 10,000	< 100	< 45	< 200	< 100	< 200	< 100	< 100	< 60	All ND	< 3.7
SG11	SG11	10/10/17	4.9	Mobile	< 10,000	< 100	< 45	< 200	< 100	< 200	< 100	< 100	< 60	All ND	< 3.7
SG12	SG12	10/10/17	4.9	Mobile	< 10,000	< 100	< 45	< 200	< 100	< 200	< 100	< 100	< 60	All ND	< 3.7
SG13	SG13	10/10/17	4.9	Mobile	< 10,000	< 100	< 45	< 200	< 100	< 200	< 100	< 100	< 60	All ND	< 3.7
SG14	SG14	10/10/17	4.9	Mobile	< 10,000	< 100	< 45	< 200	< 100	< 200	< 100	< 100	< 60	All ND	< 3.7
SG15	SG15	10/10/17	4.9	Mobile	< 10,000	< 100	< 45	< 200	< 100	< 200	< 100	< 100	< 60	All ND	< 3.7
SG16	SG16	10/10/17	4.9	Mobile	< 10,000	< 100	< 45	< 200	< 100	< 200	< 100	< 100	< 60	All ND	< 3.7
SG17	SG17	10/10/17	4.9	Mobile	< 10,000	< 100	< 45	< 200	< 100	< 200	< 100	< 100	< 60	All ND	< 3.7
SG18	SG18	10/09/17	4.9	Mobile	< 10,000	< 100	< 45	< 200	< 100	< 200	< 100	< 100	< 60	All ND	< 3.7
SG19	SG19	10/09/17	4.9	Mobile	< 10,000	< 100	< 45	< 200	< 100	< 200	< 100	< 100	< 60	All ND	< 3.7
	SG19	10/10/17	4.9	Stationary	--	**34.4**	**12.6**	**55.0**	**10.6**	**37.3**	**9.60**	< 3.97	**8.98**	All ND	< 10.0
SG20	SG20	10/09/17	4.9	Mobile	< 10,000	< 100	< 45	< 200	< 100	< 200	< 100	< 100	< 60	All ND	< 3.7
SG21	SG21	10/09/17	4.9	Mobile	< 10,000	< 100	< 45	< 200	< 100	< 200	< 100	< 100	< 60	All ND	< 3.7
SG22	SG22	10/09/17	4.9	Mobile	< 10,000	< 100	< 45	< 200	< 100	< 200	< 100	< 100	< 60	All ND	< 3.7
SG23	SG23	10/09/17	4.9	Mobile	< 10,000	< 100	< 45	< 200	< 100	< 200	< 100	< 100	< 60	All ND	< 3.7
	SG23	10/09/17	4.9	Stationary	--	**32.4**	**4.03**	**8.97**	< 4.34	< 8.68	< 4.34	**5.99**	< 4.88	All ND	< 10.0
SG24	SG24	10/09/17	4.9	Mobile	< 10,000	< 100	< 45	< 200	< 100	< 200	< 100	< 100	< 60	All ND	< 3.7
Tier 1 Soil Gas ESL (Note 1)					50,000	240	48	160,000	560	52,000	52,000	37,000	61	N/A	N/A

Detections are shown in **bold**.

Results equal to or exceeding the Tier 1 soil gas ESLs are shaded.

Abbreviations:

bgs = below ground surface.

$\mu g/m^3$ = micrograms per cubic meter.

ppmV = parts per million by volume.

PCE = Tetrachloroethene.

1,1-DCE = 1,1-Dichloroethene

1,1-DFA = 1,1-difluoroethane (leak check compound).

< 100 = not detected at or above the specified laboratory reporting limit.

-- = Not analyzed.

ND = Not detected at or above the laboratory reporting limit.

NE = Not established.

N/A = Not applicable.

Notes:

1. ESL = February 2016 (Rev. 3) Regional Water Quality Control Board, San Francisco Bay Region (SFRWQCB) Soil Gas Tier 1 Environmental Screening Levels (ESLs).
2. The mobile laboratory soil gas samples were collected and analyzed by TEG Northern California. The samples were analyzed by U.S. EPA Method 8260B.
3. The stationary laboratory soil gas samples were analyzed by K Prime, Inc. The samples were analyzed for VOCs by U.S. EPA Method TO-15 and 1,1-DFA by U.S. EPA Method TO-3.

Megan Indermill
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Environment

Subject:

Semi-Annual Operation and Maintenance Report for the North Parcel and the Former Johns Manville Plant Site
420 East Third Street
Pittsburg, California
From July 1, 2017 through December 31, 2017

Date:
January 9, 2018

Contact:
Justin Sobieraj

Phone:
415.858.8310

Email:
Justin.Sobieraj@arcadis.com

Our ref:

EM009587.0021

Dear Mrs. Indermill:

On behalf of Pittsburg River Park, LLC (PRPLLC), Arcadis U.S., Inc. (Arcadis) has prepared this letter report to provide the results of the Semi-Annual Operation and Maintenance (O&M) inspections of the North Parcel and Former Johns Manville Plant Site located at 420 East Third Street in Pittsburg, California (North Parcel "Site" and Former Plant Site; Figure 1). This report includes quarterly inspections associated with the Rodent Mitigation Plan (RMP).

All work was completed, in accordance with the California Department of Toxic Substances Control's (DTSC) March 5, 2012 approval of the semi-annual inspection and reporting schedule, and the RMP described in the Revised Semi-Annual O&M report dated September 29, 2014.

BACKGROUND

North Parcel

The North Parcel is approximately 4.2-acres and was formerly used by Johns Manville for storage of asbestos-containing products prior to shipment. As a result of the North Parcel Site use, asbestos-containing materials (ACMs) were deposited onto the ground. Under a Voluntary Cleanup Agreement (VCA), dated July 12, 2000 [Docket No. HAS-A000/01-004]), Johns Manville performed investigations that culminated in the placement of a soil cap to prevent direct exposure to ACMs at the North Parcel.

Johns Manville personnel oversaw routine O&M inspections until PRPLLC purchased the property in October 2004. Beginning in December 2004, contractors for PRPLLC have performed operation, maintenance and monitoring consistent with the protocols established in the "*Final Operations and Maintenance Plan, Asbestos Soil Cap, Johns Manville Pittsburg Plant – North Parcel Site, Pittsburg, California*", prepared by Harding, dated July 31, 2001. A revised VCA was established by the DTSC in 2005, to update the remedial actions allowing for the timely development of the Site for mixed-use redevelopment (Docket No. HSA-A 04/05-127). The "Final Operations and Maintenance Plan, North Parcel" was submitted by Environmental Resources Management (ERM), in 2006 to outline the revised operations and maintenance requirements of the engineered cap. The adherence to the revised O&M Plan is stipulated in the "*Operations and Maintenance Agreement for the Site located at East Third and Harbor Streets, Pittsburg, California*", dated September 25, 2009 ("North Parcel O&M Plan").

Former Plant Site

ERM, on behalf of PRPLLC, determined that the construction of an engineered containment berm would be the best remedial alternative for the Former Plant Site, as documented in the Final Remedial Action Plan, dated June 23, 2006. The construction details of the berms are described in *"Remedial Design and Implementation Plan, Harbor Park Development, Pittsburg, California*", dated June 22, 2006, also by ERM, as well as in the *"Addendum to the Remedial Design and Implementation Plan, Harbor Park Development (Former Johns Manville Facility), 420 East 3rd Street, Pittsburg, California,*" dated August 1, 2007, by LFR (now part of Arcadis). The containment berms are comprised of two distinct segments referred to as the "northern and southern" berms. Ongoing maintenance and monitoring was continuously performed in accordance with the "*Operation and Maintenance Plan for the Engineered Containment Berm on the Plant Site of the Former Johns Manville Facility, 420 East Third Street, Pittsburg, California*" (Plant Site O&M Plan*)*, dated October 1, 2008, by LFR*.*

RECENT ACTIVITIES

During the reporting period of July 1, 2017 through December 31, 2017, Blue Wagon Landscape and Design (Blue Wagon), the landscape and maintenance contractor for PRPLLC, performed maintenance activities, which consisted of mowing, sapling removal, testing and repairing the irrigation system, and filling any identified rodent mounds and burrows.

Following the December 5, 2017, semi-annual inspection performed by Arcadis (described below), Blue Wagon completed the repairs and site maintenance activities under the direction of Arcadis on December 20, 2017.

Semi-Annual Operation and Maintenance for the North Parcel and Plant Site

Arcadis performed the semi-annual inspection of the Former Plant Site and the North Parcel on December 5, 2017. The inspections were conducted in accordance with the Plant Site O&M Plan and the North Parcel O&M Plan, respectively. Photographs taken during the inspections documenting the current condition of the North Parcel and Plant Site are included as Attachment 1. Completed "Site Inspection

Checklists" are included as Attachment 2. Blue Wagon was informed of the inspection findings, and they promptly addressed each item, and example completion photos can be found in Attachment 1.

General Observations and Maintenance

North Parcel

The North Parcel was observed to be in good condition at the time of Arcadis' semi-annual inspection. The following specific observations were made, and a hand-drawn map of the North Parcel was completed and is included in Attachment 3. A photographic log of the Site is included as Attachment 1, which documents the conditions of the Site during the December 5, 2017 inspection (Attachment 1.1 and 1.2). A second photo log documenting the site conditions on December 20, 2017 after corrections and/or repairs by Blue Wagon is also attached (Attachment 1.3).

- The North Parcel exterior fencing was found to be in good condition.
- Trash was not observed within the North Parcel.
- The vegetation on the cap was composed of medium grasses and weeds. Following inspection of the Site, the grasses/weeds were mowed to discourage animal activity.
- The irrigation system was shut off for the rainy winter season by Arcadis. The irrigation lines were pressurized and leak-checked by Blue Wagon. Damaged sprinkler heads detected during the December 5th inspection were replaced by Blue Wagon on December 20, 2017.
- Active ground squirrel burrows were not observed.
- Nine gopher mounds were observed, primarily on the west side of the North Parcel.
    - Blue Wagon was notified of the gopher mound areas on December 12, 2017. On December 20, 2017, Blue Wagon mobilized to the site and the observed gopher mounds were filled in and the soil was compacted.
- Suspect ACM debris were not observed on the ground surface during Arcadis' inspection.

Former Plant Site

The Former Plant Site was also in good condition at the time of the inspection. The following specific observations were made, and a hand-drawn map of the Former Plant Site was completed and is included in Attachment 3. Attachment 1.4 through 1.6 document the conditions of the Site during the December 5, 2017 inspection, and Attachment 1.7 documents the corrections/fixes on December 20, 2017.

- The exterior fence was in good condition, but the main gate was found to be damaged. Blue wagon repaired the fence damage on December 20, 2017 (see Attachment 1.7).
- There were no signs of trespassing or graffiti.

- Vegetation on the Berm Parcels was medium height and in-process of being mowed. Grass was being mowed during December 5, 2017 inspection (Attachment 1.4), and finalized by December 20, 2017.
- The remainder of the Former Plant Site consisted of mixed low brown and green grasses and weeds.
- The irrigation system was shut off for the rainy winter season by Arcadis. The irrigation lines were pressurized and leak-checked by Blue Wagon, and any damaged sprinkler heads were replaced on December 20, 2017.
- Neither active or inactive ground squirrel burrows were observed. However, approximately 21 gopher burrows were identified on the North Berm, and approximately nine gopher burrows were identified on the south berm were identified on the Berm Parcel which falls within historic range. All identified gopher burrows were hand backfilled with clean, compacted soil on December 20, 2017.
- Ground squirrel bait stations were full and in working condition.
- Suspect ACM debris were not observed on the ground surface during Arcadis' inspection.
- Minor trash that was found on the site after the December 5, 2017 inspection was removed Blue Wagon on December 20, 2017 (Attachment 1.7).

Ongoing O&M Requirements

- Maintain the fences and irrigation systems.
- Maintain adequate landscaping irrigation.
- Continue quarterly rodent inspections and ground squirrel bait station replenishment.
- Continue the O&M schedule on a quarterly basis with the landscaping subcontractor, Blue Wagon.
- The next semi-annual O&M inspection will be conducted in June 2018.

RODENT MITIGATION PLAN INSPECTIONS – BERM PARCEL

Quarterly RMP inspections are conducted by Arcadis at the Berm Parcel as part of the approved scope submitted to the DTSC on September 27, 2013, to address the rodent population at the Site and maintain the integrity of the cap. Clark Pest Control (Clark) has maintained the bait stations and quarterly scheduled inspections have consistently found the bait stations to be in working condition and well-stocked since installation.

Rodent Mitigation Plan Implementation and Recommendations

The introduction of ground squirrel bait stations at the property has proven to be an effective and long-term mitigation strategy to limit the number of rodents and will continue. As outlined in previous semi-annual O&M inspection reports, the Berm Parcel is currently inspected on a quarterly basis to monitor rodent population. The third quarter 2017 monitoring inspection took place on September 18, 2017, and the fourth quarter 2017 monitoring inspection coincided with the North Parcel and Former Plant Site semi-annual inspection on December 5, 2017. A separate Site Inspection form for the September 18, 2017 RMP is included in Attachment 2 and a Site Map is included as Attachment 3. Active ground squirrel burrows were not identified during either quarterly inspection. Inactive burrows were filled with compacted soil.

To limit gopher populations, a Passive Exhaust Rodent Control (PERC) treatment was implemented in October 2014 and treated the approximately 100 gopher burrows identified on the Berm Parcel. During the inspections on September 18, 2017 and December 5, 2017, Arcadis identified approximately 25 and 30 gopher mounds on the Berm Parcel, respectively. Based on the most recent inspection, the October 2014 PERC treatment was effective and significantly reduced the gopher population.

The rodent inspections for the next monitoring period are scheduled to take place in March and June 2018, and results will be reported in the June 2018 Semi-Annual Operations and Maintenance Report.

CLOSURE

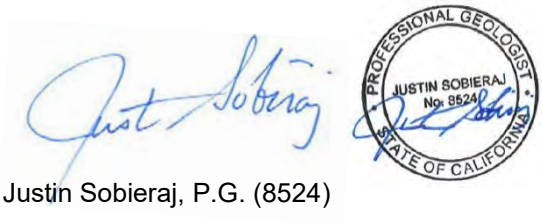
If you have any questions or need more information regarding the results of this inspection or the project in general, please call Mr. Justin Sobieraj of Arcadis at 415.858.8310, Mr. Rob Moniz of Arcadis at 925.409.3831, or Mr. Mike Singer of PRPLLC at 860.214.7195.

Sincerely,

Arcadis U.S., Inc.



Rob Moniz
Staff Geologist



Justin Sobieraj, P.G. (8524)
Senior Geologist

Enclosures:

Figure 1 - Site Vicinity Map

Attachment 1 - Photographic Log

Attachment 2 - Site Inspection Checklists

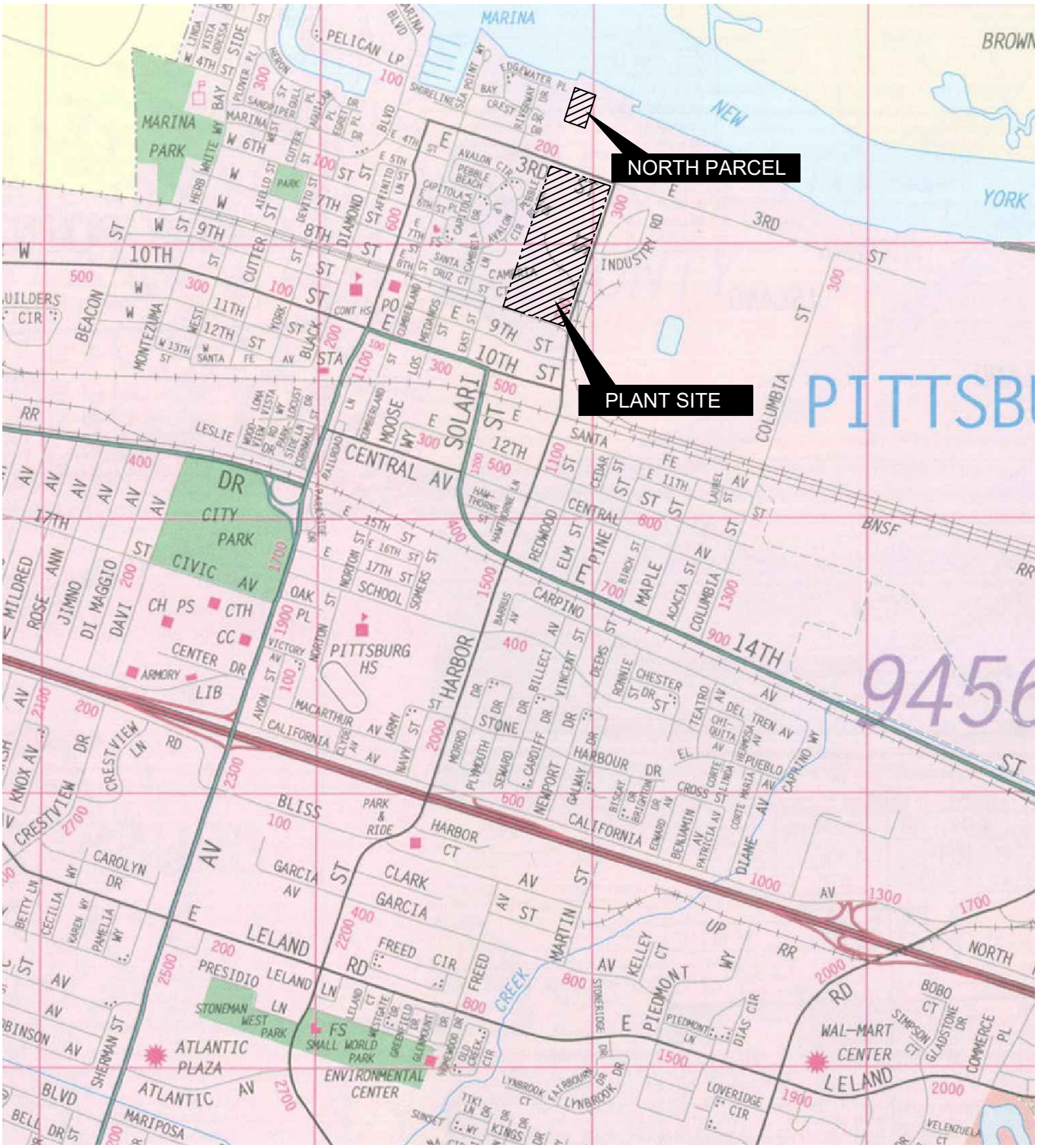
Attachment 3 - Hand-Drawn Maps

Copies:

Mr. Mike Singer – PRPLLC

Mr. Neal Drawas – MMA Environmental

Figure



SOURCE: THOMAS BROS MAP 2000

PITTSBURG RIVER PARK, LLC
PITTSBURG, CALIFORNIA

SITE VICINITY MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE
1

CITY:(Reqd) DIV/GROUP:(Reqd) DB:(Reqd) LD:(Opt) PIC:(Opt) PM:(Reqd) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
C:\ENVCAD\EmeryvilleACT\EM0095870014\00001\DWG\EM009587 N01.dwg LAYOUT: 1 SAVED: 1/8/2016 3:09 PM ACADVER: 19.1S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 1/8/2016 3:10 PM BY: REYES, ALEC

Attachment 1

Photographic Log (Pre- and Post-O&M)



North Parcel from southwest corner of cap, looking west northwest (12/5/17).



North Parcel from southeast corner of cap, looking north (12/5/17).

PITTSBURG RIVER PARK, LLC
NORTH PARCEL PRE O&M

PHOTO LOG

ARCADIS Design & Consultancy for natural and built assets

FIGURE
1.1



North Parcel west-center of cap, looking northwest. Example of gopher mound and extruded, light yellow-brown soil cap material (12/5/17).



North Parcel northern boundary line, looking southeast. Fencing secure and no evidence of trespassing or vandalism found (12/5/17).

PITTSBURG RIVER PARK, LLC
NORTH PARCEL PRE O&M

PHOTO LOG

ARCADIS Design & Consultancy for natural and built assets

FIGURE
1.2



North Parcel northeast corner of cap, looking southwest. Irrigation system fixed and tested after gopher mounds were packed in (12/20/17).



North Parcel fixed irrigation piping (12/5/17).

PITTSBURG RIVER PARK, LLC
NORTH PARCEL POST O&M

PHOTO LOG

ARCADIS Design & Consultancy for natural and built assets

FIGURE
1.3



North Berm looking south along the eastern flank (12/5/17).



North Berm looking north from the top. Vegetation in the process of being mowed (12/5/17).

PITTSBURG RIVER PARK, LLC
BERM PARCEL PRE O&M

PHOTO LOG

ARCADIS Design & Consultancy for natural and built assets

FIGURE
1.4



South Berm looking north along the top of the western flank (12/5/17).



South Berm looking north along eastern flank (12/5/17).

PITTSBURG RIVER PARK, LLC
BERM PARCEL PRE O&M

PHOTO LOG

ARCADIS Design & Consultancy for natural and built assets

FIGURE
1.5



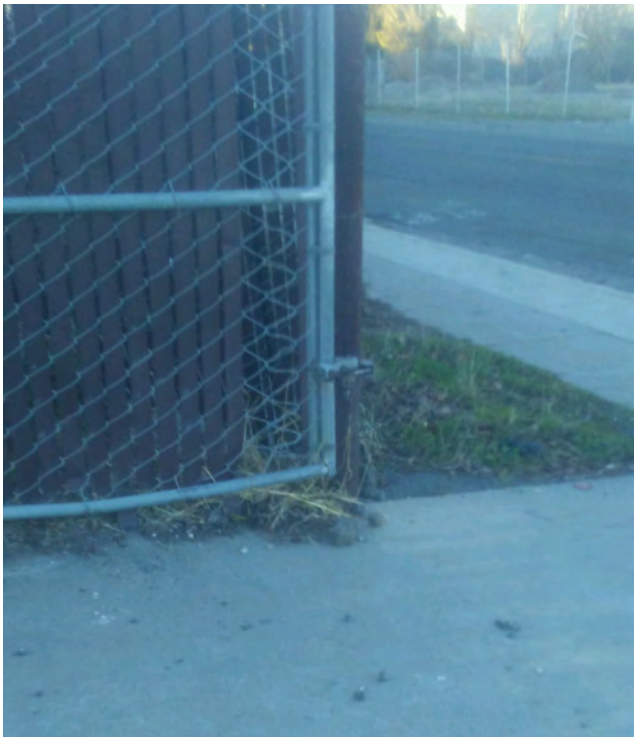
Former Plant Site gate cut (12/5/17).

PITTSBURG RIVER PARK, LLC
BERM PARCEL PRE O&M

PHOTO LOG

ARCADIS Design & Consultancy for natural and built assets

FIGURE
1.6



Former Plant Site gate fixed by Blue Wagon (12/20/17)



Minor trash thrown over the fence found after December 5th was removed by Blue Wagon (12/20/17)

PITTSBURG RIVER PARK, LLC
BERM PARCEL POST O&M

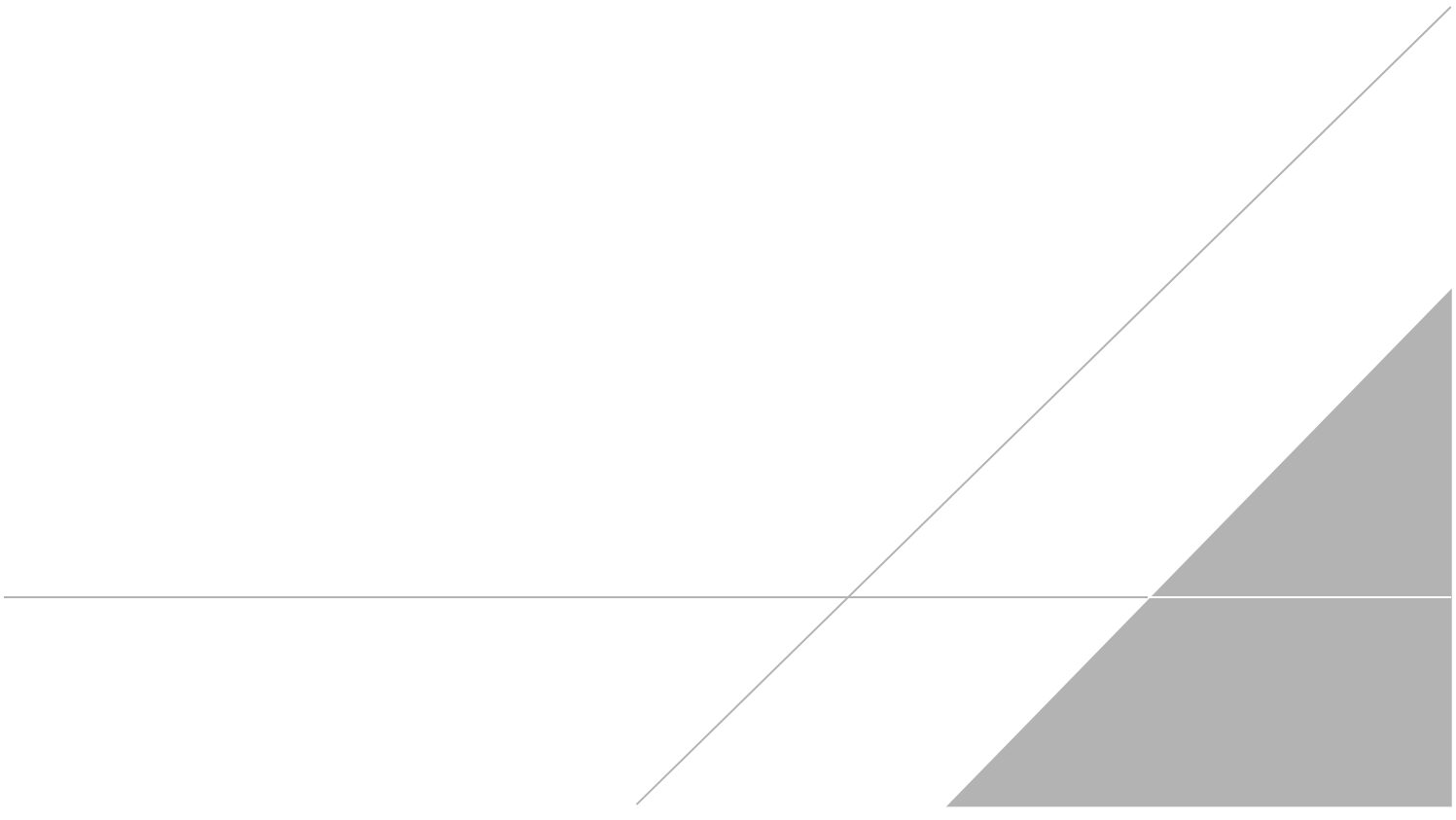
PHOTO LOG

ARCADIS Design & Consultancy for natural and built assets

FIGURE
1.7

Attachment 2

Site Inspection Checklists



O&M CHECKLIST
PITTSBURG RIVER PARK LLC (Former JM Plant)
NORTH PARCEL

Inspector: Rob Moniz Date: 12/5/17 Time: 0900

Climatic Conditions: Clear, mild

Landscaping, Fencing, and Drainage Inspection

Please observe and document the following:

- Note and quantify eroded areas.
- Note and quantify cover soil conditions such as sloughing, sliding (presence of headscarps and/or toe bulging.
- Note and quantify cracks, fissures, or other features that may potentially allow surface water infiltration.
- Note and quantify areas subsidence, depressions, or topography where ponding may occur.
- Estimate of rodent or other burrowing animal populations
- Note and quantify burrowing animal intrusion drainage
- Document (locate) areas where cover deficiencies are observed.
- Inspect and record any ponding.
- Inspect for runoff inundation.
- Inspect fencing

LOCATION OF OBSERVATION (show on map)**:**

Sitewide: Grass green, tall, to be mowed

Sitewide: Water main and irrigation shut off for the winter.

West Side of Field: Gopher mounding activity.

OBSERVATION TYPE AND DETAILED DESCRIPTION:

-Tall grasses to be mowed to discourage animal activity

-Irrigation system turned off for winter—rainwater to be sufficient irrigation.

-Gopher mounding activity. Nine gopher mounds present.

ACTION(s) TO BE TAKEN (if necessary)***:**

-Mow tall grasses to be mowed to discourage burrowing animal activity.

-Continue to monitor grass health to ensure rainwater alone is sufficient irrigation for winter.

-Pack in gopher mounds to prevent erosion damage to cap and discourage gopher activity.

REMARKS:

Nothing further.

LANDSCAPE COVER

Please observe and document the following:

- Weed and fire control – Observe growth of plant materials and nuisance weeds in late winter. Determine if unsuitable plants pose a threat to the cover.
- Reseeding – Determine areas that require reseeding in summer.
- Rodent control – Evaluate visible signs of burrowing rodents during routine inspections around the site.
- Sprinkler system – Observe the condition of sprinkler heads and any potential leak from irrigation lines.

AREA LOCATION (show on map)	**GENERAL APPEARANCE & MOISTURE**	**MAINTENANCE REQUIRED**	**COMMENTS**
Sitewide Irrigation	Lines and heads intact. Good condition.	Inspect, fix, then turn-off irrigation system for winter.	Informed BW

Sitewide Vegetation	Grasses tall, weeds present.	Field to be mowed.	Informed BW
Gate Access	Secure and in good condition.	NA	
West side of site	Several gopher mounds present	Gopher mounds to be packed in	Informed BW

Signature:

Site Inspector: __ _____ Date: ___12/5/17_____

REPAIR RECORD

Inspector: Rob Moniz Date: 12/20/17 Time: 1300

Climatic Conditions: Sunny and mild

DEFICIENCY TYPE AND DETAILED DESCRIPTION:

Gopher mounds, irrigation system as detailed on the maps

LOCATION OF REPAIR ACTIVITY (show on map)**:**

See map

REPAIR ACTION TAKEN:

On December 20th, Blue Wagon compeleted the final activities at the site. The irrigation system was inspected, repaired, and turned off for the winter. All gopher mounds were packed in with soil.

REMARKS:

Activities were completed properly, ensure the caps are in good condition and will be protected for the next period.

Signature:

Site Inspector: _____ Date: 12/20/17

O&M CHECKLIST
PITTSBURG RIVER PARK LLC (Former JM Plant)
BERM PARCEL

Inspector: Rob Moniz Date: 12/5/17 Time: 0900

Climatic Conditions: Clear, mild

Landscaping, Fencing, and Drainage Inspection

Please observe and document the following:

- Note and quantify eroded areas.
- Note and quantify cover soil conditions such as sloughing, sliding (presence of headscarps and/or toe bulging.
- Note and quantify cracks, fissures, or other features that may potentially allow surface water infiltration.
- Note and quantify areas subsidence, depressions, or topography where ponding may occur.
- Estimate of rodent or other burrowing animal populations
- Note and quantify burrowing animal intrusion drainage
- Document (locate) areas where cover deficiencies are observed.
- Inspect and record any ponding.
- Inspect for runoff inundation.
- Inspect fencing

LOCATION OF OBSERVATION (show on map)**:**

Sitewide: grass at variable heights. Short, recently mowed on top of berms, grass long on berm flanks and in field.

Sitewide: Water main and irrigation shut off for the winter.

Berms: Gopher mounding activity.

North Berm: Sapling growth.

Northern Corner of Site: Cut in gate.

OBSERVATION TYPE AND DETAILED DESCRIPTION:

-Tall grasses to be mowed to discourage animal activity

-Irrigation system turned off for winter—rainwater to be sufficient irrigation.

-Gopher mounding activity. 21 gopher mounds observed on North Berm, 9 gopher mounds observed on South Berm.

-Sapling Growth. 10 saplings observed near North Berm.

-Cut in gate. Gate cut large enough for person to enter site.

ACTION(s) TO BE TAKEN (if necessary)***:**

-Mow tall grasses to discourage burrowing animal activity.

-Continue to monitor grass health to ensure rainwater alone is sufficient irrigation for winter.

-Pack in gopher mounds to prevent erosion damage to cap and discourage gopher activity.

-Remove saplings to prevent root infiltration into cap.

-Repair cut gate.

REMARKS:

Nothing further.

LANDSCAPE COVER

Please observe and document the following:

- Weed and fire control – Observe growth of plant materials and nuisance weeds in late winter. Determine if unsuitable plants pose a threat to the cover.
- Reseeding – Determine areas that require reseeding in summer.
- Rodent control – Evaluate visible signs of burrowing rodents during routine inspections around the site.
- Sprinkler system – Observe the condition of sprinkler heads and any potential leak from irrigation lines.

AREA LOCATION (show on map)	**GENERAL APPEARANCE & MOISTURE**	**MAINTENANCE REQUIRED**	**COMMENTS**
Sitewide Irrigation	Lines and heads intact. Good condition.	Inspect, test, repair Irrigation system, then turn off for the winter.	Informed BlueWagon on 12/7/17

Gate Access	Norther fence cut.	Repair cut fence.	Informed BlueWagon on 12/7/17
North and south berm	21 gopher mounds present on North Berm, 9 present on south berm	Gopher mounds to be packed in	Informed BlueWagon on 12/7/17
North berm	10 sapings present near North Berm	Samplings to be removed	Informed BlueWagon on 12/7/17

Signature:

Site Inspector: _____ Date: 12/5/17

REPAIR RECORD

Inspector: Rob Moniz Date: 12/20/17 Time: 1300

Climatic Conditions: Sunny and mild

DEFICIENCY TYPE AND DETAILED DESCRIPTION:

Gopher mounds, gate repair, and irrigation system as detailed on the maps

LOCATION OF REPAIR ACTIVITY (show on map)**:**

See map

REPAIR ACTION TAKEN:

On December 20th, Blue Wagon compeleted the final activities at the site. The irrigation system was inspected, repaired, and turned off for the winter. All gopher mounds were packed in with soil. The hole in the gate was fixed.

REMARKS:

Activities were completed properly, ensure the caps are in good condition and will be protected for the next period.

Signature:

Site Inspector: _____ Date: 12/20/17

RMP

O&M CHECKLIST
PITTSBURG RIVER PARK LLC (Former JM Plant)
BERM PARCEL

Inspector: SEAN MAUREL Date: 9/18/17 Time: 0810

Climatic Conditions: Sunny & Mild

Landscaping, Fencing, and Drainage Inspection

Please observe and document the following:

- Note and quantify eroded areas.
- Note and quantify cover soil conditions such as sloughing, sliding (presence of headscarps and/or toe bulging.
- Note and quantify cracks, fissures, or other features that may potentially allow surface water infiltration.
- Note and quantify areas subsidence, depressions, or topography where ponding may occur.
- Estimate of rodent or other burrowing animal populations
- Note and quantify burrowing animal intrusion drainage
- Document (locate) areas where cover deficiencies are observed.
- Inspect and record any ponding.
- Inspect for runoff inundation.
- Inspect fencing

RMP Related items

LOCATION OF OBSERVATION (show on map):

RMP → GROUND SQUIRREL BURROWS PRESENT IN SWALE OF SOUTH BERM

Other → SOME DRY CRACKED SOIL AREAS

- BROKEN SPRINKLER HEAD TO BE REPLACED
- 1 of 4 IRRIGATION CONTROL BOXES TO BE SERVICED - CONFIRM IT IS OPERATING CORRECTLY

OBSERVATION TYPE AND DETAILED DESCRIPTION:

RMP
- 2 GROUND SQUIRREL BURROWS IN SWALE OF SOUTH BERM - 1 ABANDONED AND 1 POTENTIALLY ACTIVE
- NO NEW RODENT BAIT STATIONS SET ON S. BERM

Other
- LOCALIZED SURFICIAL CRACKS (<1") - TO BE BACKFILLED + COMPACTED
- 1 SPRINKLER HEAD IN SWALE OF N. BERM TO BE REPLACED
- 1 of 4 N. BERM IRRIGATION CONTROL BOXES TO BE SERVICED

ACTION(s) TO BE TAKEN (if necessary)*:

RMP related
- PACK IN BURROWS AND MOUNDS
- PLACE NEW RODENT BAIT TRAPS ON S. BERM TO DISCOURAGE FURTHER ACTIVITY

- BACKFILL + COMPACT AREA W LOCALIZED SURFICIAL CRACKS

other
- REPLACE DAMAGED SPRINKLER HEAD
- SERVICE 1 of 4 N. BERM CONTROL BOXES TO CONFIRM IRRIGATION TIMERS ARE SET AND FUNCTIONING PROPERLY

REMARKS:

9/18/17 CLARK PEST CONTROL NOTIFIED OF NEEDED SERVICE @ SOUTH BERM

9/21/17 BLUE WAGON (LANDSCAPING CONTRACTOR) NOTIFIED OF NEEDED REPAIRS, PHOTOS + MAP OF LOCATIONS INCLUDED.

LANDSCAPE COVER

Please observe and document the following:

- Weed and fire control – Observe growth of plant materials and nuisance weeds in late winter. Determine if unsuitable plants pose a threat to the cover.
- Reseeding – Determine areas that require reseeding in summer.
- Rodent control – Evaluate visible signs of burrowing rodents during routine inspections around the site.
- Sprinkler system – Observe the condition of sprinkler heads and any potential leak from irrigation lines.

AREA LOCATION (show on map)	GENERAL APPEARANCE & MOISTURE	MAINTENANCE REQUIRED	COMMENTS
5 SEGMENTS OF IRRIGATION	1 of 5 SEGMENTS NOTICEABLY LESS VEGETATED	SERVICE 1 of 5 CONTROL BOXES - CONFIRM TIMERS OPERATIONAL CORRECT	
VEGETATION ON N + S. BERMS	LOW-LYING GRASSES - NO MOWING NEEDED	—	
BURROWS / MOUNDS	2 BURROWS ~25 MOUNDS	PACK IN MOUNDS + BURROWS	

RMP =

RMP

~~O&M~~ Checklist

Pittsburg River Park LLC – Berm Parcel

AREA LOCATION (show on map)	GENERAL APPEARANCE & MOISTURE	MAINTENANCE REQUIRED	COMMENTS
RMP = SITEWIDE BAIT STATIONS	NEW STATIONS ON N. BERM, BUT NONE ON S. BERM	PLACE NEW BAIT STATIONS @ S. BERM	
EAST SIDE OF N. BERM	1 SPRINKLER HEAD DAMAGED	REPAIR/ REPLACE SPRINKLER HEAD	
N. SIDE OF N. BERM	SMALL SURFICIAL CRACKS (< 1")	PACK AND COMPACT W/ CLEAN FILL	

Signature: [signature]

Site Inspector: SEAN MAUREL **Date:** 9/18/17

October 6th, 2017 update:
Confirmed w/ Bluewagon that all items (RMP + general O&M related) were completed.

[signature]

Attachment 3

Hand-Drawn Maps

ARCADIS

SUBJECT: PITTSBURG RIVER PARCEL LLC
NORTH PARCEL INVESTIGATION

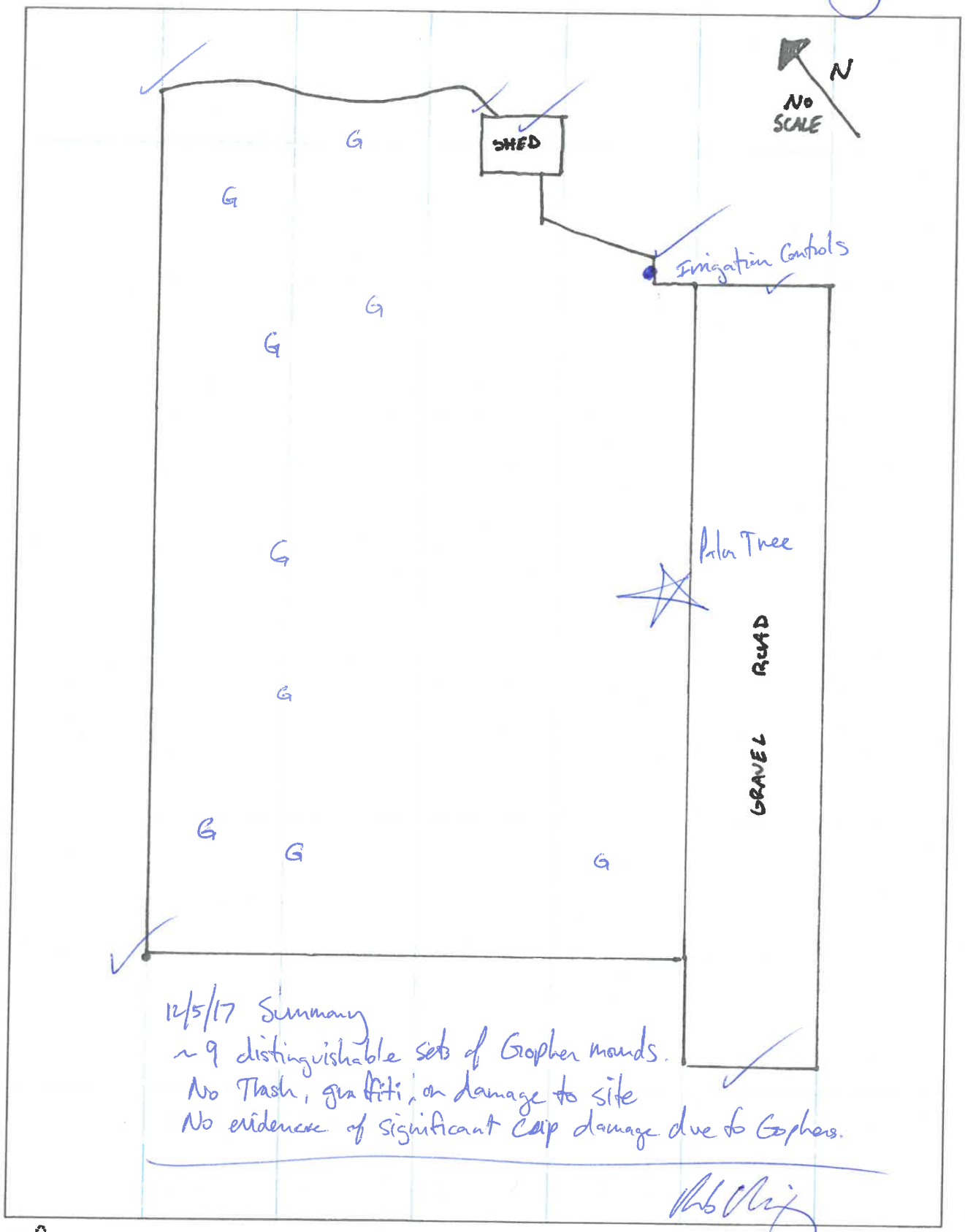
JOB NO: EM009587

BY: RM DATE: 12/5/17

CHKD: DATE:

PAGE

SHEET 1/1



12/5/17 Summary
~9 distinguishable sets of Gopher mounds.
No Trash, graffiti, or damage to site
No evidence of significant Crop damage due to Gophers.

AGM Form 30 12-01

APPROXIMATE 10' SOUNDWALL/SOIL BERM

CITY OF PITTSBURG PUBLIC PARK

EAST THIRD STREET

PARCEL "A"

PARCEL "B"

PARCEL "C"

PARCEL "D"

Cut in Gate

12/5/17 Summary
- No trash, vandalism or damage to site or fences/gates.
- No ground squirrel burrows Identified.
- Approx. 21 Gopher mounds on North Berm.
- Approx. 9 Gopher mounds on South Berm.
- Approx 10 small (<3ft) Saplings growing near Berms.
- Minor irrigation system O&M needed, (Then shut off for the winter).

Small erosional feature forming. To be filled in.

2 Saplings

Added volume

~7 saplings along fence

TOE OF BERM WASTE

TOE OF BERM WASTE

2 x 4' eroded oval. At end of irrigation line

BP-W

BP-S

BP-N

BP-E

DUP

8 (22")

SOUTH BERM

7 (22")

6 (17.5")

5 (22")

NORTH BERM

4 (18")

3 (11.5")

2 (19")

1 (18")

2x swale filled, Irrigation head broken

INTERIM FENCE

~3 Saplings

INTERIM FENCE

EXISTING PROPERTY BOUNDARY

Site visits by Arcadis 12/5/17

LEGEND

6-FOOT GALVANIZED CHAIN-LINK FENCE

PARCEL BOUNDARY

"BERM" PARCEL BOUNDARY

15 FINAL GRADE CONTOURS

CATCH BASIN

BP-N UPWIND AIR MONITORING LOCATION

BP-S DOWNWIND AIR MONITORING LOCATION

1 EXPLORATORY BORING LOCATION

APPROXIMATE EXTENT OF EROSIONAL FEATURE

(18") THICKNESS OF CAP (INCHES BELOW GROUND SURFACE)

G Gopher mound.

All have been filled in on previous O&M visits by B.W.

0 100 Feet

BASED ON TOPOGRAPHY PROVIDED BY: WINZLER&KELLY

FORMER JOHNS MANVILLE PLANT
420 EAST 3RD STREET
PITTSBURG, CALIFORNIA

Semi-Annual Maintenance Inspection Report
Hand Drawn Map

ARCADIS Design & Consultancy for natural and built assets

CITY:(Reqd) DIV/GROUP:(Reqd) DB:(Reqd) LD:(Opt) PIC:(Opt) PM:(Reqd) TM:(Opt) LYR:(On)ON=*;OFF=*REF*
G:\ENVCAD\Emeryville\ACTIVE\M09687\0019000\02\DWG\EM009687 B03.dwg LAYOUT:3 SAVED: 12/7/2016 9:59 AM ACADVER: 19.1S (LMS TECH) PAGESETUP: ---
XREFS: IMAGES: PROJECTNAME: ---

CITY:(Reed) DIV/GROUP:(Reed) DB:(Reed) LD:(Opt) PIC:(Opt) PM:(Reed) TM:(Ort) LYR:(Off)(Xref)*;OFF;*REF*
G:\ENVCAD\Elmwyllie\ACTIEM\0508700\19500020\DWG\EM050897 B63.dwg LAYOUT: 3 SAVED: 12/7/2016 6:59 AM ACADVER: 19.1S (LMS TECH) PAGESETUP: —
XREFS: IMAGES: PROJECTNAME: —

APPROXIMATE 10' SOUNDWALL/SOIL BERM

CITY OF PITTSBURG PUBLIC PARK

EAST THIRD STREET

PARCEL "A"

PARCEL "B"

PARCEL "C"

PARCEL "D"

S. MAUREL
9/18/17

- VEGETATION CONSISTS OF LOW-LYING SEASONAL GRASSES - NO MOWING NEEDED
- NO TRASH OBSERVED
- GATE SECURED W/ NEW LOCK AND CHAIN
- NEW RODENT BAIT STATIONS SET BY CLARK PEST CONTROL
- PREVIOUSLY NOTED SURFACE CRACKS FILLED AND TIMER CONTROL BOXES REPAIRED/REPLACED

LACK OF VEGETATION CHECK IRRIGATION TIMER

NO RODENT BAIT TRAPS

TOE OF BERM WASTE

TOE OF BERM WASTE

2 x 4' eroded oval. At end of irrigation line

SURFACE CRACKS PRESENT (< 1")

BP-W

BP-S

BP-N

BP-E

DUP

SOUTH BERM

NORTH BERM

8 (22")

7 (22")

6 (17.5")

5 (22")

4 (18")

3 (11.5")

2 (19")

1 (18")

INTERIM FENCE

INTERIM FENCE

EXISTING PROPERTY BOUNDARY

SPRINKLER HEAD BROKEN - REPLACE

LEGEND

- 6-FOOT GALVANIZED CHAIN-LINK FENCE
- PARCEL BOUNDARY
- "BERM" PARCEL BOUNDARY
- 15 FINAL GRADE CONTOURS
- CATCH BASIN

- BP-N UPWIND AIR MONITORING LOCATION
- BP-S DOWNWIND AIR MONITORING LOCATION
- [1] EXPLORATORY BORING LOCATION
- APPROXIMATE EXTENT OF EROSIONAL FEATURE
- (18") THICKNESS OF CAP (INCHES BELOW GROUND SURFACE)

(M) = GOPHER MOUNDS (~25 TOTAL)
(B) = GROUND SQUIRREL BURROW
● = NEW RODENT BAIT STATIONS (CLARK)
X = SPRINKLER HEAD

0 100 Feet

BASED ON TOPOGRAPHY PROVIDED BY: WINZLER&KELLY

FORMER JOHNS MANVILLE PLANT
420 EAST 3RD STREET
PITTSBURG, CALIFORNIA

BERM PARCEL TEST PIT AND AIR MONITORING LOCATIONS

ARCADIS Design & Consultancy for natural and built assets

FIGURE 3

CONTRA COSTA Co Recorder Office
STEPHEN L. WEIR, Clerk-Recorder
DOC- 2009-0236517-00

Check Number
Wednesday, OCT 07, 2009 10:08:44
MOD $26.00 REC $30.00 FTC $25.00
RED $1.00
Ttl Pd $82.00
Nbr-0000277309
lrc/R9/1-26

RECORDING REQUESTED BY:
Pittsburg River Park LLC
36 Washington Street, Suite 390
Wellesley, MA 02481

WHEN RECORDED, MAIL TO:

Barbara J. Cook, P.E. Chief
Department of Toxic Substances Control
Brownfields and Environmental Restoration
Program – Berkeley Office
700 Heinz Avenue
Berkeley, California 94710-2721

SPACE ABOVE THIS LINE RESERVED FOR RECORDER'S USE

COVENANT TO RESTRICT USE OF PROPERTY

ENVIRONMENTAL RESTRICTION

(Re: Former Johns Manville Plant Site, Contra Costa County, Assessor Parcel Number 073-050-001; Site Code 201318-11)

This Covenant and Agreement ("Covenant") is made by and between Pittsburg River Park LLC ("PRP" or the "Covenantor"), the current Owner of certain property situated in Pittsburg, County of Contra Costa, State of California, described and depicted in Exhibit "A" attached, (the "Property"), PRP's successors and assigns, and the California Department of Toxic Substances Control (the "Department"). Pursuant to Civil Code section 1471(c), the Department has determined that this Covenant is reasonably necessary to protect present or future human health or safety or the environment as a result of the presence on the land of hazardous materials as defined in Health and Safety Code section 25260. The Covenantor and the Department, collectively referred to as the "Parties," hereby agree, pursuant to Civil Code section 1471(c) and Health and Safety Code section 25355.5 that the use of the Property be restricted as set forth in this Covenant; and the Parties further agree that the Covenant shall conform with the requirements of California Code of Regulations, title 22, section 67391.1.

ARTICLE I
STATEMENT OF FACTS

1.01. The Former Johns Manville Plant site Property, totaling approximately 20.5 acres, is more particularly described and depicted in Exhibit "A." The Property is located in the area now generally bounded by the North Parcel, Third Street and a Tesoro coke facility to the north; by Harbor Street, several small light industrial businesses, and USS Posco Corporation to the east; and by the City of Pittsburg's Eighth Street Linear Park and residential properties to the south, and by residential properties to the west. This Property is more specifically described as Contra Costa County Assessor's Parcel Number: 073-050-001.

1.02. A portion of the Property is more particularly described and identified in Exhibit "B", which is attached hereto and incorporated herein by this reference ("Bermed Property") as defined below. The Bermed Property is approximately 3.2 acres and is located on the eastern side of the Property. The Bermed Property is distinguished by a chain link fence surrounding the property as further described in Exhibit "B" as Parcel D, as shown on that certain tentative parcel map entitled, "Harbor Park Development Project, Parcel Map MS 676-06, Pittsburg, California." APN: 073-050-001 (portion).

1.03. A portion of the Property is more particularly described and identified in Exhibit "C", which is attached hereto and incorporated herein by this reference ("Residential Property") as defined below. The Residential Property is approximately 17.30 acres and is located on the western and southern sides of the Property. The Residential Property is further described in Exhibit "C" as Parcels A, B and C as shown on that certain tentative parcel map entitled, "Harbor Park Development Project, Parcel Map MS 676-06, Pittsburg, California." APN: 073-050-001 (portion).

1.04. The subsurface soils on a portion of the Residential Property in the vicinity of the former evaporation pond formerly located in the southern portion of the Property are impacted with petroleum hydrocarbons and volatile organic compounds that are present below a depth of four feet National Geodetic Vertical Datum ("NGVD") and deeper, as more particularly described on Exhibit "D" ("Soil Management Area"). APN: 073-050-001 (portion).

1.05 In 2001, Harding Lawson Associates ("HLA") conducted a preliminary endangerment assessment to assess the presence and the extent of waste asbestos products and total petroleum hydrocarbons ("TPH") in the Property soils. The investigation confirmed the presence of asbestos fibers and asbestos products, TPH and volatile organic compounds ("VOC") including tetrachloroethylene ("PCE") and trichloroethylene ("TCE") at the Property. HLA presented the results of the site investigation in a report titled Preliminary Endangerment Assessment, Johns Manville – Plant Site, Pittsburg, California dated July 17, 2001 ("PEA"). In June 2006, ERM prepared a Remedial Action Plan ("RAP") for PRP. The RAP is developed in accordance with Health and Safety Code, division 20, chapter 6.8 under the oversight of the Department. Because hazardous substances, as defined in Health and Safety Code

section 25316, which are also hazardous materials as defined in Health and Safety Code section 25260, including asbestos, VOC and benzene remain in the Bermed property and in groundwater under the Property, the RAP provides that a Covenant be required as part of the site remediaton. The remedial activities selected in the RAP included consolidation of asbestos material in two berm trenches and aboveground consolidation of TPH-impacted soil from the Property, and installation of a protective barrier over the two consolidated berm areas of the Bermed Property. The berm-related remedial action includes: excavation and consolidation of TPH-and asbestos-impacted fill materials from the Property in two engineered berms; each with a subgrade storage cell and an aboveground storage cell; placing a two-foot-thick layer of clean soil as cover for the Bermed Property; installing an automatic sprinkler system; and, hydroseeding the cover soil with a grass seed mixture. The Department held a public meeting and circulated the RAP, an Initial Study and a Negative Declaration prepared pursuant to the California Environmental Quality Act, Public Resources Code section 21000 et seq., for public review and comment. The RAP and the Negative Declaration were approved by the Department on June 22, 2006. On August 25, 2006, the Department conditionally approved the Remedial Design and Implementation Plan ("RDIP") pending the approval of the final grading permit issued by the City of Pittsburg. The conditional approval of the RDIP allowed PRP's contractor to excavate the two trenches for the Bermed Property and to remove the contaminated soil from the Residential Property. On November 2, 2007, the Department approved an RDIP addendum ("ARDIP"), which allowed PRP's contractor to complete the construction of the two berms. The soil excavation and on-site and offsite disposal activities required in the RDIP were implemented from September 2006 to March 2008 to remove areas of soil contaminated with TPH and asbestos to achieve cleanup goals deemed safe for residential development of the Residential Property. Approximately 48,000 tons of soil contaminated with TPH and asbestos was excavated and disposed at the Forward Landfill and Hay Road Landfill. Approximately 103,000 tons of soil contaminated with asbestos and TPH was placed on the Bermed Property.

The Soil Management Area was initially excavated as deep as 11-feet NGVD or 22 feet below ground surface. In accordance with the ARDIP, the excavation of the former evaporation pond was extended to the north and west at an elevation of about 4 feet NGDV (observed groundwater table). About 4,400 cubic yards of stockpiled soil previously excavated from below the water table at a depth of 22 feet bgs was placed back to the excavation. The TPH-affected soil that was removed at or above the water table was placed on the Bermed Property. The results of the confirmation samples collected from the base of the excavation below the groundwater table in the Soil Management Area detected TPH from below laboratory analytical reporting limits to as high as 10,000 milligrams per kilogram ("mg/kg"). These concentrations exceed the cleanup level established by the RAP and the San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels for residential development and protection of groundwater ("Residential ESLs"). Five grab groundwater samples collected in the Soil Management Area after the excavation was backfilled were above the ESL for groundwater not used as a source of drinking water and the detected TPH

concentrations ranged from 7.1 milligrams per liter ("mg/L") to 500 mg/L. Benzene was the only petroleum-related constituent detected above its Maximum Contaminant Level ("MCL") and was detected in only one groundwater sample collected under the Soil Management Area at a concentration of 1.3 micrograms per liter ("µg/L"), just slightly above the MCL of 1.0 µg/L. PCE and TCE were also detected at concentrations of 72 µg/L and 7.9 µg/L, respectively on the southwestern corner of the Property. These concentrations exceeded their respective MCLs. A soil-vapor investigation was also conducted to evaluate the potential hazard of vapor intrusion from groundwater for future residential development. Based on the results of a soil-vapor investigation and human health screening evaluation for the vapor intrusion pathway, estimated risks and hazards were below regulatory cancer and non-cancer targets associated with residential land use. The estimated cancer risk was determined using default building foundation assumptions, DTSC residential exposure assumptions, and site-specific soil parameters.

TPH in soil and groundwater at the Soil Management Area below the groundwater table exceeds the Residential soil ESL and the ESL for groundwater not used as a source of drinking water. Groundwater at the Property is also impacted with VOC. The contamination does not pose an unacceptable threat to public health in its current location. However, the contamination is present above Residential ESLs and MCLs. Therefore, it could pose a threat to public health if the contaminated soil is excavated or groundwater is extracted in areas with the potential for direct contact. The Bermed Property is intended to be used as a landscaped buffer for residential uses on the Property. The Department concluded that the Property, as remediated, and subject to the restrictions of this Covenant, does not present an unacceptable threat to human safety or the environment, if the Property is managed in accordance with the restrictions set forth in this Covenant.

1.06 The restrictions set forth in this Covenant are necessary to preclude present and future users' exposure to asbestos that will remain in Bermed Property soils and to preclude present and future users' exposure to petroleum hydrocarbons and volatile organic compounds that will remain in and below the Soil Management Area soils and in groundwater beneath the Residential Property.

ARTICLE II
DEFINITIONS

2.01. Department. "Department" means the California Department of Toxic Substances Control and includes its successor agencies, if any.

2.02. Environmental Restrictions. "Environmental Restrictions" means all protective provisions, covenants, restrictions, prohibitions, and terms and conditions as set forth in any section of this Covenant.

2.03. Improvements. "Improvements" includes, but is not limited to: buildings, structures, roads, driveways, improved parking areas, wells, pipelines, or other utilities.

2.04. Lease. "Lease" means lease, rental agreement, or any other document that creates a right to use or occupy any portion of the Property.

2.05. Occupant. "Occupant" means Owners and any person or entity entitled by ownership, leasehold, or other legal relationship to the right to occupy any portion of the Property.

2.06. Owner. "Owner" means the Covenantor, and all successors in interest including heirs and assigns, who at any time hold title to all or any portion of the Property.

ARTICLE III
GENERAL PROVISIONS

3.01. Restrictions to Run with the Land. This Covenant sets forth Environmental Restrictions that apply to and encumber the Property and every portion thereof no matter how it is improved, held, used, occupied, leased, sold, hypothecated, encumbered, or conveyed. This Covenant: (a) runs with the land pursuant to Health and Safety Code section 25355.5 and Civil Code section 1471; (b) inures to the benefit of and passes with each and every portion of the Property, (c) is for the benefit of, and is enforceable by the Department, and (d) is imposed upon the entire Property unless expressly stated as applicable only to a specific portion.

3.02. Binding upon all Owners/Occupants. Pursuant to the Health and Safety Code, this Covenant binds all Owners of the Property, their heirs, successors, and assignees, and the agents, employees, and lessees of the Owners, their heirs, successors, and assignees. Pursuant to Civil Code section 1471, all successive Owners of the Property, are expressly bound hereby for the benefit of the Department provided however, that Owners/Occupants are not responsible for any obligations and/or breaches of those obligations arising subsequent to their ownership/occupancy unless they caused or contributed to such a breach.

3.03. Incorporation into Deeds and Leases. This Covenant shall be incorporated by reference in each and every deed and lease for any portion of the Property.

3.04. Conveyance of Property. The Owner shall provide notice to the Department not later than thirty (30) days after any conveyance or other transfer of any ownership interest in the Property (excluding mortgages, liens, and other nonpossessory encumbrances) made by that Owner. The written notice shall include the name and mailing address of the new owner of the Property and shall reference the site name and site code as listed on page one of this Covenant. The notice shall also

include the APN noted on page one. If the new owner's property has been assigned a different APN, each such APN that covers the Property must be provided. The Department shall not, by reason of this Covenant, have authority to approve, disapprove, or otherwise affect a proposed conveyance or transfer, except as otherwise provided by law, or by administrative order.

3.05. Costs of Administering the Covenant to be Paid by Owner. The Department has already incurred and will in the future incur costs associated with the administration of this Covenant. Therefore the Owner hereby covenants for the Covenantor and for all subsequent Owners that, pursuant to Title 22 California Code of Regulations section 67391.1(h), the Owner agrees to pay the Department's cost in administering the Covenant.

ARTICLE IV
RESTRICTIONS

4.01. Prohibited Uses of the Bermed Property. The Bermed Property shall not be used for any of the following purposes:

(a) A residence, including any mobile home or factory built housing, constructed or installed for use as residential human habitation;

(b) A hospital for humans;

(c) A public or private school for persons under 21 years of age;

(d) A day care center for children;

(e) Raising of food (cattle, food crops);

4.02 Prohibited Activities on the Bermed Property. The following activities shall not be conducted at the Bermed Property:

(a) Drilling for water, oil, or gas, or extraction of groundwater without prior written approval by the Department.

(b) Activities that may disturb the Berms (e.g., excavation, grading, removal, trenching, filling, earth movement, or mining), except as authorized pursuant to the Operation and Maintenance Agreement for the Former Johns Manville Plant Site Bermed Property, as approved by the Department, or otherwise approved in writing by the Department.

4.03 Notice to the Department regarding Disturbance of the Bermed Property. The current Owner or Occupant shall notify the Department of each of the following on the Bermed Property: (a) the type, cause, location and date of any disturbance or damage to the lowest six inches in depth of the cover soil on the Berm and (b) the type and date of repair of such damage. Notification to the Department shall be made as provided below within ten (10) working days of (a) the discovery of any such disturbance and (b) the completion of any repairs. Timely and accurate notification by any Owner or Occupant shall satisfy this requirement on behalf of all other Owners and Occupants.

The Owner shall prepare a Soil Management Plan and a Health and Safety Plan for the Bermed Property, approved by the Department, prior to conducting activities that will disturb the integrity of the Berms. Any contaminated soils brought to the surface by grading, excavation, trenching, or backfilling shall be managed in accordance with all applicable provisions of state and federal law. The Owner shall obtain the Department's written approval prior to removing any contaminated soils from the Bermed Property

4.04 Prohibited Activities on the Residential Property. The following activities shall not be conducted at the Residential Property:

(a) Extraction of groundwater for use as drinking water and for any other purposes other than groundwater monitoring or treatment or excavation or construction dewatering

(b) Installation and/or pumping of water producing wells, including but not limited to water supply, irrigation or private wells; or

(c) Removal and handling of groundwater for the purpose of excavation or construction dewatering shall be managed in accordance with all applicable provisions of state and federal law.

4.05 Prohibited Activities on the Soil Management Area. In addition to the prohibitions set forth in section 4.04, above, the following activities shall not be conducted at the Soil Management Area:

(a) Activities that will disturb the soil at or below four feet NGVD or which encounter groundwater if it occurs at a shallower depth (e.g., excavation, grading, removal, trenching, filling, earth movement, mining, or drilling) without a Soil Management Plan approved by the Department in advance. At the time remediation was completed, there was approximately five feet of clean soil above four feet NGVD.

(b) Any contaminated soils brought to the surface by grading, excavation, trenching, or backfilling shall be managed in accordance with all applicable provisions of state and federal law.

4.06 Access for Department. The Department shall have reasonable right of entry and access to the Bermed Property and the Residential Property for inspection, monitoring, and other activities consistent with the purposes of this Covenant as deemed necessary by the Department in order to protect the public health or safety, or the environment.

4.07 Access for Implementing Operation and Maintenance. The entity or person responsible for implementing the operation and maintenance activities shall have reasonable rights of entry and access to the Bermed Property and the Residential Property for the purpose of implementing the operation and maintenance.

ARTICLE V
ENFORCEMENT

5.01. Enforcement. Failure of the Owner or Occupant to comply with this Covenant shall be grounds for the Department to require modification or removal, as appropriate, of any Improvements constructed or placed upon any portion of the Property in violation of this Covenant. Violation of this Covenant, including but not limited to, failure to submit, or the submission of any false statement, record or report to the Department, shall be grounds for the Department to pursue administrative, civil, or criminal actions, as provided by law.

ARTICLE VI
VARIANCE, TERMINATION, AND TERM

6.01. Variance. The Owner or any other aggrieved person may apply to the Department for a written variance from the provisions of this Covenant. Such application shall be made in accordance with Health and Safety Code section 25233.

6.02. Termination. The Owner or any other aggrieved person may apply to the Department for a termination of the Restrictions or other terms of this Covenant as they apply to all or any portion of the Bermed Property or the Residential Property. Such application shall be made in accordance with Health and Safety Code section 25234.

6.03. Term. Unless ended or modified in accordance with the paragraphs above, by law, or by the Department in the exercise of its discretion, this Covenant shall continue in effect in perpetuity.

ARTICLE VII
MISCELLANEOUS

7.01. No Dedication Intended. Nothing set forth in this Covenant shall be construed to be a gift or dedication, or offer of a gift or dedication, of the Property, or any portion thereof to the general public or anyone else for any purpose whatsoever. Further, nothing set forth in this Covenant shall be construed to effect a taking under federal or state law.

7.02. Department References. All references to the Department include successor agencies/departments or other successor entity.

7.03. Recordation. The Covenantor shall record this Covenant, with all referenced Exhibits, in the County of Contra Costa within ten (10) days of the Covenantor's receipt of a fully executed original.

7.04. Notices. Whenever any person gives or serves any Notice ("Notice" as used herein includes any demand or other communication with respect to this Covenant), each such Notice shall be in writing and shall be deemed effective: (1) when delivered, if personally delivered to the person being served or to an officer of a corporate party being served, or (2) three (3) business days after deposit in the mail, if mailed by United States mail, postage paid, certified, return receipt requested:

To Owner: Pittsburg River Park LLC
36 Washington Street, Suite 390
Wellesley, MA 02481
Attention: Mr. John B. Hanselman

Or, at the Department's discretion to:

Paul Hastings Janofsky & Walker LLP
55 Second Street, 24th Floor
San Francisco, CA 94105
Attention: Mr. Gordon Hart

To DTSC: Barbara J. Cook, P.E., Performance Manager
Department of Toxic Substances Control
Brownfields and Environmental Restoration Program – Berkeley Office
700 Heinz Avenue
Berkeley, California 94710-2721

Any party may change its address or the individual to whose attention a Notice is to be sent by giving written Notice in compliance with this paragraph.

7.05. Partial Invalidity. If any portion of the Restrictions or other term set forth herein, or the application of it to any person or circumstance, is determined by a court of

competent jurisdiction to be invalid for any reason, the surviving portions of this Covenant shall remain in full force and effect as if such portion found invalid had not been included herein.

7.06. Statutory References. All statutory references include successor provisions.

7.07. Annual Reporting Requirements for the Bermed Property. The Owner of the Bermed Property shall conduct an annual inspection of the Bermed Property verifying compliance with this Covenant, and shall submit an annual inspection report to the Department for its approval by January 15th of each year. The annual inspection report must include the dates, times, and names of those who conducted the inspection and reviewed the annual inspection report. It also shall describe how the observations were performed that were the basis for the statements and conclusions in the annual inspection report (e.g., drive by, fly over, walk in, etc.). If violations are noted, the annual inspection report must detail the steps taken to return to compliance. If the Owner identifies any violations of this Covenant during the annual inspections or at any other time, the Owner must within 10 days of identifying the violations: determine the identity of the party in violation, send a letter advising the party of the violation of the Covenant, and demand that the violations cease immediately. Additionally, copies of any correspondence related to the violation of this Covenant shall be sent to the Department within 10 days of its original transmission.

IN WITNESS WHEREOF, the Parties execute this Covenant.

Covenantor: Pittsburg River Park LLC

By: _____ Date: 9/17/09

Title: John B. Hanselman
Managing Principal

Department of Toxic Substances Control

By: _____ Date: 9/25/09

Title: Barbara J. Cook, P.E., Performance Manager
Brownfields and Environmental Restoration
Program, Berkeley Office

Dept. of Toxic Substances Control

STATE OF CALIFORNIA, COUNTY OF Alameda

On 9-25-09 before me, Nicole Thuemmler, notary public,

personally appeared Barbara J. Cook

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct. WITNESS my hand and official seal.

SIGNATURE Nicole Thuemmler

NICOLE THUEMMLER
COMM. # 1668722
NOTARY PUBLIC-CALIFORNIA
ALAMEDA COUNTY
MY COMM. EXP. MAY 21, 2010

STATE OF ~~CALIFORNIA~~ MA)
)
COUNTY OF NORFOLK)

On this 17 day of SEPT., in the year 2009, before me RICHARD THALL Notary Public, personally appeared JOHN B. HANSELMAN, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is /are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of ~~California~~ MA that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____

RICHARD M. THALL
Notary Public
Commonwealth of Massachusetts
My Commission Expires
April 30, 2010

EXHIBIT A

LEGAL DESCRIPTION

EXHIBIT "A"

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF Pittsburg, COUNTY OF Contra Costa, STATE OF California AND IS DESCRIBED AS FOLLOWS:

CITY OF PITTSBURG

PARCEL ONE:

BEGINNING AT THE POINT OF INTERSECTION OF THE SOUTHERLY LINE OF THIRD STREET OF THE CITY OF PITTSBURG, IF EXTENDED EASTERLY, WITH THE EASTERLY BOUNDARY LINE OF THE CITY OF PITTSBURG AS IT NOW EXISTS; THENCE RUNNING SOUTH 73° 18' WEST ALONG THE SAID SOUTHERLY LINE OF THIRD STREET, PRODUCED EASTERLY, A DISTANCE OF SIX HUNDRED THIRTY ONE (631) FEET TO A POINT; THENCE LEAVING SAID LINE AND RUNNING SOUTH 15° 45' WEST, A DISTANCE OF TEN HUNDRED SEVENTY-NINE AND 50/100 (1078.50) FEET, MORE OR LESS, TO A POINT ON THE NORTHERLY LINE OF SEVENTH STREET OF THE CITY OF PITTSBURG, PRODUCED EASTERLY; THENCE RUNNING ALONG SAID LAST MENTIONED LINE, NORTH 73° 15' WEST, A DISTANCE OF SIX HUNDRED THIRTY ONE (631) FEET TO A POINT ON THE AFORESAID EASTERLY BOUNDARY LINE OF THE CITY OF PITTSBURG; THENCE RUNNING ALONG SAID LAST MENTIONED LINE, NORTH 15° 45' EAST, A DISTANCE OF TEN HUNDRED SEVENTY-NINE AND 50/100 (1079.50) FEET, MORE OR LESS, TO THE POINT OF BEGINNING, AND BEING A PORTION OF THE RANCHO LOS MEDANOS, CONTRA COSTA COUNTY, CALIFORNIA,

ASSESSOR'S PARCEL NO. 073-050-001 (PORTION)

PARCEL TWO:

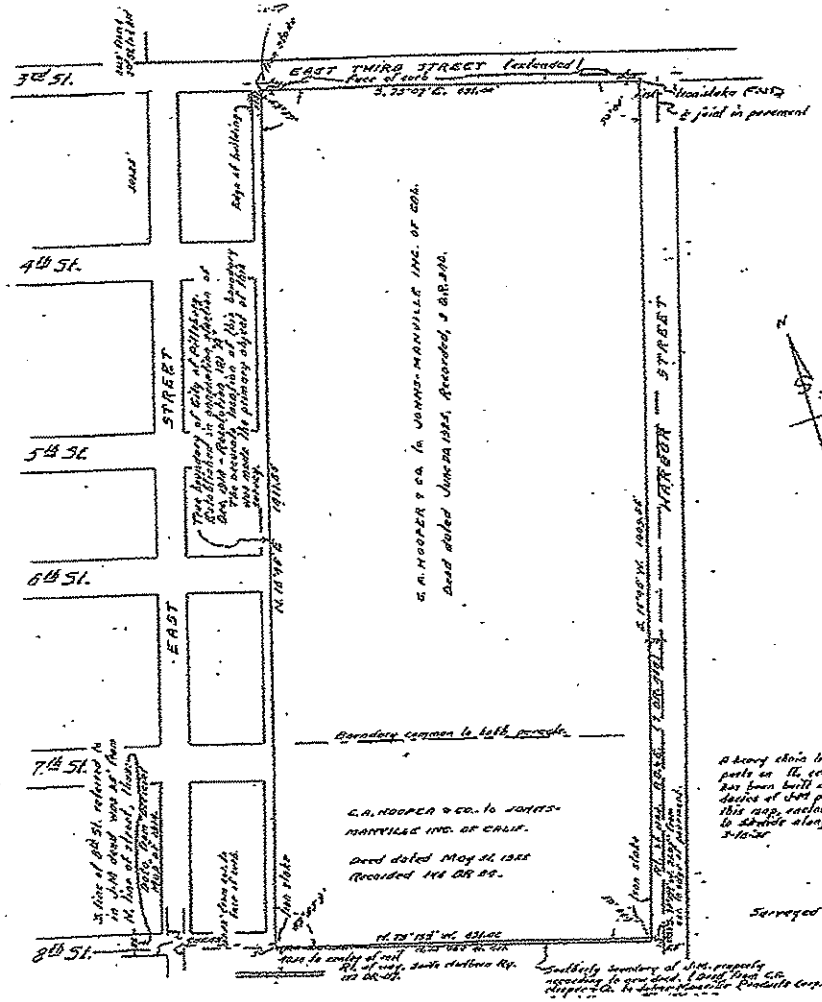
COMMENCING AT THE POINT OF INTERSECTION FO THE EASTERLY BOUNDARY LINE OF THE CITY OF PITTSBURG, AS SAID BOUNDARY LINE NOW EXISTS, AND THE SOUTHERLY LINE OF THAT CERTAIN TRACT OF LAND DESCRIBED AS PARCEL NO. 1, CONVEYED BY C. A. HOOPER & CO., A CORPORATION, TO JOHNS-MANVILLE INCORPORATED OF CALIFORNIA, A CORPORATION, BY THAT CERTAIN DEED RECORDED IN VOLUME 3 OF OFFICIAL RECORDS, AT PAGE 340, IN THE OFFICE OF THE COUNTY RECORDER, OF THE COUNTY OF CONTRA COSTA, STATE OF CALIFORNIA; RUNNING THENCE ALONG SAID SOUTHERLY LINE OF SAID LANDS OF JOHNS-MANVILLE INCORPORATED OF CALIFORNIA, SO CONVEYED BY THE AFORESAID DEED, SOUTH 73° 15' EAST, 631 FEET TO THE SOUTHEAST CORNER OF THE LANDS OF SAID JOHNS-MANVILLE INCORPORATED OF CALIFORNIA SO CONVEYED BY THE AFORESAID DEED; THENCE SOUTH 16° 45' WEST, 335 FEET, MORE OR LESS, TO A POINT OF A LINE WHICH IS THE EXTENSION EASTERLY OF THE SOUTHERLY LINE OF EAST EIGHTH STREET OF SAID CITY OF PITTSBURG; THENCE ALONG SAID LAST MENTIONED LINE, NORTH 73° 15' WEST, A DISTANCE OF 631 FEET TO A POINT ON THE EASTERLY BOUNDARY LINE OF SAID CITY OF PITTSBURG, AS SAID EASTERLY BOUNDARY LINE NOW EXISTS; THENCE ALONG SAID LAST NAMED LINE, NORTH 16° 45' EAST, A DISTANCE OF 335 FEET, MORE OR LESS, TO THE POINT OF COMMENCEMENT,

ASSESSOR'S PARCEL NO. 073-050-001 (PORTION)

PARCEL THREE:

BEGINNING AT A POINT IN THE EASTERLY BOUNDARY OF THE CITY OF PITTSBURG, CONTRA COSTA COUNTY, CALIFORNIA, THE SAID POINT BEING AT THE SOUTHEASTERLY CORNER OF LAND DESCRIBED AS PARCEL I IN A DEED FROM C. A. HOOPER & CO. TO JOHNS-MANVILLE INCORPORATED OF CALIFORNIA, DATED MAY 31, 1928 AND RECORDED IN VOLUME 146 OF OFFICIAL RECORDS, AT PAGE 84, RECORDS OF CONTRA COSTA COUNTY; THENCE FROM THE SAID POINT OF BEGINNING, ALONG THE SOUTHERLY BOUNDARY OF THE SAID LAND OF JOHNS-MANVILLE INCORPORATED OF CALIFORNIA, SOUTH 73° 19-1/2' EAST, 631.00 FEET TO THE SOUTHEASTERLY CORNER OF THE SAID LAND; THENCE SOUTH 16° 45' WEST, FIVE AND FIVE TENTHS (5.5) FEET, MORE OR LESS, TO THE NORTHEASTERLY CORNER OF LAND DESCRIBED AS PARCEL I IN A DEED FROM C. A. HOOPER & CO. TO SACRAMENTO NORTHERN RAILWAY, DATED OCTOBER 8, 1929 AND RECORDED IN VOLUME 192 OF OFFICIAL RECORDS, AT PAGE 467, RECORDS OF CONTRA COSTA COUNTY; THENCE ALONG THE NORTHERLY BOUNDARY OF THE SAID SACRAMENTO NORTHERN RAILWAY, NORTH 73° 06-1/2' WEST, 631.00 FEET TO A POINT IN THE EASTERLY BOUNDARY OF THE CITY OF PITTSBURG; THENCE ALONG THE SAID LAST NAMED BOUNDARY, NORTH 16° 45' EAST, THREE (3.0) FEET, MORE OR LESS, TO THE POINT OF BEGINNING.

ASSESSOR'S PARCEL NO. 073-050-001 (PORTION)



PROPERTY OF
JOHNS-MANVILLE INC., OF CALIF.
PITTSBURG, CALIF.
WITHIN RANCHO LOS MEDANOS
and property of
JOHNS MANVILLE PRODUCTS CORPORATION

SCALE:
1 inch = 100 feet.

FILED AT REQUEST OF R. R. ARNOLD MAR 20TH, 1935 AT 30 MIN. PAST 3 P.M. IN THE OFFICE OF THE COUNTY RECORDER OF CONTRA COSTA COUNTY, STATE OF CALIFORNIA.

[illegible]
COUNTY RECORDER.

Corners of Johns-Manville property are marked with ¾" iron pipes. The immediate building of a permanent fence is contemplated.

Basis of bearings is east boundary of City of Pittsburg.

A heavy chain link fence with H-bar posts on 10' centers set in concrete has been built along the exterior boundaries of JM property as shown upon this map, excepting the new strip 3 to Harbor along the northerly boundary. Ehatt. 3-16-35

Survey and map by C. L. O'Hara, Registered Civil Engineer.
C. L. O'Hara

Surveyed in January 1935.

Approved, March 14, 1935
[illegible]
County Surveyor

345 M 1

MISSING REF 6, 9, 11, 12

R 1
(1)

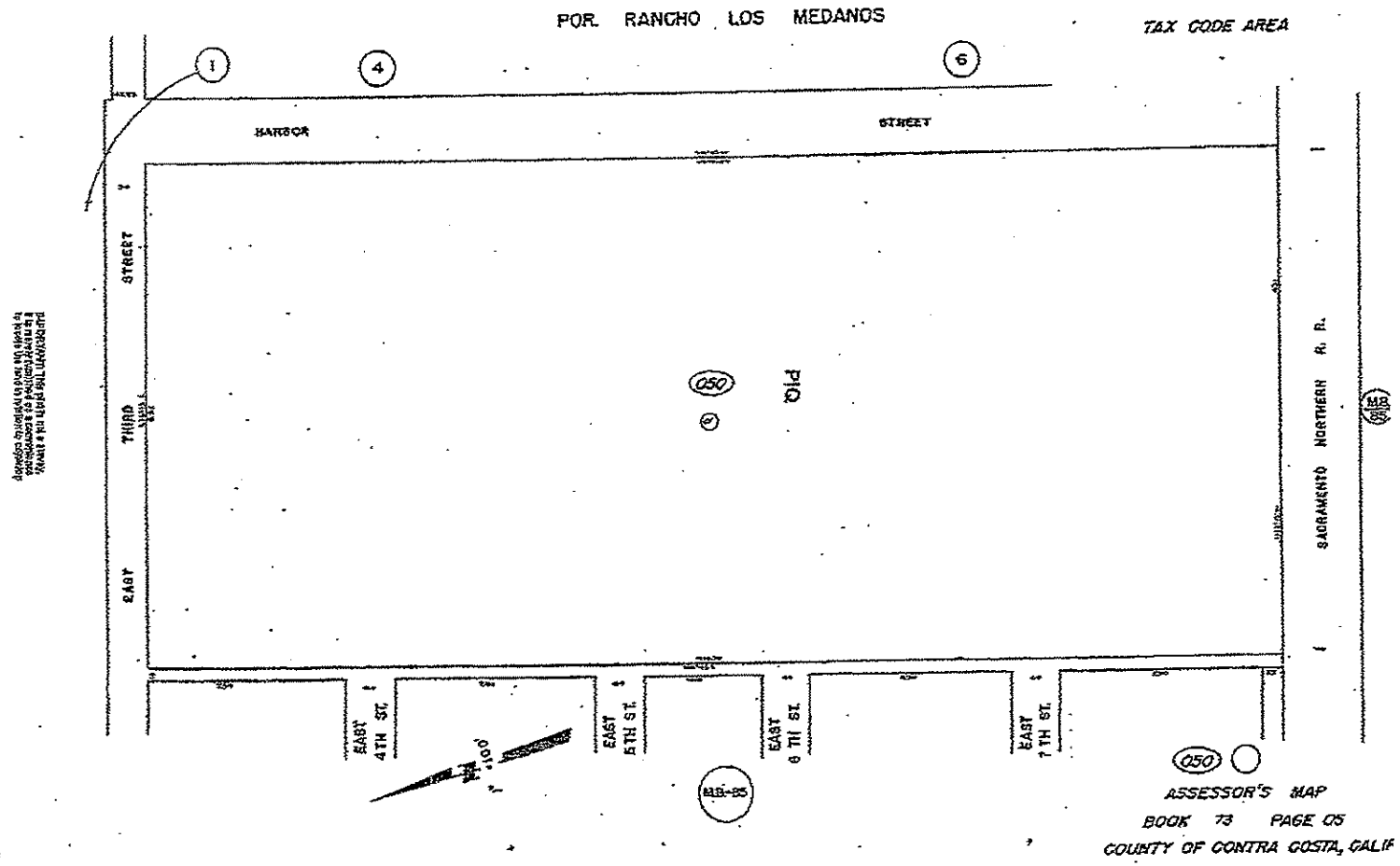

POR. RANCHO LOS MEDANOS
TAX CODE AREA
1
4
6
HARBOR
STREET
THIRD STREET
EAST
SACRAMENTO NORTHERN R. R.
050
Old
EAST 4TH ST.
EAST 5TH ST.
EAST 6TH ST.
EAST 7TH ST.
100'
MB-95
050
ASSESSOR'S MAP
BOOK 73 PAGE 05
COUNTY OF CONTRA COSTA, CALIF

EXHIBIT B

EXHIBIT A
Legal Description

All that certain real property situate in the City of Pittsburg, County of Contra Costa, State of California, being a portion of the lands of PITTSBURG RIVER PARK LLC described by deed recorded October 20, 2004 under Document Number 2004-0402164, Contra Costa County Records, being a portion of Parcel One, Parcel Two and Parcel Three as described in said deed, being shown on that certain map filed on March 20, 1935 in Book 3 of Land Survey Maps at Page 1, Contra Costa County Records, being within the Rancho Los Medanos, said portion of lands being more particularly described as follows:

Parcel D

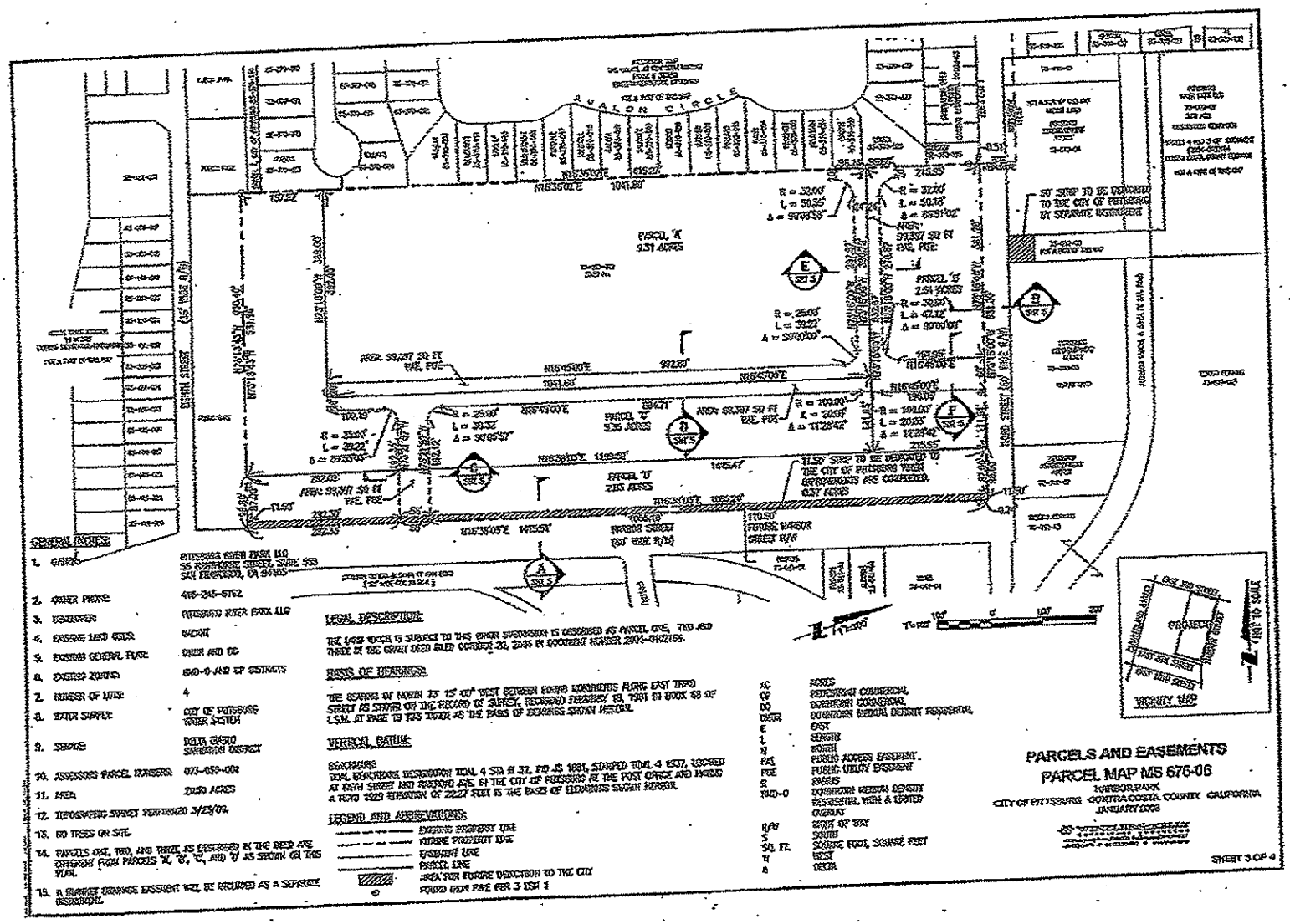
Commencing at a found standard City of Pittsburg street monument from which a found standard City of Pittsburg street monument bears North 73°15'00"West, 1269.91 feet as shown on that certain map filed on October 7, 2003 in Book 127 of Land Survey Maps at Page 11, Contra Costa County Records; thence South 16°45'00"West, 20.00 feet to a point on the northerly line of East Third Street; thence easterly along said line South 73°15'00"East, 191.24 feet to a point; thence leaving said line South 16°45'00"West, 50.00' to a point on the southerly line of East Third Street, being the northwest corner of said Parcel One, from which point a found ¾" iron pipe with no tag shown on said map filed March 20, 1935 in Book 3 of Land Survey Maps at Page 1, Contra Costa County Records bears South 16°36'02"West, 0.51 feet; thence easterly along said southerly line South 73°15'00" East, 532.80 feet to the **Point of Beginning**; thence continuing along said line South 73°15'00" East, 98.50 feet to the northeasterly corner of said lands, from which point a found ¾" iron pipe with no tag shown on said map bears South 16°38'03"West, 0.74 feet; thence southerly, along the easterly line of said lands, South 16°38'03" West, 1415.51 feet to a found ¾" iron pipe with no tag shown on said map marking the southeasterly corner of said lands; thence westerly, along the easterly line of said lands North 73°13'43" West, 98.50 feet; thence leaving said line North 16°38'03" East, 1415.47 feet to the **Point of Beginning**.

Containing 3.20 Acres, more or less.

Date: 12.9.08
John A. Cardarelli PLS 7769
Lic. Expires 12/31/2009
End of Description

LICENSED LAND SURVEYOR
JOHN A. CARDARELLI
No. 7769
Exp. 12-31-09
STATE OF CALIFORNIA

JA1505 - Renova Pittsburg\SURVEY\Parcel 2 HP PM.dwg



GENERAL NOTES

1. OWNER: PITTSBURG RIVER PARK, LLC, 55 HAWTHORNE STREET, SUITE 555, SAN FRANCISCO, CA 94105
2. OWNER PHONE: 415-243-8762
3. SURVEYOR: PITTSBURG RIVER PARK LLC
4. EXISTING LAND USES: VACANT
5. EXISTING GENERAL PLAN: DMX AND OS
6. EXISTING ZONING: MXD-G AND SP DISTRICTS
7. NUMBER OF LOTS: 4
8. WATER SUPPLY: CITY OF PITTSBURG WATER SYSTEM
9. SEWER: DELTA DIABLO SANITATION DISTRICT
10. ASSESSORS PARCEL NUMBERS: 073-059-002
11. AREA: 20.50 ACRES
12. TOPOGRAPHY SURVEY PERFORMED 3/23/07.
13. NO TREES ON SITE.
14. PARCELS ONE, TWO, AND THREE, AS DESCRIBED AT THE BEGINNING OF THE DEED ARE DIFFERENT FROM PARCELS 'A', 'B', 'C', AND 'D' AS SHOWN ON THIS PLAT.
15. A STORM DRAINAGE EASEMENT WILL BE RECORDED AS A SEPARATE INSTRUMENT.

LEGAL DESCRIPTION:

THE LAND SHOWN IS SUBJECT TO THAT GRANT SUBDIVISION IS DESCRIBED AS PARCEL ONE, TWO AND THREE OF THAT GRANT DEED FILED OCTOBER 20, 2005 BY DOCUMENT NUMBER 2005-0327195.

BASIS OF BEARINGS:

THE BEARING OF NORTH 33° 15' 00" WEST BETWEEN FOUND MONUMENTS ALONG EAST LINE OF HARBOR STREET AS SHOWN ON THE RECORD OF SURVEY, RECORDED FEBRUARY 19, 1981 IN BOOK 48 OF SURVEYS AT PAGE 19 OF THE OFFICIAL RECORDS OF CONTRA COSTA COUNTY, CALIFORNIA, WAS TAKEN AS THE BASIS OF BEARINGS SHOWN HEREON.

VERTICAL DATUM:

BENCHMARK:
TEMPORARY BENCHMARK NO. 4 SET IN MONUMENT WELL AT THE INTERSECTION OF AVALON CIRCLE AND HARBOR STREET, AS SHOWN ON THE MAP OF AVALON CIRCLE, RECORDED IN BOOK 284 OF MAPS AT PAGE 1, CONTRA COSTA COUNTY RECORDS.
ELEVATION: 22.27 FEET (NAVD 88)

LEGEND AND ABBREVIATIONS:

- EXISTING PROPERTY LINE
- FUTURE PROPERTY LINE
- EASEMENT LINE
- PARCEL LINE
- AREA FOR FUTURE DEDICATION TO THE CITY
- FOUND IRON PIPE PER 3 LSM 1

AC	ACRES
CC	CENTRAL COMMERCIAL
DO	DOWNTOWN COMMERCIAL
DMX	DOWNTOWN MIXED DENSITY RESIDENTIAL
E	EAST
L	LENGTH
N	NORTH
PAE	PUBLIC ACCESS EASEMENT
PUE	PUBLIC UTILITY EASEMENT
R	RADIUS
RMD-O	DOWNTOWN MIXED DENSITY RESIDENTIAL WITH A WATER OVERLAY
R/W	RIGHT OF WAY
S	SOUTH
SQ. FT.	SQUARE FOOT, SQUARE FEET
W	WEST
Δ	DELTA

EXHIBIT C

EXHIBIT A
Legal Description

All that certain real property situate in the City of Pittsburg, County of Contra Costa, State of California, being a portion of the lands of PITTSBURG RIVER PARK LLC described by deed recorded October 20, 2004 under Document Number 2004-0402164, Contra Costa County Records, being a portion of Parcel One, Parcel Two and Parcel Three as described in said deed, being shown on that certain map filed on March 20, 1935 in Book 3 of Land Survey Maps at Page 1, Contra Costa County Records, being within the Rancho Los Medanos, said portion of lands being more particularly described as follows:

Parcel A

Commencing at a found standard City of Pittsburg street monument from which a found standard City of Pittsburg street monument bears North 73°15'00"West, 1269.91 feet as shown on that certain map filed on October 7, 2003 in Book 127 of Land Survey Maps at Page 11, Contra Costa County Records; thence South 16°45'00"West, 20.00 feet to a point on the northerly line of East Third Street; thence easterly along said line South 73°15'00"East, 191.24 feet to a point; thence leaving said line South 16°45'00"West, 50.00' to a point on the southerly line of East Third Street, being the northwest corner of said Parcel One, from which point a found ¾" iron pipe with no tag shown on said map filed March 20, 1935 in Book 3 of Land Survey Maps at Page 1, Contra Costa County Records bears South 16°36'02"West, 0.51 feet; thence southerly, along the westerly line of said lands South 16°36'02" West, 215.95 feet to the **Point of Beginning**; thence continuing along said line South 16°36'02" West, 1041.80 feet; thence leaving said line South 73°15'00"East, 388.00 feet; thence North 16°45'00"East, 1041.80 feet; thence North 73°15'00"West, 390.72 feet to the **Point of Beginning**.

Containing 9.31 acres, more or less.

Date: 12-9-08
John A. Cardarelli PLS 7769
Lic. Expires 12/31/2009
End of Description



J:\41505 - Renova Pittsburg\SURVEY\Parcel A HP PM.dwg

EXHIBIT A
Legal Description

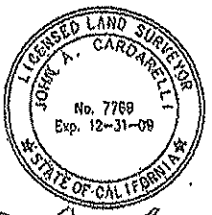
All that certain real property situate in the City of Pittsburg, County of Contra Costa, State of California, being a portion of the lands of PITTSBURG RIVER PARK LLC described by deed recorded October 20, 2004 under Document Number 2004-0402164, Contra Costa County Records, being a portion of Parcel One, Parcel Two and Parcel Three as described in said deed, being shown on that certain map filed on March 20, 1935 in Book 3 of Land Survey Maps at Page 1, Contra Costa County Records, being within the Rancho Los Medanos, said portion of lands being more particularly described as follows:

Parcel B

Commencing at a found standard City of Pittsburg street monument from which a found standard City of Pittsburg street monument bears North 73°15'00"West, 1269.91 feet as shown on that certain map filed on October 7, 2003 in Book 127 of Land Survey Maps at Page 11, Contra Costa County Records; thence South 16°45'00"West, 20.00 feet to a point on the northerly line of East Third Street; thence easterly along said line South 73°15'00"East, 191.24 feet to a point; thence leaving said line South 16°45'00"West, 50.00' to a point on the southerly line of East Third Street, being the northwest corner of said Parcel One, being the **Point of Beginning**, from which point a found ¾" iron pipe with no tag shown on said map filed March 20, 1935 in Book 3 of Land Survey Maps at Page 1, Contra Costa County Records bears South 16°36'02"West, 0.51 feet; thence southerly, along the westerly line of said lands South 16°36'02" West, 215.95 feet; thence leaving said line South 73°15'00" East, 532.67 feet; thence North 16°38'03"East, 215.95 feet to the southerly line of East Third Street; thence westerly along said line North 73°15'00" East, 532.80 feet to the **Point of Beginning**.

Containing 2.64 Acres, more or less.

Date: 12.9.08
John A. Cardarelli PLS 7769
Lic. Expires 12/31/2009
End of Description



J:\41505 - Ronovn Pittsburg\SURVEY\Parcel B HP PM.dwg

EXHIBIT A
Legal Description

All that certain real property situate in the City of Pittsburg, County of Contra Costa, State of California, being a portion of the lands of PITTSBURG RIVER PARK LLC described by deed recorded October 20, 2004 under Document Number 2004-0402164, Contra Costa County Records, being a portion of Parcel One, Parcel Two and Parcel Three as described in said deed, being shown on that certain map filed on March 20, 1935 in Book 3 of Land Survey Maps at Page 1, Contra Costa County Records, being within the Rancho Los Medanos, said portion of lands being more particularly described as follows;

Parcel C

Commencing at a found standard City of Pittsburg street monument from which a found standard City of Pittsburg street monument bears North 73°15'00"West, 1269.91 feet as shown on that certain map filed on October 7, 2003 in Book 127 of Land Survey Maps at Page 11, Contra Costa County Records; thence South 16°45'00"West, 20.00 feet to a point on the northerly line of East Third Street; thence easterly along said line South 73°15'00"East, 191.24 feet to a point; thence leaving said line South 16°45'00"West, 50.00' to a point on the southerly line of East Third Street, being the northwest corner of said Parcel One, from which point a found ¾" iron pipe with no tag shown on said map filed March 20, 1935 in Book 3 of Land Survey Maps at Page 1, Contra Costa County Records bears South 16°36'02"West, 0.51 feet; thence southerly, along the westerly line of said lands South 16°36'02" West, 1257.75 feet to the **Point of Beginning**; thence leaving said line South 73°15'00"East, 388.00 feet; thence North 16°45'00"East, 1041.80 feet; thence South 73°15'00" East, 141.95 feet; thence South 16°38'03" West, 1199.52 feet to the southerly line of said lands; thence westerly, along said line North 73°13'43" West, 531.96 feet to a found ¾" iron pipe with no tag shown on said map marking the southwesterly corner of said lands; thence northerly along the easterly line of said lands North 16°36'02" East, 157.52 feet to the **Point of Beginning**.

Containing 5.35 Acres, more or less.

Date: 12.9.08
John A. Cardarelli PLS 7769
Lic. Expires 12/31/2009
End of Description



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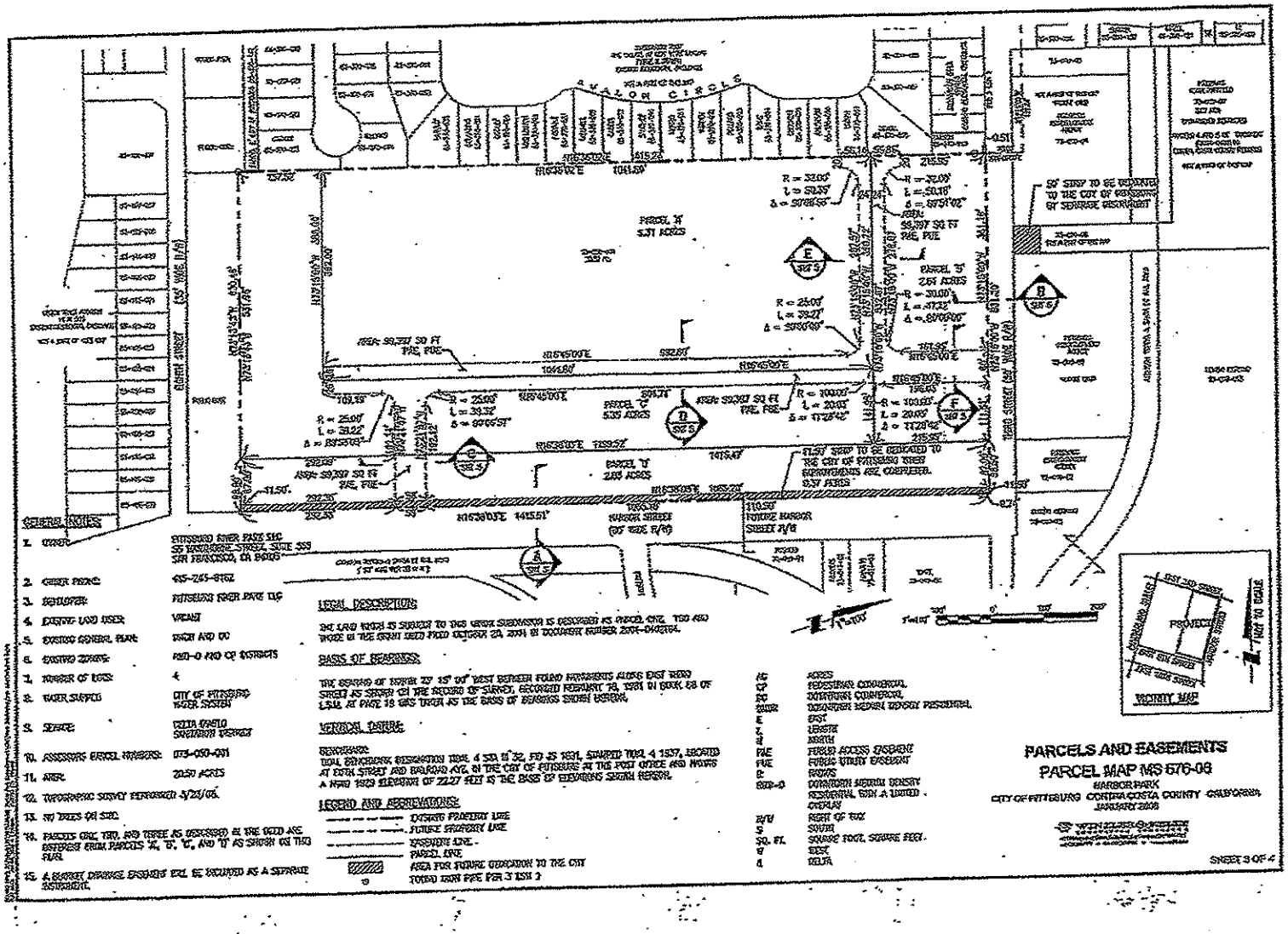

RAYLOR CIRCLE
PARCEL 'A'
5.31 ACRES
PARCEL 'B'
2.61 ACRES
PARCEL 'C'
5.35 ACRES
PARCEL 'D'
2.65 ACRES
50' STRIP TO BE DEDICATED TO THE CITY OF PITTSBURG FOR SEWAGE RESTRAINT
51.50' STRIP TO BE DEDICATED TO THE CITY OF PITTSBURG WHEN IMPROVEMENTS ARE COMPLETED.
0.37 ACRES
HARBOR STREET
(80' WIDE R/W)
FUTURE HARBOR STREET R/W
EIGHTH STREET
THIRD STREET (OLD MAIN ROAD)
PROJECT SITE
VICINITY MAP
GENERAL NOTES
LEGAL DESCRIPTION:
BASIS OF BEARINGS:
VERTICAL DATUM:
BENCHMARK:
LEGEND AND ABBREVIATIONS:
PARCELS AND EASEMENTS
PARCEL MAP MS 676-06
HARBOR PARK
CITY OF PITTSBURG CONTRA COSTA COUNTY CALIFORNIA
JANUARY 2006
SHEET 3 OF 4

EXHIBIT D

EXHIBIT A
Legal Description

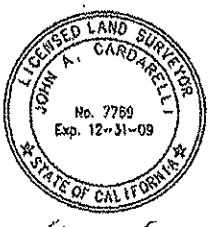
All that certain real property situate in the City of Pittsburg, County of Contra Costa, State of California, being a portion of the lands of PITTSBURG RIVER PARK LLC described by deed recorded October 20, 2004 under Document Number 2004-0402164, Contra Costa County Records, being a portion of Parcel One, Parcel Two and Parcel Three as described in said deed, being shown on that certain map filed on March 20, 1935 in Book 3 of Land Survey Maps at Page 1, Contra Costa County Records, being within the Rancho Los Medanos, said portion of lands being more particularly described as follows:

Estimated extent of Petroleum Hydrocarbon Affected Soil

Commencing at a found standard City of Pittsburg street monument from which a found standard City of Pittsburg street monument bears North 73°15'00"West, 1269.91 feet as shown on that certain map filed on October 7, 2003 in Book 127 of Land Survey Maps at Page 11, Contra Costa County Records; thence South 16°45'00"West, 20.00 feet to a point on the northerly line of East Third Street; thence easterly along said line South 73°15'00"East, 191.24 feet to a point; thence leaving said line South 16°45'00"West, 50.00' to a point on the southerly line of East Third Street, being the northwest corner of said Parcel One, from which point a found ¾" iron pipe with no tag shown on said map filed March 20, 1935 in Book 3 of Land Survey Maps at Page 1, Contra Costa County Records bears South 16°36'02"West, 0.51 feet; thence southerly, along the westerly line of said lands South 16°36'02" West, 1257.75 feet; thence leaving said line South 73°15'00" East, 262.06 feet to the **Point of Beginning** of the herein described parcel; thence continuing on the same line South 73°15'00" East, 270.00 feet thence North 16°45'00" East, 400.00 feet; thence North 73°15'00" West, 270.00 feet; thence South 16°45'00" West, 400.00 feet to the **Point of Beginning**.

Containing 2.48 Acres, more or less.

Date: 12-9-08
John A. Cardarelli PLS 7769
Lic. Expires 12/31/2009
End of Description



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In the matter of:	) Docket No. HSA-O&MEA 08/09-007
	)
Former Johns Manville Plant Site East Third & Harbor Streets Pittsburg, California	) OPERATION AND MAINTENANCE) AGREEMENT)
	)
Proponent:	)
	) Health and Safety Code
Pittsburg River Park LLC 36 Washington Street, Suite 390 Wellesley, MA 02481	) Section 25355.5 (a)(1)(C)))

The California Department of Toxic Substances Control (DTSC) and Pittsburg River Park LLC (Proponent) enter into this Operation and Maintenance Agreement (Agreement) for the site located at East Third and Harbor Streets, Pittsburg, California (Site) and agree as follows:

1. Jurisdiction. This Agreement is entered into by DTSC and Proponent pursuant to Health and Safety Code section 25355.5(a)(1)(C) which authorizes DTSC to enter into an enforceable agreement to oversee the investigation and/or remediation of a release or threatened release of any hazardous substance at or from the Site, and to oversee the operation and maintenance of any remediation system installed at the Site.

2. Remediation System. A DTSC-approved Remediation System has been installed at the Site for the remediation of the site soil. The Remediation System consists of consolidation of asbestos containing materials and the soil containing total petroleum hydrocarbons in a containment berm constructed along the eastern boundary of the Site. The Site is owned by Pittsburg River Park LLC. A site location map and the assessor's parcel map are attached as Exhibit A and Exhibit B. A site map or diagram showing the location(s) of the Remediation System is attached as Exhibit C.

3. Operation and Maintenance of Remediation System. Operation and maintenance of the Remediation System are required at the Site, and shall be left in place, operated and maintain by Proponent until and except to the extent that DTSC authorizes Proponent in writing to discontinue or modify part or all of the Remediation System.

4. Implementation of Operation and Maintenance Plan. Proponent has submitted an Operation and Maintenance Plan to DTSC for approval. Proponent shall fully implement the DTSC-approved Operation and Maintenance Plan dated October 1, 2008, attached as Exhibit D, including any requirements for inspections, monitoring, reporting and record keeping.

5. Modification or Discontinuation of Remediation System. Proponent shall submit a written request for DTSC's authorization for any modification or discontinuation

of the Remediation System or any part thereof at least 60 days, to the extent feasible, prior to the intended date of any proposed modification or discontinuation. Proponent may seek modification or discontinuation of the Remediation System or any part thereof if (a) Proponent has met the remediation objectives for the site; (b) the modification would better achieve the remediation objectives; (c) the Remediation System could not achieve the remediation objectives and other cleanup methods will be implemented; or (d) it has been demonstrated that the maximum achievable remediation has occurred. The written request to DTSC shall include the reasons for the request, a detailed description of any work to be done or modification to be made, and a map showing the exact location of the proposed work.

6. DTSC-Required Modification. DTSC may require modification, replacement, or additions to the Remediation System if the Remediation System or part of thereof is not achieving the remediation objectives or is not protecting human health or the environment. DTSC may require additional evaluations, designs and the construction and operation of facilities to achieve these objectives.

7. Five-Year Review. Proponent shall review and reevaluate the Remediation System after a period of five years from the completion of construction of the Remediation System and every 5 years thereafter. The review and reevaluation shall be conducted to determine if human health and the environment are being adequately protected by the Remediation System. Within 30 days before the end of each five-year period, Proponent shall submit a five-year review workplan to DTSC for review and approval. Within 60 days of DTSC's approval of the workplan, Proponent shall implement the workplan and submit a report of the results of the five-year review. The report shall describe the results of all sampling analyses, tests and other data generated or received by Proponent and evaluate the adequacy of the implemented remedy in protecting human health and the environment. As a result of any review work performed under this Agreement, DTSC may require Proponent to perform additional review work or modify the review work previously performed by Proponent.

8. Quality Control/Quality Assurance (QC/QA). All sampling and analysis conducted by Proponent under this Agreement shall be performed in accordance with the QC/QA procedures submitted by Proponent and approved by DTSC pursuant to this Agreement.

9. Financial Assurance. Proponent must assure that sufficient funds are available to implement all the requirements of this Agreement and to pay DTSC's costs as specified in Paragraph 10. Proponent shall propose a financial instrument as the financial assurance mechanism that meets DTSC's requirements pursuant to California Code of Regulations, title 22, section 66265.143.

10. Cost Recovery and Payment.

10.1. Proponent is liable for all of DTSC's costs incurred in implementing this Agreement, including costs of overseeing the work performed by Proponent, and in

responding to any contamination at the Site. Cost recovery may be pursued by DTSC pursuant to applicable state or federal laws or common law. DTSC will invoice Proponent for DTSC's costs on a quarterly basis. To the extent allowed by applicable law, Respondent reserves all rights to dispute such invoices and amounts and to seek administrative and/or judicial review of such Department costs.

10.2. All payments made by Proponent pursuant to this Agreement shall be by check payable to the "Department of Toxic Substances Control", and bearing on its face the project code for the Site (Site # 201318-11) and the docket number of this Agreement. Upon request by Proponent, DTSC may accept payments made by credit cards. Payments by check shall be sent to:

Department of Toxic Substances Control
Accounting Office
1001 I Street, 21st Floor
P.O. Box 806
Sacramento, California 95812-0806

A photocopy of the check shall be sent concurrently to DTSC's Project Manager.

10.3. DTSC shall retain all cost records associated with the work performed under this Agreement as may be required by state law. DTSC will make all documents that support DTSC's cost determination available for inspection upon request in accordance with the Public Records Act, Government Code section 6250 et seq.

11. Endangerment During Implementation.

11.1. Proponent shall notify DTSC's Project Manager immediately upon learning of any condition that may pose an immediate threat to public health or safety or the environment. Within seven days of the onset of such a condition, Proponent shall furnish a report to DTSC, signed by Proponent's Project Manager, setting forth the conditions and events that occurred and the measures taken in response thereto.

11.2. In the event DTSC determines that any activity (whether or not pursued in compliance with this Agreement) may pose an imminent or substantial endangerment to the health or safety of people on the Site or in the surrounding area or to the environment, DTSC may order Proponent to conduct additional activities or to stop further implementation of this Agreement for such period of time as may be needed to abate the endangerment. DTSC may request that Proponent implement interim measures to address any immediate threat or imminent or substantial endangerment.

12. Site Access. Proponent shall provide, and/or obtain access to the Site and take all reasonable efforts to obtain access to offsite areas to which access is necessary to implement the Agreement. Such access shall be provided to DTSC's employees, contractors, and consultants at all reasonable times. Such access shall also be

provided to any other proponent or Proponent who is in compliance with this Agreement for the purpose of conducting activities pursuant to this Agreement or for activities deemed necessary by DTSC to meet the objectives of this Agreement. Nothing in this paragraph is intended or shall be construed to limit in any way the right of entry or inspection that DTSC or any other agency may otherwise have by operation of law.

13. Sampling, Data and Document Availability. When requested by DTSC, Proponent shall make available for DTSC's inspection, and shall provide copies of, all data and information concerning contamination at or from the Site, including technical records and contractual documents, sampling and monitoring information and photographs and maps, whether or not such data and information was developed pursuant to this Agreement. For all final reports, Proponent shall submit one hard (paper) copy and one electronic copy with all applicable signatures and certification stamps as a text-readable Portable Document Formatted (pdf) file Adobe Acrobat or Microsoft Word formatted file.

14. Record Preservation. Proponent shall retain, during the implementation of this Agreement and for a minimum of six years after its termination, all data, reports, and other documents that relate to the performance of this Agreement. If DTSC requests that some or all of these documents be preserved for a longer period of time, Proponent shall either comply with the request, deliver the documents to DTSC, or permit DTSC to copy the documents at Proponent's expense prior to destruction.

15. Notification of Field Sampling. Proponent shall inform DTSC at least seven days in advance of all field sampling pursuant to this Agreement and shall allow DTSC and its authorized representatives to take duplicates of any samples collected by Proponent pursuant to this Agreement.

16. Project Managers. Within 14 days of the effective date of this Agreement, DTSC and Proponent shall each designate a Project Manager and shall notify each other in writing of the Project Manager selected. Each Project Manager shall be responsible for overseeing the implementation of this Agreement and for designating a person to act in his/her absence. All communications between DTSC and Proponent, and all notices, documents and correspondence concerning the activities performed pursuant to this Agreement shall be directed through the Project Managers. Each party may change its Project Manager with at least seven days prior written notice.

17. Proponent's Consultant and Contractor. All work performed pursuant to this Agreement shall be under the direction and supervision of a professional engineer or professional geologist, licensed in California, with expertise in hazardous substances site cleanup. Proponent's Project Manager, contractor or consultant shall have the technical expertise sufficient to fulfill his or her responsibilities. Within 14 days of the effective date of this Agreement, Proponent shall notify DTSC's Project Manager in writing of the name, title, and qualifications of the professional engineer or professional geologist and of any contractors or consultants and their personnel to be used in

carrying out the work under this Agreement in conformance with applicable state law, including but not limited to, Business and Professions Code sections 6735 and 7835.

18. DTSC Review and Approval. All work performed pursuant to this Agreement is subject to DTSC's review and approval. If DTSC determines that any report, plan, schedule or other document submitted for approval pursuant to this Agreement fails to comply with this Agreement or fails to protect public health or safety or the environment, DTSC may (a) return comments to Proponent with recommended changes and a date by which the Proponent must submit to DTSC a revised document incorporating or addressing the recommended changes; or (b) modify the document in consultation with Proponent and approve the document as modified. All DTSC approvals and decisions made regarding submittals and notifications will be communicated to Proponent in writing by DTSC's Performance Manager or his/her designee. No informal advice, guidance, suggestions or comments by DTSC regarding reports, plans, specifications, schedules or any other writings by the Proponent shall be construed to relieve Proponent of the obligation to obtain such written approvals.

19. Amendments. This Agreement, including the attached Operation and Maintenance Plan, may be amended in writing by mutual agreement of DTSC and Proponent. Such amendment shall be effective the third business day following the day the last party signing the amendment sends its notification of signing to the other party. The parties may agree to a different effective date.

20. Incorporation of Exhibits, Plans and Reports. All exhibits are incorporated into this Agreement by reference. All plans, schedules and reports that require DTSC's approval and are submitted by Proponent pursuant to this Agreement are incorporated in this Agreement upon DTSC's approval.

21. Reservation of Rights. DTSC reserves all of its statutory and regulatory powers, authorities, rights, and remedies under applicable laws to protect public health or the environment, including the right to recover its costs incurred therefore. Proponent reserves all of its statutory and regulatory rights, defenses and remedies available to Proponent under applicable laws..

22. Non-Admission of Liability. By entering into this Agreement, Proponent does not admit to any finding of fact or conclusion of law set forth in this Agreement or any fault or liability under applicable laws.

23. Proponent Liabilities. Nothing in this Agreement shall constitute or be considered a covenant not to sue, release or satisfaction from liability by DTSC for any condition or claim arising as a result of Proponent's past, current, or future operations or ownership of the Site.

24. Government Liabilities. The State of California or DTSC shall not be liable for any injuries or damages to persons or property resulting from acts or omissions by Proponent or by related parties in carrying out activities pursuant to this Agreement, nor

shall the State of California or DTSC be held as a party to any contract entered into by Proponent or its agents in carrying out the activities pursuant to this Agreement.

25. Third Party Actions. In the event that Proponent is a party to any suit or claim for damages or contribution relating to the Site to which DTSC is not a party, Proponent shall notify DTSC in writing within 10 days after service of the complaint in the third-party action. Proponent shall pay all costs incurred by DTSC relating to such third-party actions, including but not limited to responding to subpoenas.

26. California Law. This Agreement shall be governed, performed and interpreted under the laws of the State of California.

27. Severability. If any portion of this Agreement is ultimately determined not to be enforceable, that portion will be severed from the Agreement and the severability shall not affect the enforceability of the remaining provisions of the Agreement.

28. Parties Bound. This Agreement applies to and is binding, jointly and severally, upon Proponent and its agents, receivers, trustees, successors and assignees, and upon DTSC and any successor agency that may have responsibility for and jurisdiction over the subject matter of this Agreement. Proponent shall ensure that its contractors, subcontractors and agents receive a copy of this Agreement and comply with this Agreement.

29.. Effective Date. The effective date of this Agreement is the date of signature by DTSC's authorized representative after this Agreement is first signed by Proponent's authorized representative. Except as otherwise specified, "days" means calendar days.

30. Representative Authority. Each undersigned representative of the party to this Agreement certifies that she or he is fully authorized to enter into the terms and conditions of this Agreement and to execute and legally bind the party to this Agreement.

31. Counterparts. This Agreement may be executed and delivered in any number of counterparts, each of which when executed and delivered shall be deemed to be an original, but such counterparts shall together constitute one and the same document.

Mark Piros Date: 9/25/2009

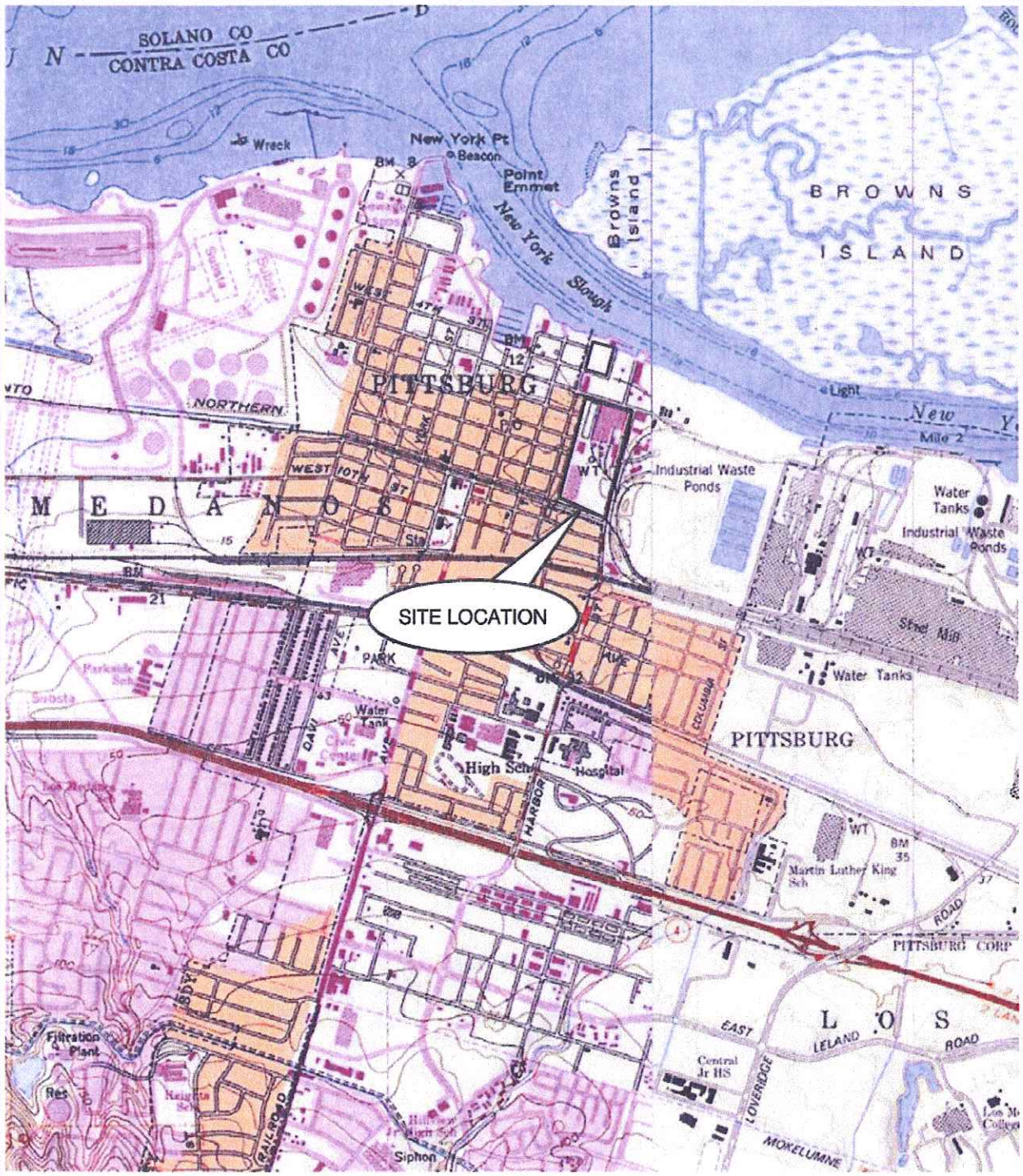
Mark Piros, P.E., Unit Chief
Brownfields and Environmental Restoration Program – Berkeley Office

Date: 9/17/09

John B. Hahselman, Managing Principal
Pittsburg River Park LLC

EXHIBIT A

CAD File: G:\0025556\Site Location Map.dwg
Drawn By: D. Ludlam
Date: 08/30/05
Project No. 0025556.04



SCALE 1: 24,000

1 1/2 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

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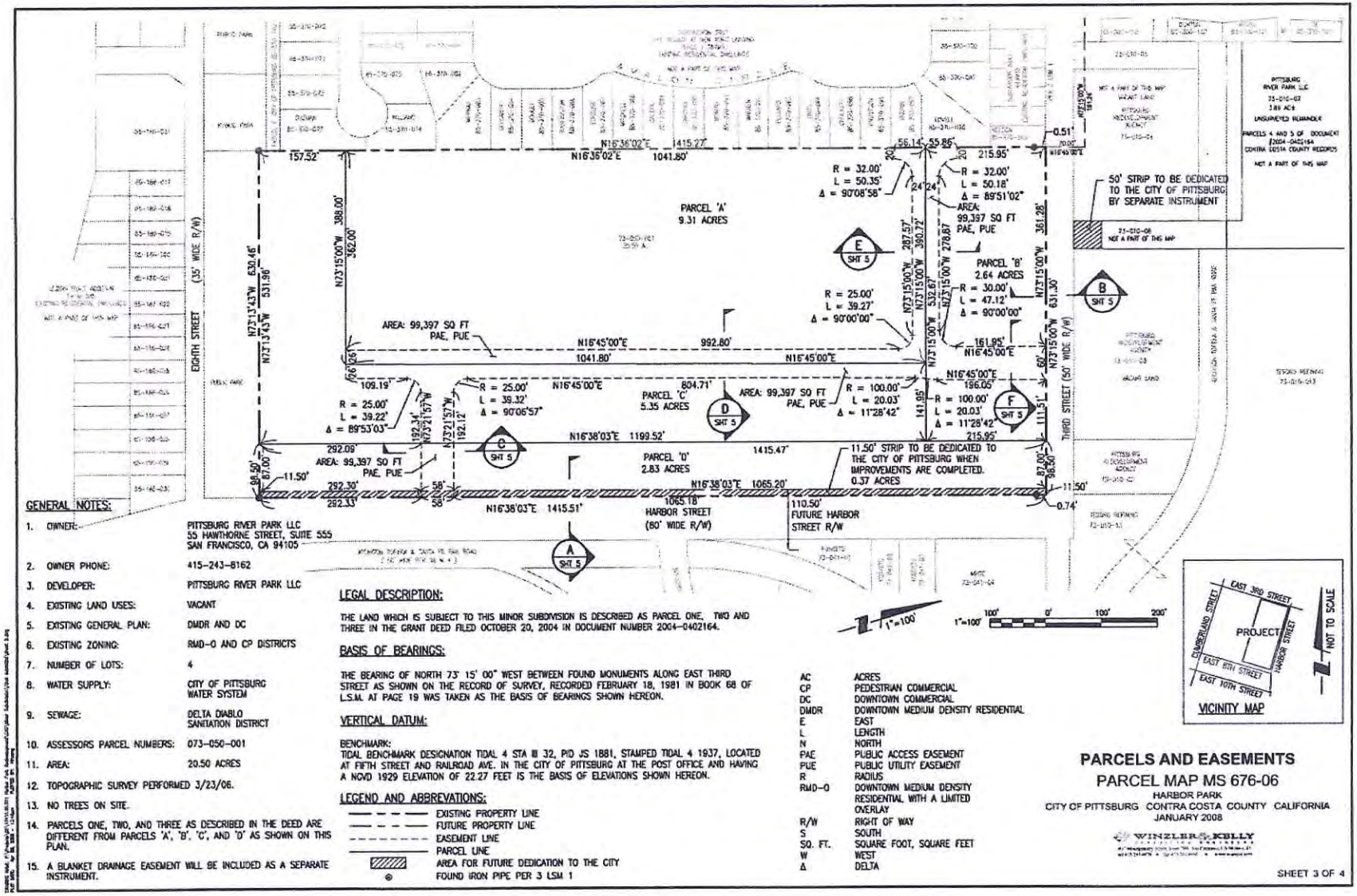
Figure 1

Site Location Map
Pittsburg River Park, LLC
(Former Johns Manville Plant)
420 East 3rd Street
Pittsburg, California

ERM 08/05

References:
U.S.G.S. 7.5 Minute Series (Topographic) Quadrangle,
Honker Bay, California
Dated: 1980

EXHIBIT B



GENERAL NOTES:

1.	OWNER:	PITTSBURG RIVER PARK LLC 55 HAWTHORNE STREET, SUITE 555 SAN FRANCISCO, CA 94105
2.	OWNER PHONE:	415-243-8162
3.	DEVELOPER:	PITTSBURG RIVER PARK LLC
4.	EXISTING LAND USES:	VACANT
5.	EXISTING GENERAL PLAN:	DMDR AND DC
6.	EXISTING ZONING:	RMD-O AND CP DISTRICTS
7.	NUMBER OF LOTS:	4
8.	WATER SUPPLY:	CITY OF PITTSBURG WATER SYSTEM
9.	SEWAGE:	DELTA DIABLO SANITATION DISTRICT
10.	ASSESSORS PARCEL NUMBERS:	073-050-001
11.	AREA:	20.50 ACRES
12.	TOPOGRAPHIC SURVEY PERFORMED 3/23/06.	
13.	NO TREES ON SITE.	
14.	PARCELS ONE, TWO, AND THREE AS DESCRIBED IN THE DEED ARE DIFFERENT FROM PARCELS 'A', 'B', 'C', AND 'D' AS SHOWN ON THIS PLAN.	
15.	A BLANKET DRAINAGE EASEMENT WILL BE INCLUDED AS A SEPARATE INSTRUMENT.	

LEGAL DESCRIPTION:

THE LAND WHICH IS SUBJECT TO THIS MINOR SUBDIVISION IS DESCRIBED AS PARCEL ONE, TWO AND THREE IN THE GRANT DEED FILED OCTOBER 20, 2004 IN DOCUMENT NUMBER 2004-0402164.

BASIS OF BEARINGS:

THE BEARING OF NORTH 73° 15' 00" WEST BETWEEN FOUND MONUMENTS ALONG EAST THIRD STREET AS SHOWN ON THE RECORD OF SURVEY, RECORDED FEBRUARY 18, 1981 IN BOOK 68 OF L.S.M. AT PAGE 19 WAS TAKEN AS THE BASIS OF BEARINGS SHOWN HEREON.

VERTICAL DATUM:

BENCHMARK:
TIDAL BENCHMARK DESIGNATION TIDAL 4 STA III 32, PID JS 1881, STAMPED TIDAL 4 1937, LOCATED AT FIFTH STREET AND RAILROAD AVE. IN THE CITY OF PITTSBURG AT THE POST OFFICE AND HAVING A NGVD 1929 ELEVATION OF 22.27 FEET IS THE BASIS OF ELEVATIONS SHOWN HEREON.

LEGEND AND ABBREVATIONS:

- EXISTING PROPERTY LINE
- FUTURE PROPERTY LINE
- EASEMENT LINE
- PARCEL LINE
- AREA FOR FUTURE DEDICATION TO THE CITY
- FOUND IRON PIPE PER 3 LSM 1

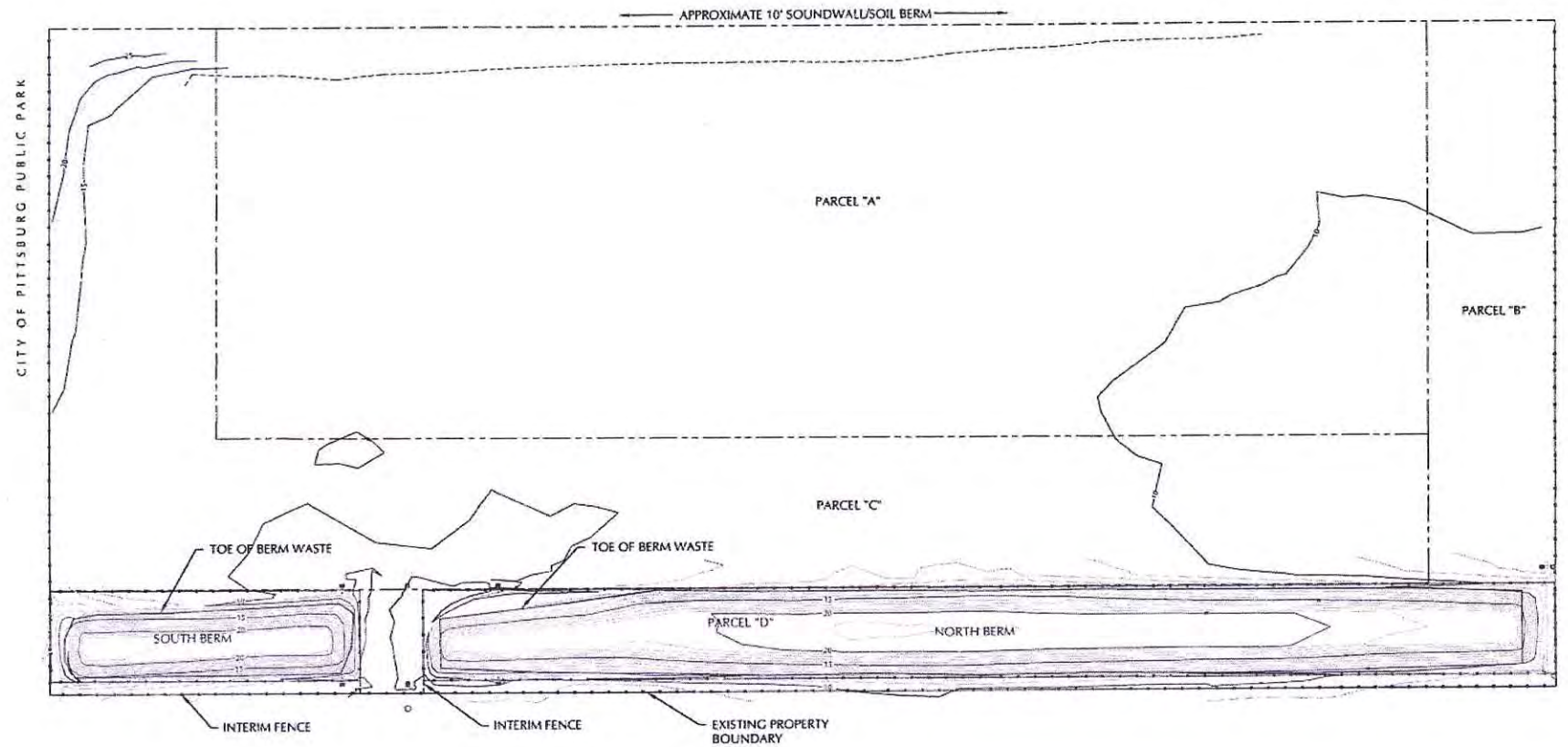
AC	ACRES
CP	PEDESTRIAN COMMERCIAL
DC	DOWNTOWN COMMERCIAL
DMDR	DOWNTOWN MEDIUM DENSITY RESIDENTIAL
E	EAST
L	LENGTH
N	NORTH
PAE	PUBLIC ACCESS EASEMENT
PUE	PUBLIC UTILITY EASEMENT
R	RADIUS
RMD-O	DOWNTOWN MEDIUM DENSITY RESIDENTIAL WITH A LIMITED OVERLAY
R/W	RIGHT OF WAY
S	SOUTH
SQ. FT.	SQUARE FOOT, SQUARE FEET
W	WEST
Δ	DELTA

PARCELS AND EASEMENTS
PARCEL MAP MS 676-06

HARBOR PARK
CITY OF PITTSBURG CONTRA COSTA COUNTY CALIFORNIA
JANUARY 2008

WINZLER & KELLY

EXHIBIT C



EXPLANATION:

- 6-FOOT GALVANIZED CHAINLINK FENCE
- PARCEL BOUNDARY
- FINAL GRADE CONTOURS
- CATCH BASIN

0 100 Feet

BASED ON TOPOGRAPHY PROVIDED BY: WINZLER&KELLY

Post Remediation Site Layout

Former Johns Manville Plant, 420 East 3rd Street, Pittsburg, California

LFR

Figure 2

I:\Design\001\09587\02\dwg\Post Remediation FINAL SITE AS-BUILT.dwg Mar 27,2008-10:33am

EXHIBIT D

Operation and Maintenance Plan for the Engineered Containment Berm on the Plant Site of the Former Johns Manville Facility, 420 East Third Street, Pittsburg, California

October 1, 2008
001-09587-02-008

Prepared for
Pittsburg River Park LLC
36 Washington Street Suite 220
Wellesley, Massachusetts 02481

Prepared by
LFR Inc.
1900 Powell Street, 12th Floor
Emeryville, California 94608

LFR ENVIRONMENTAL MANAGEMENT & CONSULTING ENGINEERING

October 1, 2008 001-09587-02

Ms. Barbara Cook, P.E.
Department of Toxic Substances Control
700 Heinz Avenue
Berkeley, California 94710-2721

Attention: Mr. Mark Piros and Mr. Patrick Lee

Subject: Operation and Maintenance Plan for the Engineered Containment Berm Parcel on the Plant Site of the Former Johns Manville Facility, 420 East Third Street, Pittsburg, California

Dear Mr. Mark Piros and Mr. Patrick Lee:

On behalf of Pittsburg River Park LLC (PRPLLC), LFR Inc. (LFR) has prepared this Operation and Maintenance (O&M) Plan for the Berm Parcel (identified as Parcel D as shown on Minor Subdivision Map) of the Former Johns Manville Facility located at 420 East Third Street in Pittsburg, California ("the Site"; Figure 1). This document addresses the comments from the City of Pittsburg and Department of Toxic Substances Control (DTSC) sent in an email to Ron Goloubow from Patrick Lee on March 12 and September 23, 2008. The O&M Plan is to serve as the guide for operating, maintaining, and repairing the containment berm that has been built at the Site.

The O&M Plan includes a description of the following:

- General site overview and history;
- Physical features of the containment berm and soil cap;
- Routine and nonroutine monitoring and maintenance procedures and related schedules; and
- General restrictions on the containment berm.

This O&M Plan, once approved by the DTSC, will be periodically reviewed and updated in the event that site conditions change.

510.652.4500 m
510.652.2246 f
1900 Powell Street, 12th Floor
Emeryville, California 94608-1814
Offices Nationwide
www.lfr.com

LFR

If you have any comments or questions or need any additional information regarding this O&M Plan or the project in general, please call either of the undersigned at LFR (510-652-4500) or Mr. Mike Singer at PRPLLC (781-431-8101 X105)

Sincerely,

Ron Goloubow
Senior Associate Geologist

William L. Carson, P.E. (C60735)
Principal Engineer

Enclosure

cc: Ms. Jodi Smith, Esq., Paul, Hastings, Janofsky & Walker LLP
Mr. Mike Singer, PRPLLC

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A Operation and Maintenance Checklist

B Landscape Plan

FIGURES

1 Site Vicinity Map

2 Conceptual Eastern Boundary Berm Layout

3 Conceptual Eastern Boundary Berm Sections

1.0 INTRODUCTION

LFR Inc. (LFR) on behalf of Pittsburg River Park LLC (PRPLLC) has prepared this Operation and Maintenance Plan ("O&M Plan") for the engineered containment berm on the Plant Site of the former Johns Manville (JM) Facility in Pittsburg, California ("the Site"; Figures 1 and 2). As illustrated on Figure 2, the containment berm is located along the eastern boundary of the Site and is comprised of two distinct segments. In order to provide access directly from Harbor Street, a 58-foot-wide access roadway was constructed between the two berm sections. For the purpose of this report the two distinct segments will be referred to as "the berm."

The construction of the on-site containment berm for asbestos-containing materials (ACM) and total petroleum hydrocarbon- (TPH-) affected soil was part of the remedial action that was selected for implementation as described in detail in the Final Remedial Action Plan (RAP; ERM 2006a). This O&M Plan serves as the guide for operating, maintaining, and repairing the containment berm that has been built at the Site. The O&M Plan will be reviewed and approved by the California Department of Toxic Substances Control (DTSC).

The O&M Plan includes a description of the following:

- General site overview and history;
- Physical features of the landscaped containment berm;
- Routine and nonroutine monitoring and maintenance procedures and related schedules; and
- General restrictions on the containment berm.

This O&M Plan, once approved by the DTSC, will be periodically reviewed and updated in the event that site conditions change. The responsibility for implementing the O&M Plan will remain with the owner of the property.

1.1 Site Description

The former JM Facility consists of two distinct properties located at the approximate intersection of East Third Street and Harbor Street in Pittsburg, California. These properties are shown on Figure 1.

The first parcel, known as the North Parcel, is an approximately 4.2-acre parcel located between (and bounded by) New York Slough to the north and the Plant Site to the south, and is situated just north of East Third Street. The North Parcel was formerly used for storage of asbestos-containing products prior to shipment. As a result of this practice, a significant amount of ACM was deposited onto the ground. To prevent future exposure to ACM a soil cap was constructed over the contaminated soil. The O&M plan for the North Parcel is provided in the "Operation and Maintenance

Plan, North Parcel Site, former Johns Manville Plant, Pittsburg, California" (ERM 2005). The O&M of the North Parcel has been conducted and reported on a semiannual basis (two times a year) since 2007 and prior to that the inspections were conducted quarterly.

The Plant Site, located approximately 1,000 feet south of New York Slough, is the subject of remedial actions addressed in this O&M plan. This 21-acre parcel is bounded to the north by the North Parcel, Third Street, and a Tesoro coke facility; to the east by Harbor Street, several small light-industrial businesses, and USS Posco Corporation; to the south by a City Park; and to the west by residential properties. Most recently, until the facility terminated operations in 2003, the facility was used for the manufacturing of commercial roofing materials.

A review of JM's historical operations, as well as site-wide investigation data, indicated that the areas of potential concern at the Site were the former evaporation pond and several additional locations found while conducting abatement and demolition activities at the Site. ERM, on behalf of PRPLLC assessed the remediation alternatives, documented in the RAP (ERM 2006a), and determined the most effective course of remedial action for the Site would be the construction of an engineered containment berm along the eastern boundary of the Site. The details of the construction of the berm is described in the "Remedial Design and Implementation Plan, Harbor Park Development, Pittsburg, California" (RDIP; ERM 2006b), and the "Addendum to the Remedial Design and Implementation Plan, Harbor Park Development (Former Johns Manville Facility), 420 East 3rd Street, Pittsburg, California" (ARDIP; LFR 2007).

1.2 Site History

The manufacturing plant was built sometime between 1925 and 1928. In 1957, a large warehouse was constructed south of the main manufacturing facility. Asbestos-cement products, asphalt roofing materials, and asbestos-containing pipe covering were the primary products produced prior to the termination of asbestos-containing product manufacturing in 1980. A series of four asphalt stills, located along the southwestern margin of former Building 4, was used to convert heavy oil to asphalt. The stills were fueled by fuel oil and later with natural gas. In the process of converting heavy oil to asphalt, off-gas vapors were collected, condensed, and mixed with water to form an oil-water slurry that was transported via an underground pipe to the evaporation pond. The residual oil in the evaporation pond was reportedly burned approximately twice a year. Use of the evaporation pond began in 1946. It remained relatively constant in size until 1959, when discharge of effluent was discontinued, and the pond was subsequently filled with scrap and construction debris and capped with asphalt pavement (ERM 2006a/b). As a result of site operations the chemicals of concern at this Site were identified as ACM, TPH, and related compounds.

Subsequent to the cessation of ACM manufacturing operations at the Site, and until the plant was closed in approximately 2003, JM manufactured commercial roofing

materials using fiberglass mat, asphalt, sand, and limestone. Petroleum-based resins and solvents were also used on site.

In 2005 PRPLLC acquired the plant and retained Plant Reclamation to decommission and demolish the plant facilities. During demolition activities ACM was segregated and stored on site for placement into the containment berm. ACM was observed in many different forms including but not limited to concrete, wall board, roofing material, pipes, and debris. This material along with TPH-affected soil removed from the former evaporation pond has been placed into the berm during remedial activities.

In 2006 PRPLLC also retained Entact Environmental Services ("Entact") to implement the scope of the RAP. During the implementation of the RAP the ACM from the demolition of the on-site structures were placed into the containment berm along with other ACM or TPH-affected soil that was excavated from the subsurface.

2.0 CONTAINMENT BERM CONSTRUCTION

The berm has been constructed along the eastern boundary of the Site, and consists of two components: a north berm and a south berm (Figure 2). The various components and characteristics of the containment berm are detailed in the RDIP and ARDIP and summarized in this section. Based on calculations completed by Winzler & Kelly (W&K), a licensed engineering company located in San Francisco and Santa Rosa, California, approximately 64,400 cubic yards of ACM and TPH-affected soil have been transported and placed in the containment berm.

Project documents related to design, construction, and O&M of the berm are identified in the References section of this O&M Plan.

2.1 Construction Plans and Technical Specifications

The construction plans and technical specifications for the berm as described in the RDIP and the ARDIP include:

- Excavating a trench to approximately 10 feet below ground surface (bgs) beneath the entire length of the berm to accommodate the placement of ACM below grade;
- Backfilling the trench with affected material and constructing a berm above grade;
- Capping the berm with a Tensar product; this is commonly used for the reinforcement of soils in construction of structures such as embankments and 2 feet of clean cover soil. In addition to providing additional structural integrity to the berm, the Tensar product fabric will also serve as a visual demarcation liner between affected soils and the 2-foot-thick clean soil cap;
- Constructing perimeter fencing to prevent public access to the Site;

- Construction of drainage swales adjacent to the berm and grading such that collected storm-water runoff will drain towards catch basins;
- Installing an automated irrigation system; and
- Installing low maintenance landscaping in accordance with the City of Pittsburg requirements.

In the ARDIP completed by LFR, the construction plans and technical specifications for the berm were modified slightly to accommodate a larger volume of ACM waste material encountered at the Site. Specifically, the ARDIP described plans for a western expansion of the berm by approximately 10 feet. The height, northern, southern, and eastern dimensions of the berm were not modified. In addition, the indicator layer to be placed between the affected soil and the 2-foot-thick clean soil cover was changed to a Tensar product (from a Mirafi™ product called for in the RAP and RDIP). Treadwell & Rollo (our Geotechnical Engineer) recommended the substitution of the Tensar product to increase adhesion between the waste material and the clean cover material.

In general, the berm was constructed in accordance with the plans outlined in the RDIP and ARDIP. The berm constructed along the edge of the eastern boundary of the Site, is referred to as "south berm" and "north berm" (Figure 2). Initially a 10-foot-deep trench was excavated in sections along the entire length of the berm. The trench was filled with ACM along the length of both berm sections. In order to provide access directly from Harbor Street, a 58-foot-wide access roadway was constructed between the two berm sections. The TPH-affected material was placed in the berm above the ACM material, which was placed up to the native grade elevations. (i.e., TPH-affected soil was not placed in the subsurface portion of the berm.). The south berm is approximately 296 feet long, while the north berm is approximately 1,072 feet long. Both berms are approximately 85 feet wide at the base and extend approximately 10 feet above the elevation of the adjacent sidewalk area of the City's Harbor Street Right of Way (8 feet of waste material and 2 feet of clean cover). A minimum buffer distance of 1 to 3 feet exists between the affected soils and public rights of way or private streets or utilities (Figures 2 and 3).

Access to the berm is restricted by a fence, with gates to provide access for inspection and routine maintenance. The fence and all signs posted meet the City of Pittsburg Municipal Code (PMC) requirements.

2.2 Grading and Profile

The containment berm was constructed by Entact in accordance with the RDIP, ARDIP, and the grading permit issued by the City of Pittsburg. The City of Pittsburg periodically monitored grading operations to verify that field operations complied with the approved grading permit. W&K provided locations and final grade control during and after the berm construction.

2.3 Surface Drainage Control

The runoff from the berm is collected in swales that flow to catch basins connected to the city storm-water system. The swales were designed by W&K and were approved by the City of Pittsburg's engineering department. The remainder of the Site is currently undeveloped and in rough grade condition. All other storm-water utilities have been removed from the Site during plant decommissioning-demolition. During soil remediation activities, storm-water management was performed such that the adjacent off-site storm-water collection system was not affected by site activities.

2.4 Slope Protection and Drainage Control

The slope of the berm caps is approximately 2.0 feet horizontal to 1.0 foot vertical (2H: 1V). The side slopes and the associated landscaping were designed to prevent erosion and provide adequate drainage. The vegetation used was determined by a Qualified Landscape Contractor and was approved by the City of Pittsburg prior to construction. It is our understanding that the landscaping on the berm will be augmented as part of the future development plans for this Site.

2.5 Irrigation System

An irrigation system has been installed to provide water for vegetation support and maintenance. The system consists of an aboveground PVC irrigation system. The system includes timer-activated, battery-operated valves so that the system can be operated at night to minimize evaporation. The system is configured such that routine landscape maintenance can be performed with minimal impact to the irrigation system. It is our understanding that the irrigation system on the berm will be upgraded as part of the future development plans for this Site.

3.0 MONITORING AND MAINTENANCE PROCEDURES AND SCHEDULES

This section provides the O&M program; identifies key personnel associated with the program; details monitoring, maintenance, and repair issues to be considered; and describes the reporting program.

3.1 O&M Monitoring Program

The objectives of the proposed O&M program are to:

- Minimize the threat to human health and the environment from ACM and TPH-affected soil contained within the berm;
- Preserve the function and integrity of the berm; and

- Control drainage and erosion on the berm.

O&M monitoring will include routine inspection of the irrigation system, fencing, drainage system, and soil cap. This inspection will also include an assessment of trash accumulation in the berm parcel. If appropriate, trash will be removed during the inspections and if necessary on a more frequent basis. With respect to the soil cap, emphasis will be placed on identifying signs of erosion, lack of vegetative cover, or damage due to burrowing animals or trespassers. Maintenance will include regular grass/weed abatement in accordance with Riverview Fire Prevention District requirements and to ensure that aesthetic issues do not arise with nearby residents. Fertilizing and pruning/trimming the vegetative cover will be conducted on an as-needed basis. The O&M monitoring program will include a quarterly (once every three months) inspection and reporting schedule for the first year and then semiannually (once every six months) assuming minimal disturbances are observed. A semiannual inspection schedule will allow for evaluating site conditions during the summer months (when the irrigation system is operational) and during the winter months (when erosion from seasonal precipitation is of most concern). These inspections will be conducted at the end of the Second Quarter (June) and Fourth Quarter (December) of each calendar year.

3.2 Monitoring Personnel

The site inspection will be conducted and the report written by the Site Inspector, a field engineer, or field geologist under the direct supervision of the Site Engineer, who will be a California professional civil or geotechnical engineer.

The primary responsibilities of the Site Inspector are:

- Perform inspections and evaluations
- Accurately record all inspection data
- Prepare the summary O&M Report
- Review and evaluate the O&M Plan and reference documents to ensure they are accurately reflected in the inspections and repairs performed

The primary responsibilities of the Site Engineer are:

- Review and evaluate data and reports prepared by the Site Inspector
- Report observations and inspection results to the property owner and DTSC
- Review and/or prepare repair plans and specifications
- Review and/or prepare instructions for contractor and Site Inspector for repair and inspection requirements and procedures

3.3 Monitoring and Maintenance Procedures

The inspection program for the containment berm and soil cap and drainage system will evaluate the following:

- Condition of the vegetative cover;
- Erosion from irrigation or storm-water runoff;
- Impacts from burrowing animals and/or trespassers;
- Condition of all drainage system components;
- Indication of settlement survey of the installed "settlement monuments" (see section 3.3.1)
- Condition of the irrigation system and fencing; and
- The need for slope failure repairs.

The site inspection will consist of a complete walk-through and visual examination of all the components addressed above. As appropriate, photographs will be taken to document site conditions. An O&M inspection checklist for use during site inspections is presented as Appendix A, and includes the following information:

- Inspector and date, time, and climatic conditions during inspection;
- Specific visual observations regarding the containment soil cap, fencing, and/or drainage system, and a diagram/map showing the location of the observations;
- Specific observations regarding the vegetative cover system to include an evaluation of weed and fire control issues, the need for re-seeding, rodent control, and the condition of the irrigation system;
- Detailed descriptions associated with observations, as appropriate;
- Short-term actions taken in response to observations, as appropriate; and
- Detailed record regarding any necessary repairs to include the nature/location of the deficiency, repair action taken, and any follow-up remarks or observations.

A map showing locations of specific observations and response/repair activities, and a photographic record of the inspection will be incorporated as part of the checklist for reporting purposes, as noted below.

All repairs determined to disturb the lowest 6 inches of the 2-foot-thick soil cover (1.5 feet below grade) or any repairs determined to be major (i.e., requiring engineering evaluation or cost analysis) will be scoped and completed under the supervision of the Site Engineer, with appropriate experience in caps and covers for waste containment facilities. The owner will be responsible to make these repairs so that the berm will return to its constructed condition. The DTSC will be informed via telephone, email, or written correspondence by the owner of the pending "major" repairs and it will be the DTSC's discretion to observe the repairs.

3.3.1 Differential Settlement

Per the recorded Grading Agreement, the settlement of the berm shall be monitored by a licensed geotechnical firm, selected by the City of Pittsburg and approved by the property owner. The observation period for the differential settlement is to be determined by the City of Pittsburg Engineer. As outlined in the grading agreement, the observation period is to be completed in accordance with the design and specifications of the wick drain report and as approved by the City of Pittsburg and City of Pittsburg geotechnical consultant. In general, the observation period is to last until it has been determined that 90% of the settlement has occurred. However, if at the end of the observation period, if 90% of the settlement has not occurred, then observation will continue.

3.3.2 Vegetation Monitoring, Maintenance, and Repairs

The entire above ground portion of the containment berm and soil cap will be visually inspected semiannually by the Site Inspector following the first year as described previously. The walk-through will focus on any indications of erosion, settlement, cracking, poor and/or unusually discolored vegetation, and animal intrusion on the containment berm and soil cap.

Vegetation on the containment berm soil cap will be maintained on a regular basis as described above to keep the area clear and visible to allow site inspections, and for fire control.

The inspection will also focus on areas of the cap that require re-vegetation. As necessary, limited areas requiring re-vegetation will be planted in a manner consistent with the rest of the berm growth and the City of Pittsburg's approved Landscaping Plan. A copy of the landscaping plan is included as Appendix B. Larger areas exhibiting dead or dying vegetation will be evaluated by the Site Engineer for potential replanting. Completing the landscaping repairs will be the responsibility of the site owner.

3.3.3 Erosion Control Monitoring, Maintenance, and Repairs

Surface erosion damage to the containment soil cap will be evaluated during each site inspection. Surface erosion damage includes areas eroded by storm water, wind, or excessive irrigation. Appropriate repairs will be evaluated and scheduled as soon as possible following identification of a defect. Repair work will be performed by appropriately trained personnel in accordance with a site-specific Health and Safety Plan (HASP) prepared prior to the commencement of work.

Implementation of repairs may require limited excavation prior to filling and grading. In all cases, care will be taken to ensure that excavation below the soil cap does not occur to the extent possible. Final grading and compaction will be performed so as to

match the surrounding topography and RDIP, ARDIP, and grading permit specifications.

3.3.4 Animal Intrusion Monitoring and Repairs

Burrowing animal intrusion will be evaluated during each site inspection. Along with evaluation of repairs necessary to fill the burrowed areas, consideration will be given to the possibility of removing burrowing animals from the Site if burrowing is extensive. Minimal filling of burrows will be conducted using commercially available soil as fill material for repair of vegetative cover as described above. Significant repairs, requiring the use of construction equipment or requiring the removal of burrowing animals, will be performed using appropriately trained personnel in accordance with a HASP prepared prior to the commencement of work.

3.3.5 Drainage System Monitoring, Maintenance, and Repairs

During each site inspection, the drainage swale and catch basins will be evaluated for obstructions, which will be removed on an as-needed basis using rakes or shovels, as appropriate. Signs of cracking, settling, excessive vegetative growth, and other maintenance and repair concerns will be evaluated.

In the event that the swale is damaged severely enough that re-grading is required, the affected section will be demolished and re-graded. The repair work will be designed and overseen by properly trained staff in accordance with a HASP prepared prior to the commencement of work.

3.3.6 Settlement Monitoring and Repairs

During each inspection, indications of settling will be evaluated. These indications include cracking, settling, or other deformations that may compromise the integrity of the containment berm and soil cap. Any such deformities will be repaired immediately using available fill materials that will be stored on site within the fenced area. More significant repairs involving construction equipment and the potential to breach the soil cap will be performed under the oversight of properly trained staff in accordance with a HASP prepared prior to the commencement of work.

3.3.7 Irrigation System Repair

The irrigation system will be evaluated during each inspection. During the growing season, when the irrigation system is generally operable, the inspection will include reviewing the condition of sprinkler heads and conveyance lines. Likewise, each station of the irrigation system will be manually started during the inspection to evaluate the degree to which the Site is being covered. Any damage to irrigation system components will be immediately repaired to ensure that system disruption does not result in damage to the vegetative cover.

During the winter months (i.e., rainy season), inspections will also include evaluation of system components. Any damage to these components will be noted and repaired at a convenient time prior to the following growing season. No efforts to manually start the irrigation system will be made during winter month inspections; however, repair needs will be noted if discovered and the necessary repairs will be made.

3.3.8 Fencing Monitoring and Repair

Because the fence and gates at the Site are the primary barriers between the containment soil cap and the public, it is essential that these components be maintained in good working order. Each inspection will include a perimeter walk along the fencing to evaluate the integrity of fence posts, structural bars, gates, and locks and to identify any evidence of vandalism or entry by humans or animals. Inspections would also include evaluating the condition of signage. Signage will include but not be limited to "no trespassing" signs and "do not enter" signs. The signs will be in English and Spanish and will be in accordance with the City of Pittsburg's requirements. Any required repairs will be conducted immediately to ensure the barrier between the Site and public remains intact.

3.3.9 Slope Failure Repairs

In the event that a localized or site-wide slope failure is identified during a site inspection, the condition will be documented photographically, and repairs will be implemented only after consulting with the Site Engineer and DTSC. If slope failure results in exposure of asbestos materials, that area will be temporarily covered with a tarp and sand bags to minimize potential threat to human health or the environment pending evaluation of appropriate repair actions by the Site Engineer and DTSC.

3.4 Nonroutine Monitoring and Maintenance Procedures and Schedules

A number of nonroutine events will require unscheduled (nonroutine) inspections. As soon as the Site is accessible, it will be inspected following any of the following events:

- Rainfall exceeding 2 inches in a 24-hour period;
- Earthquakes exceeding 5.0 magnitude within a 50-mile radius of the Site;
- Blockage or overflow of the drainage system;
- Vandalism;
- Fire;
- Explosion;
- Broken water mains;
- Misguided utility line repair;

- Vehicle collision with the berm; or
- Any other foreseeable impact which may result in a breach of the berm.

If the damage from one of these events presents an immediate hazard to human health and/or the environment, repairs or temporary controls will be initiated immediately subject to Site Engineer evaluation and approval. All repair work will be completed in accordance with the HASP that will be prepared prior to the commencement of the repair work and under the supervision of the Site Engineer or a registered professional civil engineer. DTSC will be notified if any major repairs are required.

3.5 Emergency Response Plan

As indicated in Section 4.1 of the RAP, none of the waste materials contained in the berm are acutely hazardous. As the primary exposure routes are incidental ingestion, dermal contact, or inhalation of fugitive dust there would be no immediate acute threat to human health or the environment if these materials should become suddenly exposed.

Personnel listed below can be called to contain the breach and the berm will be temporarily covered with a tarp and sand bags to minimize further threat to human health or the environment pending evaluation of appropriate repair actions by the Site Engineer and DTSC.

Contact Information Emergency Only:

- 911 – City of Pittsburg Police Department of Contra Costa County Fire Protection District

Contact Information for Routine and/or Emergencies:

- Pittsburg River Park LLC - 39 Washington Street, Suite 220 Wellesley, MA 02481, 781-431-8101- office
- Michael Singer, Project Director - 860-214-7195 - 24-hour cell phone
- John Hanselman, Managing Partner - 617-480-1667 - 24-hour cell phone
- Pete Pedersen, Managing Partner - 781-223-8157 - 24-hour cell phone
- LFR Inc. (24-Hour Emergency Response) - 510-652-4500 - office
- Ron Goloubow, Project Manager - 510-501-1789 - 24-hour cell phone

3.6 Operation and Maintenance Program Reporting

Upon completion of each inspection of the containment soil cap and drainage system, the responsible party will oversee preparation of a report describing conditions of the Site in accordance with the evaluation factors listed above. The responsible party shall

be the site owner, agent of owner, consultant or subcontractor of owner. Along with the inspection checklist and associated site diagram and photographic log, the inspection reports will include a written evaluation of the following:

- Integrity of the security fence;
- Condition of irrigation system;
- Condition of the vegetative cover;
- Erosion impacts from irrigation or storm-water runoff;
- Rodent or animal populations burrowing into the cap; and
- Condition of drainage system components.

Inspection reports will be maintained by the responsible party, and copies will be forwarded to DTSC within one month following completion of the inspection. In association with the Fourth Quarter submittal (to be submitted to DTSC by the end of January), an annual report will be prepared summarizing the results of semiannual monitoring and any noteworthy repair or maintenance activities.

In the event that slope failure is identified during a site inspection and repairs are required, the Site Engineer will oversee preparation of a report specific to slope failure issues. The report, which will be prepared by the Site Engineer, will document the problem, recommended repairs, procedures, and repair activities. That report will be submitted to DTSC and the appropriate department(s) of the City of Pittsburg within one month following completion of site repair activities.

4.0 TRAFFIC RESTRICTIONS ON THE CONTAINMENT SOIL CAP

The containment soil cap was constructed to allow limited vehicle access for the purpose of inspection, maintenance, and repair of the soil cap or its components. Vehicular traffic on the containment soil cap should be avoided unless absolutely necessary for inspections and repairs to ensure that disturbance of the cap is minimized at all times.

Under no circumstances will vehicular access be provided to anyone other than the responsible party or its subcontractors.

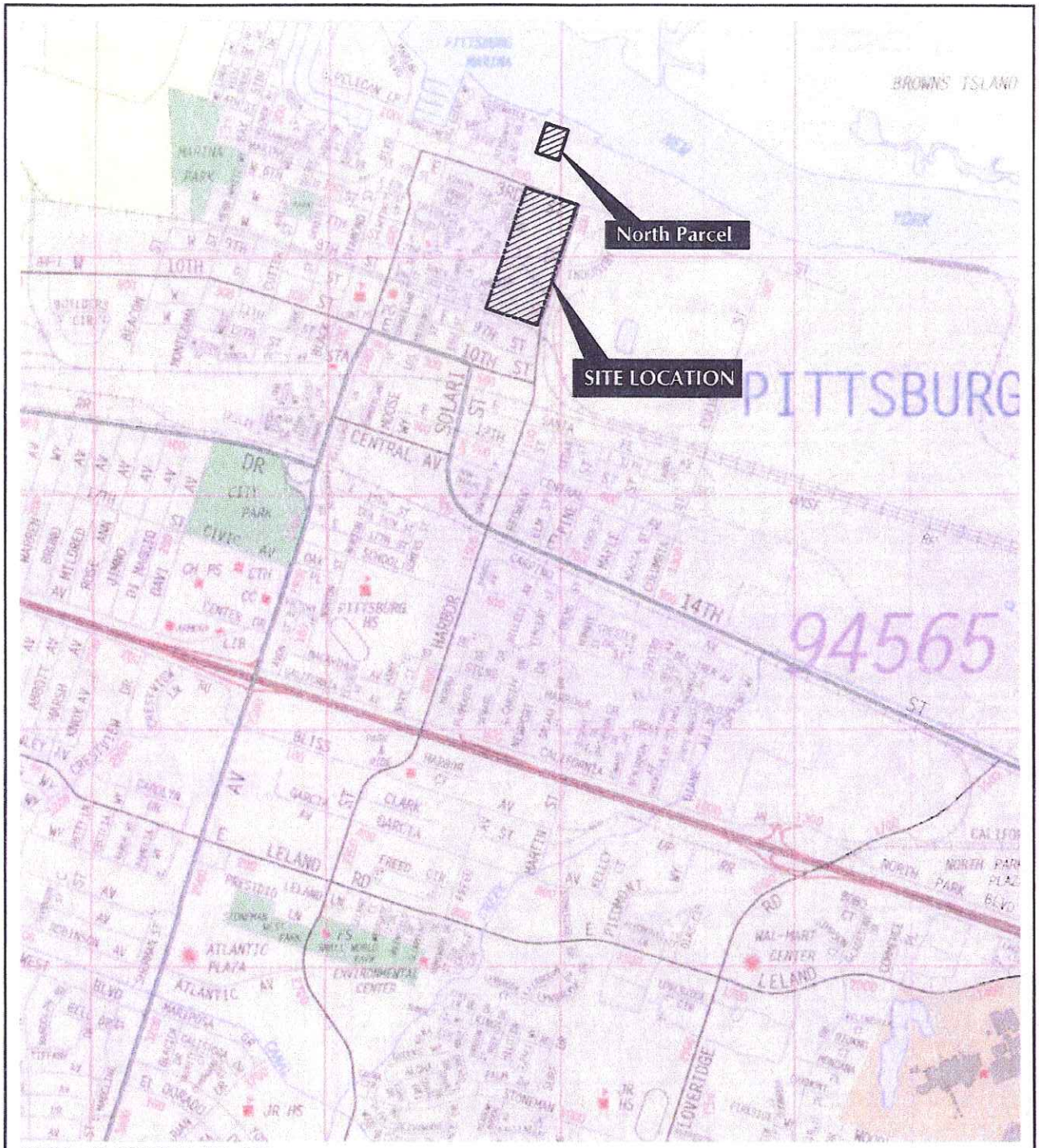
5.0 REFERENCES

ERM-West, Inc. (ERM). 2005. Operation and Maintenance Plan, North Parcel Site, former Johns Manville Plant, Pittsburg, California. November 2005.

———. 2006a. Final Remedial Action Plan, Harbor Park Development (Former Johns Manville Plant), Pittsburg, California. June 2006.

———. 2006b. Remedial Design and Implementation Plan, Harbor Park Development (Former Johns Manville Plant), Pittsburg, California. August 2006.

LFR Inc. (LFR). 2007. Addendum to the Remedial Design and Implementation Plan, Harbor Park Development (Former Johns Manville Facility), 420 East 3rd Street, Pittsburg, California. August 2007.



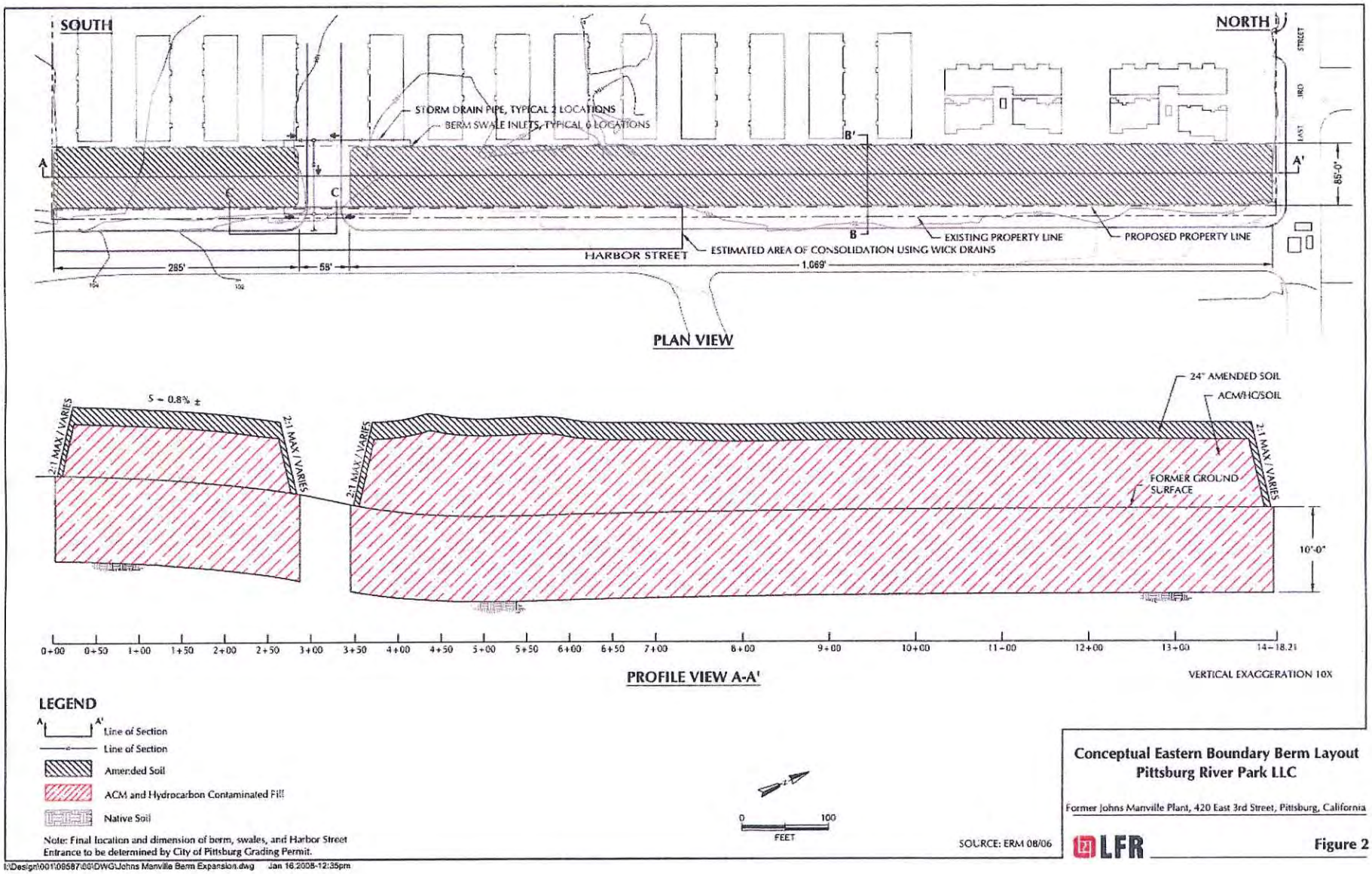
Site Vicinity Map

Former Johns Manville Plant, 420 East 3rd Street, Pittsburg, CA

LFR

Figure 1

I:\Design\001\09587\00\DWG\Johns Manville Site Sampling Plan.dwg 1/31/07



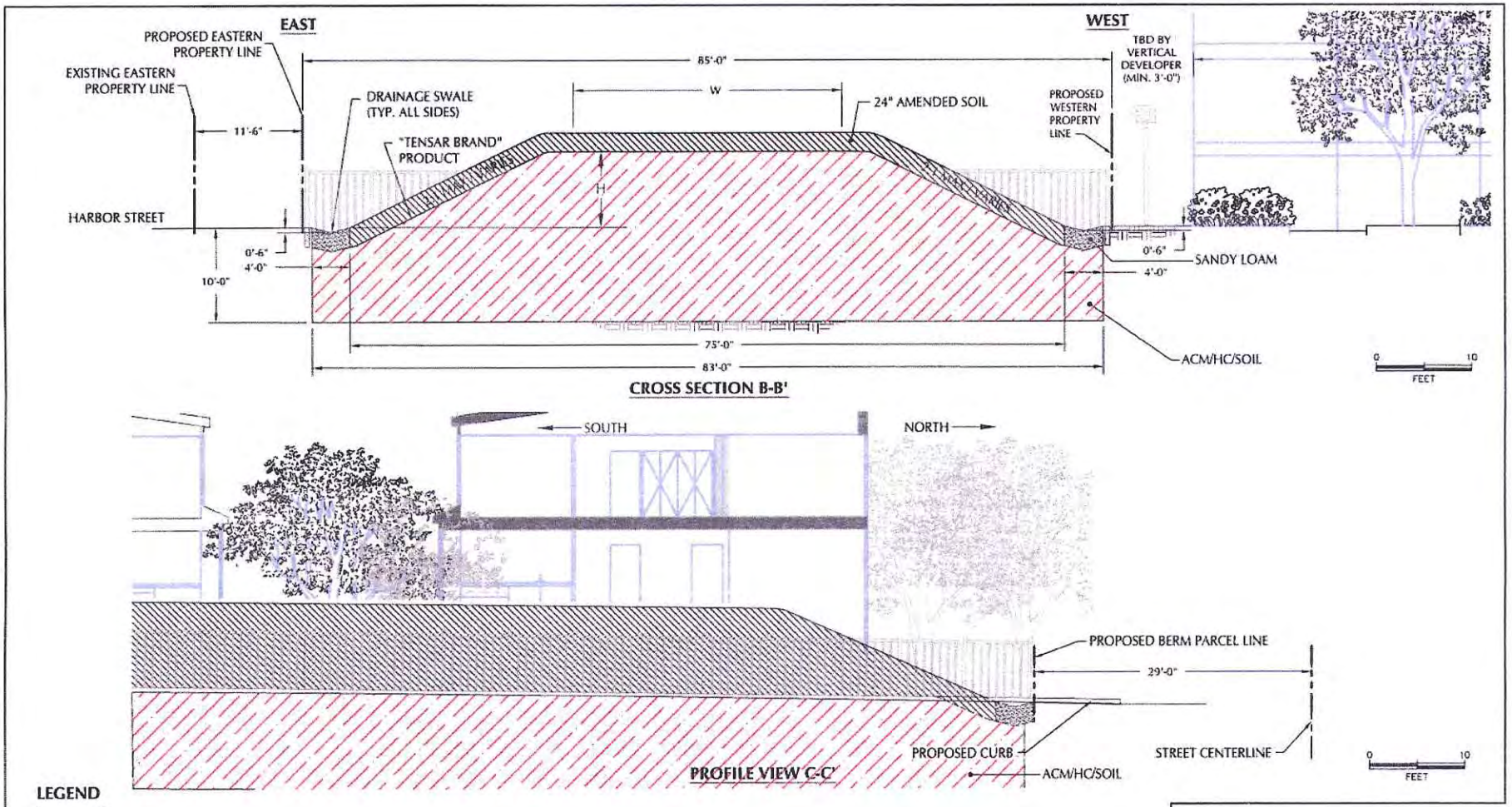
Conceptual Eastern Boundary Berm Layout
Pittsburg River Park LLC

Former Johns Manville Plant, 420 East 3rd Street, Pittsburg, California

LFR

Figure 2

I:\Design\001\09587\00\DWG\Johns Manville Berm Expansion.dwg Jan 16,2008-12:35pm



LEGEND

A A' Line of Section

Amended Soil

ACM and Hydrocarbon Contaminated Fill

Native Soil

Note: Final location and dimension of berm, swales, and Harbor Street Entrance to be determined by City of Pittsburg Grading Permit.

SOURCE: ERM 08/06

Conceptual Eastern Boundary Berm Sections
Pittsburg River Park LLC

Former Johns Manville Plant, 420 East 3rd Street, Pittsburg, California

LFR

Figure 3

I:\Design\001\09587\00\DWG\Johns Manville Berm Expansion.dwg Jan 16,2008-12:33pm

APPENDIX A

Operation and Maintenance Checklist

O&M CHECKLIST
PITTSBURG RIVER PARK LLC (Former JM Plant)
BERM PARCEL

Inspector: _____ Date: _____ Time: _____
Climatic Conditions: _____

Landscaping, Fencing, and Drainage Inspection

Please observe and document the following:

- Note and quantify eroded areas.
- Note and quantify cover soil conditions such as sloughing, sliding (presence of headscarps), and/or toe bulging.
- Note and quantify cracks, fissures, or other features that may potentially allow surface water infiltration.
- Note and quantify areas of subsidence, depressions, or topography where ponding may occur.
- Estimate rodent or other burrowing animal populations.
- Note and quantify burrowing animal intrusion drainage.
- Document (locate) areas where cover deficiencies are observed.
- Inspect and record any ponding.
- Inspect for runoff inundation.
- Inspect fencing.

LOCATION OF OBSERVATION (show on map): _____

OBSERVATION TYPE AND DETAILED DESCRIPTION: _____

ACTION(s) TAKEN (if necessary)*: _____

REMARKS: _____

*Please also fill out the attached Repair Record Form.

LANDSCAPE COVER

Please observe and document the following:

- Weed and fire control – Observe growth of plant materials and nuisance weeds in late winter. Determine if unsuitable plants pose a threat to the cover.
- Reseeding – Determine areas that require reseeding in summer.
- Rodent control – Evaluate visible signs of burrowing rodents during routine inspections around the site.
- Sprinkler system – Observe the condition of sprinkler heads and any potential leak from irrigation lines.

AREA LOCATION (show on map)	**GENERAL APPEARANCE & MOISTURE**	**MAINTENANCE REQUIRED**	**COMMENTS**

AREA LOCATION (show on map)	GENERAL APPEARANCE & MOISTURE	MAINTENANCE REQUIRED	COMMENTS

Signature:

Site Inspector: _____ Date: _____

REPAIR RECORD

Inspector: _____ Date: _____ Time: _____
Climatic Conditions: _____

DEFICIENCY TYPE AND DETAILED DESCRIPTION: _____

LOCATION OF REPAIR ACTIVITY (show on map): _____

REPAIR ACTION TAKEN: _____

REMARKS: _____

Signature:

Site Inspector: _____ Date: _____

APPENDIX B

Landscape Plan

FOR REFERENCE ONLY

HARBOR PARK
PITTSBURG, CA
PLANS FOR LANDSCAPING
MS 676-06 (AP-06-378)

LANDSCAPE PLAN

NOT FOR CONSTRUCTION

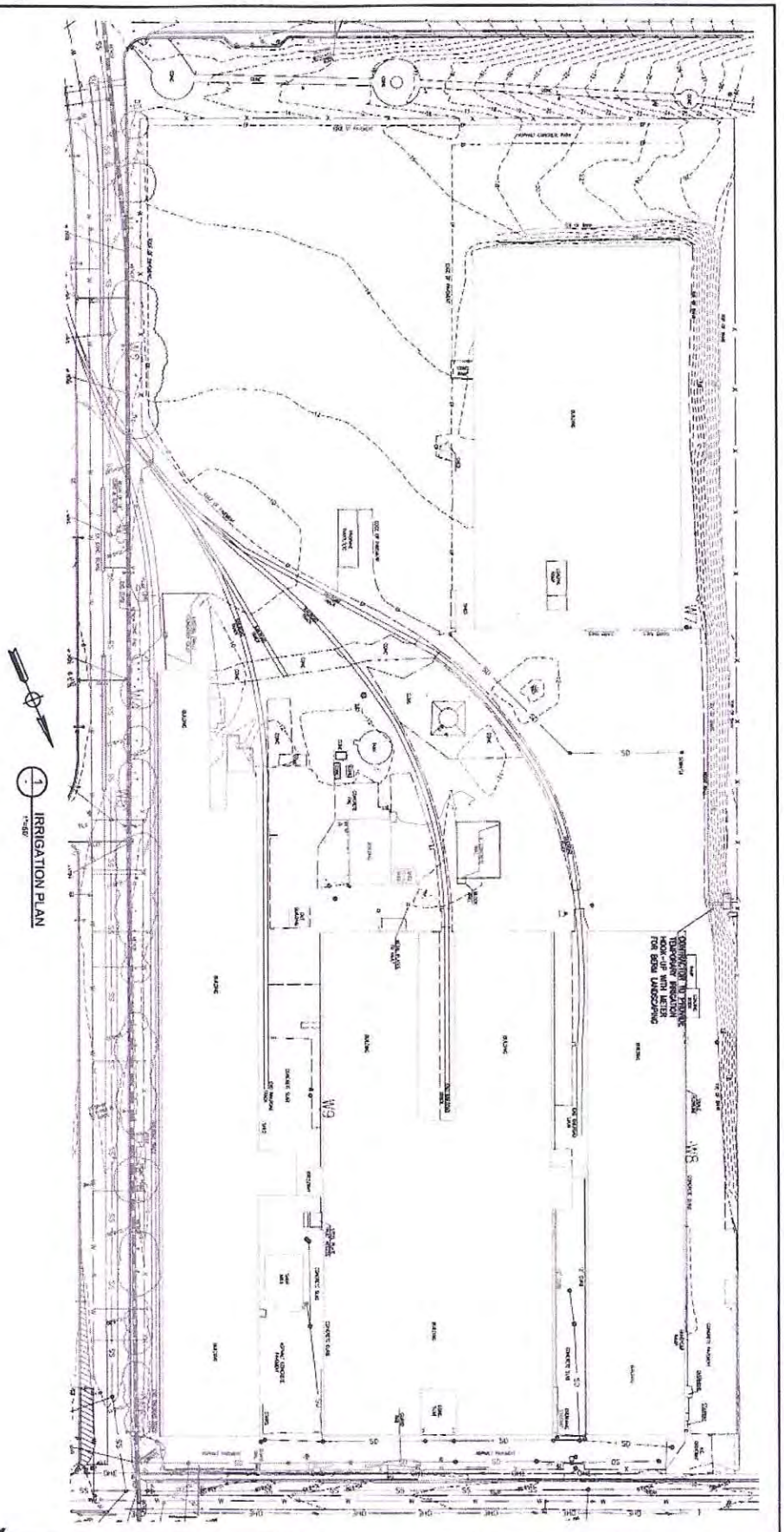
1041505001

L-101

PLANT LIST - HARBOR PARK

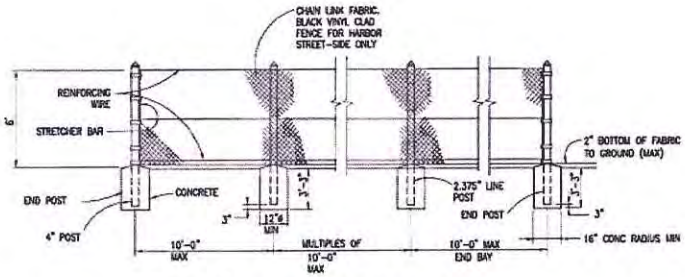
SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
PA	PENNISETUM ALOPECUROIDES 'HAMELN'	DWARF FOUNTAIN GRASS	#1 CG	24" O.C.
LM	LAVANDULA MULTIFIDA	FERNLEAF LAVENDER	#1 CG	24" O.C.
SB	SALVIA CLEVELANDII 'WINNIFRED GILMAN'	WINNIFRED GILMAN SAGE	#1 CG	24" O.C.
	ASA MONTEREYENSIS	MONTEREY MANZANITA	#1 CG	6'-0" O.C.

FOR REFERENCE ONLY

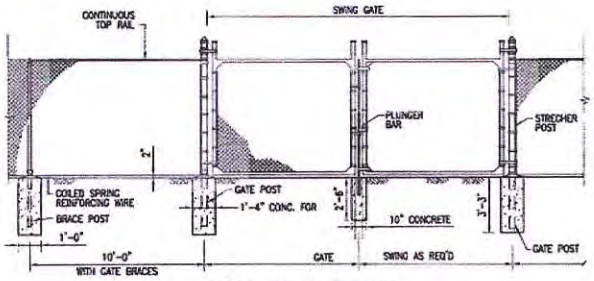


FOR REFERENCE ONLY

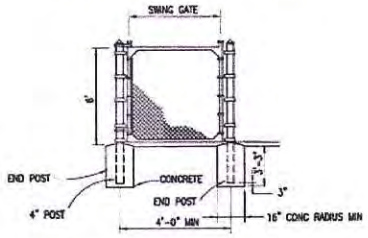
L-102	1 2 3	10415505001	HARBOR PARK PITTSBURG, CA PLANS FOR LANDSCAPING MS 676-08 (AP-06-370) IRRIGATION PLAN	NOT FOR CONSTRUCTION	HH / EAH BARS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	WINZLER & KELLY	PITTSBURG RIVER PARK LLC REVISIONS



1 TYPICAL CHAIN LINK FENCE DETAIL
NOT TO SCALE



2 TYPICAL SWING GATE
NOT TO SCALE



3 TYPICAL GATE DETAIL
NOT TO SCALE

FOR REFERENCE ONLY

NOT FOR CONSTRUCTION

HARBOR PARK
PITTSBURG, CA.
PLANS FOR LANDSCAPING
MS 576-06 (AP-06-370)

FENCE DETAILS

1241SC5001

3 OF 3

L-201

Linda S. Adams
Secretary for
Environmental Protection

Department of Toxic Substances Control

Maziar Movassaghi
Acting Director
700 Heinz Avenue
Berkeley, California 94710-2721

Arnold Schwarzenegger
Governor

November 16, 2009

Mr. Michael Singer
Pittsburg River Park, LLC
36 Washington Street, Suite 220
Wellesley, Massachusetts 02481

FORMER JOHNS MANVILLE PLANT SITE AND NORTH PARCEL, EAST THIRD STREET AND HARBOR STREET, PITTSBURG, CALIFORNIA – CERTIFICATION OF REMEDIAL ACTIONS

Dear Mr. Singer:

The Department of Toxic Substances Control certified the completion of the remedial actions at the former Johns Manville Plant Site and North Parcel on November 12, 2009. Enclosed are copies of the certification documents for your records. We appreciate your effort and cooperation in completing the cleanup of these two properties. We also wish to acknowledge Jodi Smith from Paul, Hastings, Janofsky & Walker and Ron Goloubow from LFR for their efforts.

Please call me at (510) 540-3832 if you have any questions.

Sincerely,

Mark E. Piros

Mark E. Piros, P.E.
Unit Chief
Brownfields and Environmental Restoration Program
Berkeley Office

Enclosures

cc: See next page

cc: Mr. Ron Goloubow
LFR
1900 Powell Street, 12th Floor
Emeryville, California 94508

Ms. Jodi Smith
Paul, Hastings, Janofsky & Walker LLP
55 Second Street, Twenty-Fourth Floor
San Francisco, California 94105

REMEDIAL ACTION CERTIFICATION
FORMER JOHNS MANVILLE NORTH PARCEL

---

1. Certification of Remedial Action:

I hereby certify that the following information is true and correct to the best of my knowledge.

Mark E. Piros — Project Manager, Cleanup Program — 11/12/2009 — Date

Mark E. Piros — Unit Chief, Cleanup Program — 11/12/2009 — Date

Barbara Cook — Performance Manager, Cleanup Program — 11/12/09 — Date

2. Certification Statement: Based upon the information which is currently and actually known to DTSC:

___ DTSC has determined that all appropriate response actions have been completed, that all acceptable engineering practices were implemented and that no further removal/remedial action is necessary.

___ DTSC has determined, based upon a remedial investigation or site characterization, that the site poses no significant threat to public health, welfare, or the environment and therefore implementation of removal/remedial measures is not necessary.

_X_ DTSC has determined that all appropriate removal/remedial actions have been completed and that all acceptable engineering practices were implemented: however, the site requires ongoing operation and maintenance (O&M) and monitoring efforts. The site will be deleted from the "active" site list following (1) a trial operation and maintenance period and (2) execution of a formal written settlement between DTSC and the responsible parties, if appropriate. However, the site will be placed on DTSC's list of sites undergoing O&M to ensure proper monitoring of long-term clean-up efforts.

3. **Site Name and Location: (Street address, County, and City)**

Former Johns Manville North Parcel
East Third and Harbor Streets
Pittsburg, Contra Costa County, California

A. List any other names that have been used to identify this site:

Former Johns Manville Site - OU 2

B. Address of site if different from above: N/A

C. Assessor's Parcel Numbers:

073-010-007 and 073-010-008

4. **Responsible Parties**:

Pittsburg River Park, LLC
36 Washington Street, Suite 220
Wellesley, Massachusetts 02481
Relationship to Site: Current Owner

Johns Manville
717 17th Street
Denver, Colorado 80202
Relationship to Site: Former Owner/Operator

5. **Brief Description and History of the Site:**

The 4.2-acre North Parcel was one of two properties near the intersection of East Third Street and Harbor Street which Johns Manville owned and where it operated a manufacturing facility that produced asbestos-cement products, asphalt roofing materials, and asbestos-containing pipe covering from around 1926 to 1980. The second property is known as the Plant Site. The North Parcel was used for storage of bulk asbestos fiber used in product manufacturing and for storage and repair of wood pallets used in the shipping of asbestos-cement products. A significant amount of asbestos-containing materials (ACM) were deposited on the ground while the North Parcel was used for storage of bulk asbestos fiber. The North Parcel was also used as a parking area for cars and a tarping area for truck drivers.

In 1986, Harding Lawson Associates (HLA) conducted a remedial investigation / feasibility study (RI/FS) on behalf of Johns Manville to determine the extent of ACM impacts on the North Parcel and to identify a remedial alternative to

address the impacts. The results of the RI/FS were presented in HLA's September 26, 1986 Remedial Investigation/Feasibility Study Report. The remedial investigation showed that ACM was present on approximately 3.8-acres of the 4.2-acre North Parcel in concentrations greater than one percent. The feasibility study evaluated four cleanup alternatives, which included soil removal and three different cover alternatives. The recommended alternative was a soil cover, based on its ability to prevent airborne asbestos exposures and because it was the considered the most cost-effective of the alternatives. DTSC approved the recommended remedial alternative with a letter dated December 11, 1986.

Johns Manville entered into a Voluntary Cleanup Agreement (VCA) in July 2000 to conduct a five-year review for the North Parcel and Preliminary Endangerment Assessment for the Plant Site. DTSC approved the First Five-Year Review Report for the North Parcel in June 2001. In October 2004, Pittsburg River Park LLC (PRPLLC) acquired both the North Parcel and the Plant Site from Johns Manville. PRPLLC entered into a VCA with DTSC in March 2005 and continued investigation and cleanup activities under its VCA with DTSC. PRPLLC completed the second five-year review and DTSC approved the Second Five-Year Review Report on December 11, 2006. Both the first and second five-year reviews concluded that the soil cover was functioning as intended and continued to be protective of human health and the environment.

PRPLLC has been performing ongoing inspection, maintenance, and repair of the soil cover and will continue to do so under an Operation and Maintenance Agreement with DTSC that was executed in September 2009. PRPLLC also entered into a Land Use Covenant with DTSC in December 2007 which restricts the use of the North Parcel and place limitations on activities that would disturb the soil cover.

6. Type of Site:

Has the Site been identified in EnviroStor as an active DTSC site?

Yes _X_ No___

RCRA-Permitted Facility	___	Bond-funded	___
RCRA Facility Closure	___	RP-Funded	_X_
NPL	___	Federal Facility	___
Other (i.e. walk-in)	___	Explain Briefly:	

7. Size of the Site:

Small ___ Medium _X_ Large ___ Extra-Large ___

8. Dates of Remedial Action:

a. Initiated: December 1987 b. Completed: March 1988

9. Response Action Taken on Site: (check appropriate action)

___ Removal Action (satisfactory abatement of site)

_X_ Final Remedial Action

___ RCRA enforcement/closure action

___ No action, further investigation verified that no clean-up action at the site was need.

A. Type of Remedial or Removal Action: (e.g. excavation and disposal, on-site treatment, etc.)

The remedial action primarily consisted of the construction of a soil cover over the ACM-impacted soil. The soil cover was constructed by placing a minimum of 9-inches to over 24-inches of engineered fill and was graded to have a slope of 0.5 to 10 percent to facilitate drainage. An automatic sprinkler system was installed and the soil cover was hydroseeded with a grass seed mixture. A fence was constructed around the periphery of the North Parcel to prevent public access.

B. Estimated quantity of waste associated with the site (i.e., tons/gallons/cubic yards) which was:

___	treated	amount:
_X_	untreated (capped sites)	amount: 18,400 cubic yards
___	removed	amount:

10. Cleanup Levels/Standards:

a. What were the cleanup standards established by DTSC pursuant to the Final Remedial Action Plan (RAP) or workplan (if cleanup occurred as the result of removal action (RA) prior to development of a RAP)?

The soil cover was constructed over the 3.8-acre, ACM-impacted portion of the 4.2-acre North Parcel and numerical cleanup standards were not established.

b. **Were the specified cleanup standards met?** Yes __ No __
Not applicable – capped site

c. **If "no", why not:**

11. **DTSC Involvement in the Remedial Action:**

A. **Did DTSC order the Remedial Action?**

Yes ___ No_X_ Date of Order:_____

B. **Did DTSC review and approve the following plans/procedures? (indicate date of review/approval, if done):**

Sampling and Analysis Procedures	Date: Documentation of approval could not be located
Health and Safety Protections	Date: Documentation of approval could not be located
Cleanup Plan	Date: December 11, 1986

C. **If site was abated by responsible party, did DTSC receive a signed statement from a licensed professional on all phases of the Remedial Actions? (indicate date of statement)**

Cleanup Plan	Date: September 26, 1986
Design and Construction Specifications	Date: August 12, 1988
Post Construction	Date: August 12, 1988

D. **Did a registered engineer or geologist verify that acceptable engineering practices were implemented?**

Yes _X_ No ___ Name: William Frizzell, Civil 33013
Date: the dates are those identified under 9.C.

E. **Did DTSC confirm completion of all Remedial Actions?**

Yes _X_ No ___ Date:

F. **Did DTSC (directly or through a contractor) actually perform the Remedial Action?**

Yes __ No _X_ Name of Contractor:

G. **Was there a community relations plan in place?**

Yes _X_ No __ Community Profile, dated April 5, 2001

H. **Was a removal/remedial action plan developed for this site?**

Yes _X_ No __

I. **Did DTSC hold public meetings regarding the draft RAP?**

Yes ___ No_X_

J. **Were public comments addressed?**

Yes ___ No _X_

Dates of DTSC analyses/responses:

K. **Are all of the facts cited above adequately documented in the DTSC files?**

Yes _X_ No __

If no, identify areas where documentation is lacking:

12. **EPA Involvement in the Remedial Action;**

A. **Was EPA involved in the site cleanup?**

Yes __ No _X_

B. **If yes, did EPA concur with all remedial actions?**

Yes __ No __

C. **EPA comments**

EPA staff involved in cleanup: (name, title, address, and phone number)

_____

13. Other Regulatory Agency Involvement in the Cleanup Action:

Agency:	Activity:
___ RWQCB	_____
___ ARB	_____
___ CHP	_____
___ Caltrans	_____
___ Other	_____

Name of contact persons and agency: _____

14. Post Closure Activity:

A. Will there be post-closure activities at this site? (e.g. Operation and Maintenance)

Yes X No ___

B. Have post-closure plans been prepared and approved by DTSC?

Yes X No ___

C. What is the estimated duration of post-closure (including Operation and Maintenance) activities?

30+ years

D. Are deed restrictions proposed or in place?

Yes X No ___

If "yes", have deed restrictions been recorded with the County recorder?

Yes X No ___

If "no", who is responsible for assuring that the deed restrictions are recorded? NA

Who is the Program contact? Mark Piros 510-540-3832
name/phone number

E. Has cost recovery been initiated?

Yes _X_ No __

If "yes", amount received $261,294; 99% of DTSC costs.

F. Were local planning agencies notified of the cleanup action?

Yes _X_ No ___

If "yes", the name and address of the agency:

City of Pittsburg Planning Department
65 Civic Avenue
Pittsburg, California 94565

15. Expenditure of Funds and Sources: (Information to be supplied by Toxic Account Unit.) funding source and amount expended:

___ HWCA	$_____	___ HSA	$_____
___ HSCF	$_____	___ RCRA	$_____
_X_ RP	$ unknown	___ Other	$_____
___ Federal Cooperation Agreement	$_____		

16. Problems Encountered Which Caused Major Delays: Difficulties were encountered in putting in place the required financial assurance mechanism.

17. Accomplishments Unique to this Project: There were no unique accomplishments for this project.

18. Final Use of Site: The current zoning for the North Parcel is industrial. The North Parcel is currently not being used and there are no definite plans for its future use.

REMEDIAL ACTION CERTIFICATION
FORMER JOHNS MANVILLE PLANT SITE

---

1. Certification of Remedial Action:

I hereby certify that the following information is true and correct to the best of my knowledge.

Mark E. Piros — Project Manager, Cleanup Program — 11/12/2009 — Date

Mark E. Piros — Unit Chief, Cleanup Program — 11/12/2009 — Date

Barbara Cook — Performance Manager, Cleanup Program — 11/12/09 — Date

2. Certification Statement: Based upon the information which is currently and actually known to DTSC:

___ DTSC has determined that all appropriate response actions have been completed, that all acceptable engineering practices were implemented and that no further removal/remedial action is necessary.

___ DTSC has determined, based upon a remedial investigation or site characterization, that the site poses no significant threat to public health, welfare, or the environment and therefore implementation of removal/remedial measures is not necessary.

_X_ DTSC has determined that all appropriate removal/remedial actions have been completed and that all acceptable engineering practices were implemented: however, the site requires ongoing operation and maintenance (O&M) and monitoring efforts. The site will be deleted from the "active" site list following (1) a trial operation and maintenance period and (2) execution of a formal written settlement between DTSC and the responsible parties, if appropriate. However, the site will be placed on DTSC's list of sites undergoing O&M to ensure proper monitoring of long-term clean-up efforts.

3. **Site Name and Location: (Street address, County, and City)**

Former Johns Manville Plant Site
East Third and Harbor Streets
Pittsburg, Contra Costa County, California

A. List any other names that have been used to identify this site:

Former Johns Manville Site - OU 1
Pittsburg River Park

B. Address of site if different from above: not applicable

C. **Assessor's Parcel Numbers:** 073-050-001

4. **Responsible Parties**:

Pittsburg River Park, LLC
36 Washington Street, Suite 220
Wellesley, Massachusetts 02481
Relationship to Site: Current Owner

Johns Manville
717 17th Street
Denver, Colorado 80202
Relationship to Site: Former Owner/Operator

5. Brief Description and History of the Site:

The 20.5-acre Plant Site was one of two properties near the intersection of East Third Street and Harbor Street in Pittsburg, which Johns Manville owned and where it operated a manufacturing facility. The second property is known as the North Parcel. The manufacturing facility was located on the Plant Site while the North Parcel was used for storage of bulk asbestos fiber used in product manufacturing and for storage and repair of wood pallets used in the shipping of asbestos-cement products. The manufacturing facility produced asbestos-cement products, asphalt roofing materials, and asbestos-containing pipe covering from around 1926 to 1980. The facility then manufactured commercial roofing products using fiberglass mat, asphalt, sand, and limestone until the facility closed in 2003.

The former manufacturing facility on the Plant Site consisted of four buildings in the northern portion of the Site and a warehouse in the southwestern portion of the Site. An asbestos product storage area was located in the area north of the warehouse. A series of four asphalt stills were used in the manufacturing

operation to convert heavy oil to asphalt. Off-gas vapors from the stills were collected, condensed, and mixed with water to form an oil-water slurry that was discharged to an evaporation pond from approximately 1946 to 1959. The evaporation pond was subsequently filled with scrap and construction debris.

Johns Manville entered into a Voluntary Cleanup Agreement (VCA) with DTSC in July 2000 to conduct a five-year review for the North Parcel and Preliminary Endangerment Assessment for the Plant Site. In October 2004, Pittsburg River Park LLC (PRPLLC) acquired both the Plant Site and North Parcel from Johns Manville. PRPLLC entered into a VCA with DTSC in March 2005 and continued performing investigation and cleanup activities.

Investigations were conducted at the Plant Site from 1986 to 2004 by Johns Manville and then by PRPLLC. The primary chemical constituents that were found in soil/fill materials in the former evaporation pond area were extractable petroleum hydrocarbons (primarily total petroleum hydrocarbons [TPH] in the diesel and motor oil range) and asbestos. In the former asbestos product storage area that was located north of the warehouse and other areas identified during facility demolition activities, asbestos with minor amounts of heavier range TPH were found in soils at depths ranging from 6-inches to 10-feet below ground surface.

A treatability study was performed from June to August 2005 with 39 vapor extraction wells installed to a depth of 20 to 25 feet below ground surface in the evaporation pond area to remove non-aqueous phase liquids (NAPL). Approximately 14,120 gallons of impacted groundwater were removed and treated in granular activated carbon columns and approximately 201.7 gallons of NAPL and 104.3 gallons of NAPL through the dissolved phase were removed.

DTSC approved the Final Remedial Action Plan, the Remedial Design and Implementation Plan, and a Remedial Design Addendum for the Plant Site on June 22, 2006, August 25, 2006, and November 2, 2007, respectively. The implementation of the remedial activities is documented in the October 21, 2008 Remedial Action Completion Report prepared by LFR on behalf of PRPLLC.

PRPLLC entered into a Land Use Covenant with DTSC in September 2009 which restricts the use of the area where ACM and TPH-impacted soil are contained on-site and places limitations on activities that would disturb the soil cover that was constructed on it. The Land Use Covenant includes prohibitions on extraction of groundwater and installation of wells over the rest of the Plant Site and includes restrictions on activities that disturb the soil at or below an elevation of 4 feet elevation (relative to the National Geodetic Vertical Datum) in an area that is approximately where the evaporation pond was located and where residual TPH remains in groundwater.

PRPLLC will perform ongoing inspection, maintenance, and repair of soil covers that were constructed where the ACM and TPH-impacted soil are contained on-site under an Operation and Maintenance Agreement with DTSC that was executed in September 2009.

6. **Type of Site:**

Has the Site been identified in the EnviroStor database as an active DTSC site?

Yes _X_ No___

RCRA-Permitted Facility	___	Bond-funded	___
RCRA Facility Closure	___	RP-Funded	_X_
NPL	___	Federal Facility	___
Other (i.e. walk-in)	___	Explain Briefly:	

7. **Size of the Site:**

Small ___ Medium _X_ Large ___ Extra-Large ___

8. **Dates of Remedial Action:**

a. Initiated: June 2006 b. Completed: January 2008

9. **Response Action Taken on Site: (check appropriate action)**

___ Removal Action (satisfactory abatement of site)

_X_ Final Remedial Action

___ RCRA enforcement/closure action

___ No action, further investigation verified that no clean-up action at the site was need.

A. **Type of Remedial or Removal Action: (e.g. excavation and disposal, on-site treatment, etc.)**

The remedial actions primarily consisted of excavating ACM and TPH-impacted soil and consolidating the excavated ACM and soil in a containment berm along the eastern boundary of the Plant Site. Some soil was disposed off-site due to the volume of excavated soil exceeding the berm capacity. A total of 30,321 tons of excavated, TPH-impacted

soil was disposed at the Norcal Waste System, Inc. Hay Road Landfill. A total of 17,619 tons of ACM-impacted soil was disposed at the Forward Landfill. Approximately, 64,600 cubic yards of ACM and TPH-impacted soil were placed into the containment berm, which consists of two sections. The south and north berm sections are approximately 296 feet long and 1,072 feet long, respectively. Both berm sections are approximately 85 feet wide at the base and extend approximately 10 feet above the elevation of the adjacent sidewalk area. Access to the berm area is restricted by a fence. A two-foot-thick clean soil cover was constructed on the two berm sections using clean, imported soil that was also used for backfilling the excavation areas. Post-remediation grab groundwater sampling and soil vapor sampling were performed.

B. Estimated quantity of waste associated with the site (i.e., tons/gallons/cubic yards) which was:

X	treated	amount: 993,000 gallons of water pumped from excavations discharged to sanitation district
X	untreated (capped sites)	amount: 64,600 cubic yards ACM/soil
X	removed	amount: 47,940 tons ACM/soil

10. Cleanup Levels/Standards:

a. What were the cleanup standards established by DTSC pursuant to the Final Remedial Action Plan (RAP) or workplan (if cleanup occurred as the result of removal action (RA) prior to development of a RAP)?

The soil cleanup level for asbestos was established at the detection limit, using U.S. Environmental Protection Agency Method 600/R-93/116 or an equivalent analytical method

Table C-6 from the Final Remedial Action Plan lists the soil cleanup levels for the contaminants other than asbestos. A copy of this table is attached at the end of this certification.

The State maximum contaminant levels (MCLs) were established as the groundwater cleanup levels for benzene, toluene, ethylbenzene and xylenes (BTEX).

b. Were the specified cleanup standards met? Yes X No ___

All soil cleanup levels were met except in some confirmation soil samples that were collected from below the groundwater table in the former evaporation pond area, where there were some exceedences of the TPH cleanup levels.

The groundwater cleanup levels for BTEX were met, except in one post-remediation grab groundwater sample (sample location GGW-6), where there was a slight exceedence of the maximum contaminant level. Benzene was detected in this sample at a concentration of 1.3 micrograms per liter and State MCL for benzene is 1 microgram per liter.

c. **If "no", why not:** DTSC addressed the issue of the exceedences of the TPH cleanup levels in soil samples collected below the water table in the former evaporation pond area in a March 14, 2007 letter to the project proponent. A copy of this letter is attached at the end of this certification.

The exceedence of the State benzene MCL at sample location GGW-6 was not considered to be a significant concern because it was only a slight exceedence and a localized occurrence.

Chlorinated volatile organic compounds were detected in post-remediation grab groundwater samples at concentrations exceeding the State MCLs. However, groundwater cleanup levels for the detected compounds were not established in the Final Remedial Action Plan because a previous determination was made the origin of these contaminants was likely an off-site source.

11. DTSC Involvement in the Remedial Action:

A. Did DTSC order the Remedial Action?

Yes ___ No_X_ Date of Order: VCA, March 22, 2005

B. Did DTSC review and approve the following plans/procedures? (indicate date of review/approval, if done):

Sampling and Analysis Procedures	Date: August 25, 2006 November 2, 2007
Health and Safety Protections	Date: August 25, 2006
Remedial Action Plan	Date: June 22, 2006

C. **If the site was abated by responsible party, did DTSC receive a signed statement from a licensed professional on all phases of the Remedial Actions? (indicate date of statement)**

Remedial Action Plan	Date: June 2006
Design and Construction Specifications	Date: August 2006 August 1, 2007
Post-Remediation	Date: October 21, 2008

D. **Did a registered engineer or geologist verify that acceptable engineering practices were implemented?**

Yes _X_ No ___ Name: William Carson, California Civil Engineer #C60735
Date: October 23, 2008 (certification included in Remedial Action Completion Report)

E. **Did DTSC confirm completion of all Remedial Actions?**

Yes _X_ No ____ Date: November 6, 2008 (date of Remedial Action Completion Report approval)

F. **Did DTSC (directly or through a contractor) actually perform the Remedial Action?**

Yes __ No _X_ Name of Contractor:

G. **Was there a community relations plan in place?**

Yes _X_ No __

H. **Was a removal/remedial action plan developed for this site?**

Yes _X_ No __

I. **Did DTSC hold public meetings regarding the draft RAP?**

Yes _X_ No __

J. **Were public comments addressed?**

Yes _X_ No __

Date of DTSC responses to public comments: June 12, 2006

K. Are all of the facts cited above adequately documented in the DTSC files?

Yes X No __

If no, identify areas where documentation is lacking:

12. EPA Involvement in the Remedial Action;

A. Was EPA involved in the site cleanup?

Yes __ No X

B. If yes, did EPA concur with all remedial actions?

Yes __ No __

C. EPA comments

EPA staff involved in cleanup: (name, title, address, and phone number)

_____

13. Other Regulatory Agency Involvement in the Cleanup Action:

Agency:	Activity:
__ RWQCB	_____
__ ARB	_____
__ CHP	_____
__ Caltrans	_____
X Other	City of Pittsburg – Reviewed and commented on Remedial Action Plan and Remedial Design, issued grading permit for soil excavation and berm construction

Name of contact persons and agency: Chris Barton, City of Pittsburg Planning Department

14. Post Closure Activity:

A. Will there be post-closure activities at this site? (e.g. Operation and Maintenance)

Yes X No __

B. Have post-closure plans been prepared and approved by DTSC?

Yes X No __

C. What is the estimated duration of post-closure (including Operation and Maintenance) activities?

Indefinite duration

D. Are deed restrictions proposed or in place?

Yes X No __

If "yes", have deed restrictions been recorded with the County recorder?

Yes X No __

If "no", who is responsible for assuring that the deed restrictions are recorded? not applicable

Who is the Program contact? Mark Piros 510-540-3832
name/phone number

E. Has cost recovery been initiated?

Yes X No __
If "yes", amount received $263,883; 100% of DTSC costs.

F. Were local planning agencies notified of the cleanup action?

Yes X No ___

If "yes", the name and address of the agency:

City of Pittsburg Planning Department
65 Civic Avenue
Pittsburg, California 94565

15. **Expenditure of Funds and Sources: (Information to be supplied by Toxic Account Unit.) funding source and amount expended:**

___ HWCA $_____ ___ HSA $_____

___ HSCF $_____ ___ RCRA $_____

_X_ RP $ unknown ___ Other $_____

___ Federal Cooperation Agreement $_____

16. **Problems Encountered Which Caused Major Delays:** A substantially larger volume of ACM and TPH-impacted soil were encountered during the cleanup than was anticipated based on the estimates that were made based on investigation data. Difficulties were encountered in putting in place the financial assurance mechanism required by the Operation and Maintenance Agreement.

17. **Accomplishments Unique to this Project:** The City of Pittsburg, PRPLLC, and DTSC worked closely from the preparation of the Remedial Action Plan through implementation of the remedial actions to ensure that the cleanup was done in a manner that was compatible with future development plans on and adjacent to the Plant Site.

18. **Final Use of Site:** PRPLLC has developed conceptual development plans that include a mixed-use community of residences and commercial buildings. However, PRPLLC has not submitted a formal development application to the City of Pittsburg Planning Commission and the Plant Site is currently vacant. The containment berm constructed on the eastern side of the Plant Site provides both a visual and a sound barrier between the traffic on Harbor Street and the proposed future housing lots on the Plant Site.

Table C-6
Proposed Soil Cleanup Goals
Pittsburg River Park LLC
Former Johns Manville Plant
California

Class	Compound	EPA Region IX PRG (mg/kg) [1]	Cal EPA CHHSLs (mg/kg) [2]	CRWQCB ESLs (mg/kg) [3]	Proposed Cleanup Goal (mg/kg) [4]
PCBs	PCBs (unspeciated mixture, high risk, e.g. Aroclor 1254)	0.22	0.089	6.300	**0.089**
	PCBs (unspeciated mixture, low risk, e.g. Aroclor 1016)	3.9	0.089	6.300	**3.9**
SVOCs	2-Chloronaphthalene	4,900	--	--	**4,900**
	Acenaphthene	3,700	--	19.00	**3,700**
	Anthracene	22,000	--	2.80	**22,000**
	Benzo(a)anthracene	0.62	--	12.00	**0.62**
	Chrysene	62	--	23.00	**62**
	Fluoranthene	2,300	--	32.00	**2,300**
	Fluorene	2,700	--	8.90	**2,700**
	Naphthalene	1.7	--	0.46	**1.7**
	Pyrene	2,300	--	85.00	**2,300**
TPH	Gasoline range C6-C10	--	--	400	**400**
	Diesel range C10-C28	--	--	500	**500**
	Motor Oil range C28-C40	--	--	500	**500**
VOCs	Benzene	0.64	--	0.18	**0.64**
	Ethylbenzene	400	--	32.00	**400**
	Toluene	520	--	9.30	**520**
	Xylenes	270	--	--	**270**

Notes:

1) USEPA Region 9, Preliminary Remediation Goals, October 2004, residential land use; these values do not factor in the indoor air emissions exposure pathway and additional evaluation of the protectiveness of these values may be warranted after emplacement of clean engineered backfill following remedial activities.

2) California EPA California Human Health Screening Levels, January 2005, residential land use

3) California Regional Water Quality Control Board Environmental Screening Levels, February 2005, residential land use; deep soil

(greater than 3 meters below ground surface, water is not a current or potential source of drinking water

4) As noted previously in this RAW, risks associated with site chemicals are outside the acceptable range when considered on a site-wide basis. However, if it is assumed that impacted soils within the former evaporation pond and asbestos storage areas are to be removed in association with site remedial actions, the resultant carcinogenic and noncarcinogenic (hazard index) risks are less than 10-6 and 1, respectively, which represent the acceptable range for residential reuse. For removal actions associated with the former evaporation pond and asbestos storage areas, the more stringent value of the PRG or CHHSL for a given constituent is to be used as the project-specific cleanup goal. It should be noted that CHHSLs have not been established for a number of the COCs.

For PCBs, the CHHSL does not differentiate between the different levels of risk posed by the various congeners. Therefore, for the "low risk" congeners, the proposed cleanup goal is the PRG established for this class of compounds.

In the case of TPH, for which neither PRGs nor CHHSLs have been established, the proposed cleanup goals are not risk based; these reflect standard practice. The risk-based cleanup goals for specific constituents of TPH mixtures (e.g., BTEX) will provide adequate risk protection associated with TPH in soil.

Linda S. Adams
Secretary for
Environmental Protection

Department of Toxic Substances Control

Maureen F. Gorsen, Director
700 Heinz Avenue
Berkeley, California 94710-2721

Arnold Schwarzenegger
Governor

March 14, 2007

Ms. Susan Hollingshead
Renova Partners LLC
55 Hawthorne Street
San Francisco, California 94105

Dear Ms. Hollingshead:

At our February 1, 2007 meeting, we discussed the cleanup being performed by Renova Partners LLC at the Harbor Park Development (Site) in Pittsburg, California. The issues we discussed at this meeting included Renova's proposals to: 1) limit the extent of excavation of soil impacted by total petroleum hydrocarbons (TPH) in the former evaporation pond area to the groundwater table; and 2) place back into the former evaporation pond area excavation soil that was excavated from below the groundwater table and which is currently stockpiled adjacent to the excavation. In your February 12, 2007 e-mail, you requested that the Department of Toxic Substances Control (DTSC) provide written approval of these proposals.

As we discussed at our February 1, 2007 meeting, the TPH that occurs below the groundwater table in the former evaporation pond area is essentially a groundwater contamination problem. The soil below the groundwater table has been difficult to excavate because of the loose nature of the soil below the depth where groundwater has been encountered and we agree that addressing the TPH impacts below the groundwater table by soil excavation is impractical. Therefore, DTSC approves limiting the extent of excavation of TPH-impacted soil to the groundwater table. The weathered TPH that occurs in the former evaporation pond area does not pose a significant risk to human health and past investigations have shown the TPH impacts have remained localized in the former evaporation pond area. The existing data show a very limited occurrence of volatile organic compounds (VOCs) in association with TPH in groundwater in the former evaporation pond area. However, as we discussed at the February 1st meeting, soil gas sampling shall be performed after backfilling of the excavation is completed to ensure that there will not be a potential human health risk from subsurface vapor intrusion of VOCs into future buildings constructed on the Site.

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In December 2006, about 5,200 cubic yards of soil was excavated from the former evaporation pond to depths ranging between four to eight feet below the groundwater table. The soil is now stockpiled on the west and north side of the excavation. The TPH concentrations in confirmation soil samples collected from that limits of the excavation and about 8 feet below the groundwater table ranged from 2.5 milligrams per kilogram (mg/kg) as gasoline to 11,000 mg/kg as motor oil. DTSC inspected the soil stockpile on February 27, 2006 and observed that the soil, in general, appears to be clayey and dark grey in color. Some patches of soil appear to be stained with TPH. It was also noted that the open excavation is filled with groundwater. However, no oily sheen or free product was observed in the open excavation. DTSC approves Renova's proposal to use the soil excavated from below the groundwater table to backfill the former evaporation pond area excavation once the open excavation is dewatered. However, if free oily product is encountered while handling the soil stockpile during backfilling, the soil contaminated with free oily product will be segregated and disposed offsite.

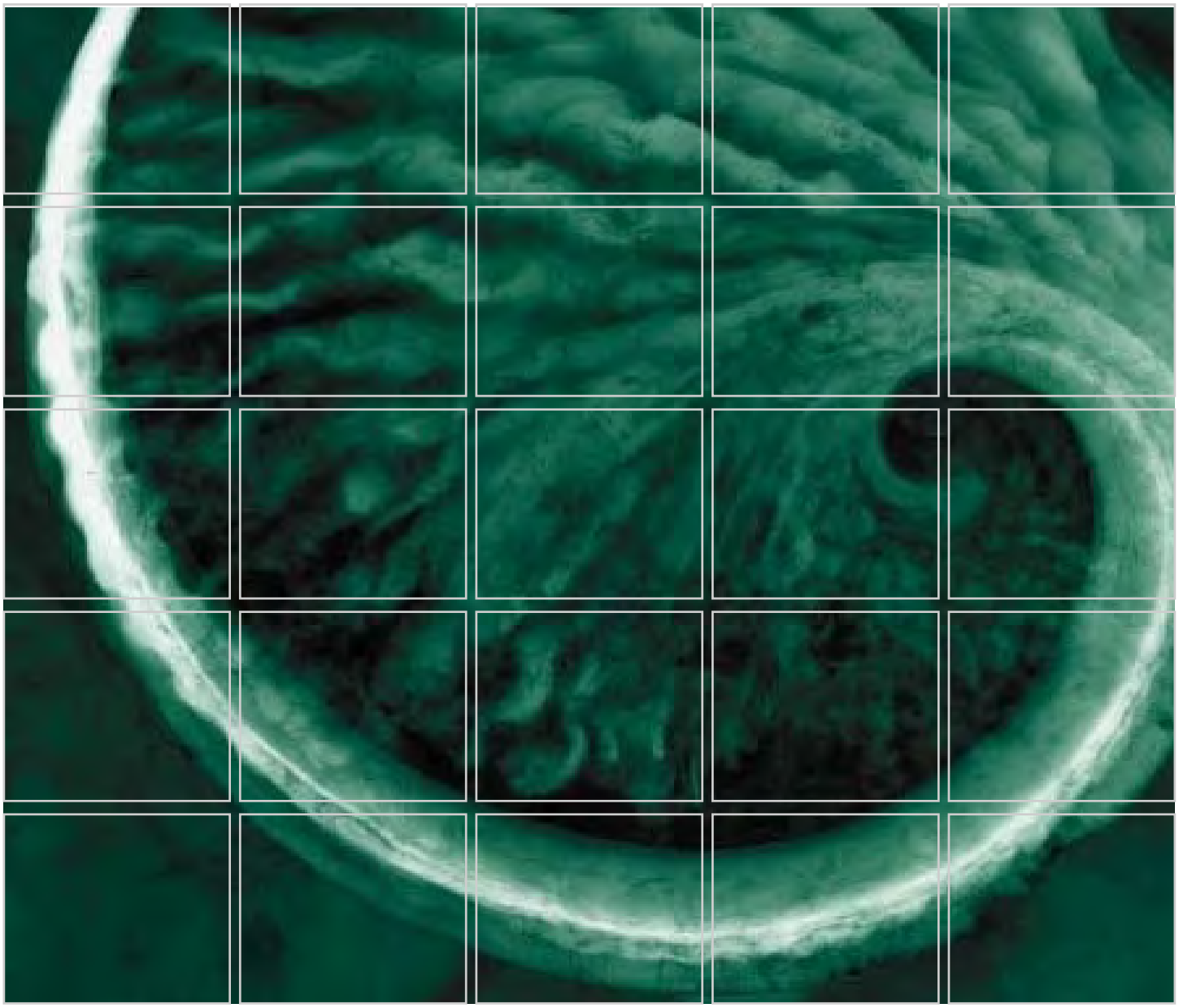
If you have any questions regarding this letter, you can contact Patrick Lee of my staff at (510) 540-3847.

Sincerely,

Barbara J. Cook, P.E.
Branch Chief
Northern California-Coastal Cleanup Operations Branch

cc: Mr. Ron Goloubow
LFR
1900 Powell Street, 12th Floor
Emeryville, California 94608-1814

Mr. Chris Nelson
Renova Partners LLC
55 Hawthorne Street
San Francisco, California 94105



Final Remedial Action Plan

Harbor Park Development
(Former Johns Manville Plant)

Pittsburg, California

June 2006

Prepared for:
Pittsburg River Park LLC

www.erm.com

ERM

Delivering sustainable solutions in a more competitive world

Pittsburg River Park LLC

Final Remedial Action Plan

Harbor Park Development
(Former Johns Manville Plant)
Pittsburg, California

June 2006

Project No.0025556.04

Michael E. Quillin, P.G.
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LIST OF ACRONYMS AND ABBREVIATIONS

ACM	Asbestos-containing material
ARAR	Applicable or Relevant and Appropriate Requirement
BAAQMD	Bay Area Air Quality Management District
bgs	Below ground surface
BTEX	Benzene, toluene, ethylbenzene and xylenes
Ca-HSC	California Health and Safety Code
CCR	California Code of Regulations
CC&Rs	(Real Estate) Covenants Conditions and Restrictions
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CHHSL	California Human Health Screening Level
DTSC	Department of Toxic Substances Control
ERM	ERM-West, Inc.
GAC	Granular activated carbon
HHSE	Human Health Screening Evaluation
HLA	Harding Lawson Associates
JM	Johns Manville
µg/L	Microgram per liter
mg/kg	Milligram per kilogram
MNA	Monitored natural attenuation
NAPL	Nonaqueous-phase liquid
NCP	National Oil and Hazardous Substance Pollution Contingency Plan
O&M	Operation and maintenance
OEHHA	Office of Environmental Health Hazard Assessment
ORC®	Oxygen Release Compound
PAH	Polynuclear (or polycyclic) aromatic hydrocarbon
PCB	Polychlorinated biphenyl

PEA	Preliminary Endangerment Assessment
PRG	Preliminary Remediation Goal
PRPLLC	Pittsburg River Park LLC
RAO	Remedial Action Objective
RAP	Remedial Action Plan
RDIP	Remedial Design and Implementation Plan
SVE	Soil vapor extraction
SVOC	Semivolatile organic compound
TBC	To be considered materials
TMV	Toxicity, mobility, or volume
TPH	Total petroleum hydrocarbons
TPH-d	Total petroleum hydrocarbons in the diesel range
TPH-g	Total petroleum hydrocarbons in the gasoline range
TPH-mo	Total petroleum hydrocarbons in the motor oil range
TPH-og	Total petroleum hydrocarbons in the oil and grease range
USEPA	United States Environmental Protection Agency
VCA	Voluntary Cleanup Agreement
VER	Vacuum enhanced recovery
VOC	Volatile organic compound

EXECUTIVE SUMMARY

This Remedial Action Plan (RAP) was prepared by ERM-West, Inc. (ERM) for Pittsburg River Park LLC (PRPLLC) to address remedial options for the Harbor Park Development in Pittsburg, Contra Costa County, California. The proposed development is at the location of the former Johns Manville (JM) Plant Site. The remedies addressed in this RAP will integrate remedial actions at the site with proposed redevelopment as a mixed-use, single- and multi-family residential development. Specifically, the selected remedies are designed to minimize potential exposure by future site users to substances that could pose an unacceptable risk to human health and the environment, including any materials that may remain in place after the site is redeveloped. This RAP has been submitted to the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) for review and approval in association with site cleanup and redevelopment activities being performed by PRPLLC, and in accordance with a Voluntary Cleanup Agreement executed between PRPLLC and DTSC on 25 March 2005.

Subsurface investigations have evaluated soil and ground water conditions across the entire site. As part of the remedial investigation process for the site, historical records of site operations were reviewed and JM staffs were interviewed regarding waste disposal practices. Former operations were generally dry processes with minimal potential for chemical releases to the environment. The areas within the site where potential releases may have occurred are well known. As a result of the investigations and historical records review, the only areas of concern at the site are:

- Soil/fill materials impacted by site operations in the former evaporation pond, in the southeastern portion of the Plant Site and east of the warehouse (Figure 3);
- Surface soil impacted by site operations in the former asbestos product storage area north of the warehouse (Figure 3);
- Other locations of materials impacted with asbestos fill and/or petroleum hydrocarbon compounds found during demolition of the site including subsurface vaults, below railroad ballast, subsurface utilities, etc.; and
- Ground water found to contain chemical constituents associated with site operations, underlying the former evaporation pond.

This RAP addresses remedial alternatives for these media and areas of concern. Consistent with the relatively low and sporadic chemical detections elsewhere on the site, remediation is not warranted for any other portions of the site, thus remedial alternatives were not evaluated for any other portions of the site in this RAP.

This RAP summarizes site background and the results of historical soil and ground water investigations, presents information regarding potential human health and environmental effects from chemical constituents in soil/fill materials and/or ground water at the site, describes the development of Remedial Action Objectives (RAOs), describes and evaluates remedial alternatives for the site, and provides a comparative analysis of remedial alternatives. Based on the comparative analysis, the RAP presents the preferred remedial approaches for soil/fill materials and ground water that meet the stated RAOs.

Evaluation of the RAOs in the RAP included consideration of Applicable or Relevant and Appropriate Requirements (ARARs). Applicable requirements are promulgated at the federal and/or state level to specifically address a hazardous constituent, remedial action, location, or other circumstances at hazardous waste sites. Relevant and appropriate requirements, while not directly applicable to circumstances at a given hazardous waste site, address problems or situations similar to those encountered at the hazardous waste site. In addition to ARARs, the degree to which current natural and man-made conditions are achieving the RAOs was also evaluated.

The remedial alternatives developed for soil/fill materials ranged from a "no action" scenario to complete excavation and off-site removal of impacted soil and fill materials. Likewise, remedial alternatives for ground water impacted with petroleum hydrocarbons ranged from a "no action" scenario to a full-scale pump-and-treat system.

Conceptual designs for each alternative were developed, followed by an evaluation of each alternative based on criteria consistent with United States Environmental Protection Agency guidance for conducting remedial investigations and feasibility studies pursuant to the National Contingency Plan (NCP), the guidelines developed under the Comprehensive Environmental Response, Compensation, and Liability Act and adopted in Chapter 6.8 of the California Health and Safety Code. The nine evaluation criteria set forth in the NCP are categorized into two threshold criteria, five balancing criteria, and two modifying criteria. Threshold criteria are:

- Overall protection of human health and the environment; and
- Compliance with ARARs.

Balancing criteria represent the primary criteria upon which the detailed and comparative analyses are based. Balancing criteria are:

- Long-term effectiveness and permanence;
- Reduction in toxicity, mobility, or volume (TMV) through treatment;
- Short-term effectiveness;
- Implementability; and
- Cost.

The modifying criteria are:

- State acceptance; and
- Community acceptance.

A comparative analysis based on these criteria was performed to provide a basis for selecting the remedial alternatives appropriate to site conditions. Finally, recommendations for appropriate remedial actions were developed, based on comparative analysis of criteria for each alternative.

Based on comparisons of the rankings relative to the evaluation criteria, Alternative 4 (on-site consolidation in eastern boundary berm) emerged as the recommended remedial alternative for the impacted soil and fill materials at the site. Under this alternative, fill materials within the areas of concern would be excavated and consolidated on site in the construction of an engineered berm along the eastern boundary of the site. Appropriate deed restrictions and an Operation and Maintenance Agreement and Operation and Maintenance Plan would be put in place prior to certification of the site. The deed restriction would limit access to and the use of the bermed area. Selection of this alternative is based primarily on its demonstrated effectiveness, consistency with future land use, cost-effectiveness, and ease and speed of implementation.

Based on comparisons of the rankings relative to the evaluation criteria, Alternative 4 (natural attenuation with no ground water monitoring) is the recommended remedial alternative for impacted ground water at the site. Alternative 4 consists of natural subsurface concentration reduction processes and establishment of institutional controls prohibiting the use of ground water for purposes other than site remediation or construction

dewatering. These institutional controls would be in the form of homeowners' association covenants, conditions and restrictions (CC&Rs). Selection of this alternative is based primarily on demonstrated effectiveness, consistency with future land use, cost-effectiveness, and the ease and speed of implementation. This remedial alternative includes a post-removal action ground water investigation component to evaluate concentrations of potential constituents of concern in ground water. Should ground water concentrations be found to be below applicable cleanup objectives, an application for closure will be submitted to DTSC.

The proposed combination of remedies for soil/fill materials and ground water meets each of the established RAOs for the site. Additionally, by implementing the soil/fill materials removal alternative, the primary source of total petroleum hydrocarbons and low concentrations of volatile organic compounds is removed, providing further assurance against potential exposure to chemicals in ground water within the former evaporation pond and against further degradation of ground water from those chemicals.

APPENDIX TO THE EXECUTIVE SUMMARY:
ADMINISTRATIVE RECORD LIST

DOCDATE:	November 1990
DOCTYPE:	Well Rehabilitation and Ground Water Sampling Results
TITLE/SUMM:	Draft Well Rehabilitation and Ground Water Sampling Results, Manville Pittsburg, CA site
AUTHOR/AFF:	Kleinfelder
DOCDATE:	February 1991
DOCTYPE:	Bailing and Laboratory Analysis Results
TITLE/SUMM:	Bailing and Laboratory Analysis Results of Floating Product from Monitoring Wells MW-2 and MW-4 Manville Facility, Pittsburg, CA
AUTHOR/AFF:	Kleinfelder
DOCDATE:	April 1991
DOCTYPE:	Report on Soil and Groundwater Investigation
TITLE/SUMM:	Report on Soil and Groundwater Investigation for the Eastside Redevelopment Area, Pittsburg, CA
AUTHOR/AFF:	ENGEO Inc.
DOCDATE:	August 1999
DOCTYPE:	Hazardous Substance Information Request
TILE/SUMM:	Hazardous Substance Information Request for Assessor's Parcel Numbers: 073-050-001-4, 073-010-007, and 073-010-008-8
AUTHOR/AFF:	Bruce Ray, Johns Manville Corporation
DOCDATE:	February 2000
DOCTYPE:	Request for Further Information
TILE/SUMM:	CDTSC Request for Further Information on Assessor's Parcel Numbers: 073-050-001, 073-010-007, and 073-010-008-8
AUTHOR/AFF:	Joe Duszka, Johns Manville Corporation

DOCDATE:	2000
DOCTYPE:	Voluntary Cleanup Agreement
TILE/SUMM:	Johns Manville, Pittsburg, CA Site Voluntary Cleanup Agreement
AUTHOR/AFF:	State of California Environmental Protection Agency Department of Substances Control
DOCDATE:	July 2001
DOCTYPE:	Preliminary Endangerment Assessment Report
TILE/SUMM:	Preliminary Endangerment Assessment/Johns Manville – Plant Site, Pittsburg, CA
AUTHOR/AFF:	Harding ESE, Inc.
DOCDATE:	August 2001
DOCTYPE:	Amendment to Agreement
TILE/SUMM:	Amendment to the Voluntary Cleanup Agreement
AUTHOR/AFF:	Agreement between Johns Manville and DTSC
DOCDATE:	January 2003
DOCTYPE:	Feasibility Study and Removal Action Workplan
TILE/SUMM:	Feasibility Study and Removal Action Workplan, Johns Manville, Plant Site, Pittsburg, CA
AUTHOR/AFF:	Harding ESE, Inc.
DOCDATE:	August 2003
DOCTYPE:	Transmittal/Workplan
TILE/SUMM:	Transmittal Letter and Workplan for Treatability Study for ORC Injection
AUTHOR/AFF:	MACTEC, Engineering and Consulting, Inc.
DOCDATE:	September 2003
DOCTYPE:	Letter of Approval
TILE/SUMM:	Letter of Approval from DTSC for Treatability Workplan
AUTHOR/AFF:	DTSC
DOCDATE:	March 2004
DOCTYPE:	Letter
TILE/SUMM:	DTSC Site Status Inquiry
AUTHOR/AFF:	DTSC

DOCDATE:	March 2004
DOCTYPE:	Letter
TILE/SUMM:	Letter - John Manville response to DTSC inquiry regarding Voluntary Clean-up Agreement
AUTHOR/AFF:	Johns Manville

DOCDATE:	March 2005
DOCTYPE:	Data Summary Report
TILE/SUMM:	Data Summary Report, Johns Manville Facility
AUTHOR/AFF:	ERM-West, Inc.

DOCDATE:	May 2005
DOCTYPE:	Treatability Study Workplan
TILE/SUMM:	Final Treatability Study Workplan, Johns Manville Facility
AUTHOR/AFF:	ERM-West, Inc.

DOCDATE:	March 2005
DOCTYPE:	Voluntary Cleanup Agreement
TILE/SUMM:	Final Voluntary Cleanup Agreement, Johns Manville Site,
AUTHOR/AFF:	DTSC

DOCDATE:	May 2005
DOCTYPE:	Final Workplan
TILE/SUMM:	Final Treatability Study Workplan, Johns Manville Facility
AUTHOR/AFF:	ERM-West, Inc.

DOCDATE:	May 2005
DOCTYPE:	Approval Letter
TILE/SUMM:	DTSC Approval for Treatability Study Workplan
AUTHOR/AFF:	DTSC

DOCDATE:	August 2005
DOCTYPE:	Building Inspection Report
TILE/SUMM:	Building Inspection Report, Former Johns Manville Plant
AUTHOR/AFF:	ERM-West

1.0 INTRODUCTION

This Remedial Action Plan (RAP) was prepared by ERM-West, Inc. (ERM) for Pittsburg River Park LLC (PRPLLC) to address remedial options for the Harbor Park Development (former Johns Manville [JM] Plant Site; also referred to herein as "site"). The site is at the approximate intersection of East Third and Harbor Streets in Pittsburg, Contra Costa County, California (Figure 1). The remedies addressed in this RAP will integrate remedial actions at the site with proposed redevelopment as a mixed-use, single- and multi-family residential development. Specifically, the selected remedies are designed to minimize potential exposure by future site users to substances that could pose an unacceptable risk to human health and the environment, including any materials that may remain in place after the site is redeveloped. This RAP has been submitted to the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) for review and approval in association with site cleanup and redevelopment activities being performed by PRPLLC. As discussed in Section 2.2.1, historical site operations are well understood, subsurface conditions at the site have been adequately characterized, and impacts to the site from historical operations are limited to localized areas. The RAP focuses on these areas, and no further evaluation or consideration of remedial alternatives is warranted for other portions of the site.

This RAP is organized as follows:

- The remainder of Section 1 addresses the RAP process, including the regulatory basis for preparation of a RAP; the specific objectives of this RAP, and the scope of this RAP intended to meet the stated objectives.
- Section 2 presents the site background, including land use history and proposed redevelopment plan, and summarizes previous soil and ground water investigations for the site and immediate vicinity.
- Section 3 presents the findings of these historical site investigations, including the geologic and hydrogeologic site conditions, the nature and extent of chemical occurrence in impacted media, and the results of a treatability study for petroleum hydrocarbons in ground water performed under the direction of DTSC.
- Section 4 summarizes information regarding potential human health and environmental effects from exposure to the chemical constituents in soil/fill materials and/or ground water at the site, specifically asbestos-containing materials (ACMs) and petroleum hydrocarbons.

- Section 5 summarizes the development of Remedial Action Objectives (RAOs).
- Section 6 describes remedial alternatives developed for evaluation of their ability to meet the RAOs.
- Section 7 evaluates the remedial alternatives according to a number of remedial criteria including effectiveness, implementability, and cost.
- Section 8 provides a comparative analysis of the remedial alternatives.
- Section 9 presents the preferred remedial approach based on the comparative analysis of remedial alternatives.
- Section 10 presents a schedule for implementation of the preferred alternative, which is consistent with the proposed redevelopment schedule for the site.
- Section 11 describes the public involvement process associated with the development and approval of this RAP.
- Section 12 presents references cited or reviewed in preparation of the RAP.

The main text is followed by figures, tables, and appendices containing supporting information to the RAP process.

1.1 REGULATORY BASIS FOR THE REMEDIAL ACTION PLAN

The following discussion presents the regulatory basis for this RAP, both with respect to the California Health and Safety Code (Ca-HSC) and with respect to the Voluntary Cleanup Agreement (VCA) executed between DTSC and PRPLLC (DTSC, 2005). In addition, the objectives and scope of the RAP are addressed.

1.1.1 California Health and Safety Code

The RAP is DTSC's remedy selection document for hazardous substance release sites addressed pursuant to Ca-HSC Section 25356.1 (DTSC, 1995). A RAP must clearly and concisely reflect the remedial action decision reached by:

- Identifying the preferred alternative for a remedial action and explaining the reasons for the preference;
- Describing the other remedial alternatives considered; and

- Soliciting public review and comments on all the alternatives described.

The RAP contains a brief summary of all applicable remedial investigation and feasibility study findings and presents the key components of the conceptual plan for site remediation. Although RAPs do not contain the specific engineering design details of the proposed remedial actions, they must clearly set out specific remedial action objectives, including cleanup levels, and timeframes for completion of the remedial actions.

A detailed engineering plan for conducting the proposed remedial action will be prepared and submitted pursuant to the approval of this RAP in the form of a Remedial Design and Implementation Plan (RDIP). The RDIP will include specific engineering details and implementation procedures for the appropriate site remedy, including specific performance standards consistent with appropriate City standards and/or ordinances.

1.1.2 Voluntary Cleanup Agreement

In addition to statutory requirements for the RAP specified in the Ca-HSC, this RAP was prepared in accordance with the VCA between DTSC and Pittsburg River Park LLC, dated 25 March 2005 (Docket No. HAS-A 04/05-127), pursuant to Ca-HSC Section 25355.5(a)(1)(C). Specifically, Task 2 of *Exhibit C – Scope of Work* to the VCA requires that the RAP "…builds upon and modifies as appropriate the prior work conducted by JM including…":

- The VCA between DTSC and JM, dated 27 November 2000;
- The Preliminary Endangerment Assessment, Johns Manville – Plant Site, Pittsburg, California (Harding ESE, 2001b); and
- The Feasibility Study and Removal Action Workplan, Johns Manville – Plant Site, Pittsburg, California (Harding ESE, 2003)[1].

In accordance with DTSC's requirement above, applicable elements of these documents, as well as others addressing site background and investigation history, were considered in the preparation of this RAP.

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[1] This FS/RAW is a draft document that was not finalized by Johns Manville due to the pending property sale, and has not been approved by DTSC.

1.1.3 Objectives of the Remedial Action Plan

Based on the results of previous investigations at the site, several areas of concern have been identified, as described in Section 2.1.2. This RAP has been prepared to summarize the remedial alternative evaluation process and identify the selected approach for addressing these areas of concern, and includes the following:

- A summary of overall site conditions and results of historical soil and ground water investigation activities, with a focus on the areas of concern;
- A summary of the evaluation that was performed to assess the potential for human exposure to site contaminants.
- RAOs developed for media-specific and area-specific protection of human health and the environment;
- Remedial action alternatives for the site;
- A discussion of the remedial alternative selected for the site; and
- A description of the remedial actions that will be implemented as part of the selected remedial alternative, including associated monitoring and reporting.

1.1.4 Scope of the Remedial Action Plan

This discussion identifies the scope of activities performed to meet the stated objectives for the RAP. To develop the summary of site conditions and historical soil and ground water investigations at the site, ERM reviewed reports and documents dating back to the mid-1980s, when investigation in the area of the site was initiated. A list of the reports and documents reviewed in preparation of this RAP are listed in Section 12. [*Note: These reports and documents are included in the Administrative Record List in the Appendix to the Executive Summary*.]

Evaluation of the RAOs in the RAP included consideration of Applicable or Relevant and Appropriate Requirements (ARARs). Applicable requirements are promulgated at the federal and/or state level to specifically address a hazardous constituent, remedial action, location, or other circumstances at hazardous waste sites. Relevant and appropriate requirements, while not directly applicable to circumstances at a given hazardous waste site, address problems or situations similar to those encountered at the hazardous waste site. In addition to ARARs, the degree to which current natural and man-made conditions are achieving the RAOs was also evaluated.

The remedial alternatives developed for fill materials in preparation of this analysis ranged from a "no action" scenario to complete excavation and off-site removal of impacted soil and fill materials buried at the site. Likewise, remedial alternatives for ground water impacted with petroleum hydrocarbons ranged from a "no action" scenario to a full-scale pump-and-treat system. Conceptual designs for each alternative were developed, followed by an evaluation of each alternative based on criteria consistent with United States Environmental Protection Agency (USEPA) guidance for conducting remedial investigations and feasibility studies pursuant to the NCP, as contained in the CERCLA and adopted in Chapter 6 of the Ca-HSC. A comparative analysis based on these criteria was performed to provide a basis for selecting the remedial action appropriate to site conditions. Finally, recommendations for appropriate remedial actions were developed, based on comparative analysis of criteria for each alternative.

The remedial alternatives considered in this evaluation are described in this RAP in sufficient detail such that they can be evaluated and compared as part of this process. After DTSC approval of the RAP, PRPLLC will submit a design document that includes a detailed description of the scope of work, including the specific portions of the Site to be addressed (lateral and vertical extent), confirmation sampling procedures, air monitoring and dust control measures, backfill requirements, and other pertinent details, as appropriate.

2.0 SITE BACKGROUND

This section describes the site and environmental conditions, including a summary of site history with respect to JM's former operations and previous environmental investigations. This summary takes into consideration significant efforts by JM associated with documenting site conditions through such documents as, among others, the *Preliminary Endangerment Assessment Report* (Harding ESE, 2001b) and the *Feasibility Study and Removal Action Workplan* (Harding ESE, 2003).

2.1 SITE DESCRIPTION

2.1.1 General Site Description

The former JM facility consists of two distinct properties located at the approximate intersection of East Third Street and Harbor Street in Pittsburg, California (Figure 2).

The first parcel, approximately 1,000 feet south of New York Slough and Suisun Bay, is referred to as the Plant Site, which is the primary subject of remedial actions addressed in this RAP (also referred to herein as "site"). This 21-acre parcel is bounded to the north by a Tesoro coke facility and Third Street; to the east by Harbor Street, several small light industrial businesses, and USS Posco Corporation; and to the south and west by residential properties. Most recently, until the facility terminated operations in 2003, the facility was used for the manufacture of commercial roofing materials. The Plant Site consists of Buildings 1 through 4 in the northern portion of the property, a warehouse in the southwestern portion of the site, and the former evaporation pond area, which is currently paved with asphalt. Railroad tracks bisect the central portion of the property. Demolition of these site features has been underway since mid-October 2005 and is nearing completion. A Site Detail Map showing physical site features, historical sampling locations, and related cross-section orientations is provided as Figure 3.

The North Parcel is an approximately 4.2-acre parcel located between (and bounded by) New York Slough to the north and the Plant Site to the south, north of East Third Street (Figure 2). This parcel is located approximately 400 feet north of the Plant Site, is covered by a separate VCA from the Plant Site, and is not the subject of this RAP. The North Parcel was formerly used for storage of asbestos-containing products prior

to shipment. As a result of this practice, a significant amount of ACMs was deposited onto the ground. Under a VCA established for the Plant Site, JM performed investigations that culminated in the emplacement of a soil cap to prevent future exposure to asbestos materials.

The land use and zoning for the Plant Site has recently been changed by the City of Pittsburg through a City Council-approved General Plan Amendment. The zoning for the plant site is now single family and multi family residential. Zoning for the North Parcel remains industrial.

2.1.2 Areas/Media of Concern

Subsurface investigations performed prior to PRPLLC's ownership of the site, as well as current environmental assessments undertaken at PRPLLC's request, have evaluated soil and ground water conditions across the entire site. As part of the remedial investigation process for the site, historical records of site operations were reviewed and JM staffs were interviewed regarding waste disposal practices. Former operations were generally dry processes with minimal potential for chemical releases to the environment. The areas within the site where potential releases may have occurred are well known. As a result of the investigations and historical records review, the areas of concern at the site are shown in Figure 3 and are identified as follows:

- Soil/fill materials impacted by site operations in the former evaporation pond, in the southeastern portion of the Plant Site and east of the warehouse;
- Surface soil impacted by site operations in the former asbestos product storage area north of the warehouse;
- Other locations of materials impacted with asbestos fill and/or petroleum hydrocarbon compounds found during demolition of the site including subsurface vaults, below railroad ballast, subsurface utilities, etc.; and
- Ground water found to contain chemical constituents associated with site operations, underlying the former evaporation pond.

This RAP addresses remedial alternatives for these media and areas of concern. PRPLLC has implemented contingency measures within the Site Management Plan (SMP; ERM, September 2005) to ensure that other impacted areas, if present, would be identified and addressed as appropriate during the development process. In addition, the implementation specifications document to be prepared pursuant to approval of this RAP will define procedures for 1) inspection of soils

beneath building foundations (following demolition) for staining or other evidence of impacts, and for the presence of underground storage tanks or sumps; and 2) sampling underlying soils and ground water, as appropriate, to determine the nature and extent of impacts, if any. If impacts warranting remediation are identified in this way, they will be addressed following the notification of, and in complete coordination with, DTSC.

The areas of concern known to exist on Site as listed above are described below.

Former Evaporation Pond. As described in more detail in Section 2.2.1, during site operations from approximately 1946 until 1959, an oil-water slurry was discharged to the former evaporation pond. The pond remained relatively constant in size during that period. In 1963, when the pond was no longer needed, it was filled with scrap and construction debris and was used from that point for parking and equipment storage.

Review of boring and test pit/pothole data generated during site investigations indicates that fill within the former evaporation pond consists of a variety of materials including fibrous ACMs, brick fragments, roofing shingles, roofing paper, wood fragments, and silty-sandy soil fill. In many of the borings and test pits, heavy, free-phase petroleum hydrocarbons and/or tarry materials were identified. The frequency at which these petroleum hydrocarbon materials were noted suggests that petroleum hydrocarbon impacts extend throughout the fill material within the former pond. This is the basis for the treatability study scope of work discussed later in this document.

Depth to ground water varies from about 6 to 8 feet below ground surface (bgs) within the evaporation pond and is likely the result of localized ponding of ground water (i.e., perched ground water).

The size of the pond at the time of closure was approximately 150 feet long by 75 feet wide with a maximum depth of 10 feet bgs. Based on information provided with the lines of section shown in Figure 3 and discussed below, the topographic low into which fill was emplaced at the time of pond closure generally extends to the warehouse on the west, and to the property lines on the southern and eastern margins. The approximate areal extent of the asbestos-impacted fill materials is 500 feet (north-south) by 300 feet (east-west). At the deepest point within the pond, fill materials are approximately 12-14 feet thick. The approximate areal extent of the asbestos-containing fill impacted with petroleum hydrocarbons is outlined on Figure 3.

Former Asbestos Product Storage Area. Interviews with former JM employees indicated that the area north of the warehouse was used for surficial storage of asbestos products. Surficial soils in this area are impacted by ACMs (an area approximately 300 by 300 feet, bounded by sample locations ERM-TP-6 through ERM-TP-9; Figure 3).

Other Locations Identified During Demolition Activities. Several additional areas of soil impacted with asbestos fill and/or petroleum hydrocarbon compounds were identified during the course of demolition at the site. These areas include subsurface vaults, below the railroad track ballast, impacted utility lines, etc. (Figure 3).

Ground Water. Ground water monitoring has been conducted at the site since approximately 1990. Ground water sampling locations are presented on Figure 3. Based on these sampling data, and consistent with the depth of soil impacts, ground water impacts from site operations have been observed in the immediate former evaporation pond vicinity. The sporadic and relatively low concentrations of chemicals detected in ground water elsewhere on site do not suggest the need for further evaluation.

2.2 LAND USE HISTORY

The following sections describe the historical land use of the JM Plant Site and the vicinity.

2.2.1 Site Land Use History

The primary manufacturing plant was built sometime between 1925 and 1928. In 1957, a large warehouse was constructed south of the main manufacturing facility. Asbestos-cement products, asphalt roofing materials, and asbestos-containing pipe covering were the primary products produced prior to termination of asbestos-containing product manufacturing in 1980. A series of four asphalt stills, located along the southwestern margin of Building 4, was used to convert heavy oil to asphalt. The stills were fueled by fuel oil and later with natural gas. In the process of converting heavy oil to asphalt, off-gas vapors were collected, condensed, and mixed with water to form an oil-water slurry that was transported via an underground pipe to the evaporation pond. The residual oil in the evaporation pond was reportedly burned approximately twice a year. Use of the evaporation pond began in 1946. It remained relatively constant in size until 1959, when discharge of effluent was discontinued, and it was subsequently filled with scrap and

construction debris. The size of the pond at the time of closure was approximately 150 feet long by 75 feet wide with a maximum depth of 10 feet bgs (Figure 3).

Subsequently, and until the plant's closure in approximately 2003, JM manufactured commercial roofing materials using fiberglass mat, asphalt, sand, and limestone. Petroleum-based resins and solvents were also used on site.

Classes of chemicals associated with these historical site operations are primarily asbestos and total petroleum hydrocarbons (TPH). Additional related chemical classes are as follows:

- Metals (as constituents of TPH mixtures);
- Polychlorinated biphenyls (PCBs; as constituents of TPH mixtures);
- Semi-volatile organic compounds (SVOCs; as constituents of TPH mixtures and as TPH combustion products); and
- Volatile organic compounds (VOCs; as constituents of TPH mixtures).

2.2.2 *Surrounding Land Use History*

As noted above, the areas to the north and east of the Plant Site have historically been used for industrial or commercial purposes. To the south, west, and northwest are residential developments. Immediately west of the site is a residential area that was redeveloped in the mid-1990s. Prior to its redevelopment, this area, referred to in previous documentation as the Eastside Redevelopment Area (ENGEO, Inc. [ENGEO], 1991), was characterized by vacant lots, single-family residences and apartment units, vacant commercial buildings, a bakery, and Riverside Fire Station No. 84. Anecdotal information obtained by ERM suggests that some of the prior residences may have been historically used as illicit drug manufacturing laboratories, resulting in some of the minimal ground water impacts observed in the ENGEO report.

2.2.3 *Proposed Redevelopment*

The proposed development plan is designed to blend with the existing single-family residential neighborhood that abuts the Plant Site to the north and west, and provide a gradual transition to the Harbor Street transportation corridor and the more industrial uses east of the Plant Site. PRPLLC is currently considering redevelopment plans that envision the creation of a mixed community of single-family and multi-family

residences on the former Plant Site. Live/work commercial development is also being considered for a limited portion of the property along Third Street.

Open space will be designed into the development along Harbor Street. The wide green space will contain an earthen berm that will provide both a visual barrier and a sound barrier between the traffic on Harbor Street and the multi-family housing facing that street. The open space and earthen berm is also consistent with the City of Pittsburg's desire to create a strong "edge" within the city between residential and industrial development. One of the objectives of the proposed redevelopment plan is to integrate soil remediation requirements into the backbone infrastructure and the planned open spaces.

In association with site demolition activities implemented in October 2005, all existing buildings have been demolished and regulated building materials have been removed to the extent required by applicable regulations. Demolition of concrete pads and the asphalt cover associated with the former evaporation pond is currently underway and will be completed within the next two months. Uncontaminated concrete and brick from the existing site structures may be crushed for aggregate base and reused on site. All other building debris will be removed from the site.

DTSC understands that the development plan described herein for the Harbor Park Development is only conceptual. The conceptual development plan demonstrates how the property might be redeveloped in the future in accordance with the City's amended General Plan. PRPLLC has not submitted a formal development application, nor has the development been granted any approvals from the City of Pittsburg Planning Commission or City Council.

2.3 PREVIOUS INVESTIGATION HISTORY

2.3.1 Site Investigation History

The following sections summarize investigations conducted at the Plant Site by JM and, more recently, by PRPLLC. These investigations have taken place over a 19-year period (from 1986 to 2004), and have included more than 100 soil sampling locations and 28 ground water sampling locations throughout the approximately 21-acre site (Figure 3). Because later investigations targeted the known areas of concern (Section 2.1.2), sampling density in these areas is higher than elsewhere on site. The

scope and general findings of these investigations are summarized below. Interpreted subsurface conditions (i.e., hydrogeology, stratigraphy, and nature and extent of chemical occurrence) based on these results are presented in Section 3.

In July and August of 1986, HLA performed a site investigation that included a geophysical survey, collecting surface soil samples, drilling five shallow test borings to a maximum depth of 7 feet, drilling 15 probe borings, installing one piezometer and nine monitoring wells (MW-1 through MW-9), and excavating 14 test pits. No report was generated; however, the data were presented in HLA's 8 December 1986 *Data Transmittal Report* (HLA, 1986b).

Roux Associates, Inc. (Roux) conducted a historical review and subsurface investigation at the site between February and May 1991. Six additional ground water monitoring wells (MW-10 through MW-15) were installed, and ground water samples were collected from MW-2 through MW-15. MW-1 was abandoned or destroyed; no records of abandonment exist. Extractable petroleum hydrocarbons in the motor oil (TPH-mo), oil and grease (TPH-og), and TPH-d ranges were detected in six of 14 wells. Benzene, toluene, ethylbenzene, and xylenes (BTEX) and selected VOCs were detected in up to six wells, but at generally low concentrations. No organochlorine pesticides or PCBs were detected in ground water samples. Nonaqueous-phase liquid (NAPL) was present in MW-2 and MW-4.

In June 1991, Roux performed a Phase II investigation. The Phase II program was designed to further characterize the subsurface conditions, to develop remedial alternatives, and to evaluate the on-site sewer corridor as a possible conduit for horizontal migration of contaminants. Twenty soil borings (B-1 through B-20) were advanced in and around the former evaporation pond. Petroleum hydrocarbons were observed in 15 of 20 soil borings, and were found to be predominantly in the fill. Several remedial technologies were evaluated for the source (soil and NAPL) and dissolved-phase organic compounds. The ground water and NAPL remedial alternatives included: (1) an interceptor trench, (2) a series of interceptor recovery wells, and (3) containment with slurry wall. Remedial alternatives for soil included: (1) capping, (2) excavation, treatment and off-site disposal, (3) in-situ bioremediation, and (4) in-situ solidification/stabilization. The investigation of the sewer line as a potential conduit was inconclusive.

Roux conducted semiannual ground water monitoring between July 1992 and December 1994 using the monitoring wells along the east property

boundary (MW-8, MW-9, MW-15, MW-16 and MW-19). Ground water samples were analyzed for TPH-og and VOCs only. With the exception of low concentrations of selected VOCs, no other chemical compounds of concern were detected in ground water samples during the Roux monitoring programs.

Based on the results of the ground water monitoring program, concentrations of on-site chemical compounds appear to have decreased with time and there is no evidence of additional migration of chemical compounds in ground water. As a result, Roux recommended to JM that no further on-site monitoring be conducted (Roux, 1995).

Harding ESE completed a Preliminary Endangerment Assessment (PEA), addressing continued industrial/commercial use, to estimate the potential threat to public health and/or the environment from contaminated soil and ground water and to evaluate whether an expedited response action was required. A Human Health Screening Evaluation (HHSE) was completed as a part of the PEA to evaluate the potential for cancer risks and noncancer health effects from exposure to chemicals detected in soil and ground water. The results of the HHSE indicated that for on-site workers and off-site residents, exposure to chemicals in the air from volatilization from underlying ground water and soil at the site is not likely to result in adverse health effects. The results are presented in the *Preliminary Endangerment Assessment, Johns Manville – Plant Site, Pittsburg, California* (Harding ESE, 2001b).

Between January 2001 and February 2002, Harding ESE conducted additional field activities necessary to support the *Feasibility Study and Removal Action Workplan* (Harding ESE, 2003). These activities included the sampling of selected wells for asbestos and petroleum hydrocarbons, NAPL removal from MW-4, and the abandonment of MW-3. This document presents additional ground water data and discusses soil target excavation goals and ground water restoration goals. This document also evaluates remedial technologies capable of achieving the designated remedial goals, and recommends preferred remedies for soil and ground water. A No Action alternative with implementation of a Deed Restriction was recommended for soil, and enhanced monitored natural attenuation was the preferred ground water alternative. The study found that, in general, environmental conditions at the site do not pose unacceptable risk to human health or the environment under a commercial/industrial reuse scenario.

The document entitled, *Workplan, Treatability Study for ORC Injection, Johns Manville Plant Site, Pittsburg, California* was then submitted in August 2003

by MACTEC Engineering and Consulting, Inc. (MACTEC; formerly Harding ESE). The workplan presents the technical scope of work to determine if enhanced monitored natural attenuation by oxygen release compound (ORC®) injection is an effective technology for reducing TPH concentrations in site ground water. Although this specific treatability study approach was not implemented, PRPLLC has implemented a treatability study intended to address residual petroleum hydrocarbons in the immediate vicinity of the former evaporation pond. That study and associated results are addressed below.

In June and July 2004, ERM implemented a limited soil and ground water investigation in association with PRPLLC's environmental assessment activities. The objectives of the investigation, which were presented in the *Data Summary Report* (ERM, 2004) were to validate previous investigation results, to determine if there were any environmental conditions that could have rendered the then-pending transaction between PRPLLC and JM undesirable, and to define the scope and cost of site remediation issues so that they could be realistically factored into the transaction.

ERM performed a review of existing project documentation maintained by JM. This review included an evaluation of the risk analysis presented in Harding ESE's PEA to evaluate the degree to which current site conditions might impact a proposed residential reuse. ERM's conclusion from this analysis was that site conditions, as identified by historical soil and ground water investigations, are compatible with proposed residential reuse.

Finally, ERM performed a site review with JM to evaluate site conditions and scope additional invasive investigation activities, which were implemented in July 2004. One objective of that investigation was to perform an in-fill soil and ground water investigation to evaluate and confirm the potential presence of asbestos and free-phase liquid petroleum hydrocarbons within the former evaporation pond. ERM and PRPLLC also engaged in discussions with DTSC to identify site mitigation activities appropriate to a prospective residential reuse scenario.

Field activities were conducted on 14 and 15 July 2004 and included shallow potholing at six locations across the site, and excavating three deep trenches and drilling six soil borings/temporary well points in the vicinity of the former evaporation pond. During the field investigation, a certified asbestos consultant from Sensible Environmental Solutions (SES) was present to evaluate the excavated material and collect representative samples of asbestos material for analysis (ERM, September 2004).

During this 2004 investigation, one soil sample exhibiting the greatest visible impact from petroleum hydrocarbons was collected from each boring and submitted to a state-certified laboratory to be analyzed as follows:

- TPH as gasoline (TPH-g) and BTEX using USEPA Method 8015 (modified)/8021;
- TPH-d and TPH-mo using USEPA Method 8015 (modified);
- SVOCs using USEPA Method 8270 with Selective Ion Monitoring; and
- Percent asbestos content using polarized light microscopy.

Following completion of soil sampling activities, ERM installed temporary well points in the boreholes for the purpose of collecting ground water grab samples. Ground water samples were collected using a peristaltic pump and analyzed for the parameters referenced above. Upon completion of ground water sampling, ERM abandoned the borings in accordance with Contra Costa County Health Services Department, Environmental Health Division (Contra Costa County) requirements.

Pursuant to implementation of a Phase I Environmental Site Assessment in March 2005, Levine-Fricke identified an under-floor vault along the eastern wall of Building 1. Further inspection revealed that the vault contained a 10,000-gallon steel tank. Follow-up evaluation by ERM indicated that the tank formerly contained plating oil (similar in chemical composition to hydraulic fluid) used during the manufacturing of asbestos paper. During March and April 2005, ERM oversaw the removal of the tank's contents, along with standing water within the vault resulting from failure of the facility's fire suppression system, and the appropriate off-site removal and disposal of those materials. There is no indication that the tank had leaked any of its contents, nor did any of the standing water in the vault infiltrate into the subsurface. Nonetheless, as part of the inspections following demolition activities addressed above, ERM will evaluate this area for any potential impacts and, as necessary and appropriate, address any impacts consistent with the remedial alternative selected in this RAP. All appropriate notification and permitting requirements will be met during removal of the tank during site demolition activities.

As previously discussed, knowledge of historical site operations, findings from previous field investigations, and site demolition activities indicate that impacts from asbestos fill materials occur at numerous locations across the site. These areas are identified in Figure 3.

2.3.2 Surrounding Area Investigation History

ENGEO completed a soil and ground water investigation in 1991 for the Eastside Redevelopment Area (ENGEO, 1991) to the west and crossgradient of the JM Plant Site. The 28-acre Eastside Redevelopment Area is bordered by East Third Street to the north, Cumberland Street to the west, East Eighth Street to the south and the JM Plant Site to the east.

The site investigation included completion of five soil borings and collection and analysis of soil and ground water samples from these five borings. Samples were analyzed for SVOCs, VOCs, TPH, and asbestos. No asbestos fibers or TPH were detected in any of the samples. Low levels of aromatic and chlorinated VOCs were detected in selected saturated soil and ground water samples, but most sample concentration detections were below the potentially applicable regulatory action levels.

Four permanent ground water monitoring wells were installed on the property to monitor ground water impacts beneath the site. The report concluded that the results of the investigation would not impact the planned redevelopment, and recommended implementation of a quarterly ground water monitoring plan. VOCs exceeding potentially applicable regulatory standards, including carbon tetrachloride (in MW-1, at the southern end and generally upgradient boundary of the study area) and trichloroethene (in MW-2, immediately west and crossgradient of the JM site), were detected in one or more of the wells. The TCE concentration detected in MW-2 is approximately 10 times higher than that detected in on-site JM wells MW-12 and MW-13. These results suggest that VOC detections along the western boundary of the JM site may be related to off-site sources. Personal communication between ERM and JM indicated that JM had no recollection of ever having used TCE as a solvent during historical operations.

3.0 RESULTS OF SITE INVESTIGATIONS

The following sections describe the regional and local geologic and hydrogeologic conditions, and an evaluation of soil and ground water chemistry, based on the results of the historical site investigations summarized in Section 2.3.

3.1 GEOLOGY

Regionally, the JM Plant Site is within an area characterized by (1) alluvial sediment eroded from Tertiary and Cretaceous rocks of the Coast Range Physiographic Province, and (2) Pleistocene to recent fluvial deposits from the Sacramento River Delta consisting of clays, silts, and sands. Locally, the site is underlain by fill that was placed in and surrounding the former evaporation pond, which occupies approximately 4 acres and is located in the southeastern portion of the site (Figure 3). Underlying the fill are interbedded thin layers of silt and sand in clay. A sandy, channel-like deposit extends diagonally across the site from east to west. Cross-sectional representations of shallow conditions across the former evaporation pond are presented as Figures 4, 5, and 6; the lines of section are indicated in Figure 3.

Geology below the sediments is characterized by a series of Pliocene volcanic and sedimentary rocks to late Jurassic metamorphosed rock consisting of the Franciscan Assemblage.

3.2 HYDROGEOLOGY

The Plant Site and North Parcel are within the Pittsburg Plain Ground Water Basin of the San Francisco Bay Hydrologic Study Area. Depth to ground water at the Plant Site ranges between 5 to 19 feet bgs (Harding ESE, 2003). The ground water flow direction is east-northeast, toward the New York Slough, and is likely affected by tidal activity.

Shallow ground water is likely perched and discontinuous with deeper aquifers (approximately 125 feet deep). Based on investigations performed at the nearby Greif site (701 Willow Pass Road, approximately one-half mile from the JM site; also a project overseen by DTSC), shallow ground water has been shown not to be suitable for potable uses by virtue of low yield (i.e., less than 200 gallons per day). Given the overall

similarities in shallow hydrogeologic character between this site and the Greif site, it is concluded that shallow ground water at the JM site is likewise not suitable for potable use. During recent discussions regarding this issue, DTSC has agreed that this is generally an appropriate conclusion. Shallow aquifers are not used for public water supply in the site vicinity because of the discontinuous nature of the alluvial sediments. Salt-water intrusion problems have also limited the use of ground water in the area (Harding ESE, 2003).

3.3 SOIL AND GROUND WATER CHEMISTRY EVALUATION

Soil/fill and ground water investigations have been performed at the site since approximately 1986. These investigations have been documented in a number of reports, as indicated in Section 12, *References*. The following discussion identifies chemical constituents present in soil/fill materials and ground water, based on these studies. The analytical results for soil/fill and ground water samples associated with historical investigations are summarized in Tables 1 through 7.

3.3.1 Chemicals in Soil/Fill Materials

As previously noted, review of JM's historical operations and the findings from site-wide investigations and on-going site demolition activities indicate that the areas of potential concern at the site (Figure 3) are (1) the former evaporation pond, (2) the former asbestos product storage area, and (3) various locations where soil is impacted with asbestos fill and/or petroleum hydrocarbon compounds, as identified during the course of site demolition. For soil/fill materials in the former evaporation pond, the primary chemical constituents identified are:

- Extractable petroleum hydrocarbons, primarily in the TPH-mo and TPH-d ranges, which are the heavier TPH fractions; and
- Asbestos.

In the former asbestos product storage area north of the warehouse and other areas of impacts identified during demolition activities, asbestos (with minor amounts of heavier petroleum hydrocarbons) is present in soils at depths ranging from 6 inches to 10 feet.

The investigations also identified the following:

- *VOCs*. Aromatic VOCs including ethylbenzene, toluene, and total xylenes at concentrations near their respective method detection levels;

concentration ranges were less than 0.005 milligrams per kilogram (mg/kg) to 1.9 mg/kg in soil/fill material (maximum detection xylene). In addition, other chlorinated hydrocarbons were detected at low concentrations in one Plant Site soil sample (0.001 mg/kg 1,1-dichloroethane and 0.038 mg/kg TCE). All of these detections were below potentially applicable regulatory screening levels (i.e., USEPA Region IX Preliminary Remediation Goals (PRGs) and California Human Health Screening Levels [CHHSLs], established by the California Environmental Protection Agency.

- *SVOCs.* Twelve SVOCs (primarily polycyclic aromatic hydrocarbons [PAHs]) were detected at concentration ranges of less than 0.05 mg/kg to 85 mg/kg in soil/fill material (maximum detection phenanthrene). Of these, PRGs (no CHHSLs) have been established for eight of them. Two detections exceed these screening criteria (naphthalene and benzo(a)anthracene); these detections were in samples collected from the central portion of the former evaporation pond.
- *PCBs.* PCBs were detected in two samples from the same boring (one at 16.6 mg/kg at 5 feet deep and 1.0 mg/kg at 6.5 feet) and from 7 feet deep in one other boring (at 5.3 mg/kg). All of the detections exceeded the PCB CHHSL. Both borings were located within the central portion of the former evaporation pond.

These compounds do not appear to be widespread or to represent a significant contributor to risk at the site. In addition, proposed removal actions addressed in this RAP would remove the fill materials represented by these sampling data.

3.3.2 Chemicals in Ground Water

As summarized below, ground water samples collected from the site contained detectable concentrations of TPH, BTEX, chlorinated VOCs, SVOCs, PCBs, metals, and asbestos. These detections are summarized below.

TPH. Ground water shows evidence of petroleum impacts, primarily in the heavier fractions (TPH-d, TPH-mo, and TPH-og), with inconsistent detections in the gasoline range.

BTEX. BTEX compounds were historically detected in five of the monitoring wells in samples collected prior to 1992. Samples collected in

2004 produced BTEX concentrations ranging from <0.5 to 3.3 micrograms per liter (µg/L) (maximum concentration xylenes).[2]

VOCs. Chlorinated VOCs were detected in nine site monitoring wells between 1990 and 2000 (MW-2, MW-4, MW-5, MW-9, MW-11, MW-12, MW-13, MW-14, and MW-15; Table 5). These detections were generally at or near detection levels, except for wells MW-4, MW-9, MW-11, MW-14, and MW-15, where elevated detections of chlorinated VOCs were sporadically observed. In sampling conducted in August 2005 using existing monitoring wells MW-10 (upgradient) and MW-6 (downgradient), and treatability study wells SVE-36 (crossgradient) and SVE-20, no VOCs other than BTEX were detected, with the exception of methylene chloride, which was considered reflective of laboratory contamination. Review of the data in Table 5 and information regarding site layout and historical operations suggest the following:

- The pattern of VOC detections shows little correlation with historical site operations;
- There is no record that chlorinated VOCs were used in significant quantities as part of JM's routine operations; and
- In general, elevated concentrations of chlorinated VOCs are shown to decrease over time, suggesting that attenuation of these constituents is occurring naturally in site ground water.

SVOCs and PCBs. PAH and PCB compounds have been detected in site ground water; however, the concentrations have been low and not widespread. SVOCs were historically detected in five of the monitoring wells in samples collected prior to 1992. The most recent sampling event (July 2004 ground water grab sampling from temporary well points) showed SVOC concentrations in ground water ranging from <1.0 to 35 µg/L (phenanthrene). PCBs have only been detected historically in two samples: Aroclor-1248 was detected at 0.2 µg/L in MW-1 in 1986 and at 1.0 µg/L in MW-2 in 1990. Later samples collected from these wells were non-detect for PCB compounds. Detections of dissolved SVOCs (particularly PAHs) and PCBs in ground water are unusual and are likely associated with (1) suspended matter in the samples; or (2) the presence of

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[2] An anomalous detection of 53 µg/L xylene was detected in a sample collected from monitoring well MW-2 in 1991, but was not replicated during subsequent sampling, is likely degraded, and is thus not considered representative of site conditions.

free product or a free product sheen. Therefore, these detections are not believed to represent actual ground water conditions.

Metals. The earliest wells installed at the site (MW-1 through MW-4, in the immediate vicinity of the former evaporation pond) indicate elevated levels of heavy metals (arsenic, barium, beryllium, cadmium, total chromium, copper, lead, mercury, nickel, silver, and/or zinc; Table 6). Comparable detections have not been noted in subsequently installed wells at various locations around the site (MW-5 through MW-21), suggesting that the observed metals may be related to the former evaporation pond operations, and that impacts to ground water are localized in that immediate area.

Asbestos. Asbestos was also detected in ground water samples collected during two sampling events (December 2000 and July 2004). Recognizing the anomalous nature of these detections, and being suspicious of matrix interference, in 2002, Harding ESE re-sampled certain wells that were sampled in 2000, using sampling methods designed to reduce collection of suspended sediment that could become agitated during the purging process. The 2000 samples did not contain detectable asbestos. Based on these findings, Harding ESE concluded that the "presence of asbestos fibers in groundwater is not an indication of a release of asbestos to the groundwater." The 2004 sampling event included sampling from temporary well points (within which suspended matter from the surrounding soils can often be incorporated), and did not undertake sediment minimization techniques. It is therefore likely that the 2004 samples (as well as the 2000 samples) reflect sediment from within the well casing as opposed to actual ground water conditions.

The data (Tables 4 and 6) show that concentrations of VOCs (including BTEX) and TPH in ground water have declined over time. As discussed subsequently in this report, this decline is believed to be due to geologic conditions at the site that promote natural attenuation.

3.4 TREATABILITY STUDY FOR PETROLEUM HYDROCARBONS

The following discussion presents the background, scope, and general findings associated with a treatability study implemented by ERM from June to September 2005. The treatability study was performed pursuant to ERM's 18 May 2005 *Final Treatability Study Workplan, Johns Manville Facility, Pittsburg, California* (Treatability Study Workplan). The Treatability Study Workplan, along with a report documenting the study, is presented as Appendix A.

3.4.1 Background for Treatability Study

As noted above, historical findings associated with site investigations (including ERM's more recent studies) indicate that fill materials and ground water within the former evaporation pond have been impacted with TPH-d and -mo. In some instances, TPH has been observed as NAPL, either on ground water (in monitoring wells such as MW-2 and MW-4) or as part of the fill matrix (as observed in selected ERM test pits and borings). Although the observed TPH fraction is generally heavy and nonvolatile, DTSC has expressed a concern that remedial alternatives for petroleum hydrocarbons in fill be evaluated. As a result, ERM prepared on behalf of PRPLLC the Treatability Study Workplan to propose a pilot study to evaluate a possible means of recovering NAPL from shallow fill and ground water.

The treatability study focused on removal of NAPL using vacuum enhanced recovery (VER) and enhancing the natural biodegradation of residual petroleum hydrocarbons. This process entails applying a vacuum through wells near the source of heavy petroleum hydrocarbons within the fill. The intended effect of this system is to:

- Enhance the mobility of petroleum hydrocarbons and to periodically remove accumulated NAPL from wells;
- Promote biodegradation of residual petroleum hydrocarbons in the soil through increased subsurface airflow; and
- Mobilize incidental volatile constituents of the petroleum hydrocarbons and treat them through granular activated carbon (GAC) before discharge to the atmosphere.

3.4.2 Scope of Treatability Study

The scope of the treatability study included pre-field activities, system installation, system operation and maintenance (O&M), performance monitoring, and reporting tasks. Pre-field tasks included:

- Obtaining permits to install soil vapor extraction (SVE) wells through Contra Costa County;
- Obtaining permits to construct and operate the SVE system through the Bay Area Air Quality Management District (BAAQMD); and
- Preparing a site-specific health and safety plan addressing potential physical and chemical hazards associated with implementing the study.

System installation (field) tasks included:

- Performing an underground utilities survey at the proposed well locations to ensure that underground utilities were not encountered during drilling activities;
- Installing 39 vapor extraction wells on 50-foot centers using hollow-stem-auger drilling techniques;
- Collecting soil samples from selected locations to supplement existing data, with analysis for TPH-mo and TPH-d by a state-licensed laboratory;
- Installing the VER equipment and system; and
- Surveying well casings, ground surface elevations, and selected physical locations across the site to augment existing map data.

System O&M tasks included:

- Performing weekly site visits to evaluate operational data and collect vapor samples to determine compliance with air permits, estimate mass removal rates, evaluate GAC loading, and to calibrate instrumentation;
- Performing liquid (ground water and NAPL) level monitoring;
- Overseeing evacuation of total fluids using a vacuum truck;
- Estimating, based on O&M data, system mass removal via biodegradation;
- Evaluating GAC breakthrough;
- Performing GAC and SVE system component changeouts, as needed; and
- Reporting results to BAAQMD, as required in the permits.

System performance monitoring included the following tasks:

- Evaluating the radius of influence based on system measurements;
- Estimating the rate of NAPL removal via free-phase produce recovery, volatilization, and biodegradation;
- Evaluating NAPL thickness and NAPL fractions in recovered total fluids; and
- Collecting periodic ground water samples from selected site wells to evaluate dissolved-phase concentrations of TPH and VOC constituents at upgradient, crossgradient, and downgradient locations.

Details regarding the scope and findings associated with the treatability study, including graphical representations of recovery data, are included in Appendix A.

3.4.3 Treatability Study Results

The treatability study was initiated with construction of the system in May 2005 in accordance with the DTSC-approved Treatability Study Workplan, and operated continually between June and August 2005. Since the treatability study was implemented, free product has been mobilized to and recovered from six wells within the central portion of the former evaporation pond. Approximately 300 gallons of free product have been recovered via total fluids removal and with a skimmer placed in selected wells. TPH reduction via biodegradation is also assumed, but can only be indirectly quantified.

Detailed results associated with the treatability study are presented in Appendix A. It is concluded that the overall treatability study was successful in removing the bulk of the recoverable free-phase petroleum hydrocarbons in fill materials within the former evaporation pond. Trace amounts of free phase-phase petroleum continue to accumulate at a few locations. However, due to the hydrostatic forces within the soil, product measured in a well can range from 5 to 10 times greater than the actual thickness of product within the surrounding formation (USEPA, 1992). Based on this and the data presented in Appendix A, it is further concluded that the operation of the system has reached a state of diminishing returns. Continued operation of the system would result in minimal amounts of incremental product recovery. As a result, further operation of the system or other removal actions associated with free-phase petroleum hydrocarbons are not warranted.

4.0 EXPOSURE EVALUATION SUMMARY

This section provides a general summary of the exposure evaluation performed in support of the RAP process, including identification of chemical classes included in the evaluation and consideration of the potential for exposure due to the impacted media (soil and ground water).

4.1 IDENTIFICATION OF SITE-RELATED CHEMICALS

As discussed in the previous sections, a number of chemicals were detected in the soil and ground water at the Plant Site. Those site-related chemicals were considered in the risk evaluation for the Plant Site that was performed as part of the RAP process, and are discussed in the subsections that follow:

Medium	**Chemical**
Soil	• Asbestos • TPH-mo • TPH-g • TPH-d • TPH-og • Ethylbenzene, toluene, and total xylenes • SVOCs • PCBs
Ground Water[3]	• TPH-mo • TPH-d • TPH-og • Heavy metals • BTEX and chlorinated VOCs • SVOCs

[3] As discussed in Section 3.2.2, asbestos was also detected in site ground water samples, but these detections are suspected to reflect the presence of residual suspended matter in the wells rather than actual ground water conditions.

4.1.1 Total Petroleum Hydrocarbons

TPH is a term used to describe a broad family of several hundred chemical compounds originating from crude oil. TPH is a mixture of chemicals and is most commonly classified as one of the following fractions: diesel, motor oil, gasoline or oil and grease. All four TPH fractions have been detected in site soil, with higher concentrations of TPH-mo and TPH-og. TPH-g-related compounds (i.e., ethylbenzene, toluene, and xylenes) and SVOCs (e.g., anthracene and pyrene) have been detected in Plant Site soil/fill material. In addition, all four TPH fractions and associated BTEX compounds have also been detected in Plant Site ground water. Individual SVOCs have also been detected in Plant Site ground water.

4.1.2 Volatile Organic Compounds

As noted above, BTEX compounds were routinely detected in Plant Site soil and ground water. In addition, other chlorinated hydrocarbons were sporadically detected in historical Plant Site soil and ground water samples. In sampling conducted in August 2005, no VOCs other than BTEX were detected, with the exception of methylene chloride, which was considered reflective of lab contamination. Therefore, this evaluation focuses on BTEX.

BTEX compounds are VOCs typically derived from petroleum products, such as gasoline and oil, and frequently co-occur at hazardous waste sites. Each of the chemicals in the mixture of concern is well absorbed, extensively metabolized, and does not persist in the body for long periods of time. All of the BTEX chemicals can produce neurological impairment. (Agency for Toxic Substances and Disease Registry [ATSDR], 2004).

When detected in soil and ground water, VOCs present a risk of migration upward into overlying structures and or trenches, where the concentrations in air may accumulate due to minimal dilution of air. Preliminary vapor intrusion pathway analysis for volatile constituents is addressed in Section 4.2).

4.1.3 Semi-Volatile Organic Compounds

Semi-volatile organic compounds (SVOCs) are organic compounds that have a boiling point higher than water and may vaporize when exposed to temperatures above room temperature. SVOCs include phenols and PAHs. PAHs are a class of SVOCs found naturally in petroleum products, including gasoline, diesel, and certain mineral spirits. Their presence in

site soils is likely due to this association or to combustion of TPH. No historical site uses of other PAH-containing materials have been identified. Phenols are a class of chemical compounds consisting of a hydroxyl functional group (-OH) attached to an aromatic hydrocarbon group. Phenols are weak acids that are widely used for their antiseptic and disinfectant properties. Phenols are often found in pesticides. No historical site uses of Phenol-containing materials have been identified.

The SVOCs detected in site soils include the following 12 PAHs:

Phenanthrene	Chrysene	Fluorene	Naphthalene
2-Methylnaphthalene	Acenaphthylene	Acenaphthene	Anthracene
Fluoranthene	Pyrene	Benzo(a)anthracene	2-Chloronaphthalene

The SVOCs detecting in site ground water include the following 9 PAHs and 10 phenols:

2-Methylnaphthalene	Fluorene	Phenanthrene	Anthracene
Benzo(a)anthracene	Chrysene	Fluoranthene	Naphthalene
Pyrene	1,3-Dichlorobenzene	1,2 and 1,4-Dichlorobenzene	Chlorobenzene
Phenol	2,4-Dimethylphenol	2-Methylphenol	4-Methyphenol
Hexachlorobenzene	2,4,6-Trichlorophenol	2,4-Dinitrotoluene	

SVOCs tend to adhere to soil particles and are effectively immobile. Potential exposures to volatile SVOCs[4] may result from airborne dust. As noted above for VOCs, when detected in soil and ground water, certain of the more volatile SVOCs (such as naphthalene, anthracene, and 1,3-dichlorobenzene) also present a risk of migration upward into overlying structures and or trenches, where the concentrations in air may accumulate due to minimal dilution air. Preliminary vapor intrusion pathway analysis for volatile constituents is addressed in Section 4.2.

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4 Volatile chemicals are defined as presented within the United States Environmental Protection Agency [USEPA] October 2004 update to the *Preliminary Remediation Goals* (USEPA, 2004) (those chemicals having a Henry's Law Constant greater than 10^{-5} atmospheres-meter^3/mole and a vapor pressure greater than 0.001 millimeters of mercury).

4.1.4 Asbestos

Asbestos is a name given to a variety of naturally occurring minerals composed of hydrated, fibrous silicates, which are crystalline in structure. There are two groups of asbestos mineral. The first is the Serpentine group, commonly referred to as chrysotile. Chrysotile, which comprises approximately 93 percent of all asbestos in the United States, is characterized by long, soft and flexible strands that can be woven into a cloth. The second category occurs as a group of minerals called Amphiboles. Amphibole fibers are characterized as being strong, brittle and needle-like. The common names of the forms of minerals within this group are: crocidolite, amosite, tremolite, anthophyllite, and actinolite.

Asbestos is virtually indestructible, has good fiber bonding, is abrasion-resistant, and is extremely resistant to heat and chemicals. The variety of desirable properties exhibited by asbestos make it very popular for use in building materials and industry. The primary drawback with its use is the known association of severe health disorders and associated liabilities with exposure to the fibers.

Inhalation is the principal route of exposure to asbestos. Other routes are dermal contact and ingestion. Asbestos is also a cancer-producing agent (lung cancer and mesothelioma). Heavy exposure to dust containing asbestos can also cause skin irritation. Epidemiological studies have shown that lung cancer appears to be related to the degree of exposure, the type of asbestos and whether or not the individuals smoke cigarettes. Cigarette smoking greatly increases the risk of lung cancer in those who are exposed to asbestos. However, mesothelioma (a rare tumor of the chest cavity lining) appears to develop without regard to the amount of asbestos inhaled. There have been some studies regarding the risks of asbestos ingestion. However researchers and regulators have reviewed this information and have not been able to reach a consensus on the effects of ingested asbestos fibers. Dermal contact with asbestos can cause small warts or corns.

Most of the information on health effects comes from studies of workers exposed regularly to high levels of asbestos (chronic exposure). For individuals living in areas of naturally occurring asbestos, exposures to soil dust containing asbestos can occur under a variety of scenarios, including construction, landscaping and children playing in dirt. For homes built on asbestos outcroppings, asbestos may be tracked into the home and can also enter as fibers in outdoor air (Office of Environmental Health Hazard Assessment [OEHHA], 2003).

Asbestos results in soil/fill material samples are reported as a percentage (%), with concentrations ranging from <1% to 80%. The principal form of asbestos fiber detected at the site is chrysotile.

4.1.5 PCBs

PCBs are a group of 209 distinct molecules. In the U.S., PCB mixtures were principally sold under the trade name Aroclor. The various PCB mixtures sold were identified by their PCB content. PCBs have very low solubility in water, relatively low volatility in air, and tend to absorb to oils, fats, and carbon-rich materials, if available. In the environment, PCBs are relatively persistent, and are degraded only under certain conditions. PCBs are reported to pose a health risk to humans depending upon the route and duration of exposure and the dose received.

4.1.6 Metals

As noted in Section 2, site operations did not involve the use or production of metals-containing materials. However, there is a possibility that heavy metals could be present as constituents of the heavy oils present in the evaporation pond area. Due to the lack of historical metal usage, metals were not included in the suite of analyses performed on soil samples collected at the Plant Site. If present, they would be restricted to soil intervals containing heavy oils, and they would be addressed by the remedial alternatives selected for addressing those oils. A variety of metals were detected in ground water, including earth metals (e.g., calcium, iron, etc.). The observed metals appear to be related to the former evaporation pond operations; however, the extent to which some of the detections may reflect naturally-occurring conditions has not been determined.

Metals represent a large and toxicologically diverse group of chemicals that occur naturally in the environment. The toxicity of metals and metal compounds depends on their chemical form and is difficult to generalize. In addition to the carcinogenic potential of various metals found on site, many metals may also include a variety of noncarcinogenic adverse health effects, including effects on the liver, kidney, and nervous, cardiovascular, and respiratory systems at sufficient dosages.

4.2 POTENTIAL FOR EXPOSURE

The potential chemical exposure pathways and receptors for current/future use scenarios are summarized in Table 8 and discussed below.

This evaluation has determined that there are no complete exposure pathways under **current** site and land use conditions for the following reasons:

- The JM Plant Site ceased operations and closed its facilities in 2003. Site buildings remain, but the property is otherwise vacant. Commercial workers, except for the building demolition crew, are not currently present on site. The demolition workers are working in accordance with a health and safety plan that ensures their exposure is limited. In addition, perimeter fencing precludes access by trespassers. Therefore, potential on-site receptors are absent.
- The site is entirely paved, including the former evaporation pond. Because site soil is not exposed, direct exposure by on-site receptors (non-existent) and off-site transport of impacted dust/fibers by wind (and resultant inhalation by off-site receptors) are incomplete pathways.
- Ground water is not a potable drinking water source, and impacts are localized to the immediate evaporation pond vicinity. Because of this, exposures to off-site receptors (i.e., by ingestion or inhalation of vapors) are incomplete pathways. Direct contact by on-site receptors (non-existent) is also an incomplete pathway.

The redevelopment plan for the site consists of constructing residential buildings (multi-family) and single-family homes. As a result, intrusive activities performed at the site will generate fugitive dust potentially contaminated with various chemicals as well as create new potential pathways (e.g., vapor migration into overlying residential structures). Therefore, the exposure evaluation determined that the following exposure pathways are potentially complete under anticipated future land use:

- Inhalation of fugitive dusts from soil/fill materials;
- Inhalation of volatile emissions from soil/fill or ground water; and
- Direct contact (soil/fill and ground water).

These exposure pathways and the associated receptors are discussed below.

4.2.1 Soil/Fill Materials

The chemicals identified in site soil were detected primarily in the former evaporation pond area, with asbestos and TPH-mo being present at the highest concentrations. The other detected chemicals were VOCs (specifically, BTEX), other TPH fractions, PCBs, and SVOCs. Exposure pathways for these chemical classes are summarized below.

Inhalation of Fugitive Dusts/Fibers

SVOCs, TPH, PCBs, and VOCs are chemicals that may adhere to site soil and become airborne during intrusive site activities. In addition, asbestos fibers are intermixed with soil/fill material and may become airborne during intrusive activities. As a result, the primary receptors of concern are individuals with the highest likelihood of disturbing site soils (i.e., construction workers, utility workers, and landscapers). In addition, residents (adult and child) going about their daily routine and playing in the yard or in on-site park areas may be exposed to dust containing these chemicals or asbestos fibers.

Inhalation of Volatile Constituents

Ethylbenzene, toluene, total xylenes, and SVOCs are present in site soil. Because volatile constituents (VOCs and volatile SVOCs) may migrate upward into overlying residential structures, indoor air may become impacted, thereby exposing residents to these chemicals. In addition, construction and/or utility workers digging trenches and working within the trenches may be exposed to migrating vapors. The volatile constituents may accumulate in this "box" due to minimal air exchanges.

ERM performed a preliminary vapor intrusion pathway analysis for volatile constituents using the DTSC-modified Johnson and Ettinger *Screening Soil Gas Model* (January 2005). The evaluation was performed for two data sets based on historical sampling data performed by ERM and previous consultants to JM: 1) soil data collected across the entire site (including the former evaporation pond), and 2) soil data excluding samples collected within and around the former evaporation ponds. The latter evaluation takes into consideration that pond contents (i.e., asbestos fill containing petroleum hydrocarbons) will need to be remediated as part of proposed remedial actions. It follows that an evaluation of conditions excluding those materials will most accurately reflect future risks at the site.

First, the maximum detected soil concentration for each constituent was converted to equilibrium soil gas concentration using the equation developed by Dominic DiGiulio (USEPA, 1992). The risk associated resultant soil gas data was then determined using the default assumptions of the DTSC-modified Johnson and Ettinger *Screening Soil Gas Model* (January 2005), with the exception of soil type (a sandy clay matrix was assumed). Appendix B presents the risk models and summary tables.

The analysis estimates that hypothetical risks to future residents due to inhalation of volatile constituents emanating from soil as:

	Carcinogenic Risk	Noncarcinogenic Risk
Entire Data Set (including evaporation pond)	2.2×10^{-3}	52
Excluding Pond Data	0.00	0.054

It will be noted that carcinogenic risk excluding pond data does not exist because no carcinogenic compounds were detected in site soils outside the former evaporation pond (Table B-1; Appendix B).

The analysis indicates that hypothetical risks to future residents due to inhalation of volatile constituents emanating from soil exceed the acceptable carcinogenic risk range ($1x10^{-4}$ to $1x10^{-6}$) and noncarcinogenic risk range (1) as defined by the USEPA for the entire site data. For the data set *excluding* the former evaporation pond data, the analysis indicates that hypothetical risks to future residents are acceptable under both USEPA and DTSC guidelines.

Direct Contact

Construction workers, utility workers, and landscapers will directly contact soil during their respective job activities, although they may be using some type of personal protective equipment (e.g., chemical resistant gloves). Residents (adult and children) may also contact soil during household activities. As a result, asbestos, TPH, VOCs, PCBs, and SVOCs in soil may present a dermal and ingestion risk.

4.2.2 *Ground Water*

Because ground water is not a potable drinking water source (see Section 3.2) this medium does not present a complete exposure pathway for ingestion and dermal contact associated with use of this water (e.g., showering, bathing). However, inhalation of VOCs and direct contact

present complete exposure pathways as summarized below. Exposure pathways for site-related chemical classes present in ground water (TPH, VOCs, PCBs, SVOCs, and metals) are described below.

Inhalation of Volatile Constituents

VOCs, most notably BTEX, and volatile SVOCs are present in site ground water. Because these volatile constituents may migrate upward from ground water into overlying residential structures, indoor air may be impacted, thereby exposing residents to these site-related chemicals. In addition, construction and/or utility workers digging trenches and working within the trenches may be exposed to migrating vapors from ground water. The volatile constituents may accumulate in this "box" due to minimal air exchanges.

ERM performed a preliminary vapor intrusion pathway analysis for volatile constituents in groundwater using the DTSC-modified Johnson and Ettinger *Screening Groundwater Model* (January 2005). The maximum detected value for each constituent from January 2000 through present was used in this evaluation. The risk associated with current groundwater was then determined using the default assumptions of the DTSC-modified Johnson and Ettinger *Screening Groundwater Model* (January 2005) with the exception of depth to groundwater where the site-specific value of 10 feet was used. Appendix B presents the risk models and summary tables. The preliminary vapor intrusion pathway analysis, which used a sandy clay default for soil type, found that hypothetical risks to future residents due to inhalation of volatile constituent emanating from site-wide ground water (including the evaporation pond) are within or lower than the USEPA defined acceptable carcinogenic risk range (value of 2.9×10^{-6}) and noncarcinogenic risk range (value of 0.033). The results are tabulated in Table B-2 of Appendix B.

It is noted that, with the exception of MW-9 (along the northeastern site margin), all the VOC and SVOC concentrations driving the cumulative carcinogenic risk value for indoor air (Table B-2) represent samples collected from within the former evaporation pond. Given that the cumulative risk is very near the 1.0×10^{-6} value recognized by DTSC as acceptable for residential reuse, and that some form of remedial action will be taken to address fill materials (both above and below ground water) within the pond, it follows that these remedial actions may very likely reduce the cumulative risk to below 1.0×10^{-6}.

Direct Contact

Construction workers and utility workers may directly contact ground water during their respective job activities, although they may be using some type of personal protective equipment (e.g., chemical resistant gloves). As a result, metals, TPH, VOCs, PCBs, and SVOCs in ground water may present a dermal and incidental ingestion risk.

5.0 REMEDIAL ACTION OBJECTIVES

This section provides the objectives for the remedial action and discusses how those objectives were formulated with respect to the site-specific exposure assessment, the ARARs, current and future beneficial uses for the site, and the remediation alternatives.

5.1 DEVELOPMENT PROCESS FOR REMEDIAL ACTION OBJECTIVES

RAOs consist of medium-specific goals that are protective of human health and the environment, which includes ground water. These objectives are based on present and anticipated future beneficial uses of study area resources. Typically, human health RAOs are chemical- and exposure-specific and are based on an assessment of potential exposure pathways. "Protection of ground water" RAOs are also chemical-specific objectives that govern allowable concentrations of chemical constituents in soils and ground water. These objectives are typically developed using ARARs and by applying specific chemical fate-and-transport assumptions to determine allowable concentrations of chemical constituents in soil/fill material and ground water that are protective of human health and of natural resources, such as ground water.

The process for developing RAOs consists of the following steps:

- Identify and evaluate regulatory standards that are ARARs;
- Identify current and anticipated future beneficial uses of study area resources and potential exposure scenarios associated with those uses;
- Develop health-risk-based remedial goals for soil/fill material and ground water that are protective of human health;
- Develop risk-based remedial goals for soil/fill material and ground water that are protective of the beneficial uses of ground water; and
- Develop RAOs that incorporate applicable ARARs and are protective of human health, the environment, and beneficial uses of ground water.

5.2 APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

A requirement may be either (1) applicable or (2) relevant and appropriate, but not both. Applicable requirements are those remedial

standards, standards of control, or other environmental protection criteria or limitations that are promulgated under local, federal, or state law that specifically address hazardous substances, pollutants, contaminants, remedial actions, locations, or other circumstances at the site. Relevant and appropriate requirements are those that, while not applicable to the circumstances at the site, address problems or situations sufficiently similar to those encountered at sites such that their use is well suited to the target site of concern.

In addition to laws, regulations, and policies that are directly applicable, or relevant and appropriate, certain other items may have some reason warranting their consideration. Requirements "to be considered" (TBCs) include advisories or guidance documents issued by regulatory agencies that are not legally binding. TBCs may influence the selection of a remedy to allow the optimal remedy to be identified.

ARARs and TBCs were identified on a local, state, and federal level and evaluated in accordance with the physical, chemical, and toxicological characteristics of the chemical constituents, future use of the property, location of the property, and proposed remedial alternatives. Appendix C of this document presents the ARARs and TBCs identified for each of three categories: chemical-specific, action-specific, and location-specific.

5.2.1 Chemical-Specific ARARs

Chemical-specific ARARs are numerical standards set by various regulatory and government agencies that indicate the concentrations of certain compounds permitted in air, soil, ground water, surface water, and sediments.

ARARs and TBCs for chemical constituents present at the site, previously discussed in Section 4), are described in detail in Appendix C (Tables C-1 and C-2, respectively).

5.2.2 Action-Specific ARARs

Action-specific ARARs generally set performance, design, or other similar action-specific controls or restrictions on study area activities related to the management of hazardous substances. Action-specific ARARs will impact all activities that may be performed within the remediation area.

The types of activities under consideration for this RAP include:

- Release of dust or vapors from excavation activities;

- Transportation of excavated soil/fill materials within property boundaries;
- Transportation of excavated soil/fill materials to off-site locations;
- Ground water management during excavation activities; and
- Treatment, transportation and disposal of contaminated ground water.

Selected local ordinances and/or environmental protections governing proposed physical activities associated with the proposed remedies are TBCs, and include but are not limited to:

- Harbor Park General Plan Amendment (AP-05-223) and Mitigated Negative Declaration and Mitigation and Monitoring Plan (SCH#2005102062);
- City of Pittsburg Grading Ordinance, Title 15, Chapter 15.88;
- City of Pittsburg Standard Conditions of Development Details; and
- City of Pittsburg Landscaping Ordinance, Title 18, Chapter 18.84.

Action-specific ARARs and TBCs are presented in Appendix C (Tables C-3 and C-4, respectively).

5.2.3 Location-Specific ARARs

Location-specific ARARs are restrictions or requirements placed on the conduct of activities solely because they are in specific locations (e.g., activities performed in a flood plain or seismic standards for a specific location).

Location-specific ARARs are presented in Appendix C (Table C-5); no TBCs were identified.

5.3 BENEFICIAL USES SUMMARY

5.3.1 Current Beneficial Uses

As a non-operating industrial processing and manufacturing facility, there are currently no beneficial uses of this property. As noted above, shallow ground water (approximately 6-8 feet deep) is likely perched and discontinuous with deeper aquifers (approximately 125 feet deep). As discussed in Section 3.2, based on investigations performed at a site

approximately one-half mile from the JM site, shallow ground water has been shown not to be suitable for potable uses by virtue of low yield. Given the overall similarities in shallow hydrogeologic character between the two sites, it is concluded that shallow ground water at the JM site is likewise not suitable for potable use.

5.3.2 Anticipated Future Beneficial Uses

As discussed in Section 2.2.3, after completion of the planned development, this property will provide single and multi-family housing in the city of Pittsburg. Live/work commercial development is also being considered for a limited portion of the property along Third Street. As discussed above, there are no anticipated future beneficial uses for shallow ground water.

5.4 REMEDIAL ACTION OBJECTIVES

The RAOs are based on residential site usage and include the following:

- Prevent exposure (i.e., via incidental ingestion, dermal contact, inhalation of fugitive dust, and inhalation of volatile emissions) to soil/fill materials that are impacted with TPH at concentrations in excess of the cleanup goals established for the site (see Table C-6). (Note: These cleanup goals are not risk-based, because TPH includes varying mixtures of constituents and as such, the associated risks would also be variable. Risks associated with TPH are addressed by the cleanup goals established for specific TPH constituents [i.e., BTEX].) The proposed TPH cleanup goals for soil will be consistent with those commonly used by the Contra Costa County Environmental Health Division, Hazardous Materials Programs (County) in evaluating remedial actions for proposed residential sites. These cleanup objectives are based on California Regional Water Quality Control Board Environmental Screening Levels, and vary on a case-by-case basis.
- Ensure that asbestos is not present in soil/fill materials at detectable levels in any portions of the Plant Site in which residences are to be constructed (analysis will be transmission electron microscopy per USEPA Method 600/R-93/116 or equivalent).
- Prevent exposure (i.e., via incidental ingestion, dermal contact, inhalation of fugitive dust, and inhalation of volatile emissions) to soil/fill materials that are impacted with site-related chemicals at

concentrations in excess of health-risk-based cleanup goals established for the site (i.e., PCBs, SVOCs, and VOCs, see Table C-6).

- Prevent migration of constituents in soil/fill materials that would result in ground water contamination in excess of California Maximum Contaminant Levels or other applicable water quality standards. As described below in the section addressing potential remedial alternatives, we address a ground water sampling program to evaluate this issue.
- Prevent exposure (i.e., incidental ingestion, dermal contact, and inhalation of VOCs) to ground water within the footprint of the former evaporation pond; and
- Reduce the concentrations of TPH-related constituents in ground water (i.e., BTEX) to below their respective Maximum Contaminant Levels (MCLs).

6.0 REMEDIAL ACTION ALTERNATIVES

Remedial action alternatives potentially capable of meeting the RAOs for the remediation of impacted soil/fill materials and ground water have been developed. This section describes the development process for the remedial action alternatives, the methodology used to evaluate each alternative, and an evaluation of each alternative.

6.1 DEVELOPMENT OF REMEDIAL ALTERNATIVES

Various remedial technologies and process options were screened to identify those that have the potential to meet the RAOs for the chemical constituents identified at the site. The screenings of technology process options for soil and ground water are summarized in Tables 9 and 10, respectively. Based on the screening, those technology process options least suitable for addressing impacted media and achieving RAOs were eliminated. Those technology process options considered technically effective, implementable given current knowledge of the site, and cost-effective relative to competing options were retained and evaluated to develop remedial alternatives for impacted soil/fill materials and ground water.

6.2 REMEDIAL ALTERNATIVES – SOIL/FILL MATERIALS

Four remedial action alternatives for the remediation of impacted soil/fill materials have been developed:

- **Alternative 1** – No Action;
- **Alternative 2** – Fill Excavation with Off-Site Disposal;
- **Alternative 3** – Fill Consolidation on North Parcel; and
- **Alternative 4** – On-Site Consolidation in Eastern Boundary Berm.

The following subsections present a conceptual description of each alternative, in sufficient detail for evaluation and comparison of the alternatives later in this document. Detailed design, by way of an RDIP, will be performed for the selected remedial action alternative once the RAP is approved.

6.2.1 Alternative 1 – No Action

A No Action remedial alternative is included in the alternatives analysis to serve as a baseline against which to compare the other remedial alternatives. Because no remedial activities would be implemented, and no monitoring of ongoing natural subsurface processes would take place, long-term human health and environmental risks for the site would essentially be the same as those currently identified for the site.

6.2.2 Alternative 2 – Fill Excavation with Off-Site Disposal

Under this alternative, fill materials within the areas of concern (Figure 3) would be excavated and transported off site for disposal. Fill material generated from the excavation would be profiled through analytical testing. Soil/fill materials found not to contain evidence of ACM or petroleum hydrocarbons would be considered for use as backfill during construction at the site, as appropriate and practical. Soil/fill materials from within the former evaporation pond and other locations found with visible impact from either ACM or petroleum hydrocarbons will be transported off site for disposal.

Based on the known configuration of fill materials within the former evaporation pond and other locations found during demolition of the site, as described in Section 2.1.2 above, it is estimated that approximately 42,000 cubic yards (63,000 tons) of excavated fill materials (approximately 19,500 cubic yards from the former evaporation pond area, and 20,500 cubic yards from other locations found to contain ACM) would need to be transported off site for disposal. These volumetric estimates were arrived at by using computer assisted design functions in AutoCad, based on horizontal and vertical thickness data from various borings and/or test pits excavated within the pond and measurements taken from locations found during the demolition phase of work at the site. These data include horizontal and vertical thicknesses as indicated in cross-sections A-A', B-B', and C-C' presented as Figures 4, 5, and 6, respectively.

Once excavation is completed, confirmation sampling would be performed to ensure that all fill material and impacted soils have been removed. The sampling program will include sidewall confirmation sampling to define the lateral extent of soil removal. Sampling results will be compared against cleanup goals, as discussed previously, to determine that appropriate lateral and vertical excavation has been achieved. The details of the plan will be outlined in the Remedial Design and Implementation Plan (RDIP). Following confirmation sampling, the excavation area would be surveyed and backfilled using clean overburden

and replacement fill, after which the area would be compacted and regraded as needed. The site would then be restored to suitable conditions. The degree of compaction necessary and other geotechnical specifications for fill to be emplaced within the excavation will also be addressed in the RDIP.

Excavation, loading, and transporting of soil/fill materials impacted with ACM and petroleum hydrocarbons would be performed by state-certified contractors. Transportation of materials off-site to a licensed impoundment will be conducted only along designated truck routes approved by the City of Pittsburg Ordinance No. 05-1238, as contained in Section 10.36.080 of the Pittsburg Municipal Code.

6.2.3 Alternative 3 – Fill Consolidation on North Parcel

Under this alternative, fill materials within the areas of concern (Figure 3) would be excavated and consolidated on site at the North Parcel location (Figure 2). Fill materials generated from the excavation would be profiled through analytical testing. Soil/fill materials found not to contain evidence of ACM or petroleum hydrocarbons would be considered for use as backfill during construction at the site, as appropriate and practical. Soil/fill materials from within the former evaporation pond and former asbestos product storage area with visible impact from either ACM or petroleum hydrocarbons will be transported and consolidated with existing wastes landfilled at the North Parcel. Consistent with the program addressed in the previous alternative, confirmation sampling would be performed to define the lateral extent of soil removal; the sampling program would be addressed in the RDIP.

It is estimated that approximately 42,000 cubic yards (63,000 tons) of excavated fill materials would need to be transported to the North Parcel for disposal. Transported fill materials would be placed on the North Parcel in an area covering approximately 159,300 square feet. Clean fill would be placed on this area to act as a cover. The cover would be 2 feet thick and would require an estimated 11,800 cubic yards (17,700 tons) of clean fill, over which a vegetative cover would be re-established. Once excavation is completed, confirmation sampling would be performed to ensure that all impacted soils and fill material have been removed. Following confirmation sampling, the excavation area would be surveyed and backfilled using clean overburden and replacement fill, after which the area would be compacted and regraded as needed. The site would then be restored to suitable conditions.

Excavation, loading, and transporting of soil/fill materials impacted with ACM and petroleum hydrocarbons would be performed by state-certified contractors.

Implementation of this alternative would require establishing with DTSC a covenant to restrict the use of the property (i.e., deed restrictions) pursuant to Section 67391.1, Title 22, Division 4.5, Chapter 39, California Code of Regulations (CCR). Consistent with JM's prior agreement to restrict the use of the North Parcel, the applicable deed restrictions would be as follows, subject to final negotiations with DTSC:

- Prohibited Uses, including residences, hospitals for humans, public or private schools for persons under 21 years of age, and day-care centers for children;
- Soil Management Plan, addressing any activities that may disturb the capped property. Notification to, and approval by DTSC of any disturbances is would also be required;
- Prohibited Activities, including raising food (e.g., cattle, food crops, etc.), use of shallow (water table) ground water for purposes other than site remediation or construction dewatering, any earthwork that may disturb the cap (unless otherwise addressed in the Soil Management Plan), any uses or development on the capped property that does not preserve, or results in an alteration of, the cap's integrity;
- Timely and accurate notification to DTSC regarding type and date of any damage to the cap, and the type and date of any repair of such damage (10-working day notification);
- Provision of reasonable right of entry and access to DTSC for inspection, monitoring, and other activities consistent with the purpose of the covenant as deemed necessary by DTSC to protect public health or safety, or the environment; and
- Provision of reasonable access for implementing O&M activities to entities or persons responsible for that work.

Since all waste materials would be removed from the proposed residential portions within the redevelopment area, no deed restrictions beyond the prohibition on the use of ground water would be appropriate or necessary for these areas. Any further restrictions regarding reuse would be negotiated with DTSC as part of an O&M Agreement following implementation of the chosen remedy.

6.2.4 Alternative 4 – On-Site Consolidation in Eastern Boundary Berm

Under this alternative, fill materials within the areas of concern (Figure 3) would be excavated and consolidated on site in the construction of an engineered berm along the eastern boundary of the site. Fill materials generated from the excavation would be profiled through analytical testing. Soil/fill materials found not to contain evidence of ACMs or petroleum hydrocarbons would be considered for use as backfill during construction at the site, as appropriate and practical. Soil/fill materials from within the former evaporation pond and former asbestos product storage area with visible impact from either ACM or petroleum hydrocarbons would be used in the construction of the eastern boundary berm. It is estimated that approximately 42,000 cubic yards (63,000 tons) of fill materials and impacted soil would be excavated and consolidated in the berm. Consistent with the program addressed in the previous alternative, confirmation sampling would be performed to define the lateral extent of soil removal; the sampling program would be addressed in the RDIP.

The berm would be engineered to contain aboveground as well as subgrade storage cells. The aboveground storage cell, including clean fill cover, will be 10 feet high relative to the adjacent public right of way. The subgrade storage cell of the berm would be constructed by excavating a trench a maximum of 75 feet wide, 10 feet deep, and 1,400 feet long. Based on historical depths to ground water, as identified in selected ground water monitoring wells along the alignment of the proposed berm and with test pits and other borings along the eastern margin of the former evaporation pond, a separation between the bottom of the trench and ground water is not attainable. Soil excavated from the trench would be profiled to determine its suitability for reuse as site fill, or for offsite disposal, as appropriate. The profiling program will be detailed in the RDIP.

Cultural resources have not been identified during previous site activities. However, due to the location of the project in an area designated by the City of Pittsburg as sensitive for Native American resources, and the presence of an identified known historic Cultural Resource adjacent to the project site, the project proponent will be required to retain the services of a registered professional archaeologist (pre-historic and/or historical, as appropriate), or an individual meeting the qualifications established by the Secretary of the Interior's Standards and Guidelines for Professional Qualifications contained in 36 CRF Part 61. This individual will be required to be trained and certified in accordance with Federal Hazardous Waste Operations and Emergency Response requirements.

Prior to the commencement of site activities, the archaeologist will be responsible for conducting the following:

1. Preparing a Cultural Resource Protection Plan for review and approval by DTSC. The cultural resource protection plan shall be consistent with the requirements established in Public Resource Code (PRC) sections 21083.2, 21084.1 and CEQA Guidelines (CCR) section 15064.5. Earthmoving activities shall not commence prior to approval, by DTSC, of the Cultural Resource Protection Plan.
2. Consulting with Native American tribal representatives identified by the Native American Heritage Commission. Such consultation shall be in coordination with DTSC.
3. Consulting with the appropriate CHRIS Information Center. Such consultation shall be coordinated with DTSC.
4. Conducting orientation training for workers involved in excavation and construction activities associated with the remediation project. The orientation will explain the nature and importance of cultural resources potentially present and set forth a procedure for treatment of the cultural resources, if any are found.
5. Monitoring all ground-disturbing activities. If items of cultural resources or human remains are uncovered, the archaeologist shall direct that all work activities be stopped immediately to allow the archeologist to implement appropriate procedures for treatment and/or disposition of the cultural resources as established in the approved Cultural Resource Protection Plan, PRC section 21083.2, CCR section 15064.5, and H&SC section 7050.5.

As indicated above, the Site is located in an industrial area. No unique paleontological or geologic features have been identified during previous site investigations and/or disturbances. Proposed remediation activities involve excavation to a depth of five feet. Discovery of unique paleontological or geologic features is unlikely. In the event of an accidental discovery of geologic or paleontological resources, a qualified paleontological resource specialist or geologist will be contacted for immediate evaluation of the resources. If the resources are confirmed to be significant, the Office of Historic Preservation (OHP) within the Department of California State Parks will be contacted for further guidance relating to documentation and preservation of the resource.

A conceptual diagram showing berm detail in cross-section is presented as Figure 7. The aboveground storage cell with engineered slopes of the berm will be located directly above the trench. The aboveground storage

cell of the berm will extend the approximate width and length of the trench. Two feet of clean fill (6,200 cubic yards) will be placed on top and sides to act as a cover. The total height of the berm is anticipated to be approximately 10 feet, including clean fill, as measured from the adjacent right-of-way. A marker layer will be placed between the aboveground storage cell and the clean fill. This marker will serve as demarcation between the cover material and storage cell. In addition to the clean fill, thick vegetation such as grass and non-intrusive, drought-tolerant shrubs will be planted on the berm as erosion control for the cover material. The vegetative cover will be in conformance with the City's Landscape Ordinance (Pittsburg Municipal Code, Title 18, Chapter 18.84). The landscape details will be further addressed in the RDIP.

The original design capacity of the berm was assumed to be approximately 26,000 cubic yards. Based on the current understanding of the volume of asbestos-impacted fill materials present at the site, it may be necessary to increase the berm's capacity by over 50 percent (to more than 42,000 cubic yards). The proposed remedy will remove all impacted fill materials from the proposed residential areas and consolidate those materials within the berm. Under no circumstances will asbestos-impacted fill materials be left within the residential areas. The berm will be designed to have a minimum buffer distance of 1 foot (including an appropriate marker fabric or layer) between any waste materials in the berm and existing or future public rights-of-way or utilities corridors on either side of the berm, consistent with the proposed development plan.

As noted in Section 2.2.3 above, DTSC understands that the development plan details associated with the berm design are only conceptual. PRPLLC has not submitted a formal development application, nor has the development been granted any approvals from the City of Pittsburg Planning Commission or City Council.

Once excavation is completed, confirmation sampling would be performed to ensure that all impacted soils and fill material have been removed from beneath the proposed single- and multi-family residential areas. Following confirmation sampling, the excavation area would be surveyed and backfilled using clean overburden and replacement fill, after which the area would be compacted and regraded as needed. The site would then be restored to suitable conditions.

Excavation, loading, and transporting of soil/fill materials impacted with ACM and petroleum hydrocarbons will be performed by state-certified contractors.

As noted for implementation of Alternative 3, this alternative would also require establishing with DTSC a covenant to restrict the use of the bermed area (i.e., deed restrictions) pursuant to 22 CCR, Section 67391.1, Division 4.5, Chapter 39. Applicable deed restrictions would be consistent with those identified for Alternative 3 and an O&M Agreement with DTSC would be implemented and would include a requirement for demonstration of financial assurance for berm upkeep and oversight. The RDIP will specifically address potential impacts such as accidental breaches of the berm from broken water mains, misguided utility line repair, vehicle collision with the berm, or any other foreseeable long term impact which may result in a breach to the berm.

Since all waste materials would be removed from the proposed residential areas on the redevelopment area, no institutional controls beyond the prohibition on the use of ground water (if ground water contaminants exist above applicable cleanup levels, as described below) would be appropriate or necessary in these areas. As part of an O&M Agreement negotiated between PRPLLC and DTSC, an O&M Plan will be prepared in addition to the RDIP. The O&M Plan will include a contingency plan and emergency response plan, consistent with Paragraph 2.7 of DTSC's model O&M Agreement, which will identify policies and procedures for responding to accidental breaches to the berm. The O&M Plan will be implemented in accordance with an O&M Agreement, which will be an enforceable agreement executed between DTSC and PRPLLC pursuant to Health and Safety Code section 25355.5 (a)(1)(C).

6.3 REMEDIAL ALTERNATIVES – GROUND WATER

Three remedial action alternatives for the remediation of impacted ground water have been developed:

- **Alternative 1** – No Action;
- **Alternative 2** – Extraction/Treatment with Monitored Natural Attenuation (MNA);
- **Alternative 3** – Monitored Natural Attenuation; and
- **Alternative 4** – Natural Attenuation with Land Use Restriction.

The following subsections present a conceptual description of each alternative, in sufficient detail for evaluation and comparison of the alternatives later in this document. Detailed design will be performed (via RDIP) for the selected remedial action alternative once the RAP is approved.

6.3.1 Alternative 1 – No Action

A No Action remedial alternative is included in the alternatives analysis to serve as a baseline against which to compare the other remedial alternatives. Because no remedial activities would be implemented, long-term human health and environmental risks for the site would essentially be the same as those currently identified for the site.

6.3.2 Alternative 2 – Extraction/Treatment with MNA

Alternative 2 consists of ground water extraction and treatment with continued ground water monitoring to observe the results of natural subsurface concentration reduction processes. This alternative includes the following components:

- Installation of an extraction trench near the downgradient edge of the source area and an injection trench upgradient;
- Construction of the treatment system;
- Operation, maintenance, and monitoring of the system; and
- Implementation of a ground water monitoring program utilizing existing ground water monitoring wells, as appropriate and available, or with suitable replacement wells (Figure 3).

This alternative would monitor the potential progress of natural attenuation. Ground water samples would be collected annually for TPH analysis from existing (or suitable replacement) wells. In addition to monitoring for TPH, the four ground water monitoring wells would be sampled for dissolved oxygen concentration (DO), oxidation-reduction potential (ORP), pH, dissolved iron and manganese, nitrate (NO_3), sulfate (SO_4), carbon dioxide, methane, ethane, and ethene analyses. The four-well MNA system would be selected as follows: one upgradient (south) of the source area to establish background conditions; one in the source area to monitor the zone of highest concentration; one at mid-plume to monitor conditions at that location; and one at the downgradient extent of the former evaporation pond to monitor plume stability and any potential contaminant migration.

In accordance with 22 CCR Section 67391.1, Division 4.5, Chapter 39, a land use covenant prohibiting the use of ground water for purposes other than site remediation or construction dewatering would be part of the proposed remedy associated with Alternative 2. Ground water monitoring would be performed under an O&M Agreement with DTSC.

The following subsections describe the components of Alternative 2.

6.3.2.1 Extraction Trench and Injection Trench Installation

The extraction trench would be 100 feet long, 1 foot wide, and 20 feet deep to recover ground water from the zone of highest concentration immediately downgradient (north) of the former source area (i.e., the former evaporation pond; Figure 3). To reinject treated ground water back into the aquifer, an injection trench of similar size would be installed upgradient (south) of the source area. This combination would be designed to hydraulically contain and remediate the apparent source area of the contaminant plume.

6.3.2.2 Treatment System Construction

To extract ground water from the extraction trench, a sump pump would be sized for the appropriate ground water flux through the area of the trench. Via appropriate conveyance system, the extraction system would be plumbed to an aboveground treatment system. The anticipated treatment will be by GAC. The treated ground water from the GAC system would be returned to the aquifer via the injection trench.

6.3.2.3 System Operation, Maintenance, and Monitoring

The treatment system would be scheduled for 2 years of operation. During this time, periodic ground water influent and effluent monitoring would be performed to optimize mass removal rates and evaluate system performance and permit compliance. Principal components of the treatment system, including extraction pump, conveyance piping, and the GAC vessels, would require regular replacement and/or maintenance.

6.3.2.4 Ground Water Monitoring

A ground water monitoring program would analyze the performance of the remedial action as follows:

- Quarterly monitoring of on-site wells for TPH and aromatic VOCs (BTEX) until these constituents are shown to be at concentrations less than their respective MCLs. For purposes of costing, we assume that this will be accomplished within the first 5 years, and that the need for monitoring beyond 5 years will be evaluated at that time.
- Annual monitoring for MNA parameters. The MNA parameters include monitoring for VOCs by USEPA Method 8260, nitrate and sulfate by USEPA Method 300.0, total alkalinity by USEPA Method

310.1, dissolved iron and manganese by USEPA Method 6010, and dissolved methane and carbon dioxide by Microseeps-specific method AM20GAX.

6.3.3 Alternative 3 – Monitored Natural Attenuation

Alternative 3 consists of continued ground water monitoring to observe the results of natural subsurface concentration reduction processes. Previous site investigations have shown that natural attenuation is likely occurring in the subsurface; this alternative, as described in Alternative 2, would monitor that progress. The ground water monitoring program will utilize existing wells, as available (Figure 3) and would continue for 5 years. The monitoring schedule would analyze the performance of the remedial action as follows:

- Quarterly monitoring of on-site wells for TPH and aromatic VOCs (BTEX) until these constituents are shown to be at concentrations less than their respective MCLs. For purposes of costing, we assume that this will be accomplished within the first 5 years, and that the need for monitoring beyond 5 years will be evaluated at that time.
- Annual monitoring for MNA parameters, as described above.

In accordance with 22 CCR Section 67391.1, Division 4.5, Chapter 39, a land use covenant prohibiting the use of ground water for purposes other than site remediation or construction dewatering would be part of the proposed remedy associated with Alternative 2. Ground water monitoring would be performed under an O&M Agreement with DTSC.

This remedial alternative includes a post-removal action ground water investigation component, to include ground water grab sampling within the footprint of the former evaporation pond to evaluate concentrations of VOCs (i.e., BTEX) related to TPH in ground water. If the investigation, which will be performed following pond backfilling and compaction, demonstrates that VOCs concentrations in ground water do not exceed the applicable remedial objectives, as defined in Section 5 of this RAP, continued ground water monitoring pursuant to the approach described above will not be necessary. This will be evaluated with DTSC upon completion of the post-removal action investigation. If applicable ground water cleanup levels objectives for any constituents are not met (i.e., are exceeded), a formal ground water monitoring program (including natural attenuation parameters) will be required and will be negotiated with DTSC, as appropriate. The ground water monitoring program, if required, will include, at a minimum, annual reporting of ground water monitoring results to DTSC.

6.3.4 Alternative 4 – Natural Attenuation with no Ground Water Monitoring

Under Alternative 4, no remedial activities will be implemented. However, in accordance with 22 CCR Section 67391.1, Division 4.5, Chapter 39, an institutional control prohibiting the use of ground water for purposes other than site remediation or construction dewatering would be part of the proposed remedy associated with Alternative 2. This institutional control would be in the form of homeowners' association CC&Rs.

As described above for Alternative 3, this remedial alternative also includes a post-removal action ground water investigation component, to include ground water grab sampling within the footprint of the former evaporation pond to evaluate concentrations of VOCs and TPH constituents in ground water. If applicable ground water cleanup levels for any constituents are not met (i.e., are exceeded), a formal ground water monitoring program (including natural attenuation parameters) will be required and will be negotiated with DTSC, as appropriate. The ground water monitoring program, if required, will include, at a minimum, annual reporting of ground water monitoring results to DTSC. If the investigation demonstrates that VOCs and TPH concentrations in ground water do not exceed the applicable remedial objectives, as defined in Section 5 of this RAP, a ground water closure request will be prepared and submitted to DTSC. Pending DTSC approval of the request, no further activities associated with ground water issues will be performed for the site.

7.0 REMEDIAL ALTERNATIVES EVALUATION

This section provides a detailed and comparative analysis of the remedial alternatives developed in Section 6.

The detailed analysis of each alternative involves:

- An evaluation of each remedial alternative with respect to the nine federal evaluation criteria and six California state criteria. The six California criteria are not analyzed separately because the factors that the California criteria are intended to evaluate are fully considered in one or more of the nine federal criteria.
- An assessment of each remedial alternative with respect to its effectiveness in achieving RAOs.

The nine federal evaluation criteria as set forth in the NCP [Code of Federal Regulations, Part 300.430(e)(9)(iii)] are categorized into two threshold criteria, five balancing criteria, and two modifying criteria. Threshold criteria are:

- Overall protection of human health and the environment; and
- Compliance with ARARs.

Balancing criteria represent the primary criteria upon which the detailed and comparative analyses are based. Balancing criteria are:

- Long-term effectiveness and permanence;
- Reduction in TMV through treatment;
- Short-term effectiveness;
- Implementability; and
- Cost.

The modifying criteria are:

- State acceptance; and
- Community acceptance.

To streamline the detailed analysis, the two modifying criteria are evaluated together.

The components of the remedial alternatives are summarized in Table 11. The detailed analysis for each alternative is presented in Section 7.2 and summarized on Table 11. The comparative analysis is presented in Section 7.3 and summarized in Table 11.

7.1 REMEDIAL ALTERNATIVES EVALUATION CRITERIA

The nine federal evaluation criteria are described in the following subsections and are later used in the detailed alternatives analysis. The detailed and comparative analyses are based primarily on threshold and balancing criteria.

7.1.1 Federal Evaluation Criteria

7.1.1.1 Overall Protection of Human Health and the Environment

This criterion assesses whether an alternative provides adequate protection of human health, the environment, and the beneficial uses of ground water. It evaluates how site risks posed through each exposure pathway are eliminated, reduced, or controlled through treatment, engineering, or institutional controls. It also evaluates the degree to which the alternative satisfies RAOs.

7.1.1.2 Compliance with Applicable or Relevant and Appropriate Requirements

This evaluation criterion is used to determine whether each alternative will meet ARARs, as presented in Section 5. Each alternative will be evaluated to determine compliance with chemical-specific, action-specific, and location-specific ARARs. Additionally, compliance with other applicable criteria, advisories, and guidelines (TBCs) will be considered.

7.1.1.3 Long-Term Effectiveness and Permanence

The long-term effectiveness and permanence criterion evaluates the long-term reliability of the proposed equipment and process, and the permanence of the proposed alternative. This criterion evaluates the magnitude of residual risk posed by the presence of untreated waste or treatment residuals and the adequacy of institutional actions or containment measures needed to manage residual risk.

7.1.1.4 Reduction of Toxicity, Mobility, or Volume through Treatment

This criterion addresses the statutory preference for selecting remedial actions that employ treatment to permanently reduce TMV. It evaluates the amount of hazardous substances that will be destroyed, treated, or recycled and the degree to which the treatment is irreversible. The residual compounds that will remain following treatment and the degree to which treatment reduces the inherent hazards posed by principal threats at the site are considered. This criterion favors alternatives that utilize treatment to the maximum extent possible and generate little or no residual wastes.

7.1.1.5 Short-Term Effectiveness

The short-term effectiveness criterion measures the short-term risks to the community or remediation construction personnel that might occur during implementation of remediation. It also evaluates the time required to implement the proposed remediation. Finally, this criterion assesses the potential impact on the environment during remediation and the effectiveness of the proposed remedial measures.

7.1.1.6 Implementability

The implementability criterion evaluates technical and administrative feasibility of an alternative, and the availability of services and materials needed to implement the alternative. Evaluation of technical feasibility includes an assessment of the reliability of technologies and ease of undertaking additional remedial action, if necessary. This criterion favors proven technologies that are widely available and simple to implement or construct and operate.

7.1.1.7 Cost

The cost criterion assesses the financial burden associated with implementing the alternative. The factors addressed include capital costs, both direct and indirect, and O&M costs. Direct capital costs include construction costs or expenditures for labor, materials, equipment, and subcontractors associated with the remedial action. Indirect capital costs include expenditures for engineering, permitting, construction management, and other services necessary to carry out the remedial action. O&M costs include operational labor and maintenance materials associated with the extended O&M and reporting for each alternative. Costs are given as present worth costs.

7.1.1.8 State and Community Acceptance

The state and community acceptance criteria are addressed together. The state acceptance criterion evaluates the technical and administrative issues and concerns that the state may have regarding each alternative. State acceptance is implicit in regulatory approval of the RAP. The evaluation is preliminary and qualitative. State and community acceptance will be formally documented in the final RAP following public comment on the draft RAP.

7.2 REMEDIAL ALTERNATIVES EVALUATION – SOIL/FILL MATERIALS

In this section, each remedial action alternative for impacted soils is evaluated with respect to the previously identified criteria. The results of the detailed evaluation are discussed below. With the exception of the No Action alternative, each of the remedial action alternatives satisfies or nearly satisfies all of the requirements of the effectiveness and implementability criteria. The cost criterion is a significant distinguishing factor between the remaining alternatives.

A detailed cost estimate for each alternative is presented in Appendix D. Table 11 presents a summary of the alternative costs.

7.2.1 Alternative 1 – No Action

The detailed analysis of Alternative 1 against the nine federal evaluation criteria is presented below and summarized in Table 11.

Overall Protection of Human Health and the Environment. As no actions would be taken to address site RAOs, this alternative would provide no protection of human health and the environment.

Compliance with ARARs. This alternative does not meet ARARs identified for the site because no remedial actions would be taken.

Long-Term Effectiveness and Permanence. The No Action alternative provides no effectiveness in the long term. No actions would be taken at the site under this alternative, and therefore affected media would continue to pose a potential threat to human health and the environment.

Reduction of Toxicity, Mobility, or Volume through Treatment. The No Action alternative does not involve treatment to address site chemical

constituents, and therefore this alternative does not provide any reduction in TMV.

Short-Term Effectiveness. This alternative is considered to have moderate effectiveness in the short term. Because no action would be taken, there would be no short-term risk to the community or workers. No time would be required to complete this alternative, but protection from site risks would not be achieved.

Implementability. As no actions would be taken for this alternative, this alternative is highly implementable.

Cost. No costs are associated with this alternative, as no remedial actions would be conducted.

State and Community Acceptance. As no remedial actions would be taken, this alternative would likely not be acceptable to the state or community, given PRPLLC's plans to redevelop the site.

7.2.2 *Alternative 2 – Fill Excavation with Off-Site Disposal*

The detailed analysis of Alternative 2 against the nine federal evaluation criteria is presented below and summarized in Table 11.

Overall Protection of Human Health and the Environment. This alternative provides high overall protection of human health and environment. Under this alternative, fill material and residual soil contamination would be removed from the site and no longer would pose a potential threat to human health or the environment. Soil RAOs would be achieved, removing constituents exceeding health-based levels, preventing migration of constituents to ground water, and minimizing the need for long-term management.

Compliance with ARARs. This alternative meets ARARs identified for the site. Compliance with local regulations, such as those for permitting, zoning, and transport would be required.

Long-Term Effectiveness and Permanence. This alternative would be highly effective over the long term. The removal and off-site disposal of contaminated soil at the site would meet the RAO by eliminating the source of contamination and potential pathways. Residual risks would be permanently eliminated by removing the source. Excavation and disposal are proven and reliable technologies that would effectively remove the contaminated soil and thus permanently reduce the possibility of human

exposure to the materials. No long-term management would be needed, though confirmation sampling would be required to verify total removal.

Reduction of Toxicity, Mobility, or Volume through Treatment. The mobility of chemicals in on-site soil would be reduced through removal and disposal at a landfill.

Short-Term Effectiveness. Potential short-term risks for this alternative include generation of airborne contaminants from the excavation, including dust, volatile chemicals, and asbestos fibers. Risks would be present due to transportation of contaminated fill materials and soil to the landfill (as many as 1,800 truckloads) and physical hazards from the construction equipment.

Implementability. This alternative is highly implementable. Soil removal uses standard construction methods and the necessary labor, materials, and equipment are readily available. Traffic impacts are likely a significant concern.

Cost. The estimated cost for this alternative is $7,601,000 (Appendix D).

State and Community Acceptance. This alternative would likely be acceptable to the State and local community because it addresses site impacts through removal of impacted soil. Transportation of impacted soil and fill materials to the landfill could raise concerns within the community. Final determination of community acceptance would depend on comments received during the public comment period.

7.2.3 Alternative 3 – Fill Consolidation on North Parcel

The detailed analysis of Alternative 3 against the nine federal evaluation criteria is presented below and summarized in Table 11.

Overall Protection of Human Health and the Environment. This alternative also provides high overall protection of human health and environment. Under this alternative, impacted soil and fill materials would be removed from the area of the site that poses a potential threat to human health or the environment. Impacted soil and fill materials would be consolidated into a single area that would be classified for restricted use. Clean fill would be placed on top of the contaminated soil preventing exposure. The chemical constituents are not thought to be highly mobile and the threat of migration of constituents to ground water would be minimal.

Compliance with ARARs. This alternative meets ARARs identified for the site. Compliance with local regulations, such as those for permitting, zoning, and transport would be required.

Long-Term Effectiveness and Permanence. This alternative would be highly effective over the long term provided that there is ongoing inspection and maintenance of the waste consolidation area. The consolidation of contaminated soil at the site would meet the RAO by eliminating the source of contamination and potential pathways in the area of the site to be classified for unrestricted use. Limited access or deed restrictions would only apply to the consolidation area. The berm will be maintained and inspected in accordance with an Operation and Maintenance Agreement with DTSC to ensure the integrity of the berm. Residual risks to human health would be reduced by capping the consolidation area with clean fill. The residual risks to ground water would be minimal because the chemical constituents in soil are not thought to be highly mobile. Excavation and consolidation are proven and reliable technologies that would effectively remove the contaminated soil from unrestricted areas and thus permanently reduce the possibility of human exposure to the materials within the proposed residential development area of the site.

Reduction of Toxicity, Mobility, or Volume through Treatment. This alternative would not reduce the TMV of chemicals in on-site soil through treatment. The chemical constituents would be consolidated in one location (North Parcel), preventing potential exposure to on-site residents.

Short-Term Effectiveness. Potential short-term risks for this alternative include generation of airborne contaminants from the excavation, including dust, volatile chemicals, and asbestos fibers. There would be exposure risks from transportation of contaminated fill materials and soil to the North Parcel. Also, physical hazards from the construction equipment would be present.

Implementability. This alternative is highly implementable. Soil consolidation uses standard construction methods and the necessary labor, materials, and equipment are readily available.

Cost. The estimated cost for this alternative, including long-term O&M, is $2,358,000 (Appendix D).

State and Community Acceptance. This alternative would likely not be acceptable to the State and local community. Transportation of impacted soil and fill materials to the North Parcel would necessitate re-opening an impoundment (previously closed by DTSC) containing impacted fill

materials, which would likely not be approved by DTSC. Likewise, implementing this alternative within approximately 100 feet of the existing residential neighborhood to the west would likely raise concerns within the community. Final determination of community acceptance will depend on comments received during the public comment period.

7.2.4 Alternative 4 – On-Site Consolidation in Eastern Boundary Berm

The detailed analysis of Alternative 4 against the nine federal evaluation criteria is presented below and summarized in Table 11.

Overall Protection of Human Health and the Environment. This alternative also provides high overall protection of human health and environment. Under this alternative, impacted soil and fill materials would be largely removed from the area of the site that poses a potential threat to human health or the environment (to the extent that the berm can accommodate the fill materials). Excess impacted materials would be transported to and disposed at an appropriate off site landfill. Impacted soil and fill materials would be consolidated into a berm along the eastern boundary that would have a recorded land use covenant restricting its use. Clean fill would be placed on top of the contaminated soil, preventing exposure. Vegetation would be planted on the berm, reducing ground water infiltration to the impacted soil. The chemical constituents (namely asbestos and petroleum hydrocarbons in the diesel and motor oil ranges) are generally not mobile, therefore the threat of migration of constituents to ground water would be minimal. Continued ground water monitoring may be required to ensure that migration of the chemical constituents to ground water is not occurring.

Compliance with ARARs. This alternative meets ARARs identified for the site. Compliance with local regulations, such as those for permitting and zoning, would be required.

Long-Term Effectiveness and Permanence. This alternative would be highly effective over the long term provided that there is ongoing inspection and maintenance of the berm. The consolidation of contaminated soil at the site would meet the RAO by eliminating the source of contamination and potential pathways in the area of the site to be classified for unrestricted use. Limited access or deed restrictions would only apply to the consolidation area. Residual risks to human health would be reduced by capping the consolidation area with clean fill. The residual risks to ground water would be minimal because the chemical constituents in soil are generally not mobile. Additionally, vegetation would be placed on the berm. Excavation and consolidation are proven and reliable technologies

that would effectively remove the contaminated soil from unrestricted areas and thus permanently reduce the possibility of human exposure to the materials.

Reduction of Toxicity, Mobility, or Volume through Treatment. This alternative would not reduce the TMV of chemicals in on-site soil through treatment. Consolidation of contaminated soils to the eastern boundary berm would reduce the volume of contaminants in the proposed residential reuse area. The toxicity and volume of contaminants site-wide would not be reduced, but potential exposure to the chemical constituents would be reduced and the engineered controls of the berm would reduce the mobility of contaminants.

Short-Term Effectiveness. Potential short-term risks for this alternative include generation of airborne contaminants from the excavation, including dust, volatile chemicals, and asbestos fibers (these impacts can be mitigated with water misting and air monitoring during removal activities). Also, physical hazards from the construction equipment would be present.

Implementability. This alternative is highly implementable. Soil consolidation uses standard construction methods and the necessary labor, materials, and equipment are readily available.

Cost. The estimated cost for this alternative is $1,598,000 (Appendix D).

State and Community Acceptance. This alternative would likely be acceptable to the State and local community. This alternative has also been determined to be potentially acceptable to both the City of Pittsburg as well as the prospective multi-family residential developer. Final determination of community acceptance would depend on comments received during the public comment period.

7.3 REMEDIAL ALTERNATIVES EVALUATION – GROUND WATER

In this section, each remedial action alternative for contaminated ground water is evaluated with respect to the previously identified criteria. The results of the detailed evaluation are discussed below. With the exception of the No Action alternative, each of the remedial action alternatives satisfies or nearly satisfies all of the requirements of the effectiveness and implementability criteria. The cost criterion is a significant distinguishing factor between the remaining alternatives.

A detailed cost estimate for each alternative is presented in Appendix D. Table 12 presents a summary of the alternative costs.

7.3.1 Alternative 1 – No Action

The detailed analysis of Alternative 1 against the nine federal evaluation criteria is presented below and summarized in Table 12.

Overall Protection of Human Health and the Environment. This alternative would provide a moderate level of protection to human health and the environment, especially given the likely non-beneficial use of site ground water. Concentrations of TPH and VOCs in ground water may tend to decline over time due to natural attenuation. Petroleum hydrocarbons, and some VOCs, are well documented to be readily biodegradable in ground water systems (USEPA, 2004). Petroleum hydrocarbons and their constituents are generally biodegradable as long as indigenous microorganisms have an adequate supply of nutrients and electron acceptors, and biological activity is not inhibited by substances toxic to the organisms. In systems lacking a sufficient oxygen supply, anaerobic biodegradation will occur as long as an electron acceptor such as nitrate, iron (III), manganese (IV), and sulfate are present in adequate levels. As such, the biodegradation capacity of natural systems with is reported to be in the range of 7 to 70 mg/l (USEPA, 1996).

Compliance with ARARs. This alternative does not meet ARARs identified for the site because there are no controls to limit exposure to ground water.

Long-Term Effectiveness and Permanence. This alternative would provide moderate long-term effectiveness. Natural attenuation would reduce chemical concentrations in ground water to meet the RAOs. These concentration reductions would be permanent. However, this alternative does not provide monitoring to ensure that natural attenuation is sufficiently reducing chemical constituents.

Reduction of Toxicity, Mobility, or Volume through Treatment. The No Action alternative provides for reduction of TMV through natural attenuation.

Short-Term Effectiveness. This alternative is considered to have moderate to high effectiveness in the short term. Because no action would be taken, there would be no short-term risk to the community or workers. No time would be required to complete this alternative and ground water chemical concentrations will decrease due to natural attenuation.

Implementability. As no actions would be taken for this alternative, this alternative is highly implementable.

Cost. No costs are associated with this alternative, as no remedial actions would be conducted.

State and Community Acceptance. As no remedial actions would be taken, this alternative would likely not be acceptable to the State or community.

7.3.2 Alternative 2 – Extraction/Treatment with MNA

The detailed analysis of Alternative 2 against the nine federal evaluation criteria is presented below and summarized in Table 12.

Overall Protection of Human Health and the Environment. This alternative would provide a high level of protection to human health and the environment. Ground water chemical concentrations at the source area will be reduced through extraction and treatment. Continued ground water monitoring will confirm remedial progress or warn of unexpected developments.

Compliance with ARARs. This alternative would meet the ARARs by reducing the concentrations in the source area and verifying the stability and continued decrease in ground water concentrations with the implementation of the ground water monitoring program. Potential exposure to ground water would be limited by the implementation of a deed restriction.

Long-Term Effectiveness and Permanence. This alternative would provide high long-term effectiveness. Extraction and treatment may reduce chemical concentrations in ground water at the source area; however, the technical feasibility of such an approach is questionable due to the overall success of the treatability study (Appendix A). Natural attenuation, which is believed to be occurring due to the overall reductions in organic chemical concentrations site-wide, would decrease downgradient chemical constituents to concentrations that meet the RAOs. These concentration reductions would be permanent. Ground water monitoring would confirm remedial progress.

Reduction of Toxicity, Mobility, or Volume through Treatment. This alternative provides for reduction of TMV through extraction with treatment as well as natural attenuation.

Short-Term Effectiveness. Potential short-term risks to workers for this alternative include those associated with the installation of the extraction and injection trenches and treatment system and exposure to ground water during sampling events.

Implementability. This alternative is highly implementable. Extraction and treatment systems are readily available. Permits would be required for the treatment system as well as well installation. As noted above, this approach may not ultimately be technically feasible as a result of successful removal actions associated with the treatability study (Appendix A).

Cost. The estimated cost for this alternative is $413,000 (Appendix D).

State and Community Acceptance. This alternative would likely be acceptable to the State but possibly less desirable to the local community due to the proposed residential nature of the redevelopment. Final determination of community acceptance would depend on comments received during the public comment period.

7.3.3 Alternative 3 – Monitored Natural Attenuation

The detailed analysis of Alternative 3 against the nine federal evaluation criteria is presented below and summarized in Table 12.

Overall Protection of Human Health and the Environment. This alternative would provide a high level of protection to human health and the environment. It is believed that ground water chemical concentrations at the source area are declining due to natural attenuation, as described above. Continued ground water monitoring would confirm remedial progress.

Compliance with ARARs. This alternative would meet the ARARs by verifying the stability and continued decrease in ground water concentration with the implementation of the ground water monitoring program. Potential exposure to ground water would be limited by the implementation of a deed restriction.

Long-Term Effectiveness and Permanence. This alternative would provide high long-term effectiveness. Natural attenuation would reduce chemical concentrations in ground water to concentrations that meet the RAOs. These reductions would be permanent as long as further contamination does not occur. Ground water monitoring would confirm remedial progress or warn of unexpected developments.

Reduction of Toxicity, Mobility, or Volume through Treatment. This alternative provides for reduction of TMV not through treatment but through natural attenuation.

Short-Term Effectiveness. Potential short-term risks for this alternative include those associated with exposure to ground water during sampling events.

Implementability. This alternative is highly implementable. Existing wells could be utilized for the ground water monitoring program, to the extent that they do not interfere with the planned redevelopment.

Cost. The estimated cost for this alternative is $104,000 (Appendix D).

State and Community Acceptance. This alternative would likely be acceptable to the State and local community. Final determination of community acceptance would depend on comments received during the public comment period.

7.3.4 Alternative 4 – Natural Attenuation with Land Use Restriction

The detailed analysis of Alternative 4 against the nine federal evaluation criteria is presented below and summarized in Table 12.

Overall Protection of Human Health and the Environment. This alternative would provide a moderate level of protection to human health and the environment, especially given the likely non-beneficial use of site ground water. As described above, it is possible that ground water chemical concentrations will decline due to natural attenuation. A deed restriction would be placed on ground water for purposes other than site remediation or construction dewatering, eliminating potential exposure.

Compliance with ARARs. This alternative would meet ARARs identified for the site. Exposure to ground water would be limited only to construction or remediation activities as per the deed restriction. Natural attenuation will potentially decrease chemical concentrations in ground water.

Long-Term Effectiveness and Permanence. This alternative would provide moderate long-term effectiveness. Natural attenuation would potentially reduce chemical concentrations in ground water to meet the RAOs. These concentration reductions would be permanent.

Reduction of Toxicity, Mobility, or Volume through Treatment. This alternative provides for potential reduction of TMV through natural attenuation.

Short-Term Effectiveness. This alternative is considered to have moderate to high effectiveness in the short term. Because no remedial action would be taken, there would be no short-term risk to the community or workers. Time would be required to implement a deed restriction in place, although it would be relatively short.

Implementability. As no actions other than implementing a deed restriction would be taken for this alternative, this alternative is highly implementable.

Cost. The estimated cost for this alternative is $52,000 including long term O&M in the form of administrative oversight (Appendix D).

State and Community Acceptance. This alternative would likely be acceptable to the State and local community, although it does not provide monitoring to ensure that natural attenuation is sufficiently reducing chemical constituents. Final determination of community acceptance would depend on comments received during the public comment period.

8.0 COMPARATIVE ANALYSIS OF ALTERNATIVES AND RECOMMENDATIONS

In this section, the alternatives are evaluated relative to one another for each criterion. The comparative analysis identifies the relative advantages and disadvantages of each alternative.

8.1 COMPARATIVE ANALYSIS OF SOIL/FILL MATERIALS ALTERNATIVES

The following subsections evaluate the alternatives for remediation of impacted soil. Table 11 summarizes the results of the comparative analysis of soil/fill materials alternatives.

8.1.1 Overall Protection of Human Health and the Environment

Alternatives 2, 3, and 4 provide the greatest overall protection to human health and the environment. All of the alternatives except Alternative 1 (No Action) provide adequate protection of human health. Risk through direct contact with impacted soil and fill materials, and inhalation of volatile constituents and asbestos fibers are sufficiently reduced and consistent with proposed future land use.

Alternatives 2, 3, and 4 employ excavation to remove the impacted soils and fill materials from areas where proposed land use will be unrestricted. Alternative 2 disposes of the impacted soil in a landfill, minimizing the potential for future exposure to the chemical constituents. Risks do exist associated with potential future landfill leakage or failure, or from transport of the materials.

Alternatives 3 and 4 consolidate the impacted soils and fill materials on site in an area with restricted future use, as implemented through appropriate land use restrictions. Clean fill would be placed on the consolidated soils to eliminate exposure through direct contact or inhalation. The chemical constituents in soil are generally not mobile and infiltration of surface water through the consolidated soils should not cause chemical constituents to leach into ground water. Alternative 4 addresses this issue by placing a cover of vegetation such as grass and non-intrusive, drought-tolerant shrubs on top of the consolidated berm in order to reduce excessive surface water infiltration into impacted soils.

8.1.2 Compliance with ARARs

With the exception of Alternative 1 (No Action), all of the alternatives meet the ARARs for the areas of the site that are deeded for unrestricted use.

8.1.3 Long-Term Effectiveness and Permanence

Alternative 2 would provide the highest level of long-term effectiveness and permanence because the impacted soils and fill materials would be excavated and disposed of off site, thereby leaving no significant residual risks and removing the potential for exposure by future residents at the development to hazardous substances in soil.

Both Alternatives 3 and 4 would be adequate and reliable because they would result in the removal and consolidation of impacted soils and fill materials in areas on site with restricted future use. The potential for residual risks from chemical constituents leaching into the ground water is minimal for Alternatives 3 and 4 because the chemical constituents in soil are generally not mobile; however, protection of human health would be achieved by placing clean fill on top of the consolidated waste materials.

Alternative 4 addresses the concern of future mobility of contaminants into the ground water by creating sloped surfaces that promote runoff of precipitation and placing thick vegetation on the berm, reducing precipitation/irrigation water infiltration to the impacted soils and fill materials. No remedial action would be conducted under Alternative 1; therefore, Alternative 1 would provide no long-term effectiveness or permanence.

8.1.4 Reduction of Toxicity, Mobility, or Volume through Treatment

None of the alternatives reduce the TMV of contaminants through treatment. In Alternative 2, the TMV of chemicals in on-site soil would be reduced through removal. The impacted soil would be disposed of at a landfill where the mobility would be reduced. Alternatives 3 and 4 locally reduce the volume of contamination by consolidating these materials at another location on or near the site, which will limit potential exposure to future residents.

8.1.5 Short-Term Effectiveness

Because no action would be taken with Alternative 1, there would be no short-term risk to the community or workers. However, protection from site risks and the RAOs would not be achieved. Alternatives 2 through 4 pose a greater risk to the community or workers due to the potential for generation of fugitive dust emissions and potential risk associated with exposure to workers and the community. However, engineering controls such as dust suppression, air monitoring, and appropriate personal protective equipment would be implemented to mitigate these concerns. Alternatives 2 and 3 also require roadway transportation of impacted material, thus increasing the potential for community exposure to impacted materials during transport.

8.1.6 Implementability

All four alternatives are implementable since only standard construction equipment and techniques are required.

8.1.7 Cost

Appendix D contains detailed cost estimates of Alternatives 1 through 4. The total present worth of each alternative is as follows:

- Alternative 1 - $0;
- Alternative 2 - $7,601,000;
- Alternative 3 - $2,358,000; and
- Alternative 4 - $1,598,000.

8.1.8 State and Community Acceptance

Alternative 1 would not be acceptable to the State or community because it is not protective of human health or the environment under the proposed land use. The Harbor Bay community would be unlikely to accept Alternative 3 due to the perception of health risks associated with reopening a closed disposal cell in close proximity to existing, occupied housing.

Alternatives 2 and 4 would likely be acceptable to the State and local community. Alternatives 2 and 3 require roadway transportation of impacted soil and fill materials to either a landfill or the North Parcel and could raise concerns within the community. Final determination of

community acceptance would depend on comments received during the public comment period.

8.2 COMPARATIVE ANALYSIS OF GROUND WATER ALTERNATIVES

The following subsections evaluate the alternatives for remediation of impacted ground water. Table 12 summarizes the results of the comparative analysis of ground water alternatives.

8.2.1 Overall Protection of Human Health and the Environment

Alternative 2 provides the greatest potential protection to human health and the environment by reducing ground water chemical concentrations at the source area through extraction and treatment. Continued ground water monitoring would confirm remedial progress. Alternative 3 would also provide a high level of protection to human health and the environment, because concentrations of chemicals in ground water may decline as a result of natural attenuation. Continued ground water monitoring (Alternatives 2 and 3) would confirm remedial progress. Given the generally nonvolatile nature of ground water chemicals, Alternatives 1 and 4 would also provide a high level of protection to human health and the environment. However, these alternatives provide for no monitoring to confirm remedial progress or warn of unexpected developments. Alternatives 2, 3, and 4 also limit exposure by placing a deed restriction on ground water usage.

8.2.2 Compliance with ARARs

Alternative 1 does not meet ARARs identified for the site because no effort would be taken to limit exposure to chemicals in ground water. Alternatives 2, 3, and 4 comply with the site ARARs for ground water.

8.2.3 Long-Term Effectiveness and Permanence

All of the alternatives would provide permanent long-term effectiveness. Natural attenuation (Alternatives 1, 3, and 4) or extraction and treatment (Alternative 2) would reduce chemical concentrations in ground water to concentrations that meet RAOs. Alternatives 2 and 3 would employ ground water monitoring to ensure that chemical constituents are declining and not migrating. Alternatives 1 and 4 do not provide monitoring to ensure that natural attenuation is reducing chemical constituents.

8.2.4 Reduction of Toxicity, Mobility, or Volume through Treatment

All of the alternatives provide for reduction of TMV through treatment. Alternative 2 provides for reduction of TMV through extraction with treatment as well as natural attenuation. Alternatives 1, 3, and 4 provide for reduction of TMV through natural attenuation.

8.2.5 Short-Term Effectiveness

Alternatives 1 and 4 are considered to have high effectiveness in the short term. Because no remedial action would be taken, there would be no short-term risk to the community or workers and little time would be required to complete these alternatives.

Alternative 3 is considered to have moderate to high effectiveness in the short term. Potential short-term risks for this alternative include those associated with exposure to ground water during sampling events. Alternative 2 is considered to have moderate effectiveness in the short term. Potential short-term risks for this alternative include those associated with the installation of the extraction and injection trenches and the treatment system as well as exposure to ground water during sampling events.

8.2.6 Implementability

As no remedial actions would be taken for Alternatives 1 and 4, these alternatives are highly implementable. Alternative 2 is highly implementable. Extraction and treatment systems are readily available and easily designed. Permits would be required for the treatment system as well as trench installations. Alternative 3 is highly implementable. Existing wells would be utilized for the ground water monitoring program.

8.2.7 Cost

Appendix D contains detailed cost estimates of Ground Water Alternatives 1 through 3. The total present worth of each alternative is as follows:

- Alternative 1 - $0;
- Alternative 2 - $413,000;
- Alternative 3 - $104,000; and
- Alternative 4 - $52,000.

8.2.8 State and Community Acceptance

As no actions would be taken to limit exposure to chemicals in ground water within the footprint of the former evaporation pond, Alternative 1 would not be acceptable to the State or community. Alternatives 2, 3 and 4 would likely be acceptable to the State and local community because treatment and/or implementation of land use restrictions are part of the remedy. Final determination of community acceptance would depend on comments received during the public comment period.

9.0 RECOMMENDED REMEDIAL ALTERNATIVE

The purpose of the detailed and comparative analysis presented in Section 8 is to provide a basis for determining the most appropriate responses for protecting human health and the environment and managing long-term risk. This section summarizes the results of the detailed and comparative analysis in Section 8, and recommends a preferred alternative based on the comparative analysis.

9.1 RECOMMENDED REMEDIAL ALTERNATIVE FOR SOIL/FILL MATERIALS

Based on comparisons of the rankings relative to the evaluation criteria, Alternative 4 (on-site consolidation in eastern boundary berm) emerged as the recommended remedial alternative for the impacted soil and fill materials at the site. Under this alternative, fill materials within the areas of concern (former evaporation pond and other locations identified during the demolition phase of construction) would be excavated and consolidated on site in the construction of an engineered berm along the eastern boundary of the site. Appropriate land use restrictions limiting access to and the use of the bermed area would be negotiated with DTSC under a Land Use Covenant.

Selection of this alternative is based primarily on its protectiveness of human health and the environment, demonstrated effectiveness, consistency with future land use, cost-effectiveness, and ease and speed of implementation, as summarized below and in Table 11.

A comparison of the alternatives evaluation indicates the following:

- Alternatives 2, 3, and 4 satisfy the threshold criteria of overall protection of human health and the environment and compliance with ARARs.
- Alternatives 2, 3, and 4 provide a high level of long-term effectiveness and permanence. Alternative 2 ranks slightly higher than Alternatives 3 and 4 in terms of long-term effectiveness and permanence because all impacted soils and fill materials would be permanently removed from the site and the potential for exposure to future residents at the site would be reduced.
- None of the alternatives reduce TMV through treatment.

- Alternatives 2, 3, and 4 are similarly ranked in terms of implementability.
- Alternatives 2 and 3 require roadway transportation of contaminated soils and fill materials, increasing the risk of accidental exposure to the public and rank lower than Alternatives 1 and 4 in terms of short-term effectiveness.
- Alternative 4 ranked higher than Alternatives 2 and 3 in terms of State and community acceptance. Roadway transportation of fill materials would be required for Alternatives 2 and 3, resulting in increased road noise and contributing to traffic congestion. These issues would likely meet with significant community resistance. Additionally, the Harbor Bay and adjacent communities would be unlikely to accept Alternative 3 due to the perception of health risks associated with reopening a closed disposal cell in close proximity to existing, occupied housing.
- The cost of implementing Alternative 4 is much lower than the cost of implementing Alternatives 2 or 3.

Alternative 4 is the most suitable remediation remedy for impacted soil and fill materials at the site. While Alternative 2 was ranked higher in terms of long-term effectiveness, it was significantly lower in cost effectiveness and also ranked lower in terms of community acceptance and short-term effectiveness.

A detailed plan for implementing this alternative will be outlined in the RDIP and will include a comprehensive confirmation sampling program, and a strategy for air monitoring and dust suppression during the construction phase. In addition, the RDIP will contain a complete plan detailing the design and construction requirements of the berm as well as future land use restrictions and maintenance requirements. These restrictions will include:

- Specifically prohibited uses (e.g., residences, hospitals, day-care centers, etc.) and activities (e.g., raising food, ground water use, etc.);
- Implementation of a Soil Management Plan and O&M Plan addressing activities that may disturb the berm;
- Notification to and approval from DTSC for any activities that may impact the integrity of the berm; and
- Provision of access to DTSC for evaluation of the berm.

The O&M Plan will be implemented, and updated as necessary, by PRPLLC or other parties that subsequently assume responsibility for

maintenance of the berm, and will include a detailed description of the berm and related features (e.g., limits and grading profile, surface drainage control, survey monuments, and permanent irrigation system). Additionally, the O&M Plan will specify monitoring and maintenance procedures and schedules, and will specify the necessary training and qualifications for monitoring personnel. Monitoring and maintenance procedures (and repairs, as necessary) will address the following:

- Vegetation;
- Erosion control;
- Animal intrusion;
- Drainage system;
- Settlement;
- Permanent irrigation system;
- Fencing; and
- Slope failure.

9.2 RECOMMENDED REMEDIAL ALTERNATIVE FOR GROUND WATER

Based on comparisons of the rankings relative to the evaluation criteria, Alternative 4 (Natural Attenuation and Deed Restriction) is the recommended remedial alternative for impacted ground water at the site. Alternative 4 consists of natural subsurface concentration reduction processes and placing a deed restriction prohibiting the use of ground water for purposes other than site remediation or construction dewatering. Selection of this Alternative is based primarily on demonstrated effectiveness at numerous sites with comparable chemical constituents and hydrogeologic conditions (and based on overall reductions in organic chemical concentrations over time at this site), consistency with future land use, cost-effectiveness, and the ease and speed of implementation, as summarized below and in Table 12.

A comparison of the alternatives evaluation indicates the following:

- Alternatives 2, 3, and 4 satisfy the threshold criteria of overall protection of human health and the environment and compliance with ARARs.
- Alternatives 2, 3, and 4 are ranked similarly in terms of long-term effectiveness and permanence.

- Because no monitoring would be conducted, Alternative 4 ranks slightly lower than Alternatives 2 and 3 in terms State and community acceptance.
- Because physical treatment is used, Alternative 2 ranks slightly higher than Alternatives 3 and 4 in terms reduction of TMV through treatment.
- Because no additional equipment or conveyance piping is needed, Alternatives 3 and 4 rank higher than Alternative 2 in terms of short-term effectiveness and implementability.
- The cost of implementing Alternative 4 is significantly less than cost of implementing Alternatives 2 and 3.

Alternative 4 is the most suitable remediation remedy for impacted ground water at the site. Alternative 4 is the most cost-effective alternative that also meets all remediation goals. Given the localized nature of impacts to ground water, and the effectiveness of the treatability study in removing a significant volume of free product, this alternative is reasonable and appropriate.

As described in Section 6.3.3 of this document, a post-removal action ground water investigation component will be implemented to determine the appropriateness of this alternative. This investigation will include ground water grab sampling within the footprint of the former evaporation pond (following pond backfilling and compaction) to evaluate concentrations of VOCs related to TPH in ground water. If the investigation demonstrates that VOCs concentrations in ground water do not exceed the applicable remedial objectives, as defined in Section 5 of this document, Alternative 4 will be implemented in accordance with the program defined above. Alternatively, if VOCs concentrations are found to exceed one or more of the applicable remedial objectives, then Alternative 3 – *Monitored Natural Attenuation*, will be implemented in accordance with the program defined above.

9.3 DISCUSSION OF RECOMMENDED ALTERNATIVES

As indicated above, the recommended remedies for the site include (1) consolidating asbestos- and petroleum hydrocarbon-impacted soil/fill materials into an eastern boundary berm, and (2) implementing a land use restriction for ground water, prohibiting its use for anything other than remediation or construction dewatering activities, and allowing the residual chemicals to naturally attenuate. Each of the RAOs established

for the site are effectively met by implementing these remedies. Additionally, by implementing the soil/fill materials remedial alternative, the primary source of TPH and low concentrations of VOCs is removed, providing further assurance against potential exposure to chemicals in ground within the former evaporation pond and against further degradation of ground water from those chemicals. As described above, the necessity for ground water monitoring to demonstrate that natural attenuation is effectively reducing chemical constituents in ground water will be evaluated pursuant to implementation of a post-removal action ground water investigation.

10.0 IMPLEMENTATION SCHEDULE

A detailed schedule for implementation of the proposed remedy will be coordinated between PRPLLC and DTSC. A tentative schedule for implementation of the remedy following formal DTSC approval of this RAP, based on the schedule presented in the existing VCA, is summarized in the following table.

Activity	Tentative Start Date	Tentative Completion Date
Remedial Design and Implementation Plan Preparation	12/27/05	7/14/06
Permitting	6/01/06	7/14/06
Remedy Implementation	7/17/06	8/25/06
Implementation Report Preparation	8/28/06	9/8/06
Deed Restriction Development	8/1/06	9/15/06
Operation & Maintenance Agreement Development	8/01/06	9/15/06
DTSC Certification	9/15/06	10/01/06

11.0 PUBLIC INVOLVEMENT

The California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) held a 30-day comment period from February 2, 2006 to March 3, 2006 for the Draft RAP and for the proposed California Environmental Quality Act (CEQA) Negative Declaration and Initial Study for the Harbor Park Development. A public notice was placed in the Contra Costa Times and the Lel Mensojero on February 2, 2006. The notice announced the comment period, the date and time of a public meeting and the location of the information repositories. A fact sheet that discussed the Draft RAP, announced the public meeting and comment period was mailed on January 31, 2006 to the Site mailing list as well as the DTSC mandatory mailing list. The Site mailing list consists of approximately 1,100 addresses that include residents, key contacts, and businesses within a one half-mile radius of the site.

On February 16, 2006, DTSC held a public meeting on the Harbor Park Development Draft RAW. The purpose of the meeting was to provide information regarding the Draft RAP and proposed Negative Declaration and Initial and to provide the public with an opportunity to comment on these documents. DTSC addressed all the comments in Appendix E – Responsiveness Summary.

12.0 NON-BINDING PRELIMINARY ALLOCATION OF RESPONSIBILITY

DTSC has prepared a Nonbinding Allocation of Responsibilities for the site (NBAR). PRPLLC and Johns Manville are assigned to 100% of the liability (Appendix F).

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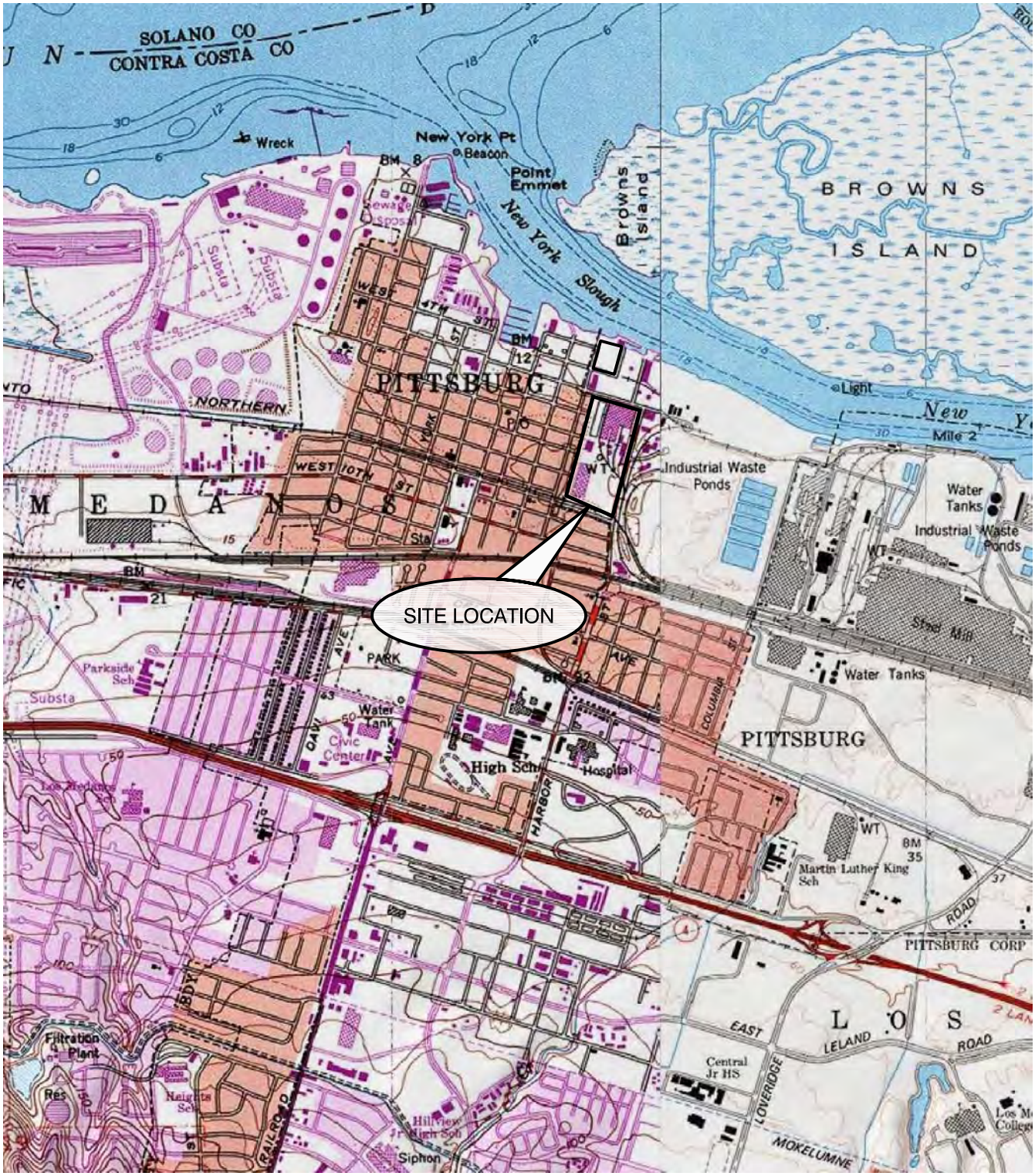
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Figures

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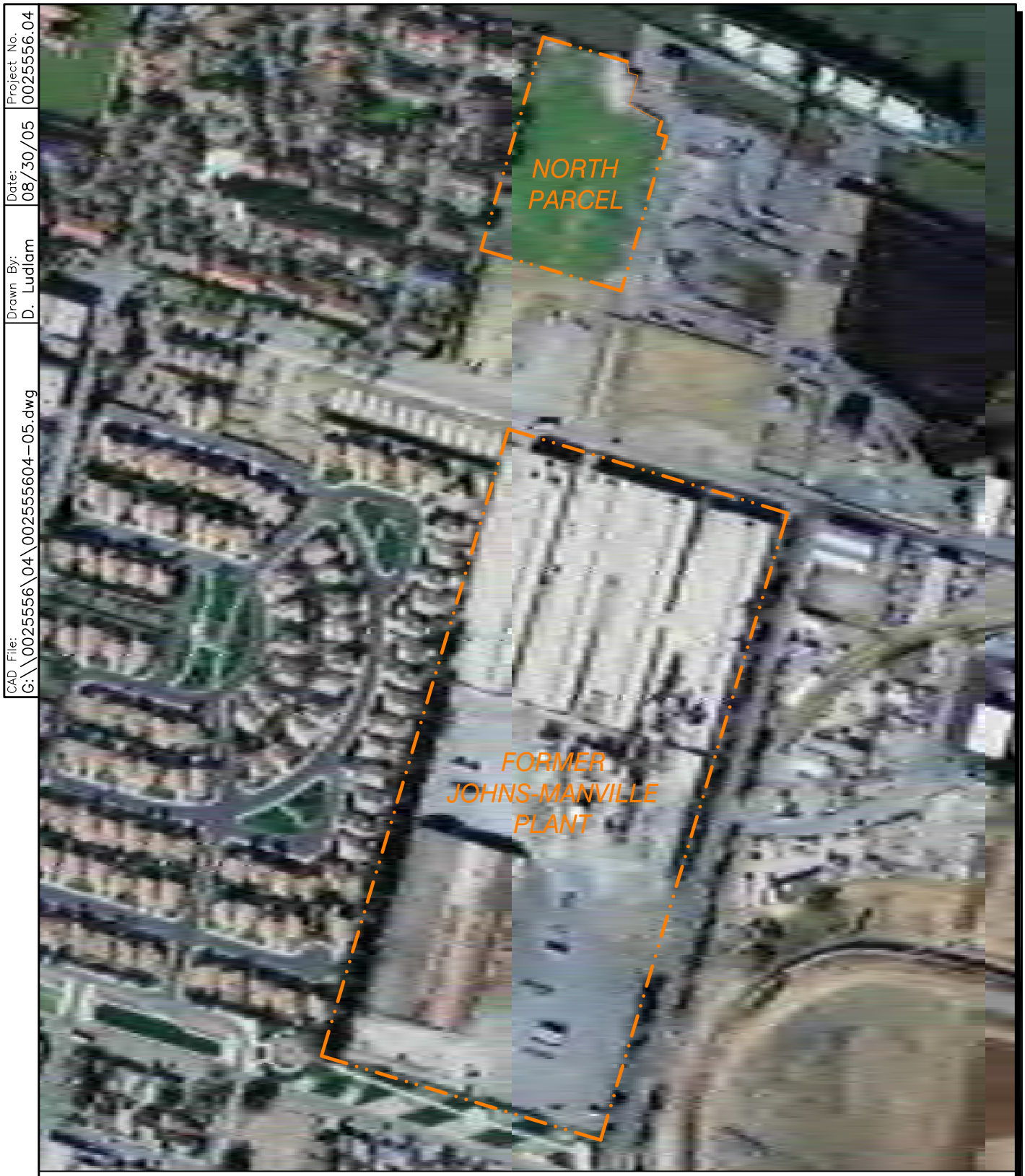
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1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 .5 0 1 KILOMETER

N

References:
U.S.G.S. 7.5 Minute Series (Topographic) Quadrangle,
Honker Bay, California
Dated: 1980

Figure 1
Site Location Map
Pittsburg River Park, LLC
(Former Johns Manville Plant)
420 East 3rd Street
Pittsburg, California

ERM 06/05



Project No. 0025556.04
Date: 08/30/05
Drawn By: D. Ludlam
CAD File: G:\\0025556\04\002555604-05.dwg

N

0 300
FEET

Figure 2
Area Map
Pittsburg River Park, LLC
(Former Johns Manville Plant)
420 East 3rd Street
Pittsburg, California

ERM 06/05

Project No. 0025556.04
Date: 06/12/06
Drawn By: D. Ludlam
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RDA-MW-2
MW-03
MW-11
MW-12
MW-13
MW-14
MW-15
MW-10
MW-5
MW-6
MW-7
MW-8
MW-9
MW-16
MW-4
MW-18
MW-17
MW-19
MW-20
MW-21
PZ-1
TP-5

WAREHOUSE
BUILDING #1
BUILDING #2
BUILDING #3
BUILDING #4
100,000-GAL. ELEVATED STEEL WATER TANK

ERM-TP-1
ERM-TP-2
ERM-TP-3
ERM-TP-4
ERM-TP-5
ERM-TP-6
ERM-TP-7
ERM-TP-8
ERM-TP-9
ERM-B-1
ERM-B-2
ERM-B-3
ERM-B-4
ERM-B-5
ERM-B-6

B-1 B-2 B-3 B-4 B-5 B-6 B-7 B-8 B-9 B-10 B-11 B-12 B-13 B-14 B-15 B-16 B-17 B-18 B-19 B-20 B-24 B-25 B-26 B-30 B-31 B-32 B-33 B-34 B-35

A A' B B' C C'

EP

STREET
3RD
EAST
HARBOR
STREET

LEGEND

- Monitoring Well (HLA and ROUX)
- Monitoring Well, Abandoned
- Soil Boring (ROUX)
- Soil Boring (ERM)
- Test Pit (ERM), Shallow, 2'-3' Deep (5'x5')
- Test Pit (ERM), Deep, 8'-10' Deep (5'x15')
- A—A' Cross Section Location
- Approximate Areal Extent of Petroleum Hydrocarbon Impacts (Harding ESE, 2002)
- Former Evaporation Pond
- Approximate Fill Material Location, 8.0-10.0' Deep
- Surficial ACM and/or TPH Impacts from Former Laydown Area and Manufacturing Process Remaining to be Excavated
- Areas of ACM Impacts Already Excavated

0 100
Approx. Scale (feet)

Figure 3
Site Detail Map
Pittsburg River Park, LLC
(Former Johns Manville Plant)
420 East 3rd Street
Pittsburg, California

ERM 06/06

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A

A'

ERM-TP-1
B-8
SVE-17
SVE-18
ERM-B-5
SVE-19
B-1
3" ASPHALT
SVE-20
B-20
MW-2
SVE-21
ERM-B-6
ERM-TP-5
B-9
SVE-22
ERM-B-3
MW-3
SVE-24
END OF ASPHALT
MW-6
B-14
B-19

FILL
CLAY
SAND
?

GROUND SURFACE ELEVATION (FEET ABOVE OR BELOW MEAN SEA LEVEL)

15
10
5
0
−5
−10
−15

LEGEND

- Fill
- Clay
- Sand
- Clean to Low-Imapcted Fill, No Hydrocarbon Statining, Odor, Saturation
- Ground Water Level
- Oil/Tar Encountered

(Vertical Exaggeration = 10X)

VERTICAL SCALE IN FEET
1" = 5'
0
5

HORIZONTAL SCALE IN FEET
1" = 50'
0
50

Figure 4
Cross Section A-A'
Pittsburg River Park, LLC
(Former Johns Manville Plant)
Pittsburg, California

ERM 08/05

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Date: 08/30/05
Project No. 0025556.04

B

B'

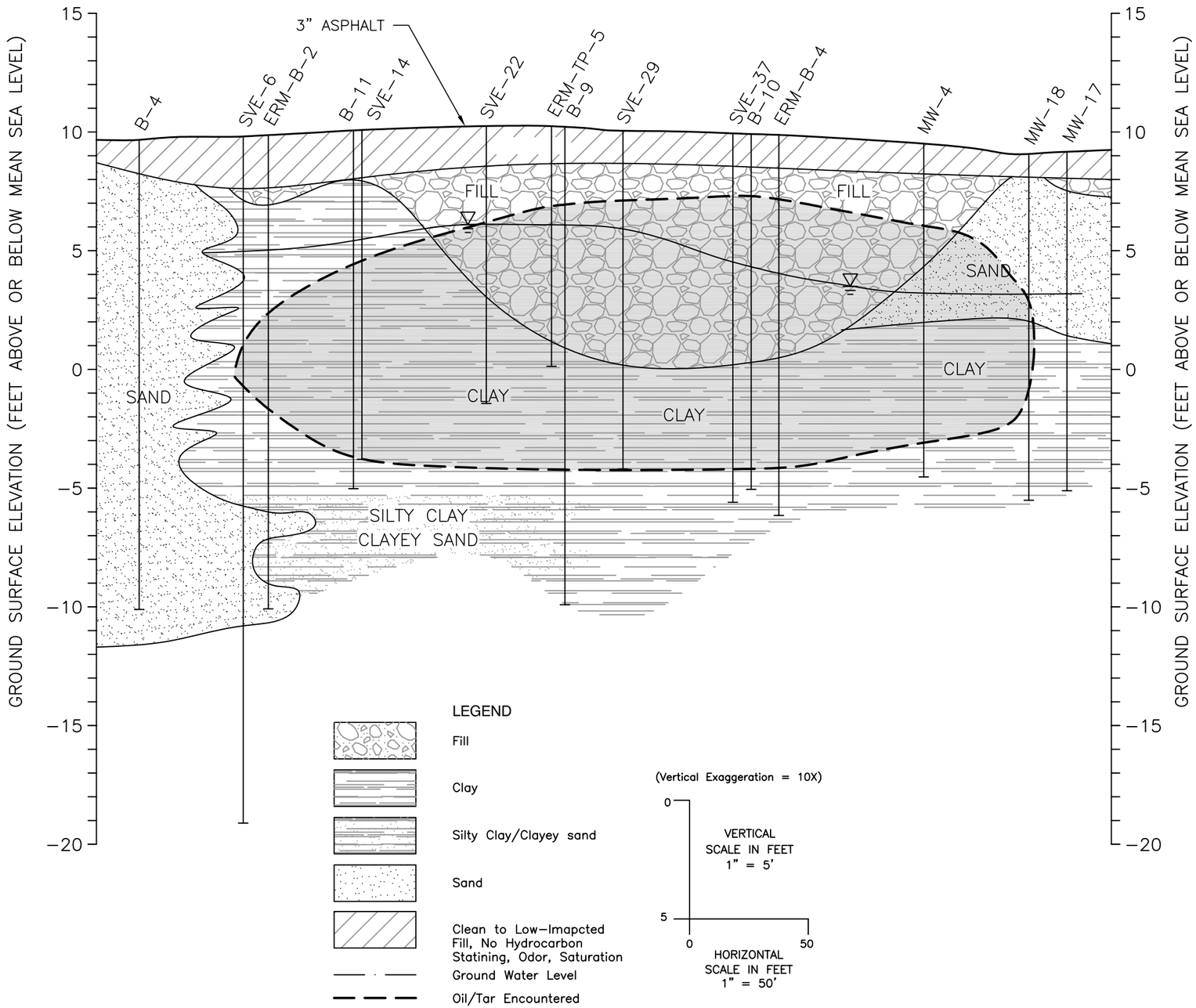


Figure 5
Cross Section B-B'
Pittsburg River Park, LLC
(Former Johns Manville Plant)
Pittsburg, California

ERM 08/05

CAD File: G:_0025556\04\002555604-12.dwg
Drawn By: D. Ludlam
Date: 08/30/05
Project No. 0025556.04

C

C'

3" ASPHALT

TP-5
B-5
SVE-1
B-16
SVE-10
ERM-B-5
SVE-19
B-1
SVE-20
ERM-B-6
SVE-29
B-9
SVE-30
ERM-B-3
B-10
SVE-39
B-6
MW-7
B-25/B-26
MW-20

FILL
CLAY
ASPHALT/ BASEROCK

GROUND SURFACE ELEVATION (FEET ABOVE OR BELOW MEAN SEA LEVEL)

15
10
5
0
−5
−10
−15
−20

LEGEND

Fill

Asphalt/Baserock

Clay

Clean to Low-Imapcted Fill, No Hydrocarbon Statining, Odor, Saturation

Ground Water Level

Oil/Tar Encountered

(Vertical Exaggeration = 10X)

VERTICAL SCALE IN FEET
1" = 5'

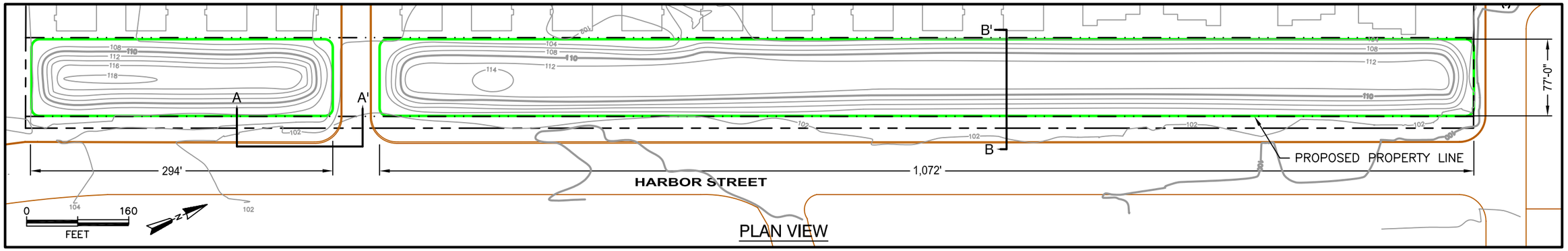
HORIZONTAL SCALE IN FEET
1" = 50'

0
5
0
50

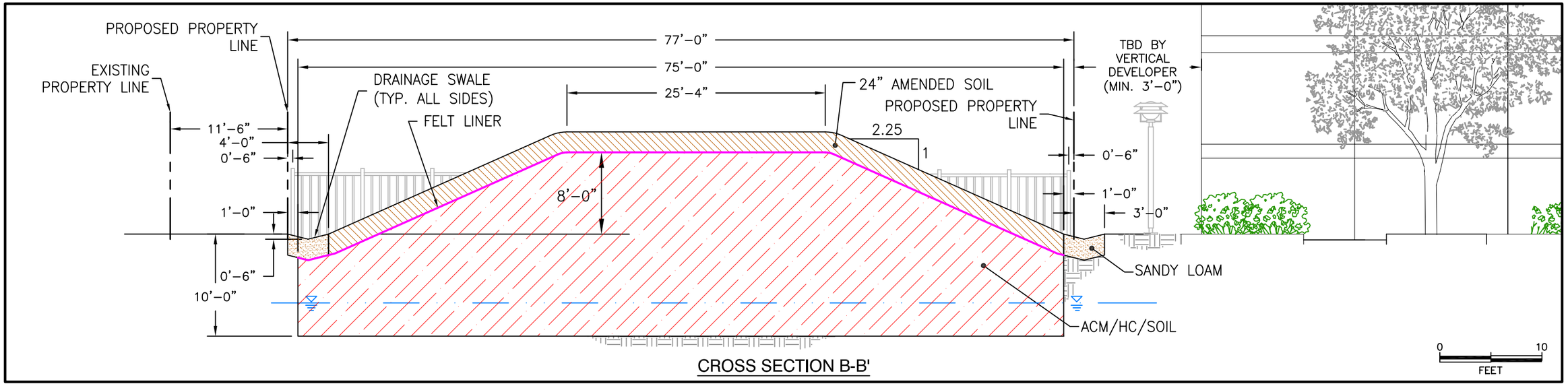
Figure 6
Cross Section C-C'
Pittsburg River Park, LLC
(Former Johns Manville Plant)
Pittsburg, California

ERM 08/05

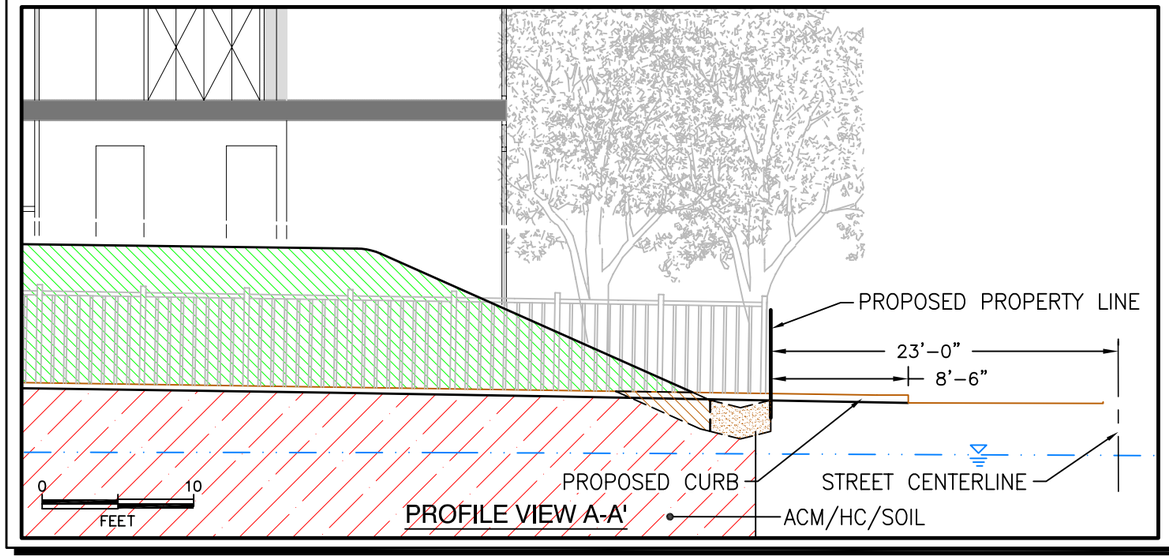
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Project No. 0025556.04



PLAN VIEW



CROSS SECTION B-B'



PROFILE VIEW A-A'

LEGEND

- Amended Soil
- ACM and Hydrocarbon Contaminated Fill
- Native Soil
- Groundwater Elevation, March 16, 2006

Figure 7
Conceptual Eastern Boundary Berm Sections
Pittsburg River Park, LLC
(Former Johns Manville Plant)
420 East 3rd Street
Pittsburg, California

ERM 06/06

Tables

Table 1
TPH, PCBs, BTEX and Asbestos Detected in Soil Samples
Pittsburg River Park LLC
Former Johns Manville Plant
Pittsburg, California

Sample Location	Date	Sample Depth (ft bgs)	Total Petroleum Hydrocarbons				Benzene (mg/kg)	Ethyl-benzene (mg/kg)	Toluene (mg/kg)	Xylenes (mg/kg)	Asbestos (Area percent)	PCBs (mg/kg)
			Diesel (mg/kg)	Motor Oil (mg/kg)	Gasoline (mg/kg)	Oil and Grease (mg/kg)						
ERM Soil Borings												
ERM-B-1	7/14/2004	10'	<10,000	91,000	29	NA	<0.125	<0.125	<0.125	<0.25	NA	NA
ERM-B-2	7/14/2004	12'	<1,250	15,000	45	NA	<0.125	<0.125	<0.125	<0.25	NA	NA
ERM-B-3	7/14/2004	6'	<10,000	110,000	350	NA	<2.5	<2.5	<2.5	<5	NA	NA
ERM-B-4	7/14/2004	6'	<10,000	100,000	55	NA	<0.125	<0.125	<0.125	<0.25	NA	NA
ERM-B-5	7/14/2004	9'	<10,000	150,000	59	NA	<0.25	<0.25	<0.25	<0.5	NA	NA
ERM-B-6	7/14/2004	6'	<25,000	220,000	170	NA	<0.25	0.61	0.81	1.9	NA	NA
36-B1-1**	7/14/2004	4'	NA	NA	NA	NA	NA	NA	NA	NA	3%	NA
36-B1-2	7/14/2004	4'	NA	NA	NA	NA	NA	NA	NA	NA	3%	NA
36-B1-3	7/14/2004	8'-12'	NA	NA	NA	NA	NA	NA	NA	NA	30%	NA
36-B1-4	7/14/2004	16'-20'	NA	NA	NA	NA	NA	NA	NA	NA	3%	NA
36-B2-1	7/14/2004	1'-3'	NA	NA	NA	NA	NA	NA	NA	NA	10%	NA
36-B3-1	7/14/2004	1'-3'	NA	NA	NA	NA	NA	NA	NA	NA	2%	NA
36-B3-2	7/14/2004	6'-7'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
36-B4-1	7/14/2004	4'-8'	NA	NA	NA	NA	NA	NA	NA	NA	3%	NA
36-B4-2	7/14/2004	4'-8'	NA	NA	NA	NA	NA	NA	NA	NA	10%	NA
36-B5-1	7/14/2004	5'-8'	NA	NA	NA	NA	NA	NA	NA	NA	3%	NA
SVE-1	5/23/2005	10'	<12	96	NA	NA	NA	NA	NA	NA	NA	NA
SVE-40	5/26/2005	5'	3,700	<1,000	NA	NA	NA	NA	NA	NA	NA	NA
ERM Test Pit Fill Samples												
36-TP1-1	7/14/2004	1'-3'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
36-TP1-1	7/14/2004	1'-3'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
36-TP1-1	7/14/2004	1'-3'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
36-TP1-1	7/14/2004	1'-3'	NA	NA	NA	NA	NA	NA	NA	NA	65%	NA
36-TP1-1	7/14/2004	1'-3'	NA	NA	NA	NA	NA	NA	NA	NA	80%	NA
36-TP1-2	7/14/2004	1'-3'	NA	NA	NA	NA	NA	NA	NA	NA	15%	NA
36-TP2-1	7/14/2004	1'-2'	NA	NA	NA	NA	NA	NA	NA	NA	5%	NA
36-TP2-2	7/14/2004	1'-2'	NA	NA	NA	NA	NA	NA	NA	NA	15%	NA

Table 1
TPH, PCBs, BTEX and Asbestos Detected in Soil Samples
Pittsburg River Park LLC
Former Johns Manville Plant
Pittsburg, California

Sample Location	Date	Sample Depth (ft bgs)	Total Petroleum Hydrocarbons				Benzene (mg/kg)	Ethyl-benzene (mg/kg)	Toluene (mg/kg)	Xylenes (mg/kg)	Asbestos (Area percent)	PCBs (mg/kg)
			Diesel (mg/kg)	Motor Oil (mg/kg)	Gasoline (mg/kg)	Oil and Grease (mg/kg)						
36-TP3-1	7/14/2004	1'-8'	NA	NA	NA	NA	NA	NA	NA	NA	15%	NA
36-TP3-2	7/14/2004	5'-8'	NA	NA	NA	NA	NA	NA	NA	NA	15%	NA
36-TP3-3	7/14/2004	1'-8'	NA	NA	NA	NA	NA	NA	NA	NA	30%	NA
36-TP3-3	7/14/2004	1'-8'	NA	NA	NA	NA	NA	NA	NA	NA	40%	NA
36-TP3-4	7/14/2004	1'-8'	NA	NA	NA	NA	NA	NA	NA	NA	15%	NA
36-TP4-1	7/14/2004	3'-6'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
36-TP4-2	7/14/2004	3'-6'	NA	NA	NA	NA	NA	NA	NA	NA	25%	NA
36-TP5-1	7/14/2004	4'-8'	NA	NA	NA	NA	NA	NA	NA	NA	40%	NA
36-TP5-2	7/14/2004	4'-8'	NA	NA	NA	NA	NA	NA	NA	NA	10%	NA
36-TP6-1	7/14/2004	1'-2'	NA	NA	NA	NA	NA	NA	NA	NA	20%	NA
36-TP6-2	7/14/2004	1'-2'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
36-TP6-3	7/14/2004	1'-2'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
36-TP7-3	7/14/2004	1'-2'	NA	NA	NA	NA	NA	NA	NA	NA	2%	NA
Historical (HLA and ROUX)												
MW-1	7/14/1986	6' 5"	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1
MW-1	7/14/1986	8'5"	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.2
MW-1	7/15/1986	0.5'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
MW-1	7/15/1986	2.0'	NA	NA	NA	NA	NA	NA	NA	NA	5%	NA
MW-1	7/15/1986	4.5'	NA	NA	NA	NA	NA	NA	NA	NA	29%	NA
MW-2	7/14/1986	5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	16.6*
MW-2	7/14/1986	6'5"	NA	NA	NA	NA	NA	NA	NA	NA	NA	1*
MW-2	7/15/1986	0.7'	NA	NA	NA	NA	NA	NA	NA	NA	3%	NA
MW-2	7/15/1986	2.5'	NA	NA	NA	NA	NA	NA	NA	NA	2%	NA
MW-2	7/15/1986	4.5'	NA	NA	NA	NA	NA	NA	NA	NA	5-10%	NA

Table 1
TPH, PCBs, BTEX and Asbestos Detected in Soil Samples
Pittsburg River Park LLC
Former Johns Manville Plant
Pittsburg, California

Sample Location	Date	Sample Depth (ft bgs)	Total Petroleum Hydrocarbons				Benzene (mg/kg)	Ethyl-benzene (mg/kg)	Toluene (mg/kg)	Xylenes (mg/kg)	Asbestos (Area percent)	PCBs (mg/kg)
			Diesel (mg/kg)	Motor Oil (mg/kg)	Gasoline (mg/kg)	Oil and Grease (mg/kg)						
MW-3	7/14/1986	3'5"	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1
MW-3	7/14/1986	5'3"	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.3
MW-3	7/15/1986	2'	NA	NA	NA	NA	NA	NA	NA	NA	2%	NA
MW-4	8/25/1986	3'	250	NA	2.3	NA	<0.005	0.008	0.094	0.021	NA	<1.0
MW-4	8/25/1986	7.5'	77	NA	1.7	NA	<0.005	0.008	0.097	0.019	NA	<2.0
MW-5	8/25/1986	6.5'	97	NA	270	NA	<0.005	<0.005	<0.005	0.49	NA	<2
MW-5	8/25/1986	8.5'	130	NA	3.2	NA	<0.005	<0.005	<0.005	0.015	NA	<2
MW-6	8/25/1986	6'	0.13	NA	6	NA	<0.005	<0.005	0.063	0.012	NA	<0.1
MW-6	8/25/1986	8'	0.1	NA	11	NA	<0.001	0.009	<0.001	0.045	NA	<0.1
MW-7	8/25/1986	6.5'	1.4	NA	5.9	NA	<0.01	<0.01	<0.01	0.05	NA	<0.1
MW-7	8/25/1986	16.5'	13	NA	5	NA	<0.005	<0.005	0.12	0.037	NA	<2.0
MW-8	8/25/1986	9'	1	NA	6.9	NA	<0.001	<0.001	<0.001	0.006	NA	<0.1
MW-8	8/25/1986	12.5'	3.4	NA	5.4	NA	<0.01	0.055	<0.01	0.07	NA	<1.0
MW-9	8/25/1986	7'	0.84	NA	1.9	NA	<0.005	<0.005	0.071	0.01	NA	<0.5
MW-9	8/25/1986	18.5'	<0.05	NA	4.6	NA	<0.005	<0.005	0.042	<0.005	NA	<0.5
PZ-1	7/15/1986	0.4'	NA	NA	NA	NA	NA	NA	NA	NA	1%	NA
PZ-1	7/15/1986	2.5'	NA	NA	NA	NA	NA	NA	NA	NA	2%	NA
PZ-1	7/15/1986	5'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
TB-1	7/15/1986	0.5'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
TB-1	7/15/1986	2.5'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
TB-1	7/15/1986	4.5'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
TB-2	7/15/1986	0.5'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
TB-2	7/15/1986	2.5'	NA	NA	NA	NA	NA	NA	NA	NA	2%	NA
TB-2	7/15/1986	4.7'	NA	NA	NA	NA	NA	NA	NA	NA	20-30%	NA

Table 1
TPH, PCBs, BTEX and Asbestos Detected in Soil Samples
Pittsburg River Park LLC
Former Johns Manville Plant
Pittsburg, California

Sample Location	Date	Sample Depth (ft bgs)	Total Petroleum Hydrocarbons				Benzene (mg/kg)	Ethyl-benzene (mg/kg)	Toluene (mg/kg)	Xylenes (mg/kg)	Asbestos (Area percent)	PCBs (mg/kg)
			Diesel (mg/kg)	Motor Oil (mg/kg)	Gasoline (mg/kg)	Oil and Grease (mg/kg)						
TB-3	7/15/1986	1.0'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
TB-3	7/15/1986	2.5'	NA	NA	NA	NA	NA	NA	NA	NA	32%	NA
TB-4	7/15/1986	0.7'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
TB-5	7/15/1986	0.5'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
TP-1	7/18/1986	0.0'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
TP-1	7/18/1986	2.0'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
TP-1	7/18/1986	4.5'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
TP-2	7/18/1986	0.7'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
TP-2	7/18/1986	2.5'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
TP-2	7/18/1986	4.5'	NA	NA	NA	NA	NA	NA	NA	NA	3-5%	NA
TP-3	7/18/1986	1.0'	NA	NA	NA	NA	NA	NA	NA	NA	2%	NA
TP-3	7/18/1986	2.5'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
TP-3	7/18/1986	4.0'	NA	NA	NA	NA	NA	NA	NA	NA	1-2%	NA
TP-4	7/18/1986	1.0'	NA	NA	NA	NA	NA	NA	NA	NA	6%	NA
TP-4	7/18/1986	3.0'	NA	NA	NA	NA	NA	NA	NA	NA	10-20%	NA
TP-4	7/18/1986	5.5'	NA	NA	NA	NA	NA	NA	NA	NA	3-5%	NA
TP-5	7/18/1986	0.3'	NA	NA	NA	NA	NA	NA	NA	NA	1%	NA
TP-5	7/18/1986	2.0'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
TP-6	7/18/1986	0.5'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
TP-6	7/18/1986	2.5'	NA	NA	NA	NA	NA	NA	NA	NA	7%	NA
TP-6	7/18/1986	5.5'	NA	NA	NA	NA	NA	NA	NA	NA	2-3%	NA
TP-7	7/18/1986	1.0'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
TP-7	7/18/1986	3.0'	NA	NA	NA	NA	NA	NA	NA	NA	10-20%	NA
TP-7	7/18/1986	6.0'	NA	NA	NA	NA	NA	NA	NA	NA	1-2%	NA
TP-8	7/18/1986	0.5'	NA	NA	NA	NA	NA	NA	NA	NA	6%	NA
TP-8	7/18/1986	2.5'	NA	NA	NA	NA	NA	NA	NA	NA	20-30%	NA
TP-8	7/18/1986	5.0'	NA	NA	NA	NA	NA	NA	NA	NA	10%	NA

Table 1
TPH, PCBs, BTEX and Asbestos Detected in Soil Samples
Pittsburg River Park LLC
Former Johns Manville Plant
Pittsburg, California

Sample Location	Date	Sample Depth (ft bgs)	Total Petroleum Hydrocarbons				Benzene (mg/kg)	Ethyl-benzene (mg/kg)	Toluene (mg/kg)	Xylenes (mg/kg)	Asbestos (Area percent)	PCBs (mg/kg)
			Diesel (mg/kg)	Motor Oil (mg/kg)	Gasoline (mg/kg)	Oil and Grease (mg/kg)						
TP-9	7/18/1986	1.0'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
TP-9	7/18/1986	3.0'	NA	NA	NA	NA	NA	NA	NA	NA	2%	NA
TP-9	7/18/1986	5.0'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
TP-10	7/18/1986	0.5'	NA	NA	NA	NA	NA	NA	NA	NA	4%	NA
TP-10	7/18/1986	2.0'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
TP-10	7/18/1986	6.5'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
TP-11	7/18/1986	0.7'	NA	NA	NA	NA	NA	NA	NA	NA	6%	NA
TP-11	7/18/1986	2.5'	NA	NA	NA	NA	NA	NA	NA	NA	3-5%	NA
TP-12	7/18/1986	0.5'	NA	NA	NA	NA	NA	NA	NA	NA	8%	NA
TP-12	7/18/1986	3.0'	NA	NA	NA	NA	NA	NA	NA	NA	1%	NA
TP-12	7/18/1986	5.0'	NA	NA	NA	NA	NA	NA	NA	NA	10-20%	NA
TP-13	7/18/1986	0.5'	NA	NA	NA	NA	NA	NA	NA	NA	2%	NA
TP-13	7/18/1986	3.0'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
TP-13	7/18/1986	4.5'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
TP-14	7/18/1986	0.3'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
TP-14	7/18/1986	2.0'	NA	NA	NA	NA	NA	NA	NA	NA	<1%	NA
Soil Borings (ROUX)												
B-01	6/4/1991	7.1'	NA	NA	NA	93,000	<0.5	<0.1	<0.1	<0.1	NA	<40
B-02	6/4/1991	10.5'	NA	NA	NA	750	<0.1	<0.1	<0.1	<0.1	NA	<2
B-03	6/4/1991	6'	NA	NA	NA	830	<0.1	<0.1	<0.1	<0.1	NA	<20
B-04	6/4/1991	8.5'	NA	NA	NA	<30	<0.1	<0.1	<0.1	<0.1	NA	<0.2
B-05	6/4/1991	9.5'	NA	NA	NA	<30	<0.1	<0.1	<0.1	<0.1	NA	<0.2
B-06	6/4/1991	7.5'	NA	NA	NA	2,100	<0.1	<0.1	<0.1	<0.1	NA	<0.2
B-07	6/4/1991	4'	NA	NA	NA	7,600	<0.1	<0.1	<0.1	<0.1	NA	NA
B-08	6/5/1991	8'	NA	NA	NA	<30	<0.1	<0.1	<0.1	<0.1	NA	NA
B-09	6/5/1991	9.5'	NA	NA	NA	42,000	<0.1	0.15	<0.1	0.18	NA	NA
B-10	6/5/1991	7.5'	NA	NA	NA	50,000	<0.1	<0.1	<0.1	0.15	NA	NA
B-11	6/5/1991	7.75'	NA	NA	NA	2,500	<0.1	<0.1	<0.1	<0.1	NA	NA
B-12	6/5/1991	4.5'	NA	NA	NA	880	<0.1	<0.1	<0.1	<0.1	NA	NA
B-13	6/5/1991	5.5'	NA	NA	NA	460	<0.1	<0.1	<0.1	<0.1	NA	NA

Table 1
TPH, PCBs, BTEX and Asbestos Detected in Soil Samples
Pittsburg River Park LLC
Former Johns Manville Plant
Pittsburg, California

Sample Location	Date	Sample Depth (ft bgs)	Total Petroleum Hydrocarbons				Benzene (mg/kg)	Ethyl-benzene (mg/kg)	Toluene (mg/kg)	Xylenes (mg/kg)	Asbestos (Area percent)	PCBs (mg/kg)
			Diesel (mg/kg)	Motor Oil (mg/kg)	Gasoline (mg/kg)	Oil and Grease (mg/kg)						
B-14	6/6/1991	7.75'	NA	NA	NA	<30	<0.1	<0.1	<0.1	<0.1	NA	NA
B-15	6/6/1991	7.5'	NA	NA	NA	<30	<0.1	<0.1	<0.1	<0.1	NA	NA
B-16	6/6/1991	13.5'	NA	NA	NA	550	<0.1	<0.1	<0.1	<0.1	NA	NA
B-17	6/6/1991	10.75'	NA	NA	NA	3,300	<0.1	<0.1	<0.1	<0.1	NA	NA
B-18	6/6/1991	5.75'	NA	NA	NA	400	<0.1	<0.1	<0.1	<0.1	NA	NA
B-19	6/6/1991	7.5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B-20	6/6/1991	7'	NA	NA	NA	29,000	<0.1	0.15	0.11	1.2	NA	5.3 *
B-21	10/29/1991	8.5'	NA	6.1	NA	NA	<0.1	<0.1	<0.1	<0.1	NA	NA
B-21	10/29/1991	11.25'	NA	6.6	NA	NA	<0.1	<0.1	<0.1	<0.1	NA	NA
B-22	10/29/1991	7.5'	NA	5.5	NA	NA	<0.1	<0.1	<0.1	<0.1	NA	NA
B-23	10/29/1991	11'	NA	6.6	NA	NA	<0.1	<0.1	<0.1	<0.1	NA	NA
B-24	10/29/1991	6.6'	NA	5	NA	NA	<0.1	<0.1	<0.1	<0.1	NA	NA
B-26	10/29/1991	8.75'	NA	2.2	NA	NA	<0.1	<0.1	<0.1	<0.1	NA	NA
B-27	10/29/1991	7.25'	NA	6.1	NA	NA	<0.1	<0.1	<0.1	<0.1	NA	NA
B-28	10/29/1991	8.5'	NA	5.5	NA	NA	<0.1	<0.1	<0.1	<0.1	NA	NA
B-28	10/29/1991	14.5'	NA	3.9	NA	NA	<0.1	<0.1	<0.1	<0.1	NA	NA
B-29	10/29/1991	9.5'	NA	430	NA	NA	<0.1	<0.1	<0.1	<0.1	NA	NA
B-29	10/29/1991	12.5'	NA	1,600	NA	NA	<0.1	<0.1	<0.1	<0.1	NA	NA
B-30	10/29/1991	8.75'	NA	2.2	NA	NA	<0.1	<0.1	<0.1	<0.1	NA	NA
B-31	10/31/1991	12.25'	NA	5.5	NA	NA	<0.1	<0.1	<0.1	<0.1	NA	NA
B-32	10/31/1991	12.5'	NA	1.1	NA	NA	<0.1	<0.1	<0.1	<0.1	NA	NA
B-32	10/31/1991	16.75'	NA	<1	NA	NA	<0.1	<0.1	<0.1	<0.1	NA	NA
B-33	10/31/1991	9.8'	NA	470	NA	NA	<0.1	<0.1	<0.1	<0.1	NA	NA
B-33	10/31/1991	13.7'	NA	23	NA	NA	<0.1	<0.1	<0.1	<0.1	NA	NA
B-34	10/31/1991	12.5'	NA	1.1	NA	NA	<0.1	<0.1	<0.1	<0.1	NA	NA
B-35	10/31/1991	9.75'	NA	1.1	NA	NA	<0.1	<0.1	<0.1	<0.1	NA	NA
B-35	10/31/1991	13.75'	NA	<1	NA	NA	<0.1	<0.1	<0.1	<0.1	NA	NA

Notes:

ft bgs = Feet below ground surface

< 0.1 Compound not detcted at or above stated Method Detection Limit

mg/kg Milligrams per kilogram (parts per million)

NA = Not analyzed

PCBs = Polychlorinated biphenyls

BTEX = Benzene, toluene, ethylbenzene, xylenes

* = Arochlor-1248

** = All "36" samples were collected by a Sensible Environmental Solutions (SES) representative onsite to collect representative samples of asbestos material. A summary of SES' findings is provided in Appendix A.

Volatile organic compounds were detected in only one sample, MW-02 on 3/25/1991 (1,1-Dichloroethane at 0.001 mg/kg and trichloroethylene at 0.038 mg/kg)

Table 2
PAHs Detected in Soil Samples
Pittsburg River Park LLC
Former Johns Manville Plant
Pittsburg, California

Sample Location	Date	Sample Depth	Phenanthrene (mg/kg)	Chrysene (mg/kg)	Fluorene (mg/kg)	NAP (mg/kg)	2-Methylnaphthalene (mg/kg)	Acenaphthylene (mg/kg)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Fluoranthene (mg/kg)	Pyrene (mg/kg)	Benzo(a)anthracene (mg/kg)	2-Chloronaphthalene (mg/kg)
ERM Soil Borings														
ERM-B-1	7/14/2004	10'	3.6	2.9	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
ERM-B-2	7/14/2004	12'	2.2	<0.05	0.55	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.63	<0.05	<0.05
ERM-B-3	7/14/2004	6'	12	2.9	6.1	2.8	8.5	0.65	1	1.8	1.2	3.8	0.94	<0.05
ERM-B-4	7/14/2004	6'	4.1	4.9	5.2	0.54	2.7	<0.05	<0.05	21	1.6	5.8	0.52	2.5
ERM-B-5	7/14/2004	9'	9.9	19	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	6.8	3.5	<0.25
ERM-B-6	7/14/2004	6'	85	49	23	9.1	32	<0.25	3.8	5.7	11	38	5.8	13
Soil Borings (ROUX)														
B-01	6/4/1991	7.1'	26	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
B-02	6/4/1991	10.5'	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
B-03	6/4/1991	6'	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
B-04	6/4/1991	8.5'	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B-05	6/4/1991	9.5'	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B-06	6/4/1991	7.5'	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B-07	6/4/1991	4'	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B-08	6/5/1991	8'	<31.25	<31.25	<31.25	<31.25	<31.25	<31.25	<31.25	<31.25	<31.25	<31.25	<31.25	<31.25
B-09	6/5/1991	9.5'	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
B-10	6/5/1991	7.5'	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
B-11	6/5/1991	7.75'	0.55	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B-12	6/5/1991	4.5'	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
B-13	6/5/1991	5.5'	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
B-14	6/6/1991	7.75'	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B-15	6/6/1991	7.5'	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B-16	6/6/1991	13.5'	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B-17	6/6/1991	10.75'	<0.1	0.27	<0.1	<0.1	0.26	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
B-18	6/6/1991	5.75'	NA	NA	NA	NA	<0.25	<0.25	<0.25	<0.25	NA	NA	<0.25	<0.25
B-19	6/6/1991	7.5'	<0.1	<0.1	<0.1	<0.1	NA	NA	NA	NA	<0.1	<0.1	NA	NA
B-20	6/6/1991	7'	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
B-21	10/29/1991	8.5'	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
B-21	10/29/1991	11.25'	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
B-22	10/29/1991	7.5'	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
B-23	10/29/1991	11'	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
B-24	10/29/1991	6.6'	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
B-26	10/29/1991	8.75'	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
B-27	10/29/1991	7.25'	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
B-28	10/29/1991	8.5'	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
B-28	10/29/1991	14.5'	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
B-29	10/29/1991	9.5'	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
B-29	10/29/1991	12.5'	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
B-30	10/29/1991	8.75'	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
B-31	10/31/1991	12.25'	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
B-32	10/31/1991	12.5'	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
B-32	10/31/1991	16.75'	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
B-33	10/31/1991	9.8'	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
B-33	10/31/1991	13.7'	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
B-34	10/31/1991	12.5'	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
B-35	10/31/1991	9.75'	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
B-35	10/31/1991	13.75'	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Notes:

NA =	Not Analyzed
PAHs =	Polyaromatic Hydrocarbons
mg/kg	Milligrams per kilogram (parts per million)
Abbr	Chemical
NAP =	Naphthalene

Table 3
TPH, PCBs, and Asbestos Detected in Ground Water Samples
Pittsburg River Park LLC
Former Johns Manville Plant
Pittsburg, California

		Total Petroleum Hydrocarbons									Asbestos (MFL)	
Sample Location	Date	Diesel (µg/L)	Motor Oil (µg/L)	Gasoline (µg/L)	Oil & Grease (µg/L)	Benzene (µg/L)	Ethyl-benzene (µg/L)	Toluene (µg/L)	Xylenes (µg/L)	PCBs (µg/L)	Total	>10 µm
ERM Boring Samples												
ERM-B-2	7/14/2004	<25,000	210,000	190	NA	1	0.87	0.74	1.2	NA	4,943	294
ERM-B-3	7/14/2004	<5,000	78,000	330	NA	2.1	1.6	0.77	2.4	NA	4,992	783
ERM-B-4	7/14/2004	<25,000	250,000	58	NA	<0.5	<0.5	<0.5	<1	NA	7,146	1,175
ERM-B-5	7/14/2004	<10,000	160,000	110	NA	0.58	0.58	0.54	<1	NA	4,552	783
ERM-B-6	7/14/2004	<10,000	190,000	340	NA	1.4	1.8	1.5	3.3	NA	4,160	832
Historical and Current Monitoring Well Data (HLA, ROUX, ERM)												
SVE-36	8/16/2005	59,000	<10,000	NA	NA	2.1	<0.50	0.63	1.2	NA	NA	NA
MW-1	7/17/1986	NA	NA	NA	NA	<0.2	<0.2	<0.2	NA	0.2*	NA	NA
MW-1	8/28/1986	2,900	NA	1300	NA	<0.1	<0.1	<0.1	1.9	<1.0	NA	NA
MW-1	2/27/1991	NA	NA	NA	NA	<0.1	<0.1	0.2	0.3	NA	NA	NA
MW-1	3/28/1991	NA	NA	NA	NA	0.2	<0.1	<0.1	<0.1	NA	NA	NA
MW-2	7/17/1986	NA	NA	NA	NA	18.05	12.03	32.1	NA	<0.1	NA	NA
MW-2	10/1/1990	<50	720,000	700	NA	6	<5	10	16	1*	NA	NA
MW-2	3/27/1991	70,000	4,600,000	72,000	570,000	13	6.5	20	53	<225.5	NA	NA
MW-2	3/28/1991	NA	NA	NA	NA	0.1	<0.1	<0.1	<0.1	NA	NA	NA
MW-3	7/17/1986	NA	NA	NA	NA	<0.2	<0.2	0.58	NA	<0.1	NA	NA
MW-3	8/28/1986	290,000	NA	2,800	NA	<0.1	<0.1	<0.1	23	<2,000	NA	NA
MW-3	9/28/1991	<50	84,000	50	NA	<0.1	<0.1	<0.1	<0.1	NA	NA	NA
MW-4	8/28/1986	360,000	NA	810	NA	<0.1	0.6	<0.1	1.9	<1.0	NA	NA
MW-4-DUP	8/28/1986	200,000	NA	1,000	NA	<0.2	1.6	<0.2	2.6	<2,000	NA	NA
MW-4	9/28/1991	<50	240,000	70	NA	<0.1	<5	<5	<5	<5	NA	NA
MW-4	2/27/1991	<50	NA	<50	NA	<0.1	<0.5	<0.1	<0.1	<0.1	NA	NA
MW-4**	3/27/1991	NA	NA	NA	300,000	<0.3	1.3	<0.1	<0.1	NA	NA	NA
MW-4	2/19/2002	51,000	10,000	NA	NA	<1	<1	<1	<1	<7	NA	NA
MW-5	8/28/1986	5,100	NA	75	NA	<0.1	<0.1	<0.1	3.8	<0.1	NA	NA
MW-5	3/13/1991	1,100	NA	NA	7,700	<0.30	<0.30	<0.30	<0.30	NA	NA	NA
MW-5	9/27/1990	<50	7,700	<50	NA	<5	<5	<5	<5	NA	NA	NA
MW-5	12/19/2000	930	1,100	<50	<5,000	<5	<5	<5	<5	NA	5,749.80	282.8
MW-5	1/7/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	<29.40
MW-5	2/19/2002	740	<250	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 3
TPH, PCBs, and Asbestos Detected in Ground Water Samples
Pittsburg River Park LLC
Former Johns Manville Plant
Pittsburg, California

		Total Petroleum Hydrocarbons									Asbestos (MFL)	
Sample Location	Date	Diesel (µg/L)	Motor Oil (µg/L)	Gasoline (µg/L)	Oil & Grease (µg/L)	Benzene (µg/L)	Ethyl-benzene (µg/L)	Toluene (µg/L)	Xylenes (µg/L)	PCBs (µg/L)	Total	>10 µm
MW-6	8/28/1986	1,500	NA	18	NA	<0.1	<0.1	<0.1	<0.1	<1.0	NA	NA
MW-6	9/28/1990	<50	3,600	<50	NA	<5	<5	<5	<5	NA	NA	NA
MW-6	3/13/1991	460	NA	NA	6,300	<0.30	<0.30	<0.30	<0.30	NA	NA	NA
MW-6	12/19/2000	220	310	<50	<5,000	<5	<5	<5	<5	NA	2733.5	<94.3
MW-6	8/16/2005	<50	1,500	NA	NA	<0.50	<0.50	<0.50	<0.50	NA	NA	NA
MW-7	8/28/1986	<10	NA	<10	NA	<0.1	<0.1	<0.1	<0.1	<2.0	NA	NA
MW-7	9/28/1990	<50	1,300	<50	NA	<5	<5	<5	<5	NA	NA	NA
MW-7	3/13/1991	1200	NA	NA	13,000	<0.30	<0.30	<0.30	<0.30	NA	NA	NA
MW-8	8/28/1986	880	NA	11	NA	<0.1	<0.1	<0.1	<0.1	<5.0	NA	NA
MW-8	9/27/1990	<50	800	<50	NA	<5	<5	<5	<5	NA	NA	NA
MW-8	3/13/1991	100	NA	NA	<5,000	<0.30	<0.30	<0.30	<0.30	NA	NA	NA
MW-8	11/14/1991	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	NA	NA	NA
MW-8	12/19/2000	140	<310	<50	<5,000	<5	<5	NA	NA	NA	<47.1	<47.1
MW-8	2/19/2002	410	410	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-9	8/28/1986	570	NA	20	NA	<0.1	<0.1	<0.1	<0.1	<2.0	NA	NA
MW-9	9/27/1990	<50	200	<50	NA	<5	<5	<5	<5	NA	NA	NA
MW-9	3/13/1991	<50	NA	NA	<5,000	<0.30	<0.30	<0.30	<0.30	NA	NA	NA
MW-9	11/14/1991	NA	<1,000	NA	NA	<2	<2	<2	<2	NA	NA	NA
MW-9	7/30/1993	NA	NA	NA	<5,000	ND	ND	ND	ND	NA	NA	NA
MW-9	1/15/1994	NA	NA	NA	<5,000	ND	ND	ND	ND	NA	NA	NA
MW-9	6/15/2004	NA	NA	NA	<5,000	ND	ND	ND	ND	NA	NA	NA
MW-9	12/7/1994	NA	NA	NA	<5,000	ND	ND	ND	ND	NA	NA	NA
MW-9	12/19/2000	<57	<280	<50	<5,000	NA	<5	<5	<5	NA	<4.7	<4.7
MW-10	3/13/1991	210	NA	NA	5,500	<0.30	<0.30	<0.30	<0.30	NA	NA	NA
MW-10	11/14/1991	NA	<1,000	NA	NA	<2	<2	<2	<2	NA	NA	NA
MW-10	12/19/2000	<57	<280	<50	<5,000	<5	<5	<5	<5	NA	NA	NA
MW-10	1/7/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	<7.83
MW-10	8/16/2005	<50	970	NA	NA	<0.50	<0.50	<0.50	<0.50	NA	N	NA
MW-11	3/13/1991	<50	NA	NA	5200	<0.30	<0.30	<0.30	<0.30	NA	NA	NA
MW-11	11/14/1991	NA	<1,000	NA	NA	<2	<2	<2	<2	NA	NA	NA
MW-11	2/19/2002	<50	<250	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 3
TPH, PCBs, and Asbestos Detected in Ground Water Samples
Pittsburg River Park LLC
Former Johns Manville Plant
Pittsburg, California

		Total Petroleum Hydrocarbons									Asbestos (MFL)	
Sample Location	Date	Diesel (µg/L)	Motor Oil (µg/L)	Gasoline (µg/L)	Oil & Grease (µg/L)	Benzene (µg/L)	Ethyl-benzene (µg/L)	Toluene (µg/L)	Xylenes (µg/L)	PCBs (µg/L)	Total	>10 µm
MW-12	3/13/1991	<50	NA	NA	<5,000	<0.30	<0.30	<0.30	<0.30	NA	NA	NA
MW-12	11/14/1991	NA	NA	NA	NA	<2	<2	<2	<2	NA	NA	NA
MW-12	12/19/2000	<59	<290	<50	<5,000	<5	<5	<5	<5	NA	NA	NA
MW-13	3/13/1991	<50	NA	NA	<5,000	<0.30	<0.30	<0.30	<0.30	NA	NA	NA
MW-13	11/14/1991	NA	NA	NA	NA	<2	<2	<2	<2	NA	NA	NA
MW-13	12/19/2000	NA	NA	<50	NA	<5	<5	<5	<5	NA	NA	NA
MW-14	3/13/1991	<50	NA	NA	<5,000	<0.30	<0.30	<0.30	<0.30	NA	NA	NA
MW-14	12/19/2000	<60	<300	<50	<5,000	<5	<5	<5	<5	NA	188.5	9.4
MW-14	1/7/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	<3.92
MW-15	3/13/1991	<50	NA	NA	<5,000	<0.30	<0.30	<0.30	<0.30	NA	NA	NA
MW-15	11/14/1991	NA	NA	NA	<5,000	<2	<2	<2	<2	NA	NA	NA
MW-15	7/30/1993	NA	NA	NA	<5,000	ND	ND	ND	ND	NA	NA	NA
MW-15	1/15/1994	NA	NA	NA	<5,000	ND	ND	ND	ND	NA	NA	NA
MW-15	6/15/1994	NA	NA	NA	<5,000	ND	ND	ND	ND	NA	NA	NA
MW-15	12/7/1994	NA	NA	NA	<5,000	ND	ND	ND	ND	NA	NA	NA
MW-15	12/19/2000	<59	<290	<50	<5,000	<5	<5	<5	<5	NA	<3.1	<3.1
MW-16	11/14/2004	NA	NA	NA	NA	<2	<2	<2	<2	NA	NA	NA
MW-16	7/30/1993	NA	NA	NA	<5,000	ND	ND	ND	ND	NA	NA	NA
MW-16	1/15/1994	NA	NA	NA	<5,000	ND	ND	ND	ND	NA	NA	NA
MW-16	6/15/2004	NA	NA	NA	<5,000	ND	ND	ND	ND	NA	NA	NA
MW-16	12/7/1994	NA	NA	NA	<5,000	ND	ND	ND	ND	NA	NA	NA
MW-16	12/18/2000	610	930	NA	<5,000	<5	<5	<5	<5	NA	367.6	<9.4
MW-16	2/19/2002	1,400	520	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-17	11/14/1991	NA	NA	NA	NA	<2	<2	<2	<2	NA	NA	NA
MW-17	12/18/2000	<60	580	NA	<5,000	<5	<5	<5	<5	NA	141.4	47.1
MW-17	1/7/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	<391.68
MW-17	2/19/2002	660	320	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-18	11/14/1991	NA	NA	NA	NA	<2	<2	<2	<2	NA	NA	NA
MW-18	12/18/2000	<70	2,800	NA	<5,000	<5	<5	<5	<5	NA	<47.1	<47.1
MW-18	2/19/2002	10,000	2,900	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 3
TPH, PCBs, and Asbestos Detected in Ground Water Samples
Pittsburg River Park LLC
Former Johns Manville Plant
Pittsburg, California

		Total Petroleum Hydrocarbons									Asbestos (MFL)	
Sample Location	Date	Diesel (µg/L)	Motor Oil (µg/L)	Gasoline (µg/L)	Oil & Grease (µg/L)	Benzene (µg/L)	Ethyl-benzene (µg/L)	Toluene (µg/L)	Xylenes (µg/L)	PCBs (µg/L)	Total	>10 µm
MW-19	11/14/1991	NA	NA	NA	<5,000	<2	<2	<2	<2	NA	NA	NA
MW-19	7/30/1993	NA	NA	NA	<5,000	ND	ND	ND	ND	NA	NA	NA
MW-19	1/15/1994	NA	NA	NA	<5,000	ND	ND	ND	ND	NA	NA	NA
MW-19	6/15/1994	NA	NA	NA	<5,000	ND	ND	ND	ND	NA	NA	NA
MW-19	12/7/1994	NA	NA	NA	<5,000	ND	ND	ND	ND	NA	NA	NA
MW-19	12/18/2000	150	<330	NA	<5,000	<5	<5	<5	<5	NA	179.1	<9.4
MW-20	12/18/2000	<57	<280	NA	<5,000	<5	<5	<5	<5	NA	18.9	<9.4
MW-21	12/18/2000	<70	<350	NA	<5,000	<5	<5	<5	<5	NA	14.1	<4.7
PZ-1	9/28/1990	<50	<50	23,000	NA	<5	<5	<5	<5	NA	NA	NA
TB-2	12/19/2000	NA	NA	NA	NA	<5	<5	<5	<5	NA	NA	NA
TB-1	12/19/2000	NA	NA	NA	NA	<5	<5	<5	<5	NA	NA	NA
EB-1	12/19/2000	NA	NA	NA	<5,000	<5	<5	<5	<5	NA	NA	NA
FB-2	3/13/1991	<50	NA	NA	<5,000	<0.30	<0.30	<0.30	<0.30	NA	NA	NA

Notes:

* =	Aroclor-1248
** =	This sample contained 750,000 mg/kg TRPH and 100,000 mg/kg HBP Hydrocarbons
< 50	Constituent not detected at or aboave
NA =	Not Analyzed
ND =	Not detected at or above Method Detection Limit
NR =	Not Reported
PCBs =	Polychlorinated Biphinyls
CCL =	Carbon Tetrachloride
CF =	Chloroform
µg/L	Micrograms per liter (parts per billion)
>10 µm	Fibers greater than 10 micrometers
MLF	Million fibers per liter

Table 4
PAHs Detected in Ground Water Samples
Pittsburg River Park LLC
Former Johns Manville Plant
Pittsburg, California

		PAHs																	
Sample Location	**Date**	**2-MN (µg/L)**	**Fluorene (µg/L)**	**Phenanthrene (µg/L)**	**Anthracene (µg/L)**	**Benzo(a) anthracene (µg/L)**	**Chrysene (µg/L)**	**Fluoranthene (µg/L)**	**NAP (µg/L)**	**Pyrene (µg/L)**	**1,3-DCB (µg/L)**	**1,4 & 1,2 -DCB (µg/L)**	**CB (µg/L)**	**Phenol (µg/L)**	**2,4-DMP (µg/L)**	**2-MP (µg/L)**	**4-MP (µg/L)**	**HCB (µg/L)**	**2,4,6 TCP (µg/L)**	**2,4 DNT (µg/L)**
ERM Boring Samples																			
ERM-B-2	7/14/2004	1.1	1.3	3.7	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA
ERM-B-3	7/14/2004	<1	<1	2.7	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA
ERM-B-4	7/14/2004	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA
ERM-B-5	7/14/2004	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA
ERM-B-6	7/14/2004	<2	<2	3.9	<2	<2	<2	<2	<2	<2	NA	NA	NA	NA	NA	NA	NA	NA	NA
ERM-TP-4	7/14/2004	13	5.6	35	2.1	3.1	11	2.8	5.3	10	NA	NA	NA	NA	NA	NA	NA	NA	NA
Historical Monitoring Well Data (HLA, ROUX)																			
MW-1	7/17/1986	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.32	<0.39	<0.25	NA	NA	NA	NA	NA	NA
MW-1	8/28/1986	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.4	<0.1	<0.1	NA	NA	NA	NA	NA	NA
MW-1	2/27/1991	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1	<0.2	<0.1	<1	<1	NA	NA	<5	<1	<1
MW-1	3/28/1991	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1	<0.2	<0.1	NA	NA	NA	NA	NA	NA	NA
MW-2	7/17/1986	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.32	<0.39	<0.25	NA	NA	NA	NA	NA	NA	NA
MW-2	10/1/1990	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.32	NA	<5	<50	280	270	910	NA	<50	NA
MW-2	3/27/1991	<2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2	<2	<2	210	48	NA	<2	NA
MW-2*	3/27/1991	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<80	<2.0	640	NA	NA	NA	<2	<2	<2
MW-2	3/28/1991	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1	<0.2	<0.1	NA	NA	NA	NA	NA	NA	NA
MW-3	7/17/1986	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.32	<0.39	<0.25	NA	NA	NA	NA	NA	NA	NA
MW-3	8/28/1986	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.6	12	<0.1	NA	NA	NA	NA	NA	NA	NA
MW-3	9/28/1990	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.2	<5	NA	NA	NA	NA	NA	<10	NA
MW-4	8/28/1986	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1	2.6	0.3	NA	NA	NA	NA	NA	NA	NA
MW-4	9/28/1990	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.2	<5	<10	<10	<10	<10	NA	<10	NA
MW-4	2/27/1991	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.2	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	3/27/1991	<2	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.2	<2	<2	<2	<2	<2	5	6	4
MW-4	3/28/1991	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1	<0.2	<0.1	NA	NA	NA	NA	NA	NA	NA
MW-4	2/19/2002	NA	<0.1	<0.05	<0.05	<0.05	<0.05	<0.1	<0.5	<0.05	<1	<2	<1	NA	NA	NA	NA	NA	NA	NA
MW-4-DUP	8/28/1986	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.2	3.7	<0.2	NA	NA	NA	NA	NA	NA	NA
MW-5	8/28/1986	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1	<0.1	<0.1	NA	NA	NA	NA	NA	NA	NA
MW-5	9/27/1990	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5	640	380	210	570	NA	<1	NA
MW-5	3/13/1991	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<40	<40	<40	<2	<2	<2
MW-5	12/19/2000	NA	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<5	<0.4	<5	<10	<5	NA	NA	NA	NA	NA	NA	NA
MW-5	2/19/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-6	8/28/1986	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1	<0.1	<0.1	NA	NA	NA	NA	NA	NA	NA
MW-6	9/28/1990	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1	NA	<5	<1	<1	<1	<1	<2	<1	NA
MW-6	3/13/1991	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<40	<40	<40	NA	<2	<2
MW-6	12/19/2000	NA	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<5	<0.2	<5	<10	<5	NA	NA	NA	NA	NA	NA	NA
MW-7	8/28/1986	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.3	<0.1	<0.1	NA	NA	NA	NA	NA	NA	NA
MW-7	9/28/1990	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.4	NA	<5	<2	<2	<2	<2	NA	<2	NA
MW-7	3/13/1991	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.7	<40	<40	<40	<2	<2	<2

Table 4
PAHs Detected in Ground Water Samples
Pittsburg River Park LLC
Former Johns Manville Plant
Pittsburg, California

Sample Location	Date	PAHs																		
		2-MN (µg/L)	Fluorene (µg/L)	Phenanthrene (µg/L)	Anthracene (µg/L)	Benzo(a) anthracene (µg/L)	Chrysene (µg/L)	Fluoranthene (µg/L)	NAP (µg/L)	Pyrene (µg/L)	1,3-DCB (µg/L)	1,4 & 1,2 -DCB (µg/L)	CB (µg/L)	Phenol (µg/L)	2,4-DMP (µg/L)	2-MP (µg/L)	4-MP (µg/L)	HCB (µg/L)	2,4,6 TCP (µg/L)	2,4 DNT (µg/L)
MW-8	8/28/1986	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.7	<0.1	<0.1	NA	NA	NA	NA	NA	NA	NA
MW-8	9/27/1990	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5	<1	<1	<1	<1	NA	<1	NA
MW-8	3/13/1991	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<40	<40	<40	<2	<2	<2
MW-8	12/19/2000	NA	NA	NA	NA	NA	NA	NA	<5	NA	<5	<10	<5	NA	NA	NA	NA	NA	NA	NA
MW-8	2/19/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-9	8/28/1986	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1	<0.1	<0.1	NA	NA	NA	NA	NA	NA	NA
MW-9	9/27/1990	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5	<2	<1	<1	<1	NA	<1	NA
MW-9	3/13/1991	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.7	<40	<40	<40	<2	<2	<2
MW-9	11/14/1991	<2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2	<2	<2	<2	<2	<2	<2	<2
MW-9	12/19/2000	NA	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<5	<0.2	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA
MW-10	3/13/1991	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<40	<40	<40	NA	NA	NA
MW-10	11/14/1991	<2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2	<2	<2	<2	<2	<2	<2	<2
MW-10	12/19/2000	NA	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<5	<0.2	<5	<10	<5	NA	NA	NA	NA	NA	NA	NA
MW-11	3/13/1991	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<40	<40	<40	NA	<2	<2
MW-11	11/14/1991	<2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2	<2	<2	<2	<2	<2	<2	<2
MW-11	2/19/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-12	3/13/1991	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<40	<40	<40	NA	<2	<2
MW-12	11/14/1991	<2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2	<2	<2	<2	<2	<2	<2	<2
MW-12	12/19/2000	NA	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<5	<0.2	<5	<10	<5	NA	NA	NA	NA	NA	NA	NA
MW-13	3/13/1991	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<40	<40	<40	NA	<2	<2
MW-13	11/14/1991	<2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2	<2	<2	<2	<2	<2	<2	<2
MW-13	12/19/2000	NA	NA	NA	NA	NA	NA	NA	<5	NA	<5	<10	<5	NA	NA	NA	NA	NA	NA	NA
MW-14	3/13/1991	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<40	<40	<40	NA	<2	<2
MW-14	12/19/2000	NA	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<5	<0.2	<5	<10	<5	NA	NA	NA	NA	NA	NA	NA
MW-15	3/13/1991	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<40	<40	<40	NA	<2	<2
MW-15	11/14/1991	<2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2	<2	<2	<2	<2	<2	<2	<2
MW-15	12/19/2000	NA	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<5	<0.2	<5	<10	<5	NA	NA	NA	NA	NA	NA	NA
MW-16	12/18/2000	NA	NA	NA	NA	NA	NA	NA	<5	NA	<5	<10	<5	NA	NA	NA	NA	NA	NA	NA
MW-17	12/18/2000	NA	NA	NA	NA	NA	NA	NA	<5	NA	<5	<10	<5	NA	NA	NA	NA	NA	NA	NA
MW-18	11/14/1991	<2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2	<2	2	<2	<2	<2	<2	<2
MW-18	12/18/2000	NA	NA	NA	NA	NA	NA	NA	<5	NA	<5	<10	<5	NA	NA	NA	NA	NA	NA	NA
MW-19	11/14/1991	<2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2	<2	<2	<2	<2	<2	<2	<2
MW-19	12/18/2000	NA	NA	NA	NA	NA	NA	NA	<5	NA	<5	<10	<5	NA	NA	NA	NA	NA	NA	NA
MW-20	12/18/2000	NA	NA	NA	NA	NA	NA	NA	<5	NA	<5	<10	<5	NA	NA	NA	NA	NA	NA	NA

Table 4
PAHs Detected in Ground Water Samples
Pittsburg River Park LLC
Former Johns Manville Plant
Pittsburg, California

		PAHs																	
Sample Location	Date	2-MN (µg/L)	Fluorene (µg/L)	Phenanthrene (µg/L)	Anthracene (µg/L)	Benzo(a) anthracene (µg/L)	Chrysene (µg/L)	Fluoranthene (µg/L)	NAP (µg/L)	Pyrene (µg/L)	1,3-DCB (µg/L)	1,4 & 1,2 -DCB (µg/L)	CB (µg/L)	Phenol (µg/L)	2,4-DMP (µg/L)	2-MP (µg/L)	4-MP (µg/L)	HCB (µg/L)	2,4,6 TCP (µg/L)	2,4 DNT (µg/L)
MW-21	12/18/2000	NA	NA	NA	NA	NA	NA	NA	<5	NA	<5	<10	<5	NA	NA	NA	NA	NA	<2	NA
PZ-1	9/28/1990	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5	<10	<10	NA	NA	NA	NA	NA
TB-1	12/19/2000	NA	NA	NA	NA	NA	NA	NA	<5	NA	<5	<10	<5	NA	NA	NA	NA	NA	NA	NA
TB-2	12/19/2000	NA	NA	NA	NA	NA	NA	NA	<5	NA	<5	<10	<5	NA	NA	NA	NA	NA	NA	NA
EB-1	12/19/2000	NA	NA	NA	NA	NA	NA	NA	<5	NA	<5	<10	<5	NA	NA	NA	NA	NA	NA	NA

Notes:

PAHs =	Polycyclic Aromatic Hydrocarbons
NA =	Not Analyzed
< 2.0	Compound not detected at or above stated Method Detection Limit
µg/L	Micrograms per liter (parts per billion)

Abbr	Chemical
2-MN =	2-Methylnaphthalene
NAP =	Naphthalene
1,3-DCB =	1,3 Dichlorobenzene
1,4 & 1,2 -DCB =	1,4 & 1,2 Dichlorobenzene
CB =	Chlorobenzene
2,4-DMP =	2,4 Dimethylphenol
2-MP =	2-Methylphenol
4-MP =	4-Methylphenol
2,4,6 TCP =	2,4,6 Trichlorophenol
2,4 DNT =	2,4 Dinitrotoluene
HCB =	Hexachlorobutadiene

Table 5
VOCs Detected in Ground Water Samples
Pittsburg River Park LLC
Former Johns Manville Plant
Pittsburg, California

		VOCs																
Sample Location	**Date**	**CCL (µg/L)**	**CF (µg/L)**	**cis-1,2-DCE (µg/L)**	**1,1-DCE (µg/L)**	**1,1-DCA (µg/L)**	**DCM (µg/L)**	**PCE (µg/L)**	**TCE (µg/L)**	**Acetone (µg/L)**	**2-Butanone (µg/L)**	**2-Hexanone (µg/L)**	**4-M,2-P (µg/L)**	**BDCM (µg/L)**	**Bromoform (µg/L)**	**1,1,1-TCA (µg/L)**	**1,2-DCA (µg/L)**	**CDS (µg/L)**
Historical and Current Monitoring Well Data (HLA, ROUX, ERM)																		
SVE-36	8/16/2005	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50	<20	<20	<20	<0.50	<0.50	<0.50	<0.50	<0.50
MW-1	7/17/1986	ND	ND	NA	0.77	<0.07	<0.2	<0.03	<0.12	NA	NA	NA	NA	<0.1	<0.1	<0.1	<0.1	NA
MW-1	8/28/1986	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	<0.1	NA	NA	NA	NA	<0.1	<0.1	<0.1	<0.1	NA
MW-1	2/27/1991	ND	ND	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA	NA	NA	NA	<0.1	<0.2	<0.1	2.6	NA
MW-1	3/28/1991	9.1	5.8	<0.1	<0.1	<0.1	<0.1	<0.1	0.7	NA	NA	NA	NA	<0.1	<0.2	0.2	<0.1	NA
MW-2	7/17/1986	ND	ND	NA	<0.13	<0.07	<0.2	<0.03	<0.12	NA	NA	NA	NA	<0.1	<0.1	<0.1	<0.1	NA
MW-2	10/1/1990	<5	<5	NA	<5	<5	<5	<5	<5	420	230	50	90	<5	<5	<5	<5	<10
MW-2	3/27/1991	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	130	74	<10	<10	<2	<2	<2	<2	18
MW-2	3/28/1991	<0.1	0.6	1	0.6	0.3	<1	<0.1	34	NA	NA	NA	NA	0.3	<0.2	<0.1	<0.1	NA
MW-3	7/17/1986	<0.1	<0.1	NA	<0.13	<0.07	0.88	<0.03	<0.12	NA	NA	NA	NA	<0.1	<0.1	<0.1	<0.1	NA
MW-3	8/28/1986	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	<0.1	NA	NA	NA	NA	<0.1	<0.1	<0.1	<0.1	NA
MW-3	9/28/1990	<0.1	<0.2	NA	<0.1	<0.1	<5	<5	<5	<100	<100	<50	<50	<5	<5	<5	<5	<10
MW-4	8/28/1986	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	<0.1	NA	NA	NA	NA	<0.1	<0.1	<0.1	<0.1	NA
MW-4-DUP	8/28/1986	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	<0.1	NA	NA	NA	NA	<0.1	<0.1	<0.1	<0.1	NA
MW-4	2/27/1991	<5	<5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.1	NA
MW-4	3/27/1991	NA	NA	<2	<2	<2	<2	<2	<2	<10	<10	<10	<10	<2	<2	<2	<2	NA
MW-4	2/19/2002	NA	NA	<1	<1	<1	<1	<1	<1	<10	<10	NA	NA	NA	NA	NA	NA	<1
MW-5	8/28/1986	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	<0.1	NA	NA	NA	NA	<0.1	<0.1	<0.1	<0.1	NA
MW-5	9/27/1990	<2	<2	NA	<5	<5	<5	<5	<5	<100	<100	<50	<50	<5	<5	<5	<5	<10
MW-5	3/13/1991	<5	<5	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<10	<10	<10	<10	<2	<2	<2	<2	<2.0
MW-5	12/19/2000	<5	<5	<5	<5	<5	95	<5	<5	<100	NA	NA	NA	NA	NA	NA	NA	<15
MW-6	8/28/1986	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	<0.1	NA	NA	NA	NA	<0.1	<0.1	<0.1	<0.1	NA
MW-6	9/28/1990	<5	<5	NA	<5	<5	<5	<5	<5	<100	<100	<50	<50	<5	<5	<5	<5	<10
MW-6	3/13/1991	<2	<2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<10	<10	<10	<10	<2	<2	<2	<2	<2.0
MW-6	12/19/2000	<5	<5	<5	<5	<5	<5	<5	<5	<100	NA	NA	NA	NA	NA	NA	NA	<15
MW-6	8/16/2005	<0.50	<0.50	<0.50	<0.50	<0.50	8.7 BL	<0.50	<0.50	<0.50	<20	<20	<20	<0.50	<0.50	<0.50	<0.50	<0.50
MW-7	8/28/1986	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	<0.1	NA	NA	NA	NA	<0.1	<0.1	<0.1	<0.1	NA
MW-7	9/28/1990	<5	<5	NA	<5	<5	<5	<5	<5	<100	<100	<50	<50	<5	<5	<5	<5	<10
MW-7	3/13/1991	<2	<2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<10	<10	<10	<10	<2	<2	<2	<2	<2.0
MW-8	8/28/1986	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	<0.1	NA	NA	NA	NA	<0.1	<0.1	<0.1	<0.1	NA
MW-8	9/27/1990	<5	<5	NA	<5	<5	<5	<5	<5	<100	<100	<50	<50	<5	<5	<5	<5	<10
MW-8	3/13/1991	<2	<2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<10	<10	<10	<10	<2	<2	<2	<2	<2.0
MW-8	12/19/2000	<5	<5	<5	<5	<5	<5	NA	<5	<100	NA	NA	NA	NA	NA	NA	NA	<15
MW-9	8/28/1986	<0.1	<0.1	NA	37	8.3	<0.1	<0.1	<0.1	NA	NA	NA	NA	<0.1	<0.1	<0.1	<0.1	NA
MW-9	9/27/1990	<5	<5	NA	7	14	<5	<5	<5	<100	<100	<50	<50	<5	<5	<5	<5	<10
MW-9	3/13/1991	<2	<2	<2.0	2.4	6.4	<2.0	<2.0	<2.0	<10	<10	<10	<10	<2	<2	<2	<2	<2.0
MW-9	11/14/1991	<2	<2	<2	4.1	9.2	<2	<2	<2	<10	<10	<10	<10	<2	<2	<2	<2	<2

Table 5
VOCs Detected in Ground Water Samples
Pittsburg River Park LLC
Former Johns Manville Plant
Pittsburg, California

		VOCs																
Sample Location	**Date**	**CCL (µg/L)**	**CF (µg/L)**	**cis-1,2-DCE (µg/L)**	**1,1-DCE (µg/L)**	**1,1-DCA (µg/L)**	**DCM (µg/L)**	**PCE (µg/L)**	**TCE (µg/L)**	**Acetone (µg/L)**	**2-Butanone (µg/L)**	**2-Hexanone (µg/L)**	**4-M,2-P (µg/L)**	**BDCM (µg/L)**	**Bromoform (µg/L)**	**1,1,1-TCA (µg/L)**	**1,2-DCA (µg/L)**	**CDS (µg/L)**
MW-9	7/30/1993	ND	ND	NA	NA	3.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-9	1/15/1994	ND	ND	NA	NA	2.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-9	12/7/1994	ND	ND	NA	NA	2.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-9	12/19/2000	<5	<5	<5	5.1	28	<5	<5	<5	NA	NA	NA	NA	NA	NA	NA	NA	<15
MW-10	3/13/1991	<2	<2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<10	<10	<10	<10	<2	<2	<2	<2	<2.0
MW-10	11/14/1991	<2	<2	<2	<2	<2	<2	<2	<2	<10	<10	<10	<10	<2	<2	<2	<2	<2
MW-10	12/19/2000	<5	<5	<5	<5	<5	14	<5	<5	<100	NA	NA	NA	NA	NA	NA	NA	<15
MW-10	8/16/2005	<0.50	<0.50	<0.50	<0.50	<0.50	8.7 BL	<0.50	<0.50	<0.50	<20	<20	<20	<0.50	<0.50	<0.50	<0.50	<0.50
MW-11	3/13/1991	<2	<2	<2.0	<2.0	<2.0	<2.0	15	2.1	<10	<10	<10	<10	<2	<2	<2	<2	<2.0
MW-11	11/14/1991	<2	<2	<2	<2	3.1	<2	21	2.8	<10	<10	<10	<10	<2	<2	<2	<2	<2
MW-12	3/13/1991	<2	<2	<2.0	<2.0	<2.0	<2.0	<2.0	2.5	<10	<10	<10	<10	<2	<2	<2	<2	<2.0
MW-12	11/14/1991	<2	<2	<2	<2	<2	<2	<2	4.1	<10	<10	<10	<10	<2	<2	<2	<2	<2
MW-12	12/19/2000	<5	<5	<5	<5	<5	24	<5	<5	<100	NA	NA	NA	NA	NA	NA	NA	<15
MW-13	3/13/1991	<2	<2	<2.0	<2.0	<2.0	<2.0	<2.0	2.3	<10	<10	<10	<10	<2	<2	<2	<2	<2.0
MW-13	11/14/1991	<2	<2	<2	<2	<2	<2	<2	3.2	<10	<10	<10	<10	<2	<2	<2	<2	<2
MW-13	12/19/2000	<5	<5	<5	<5	<5	<5	<5	<5	NA	NA	NA	NA	NA	NA	NA	NA	<15
MW-14	3/13/1991	<2	<2	<2.0	<2.0	<2.0	<2.0	<2.0	5.5	<10	<10	<10	<10	<2	<2	<2	<2	<2.0
MW-14	12/19/2000	<5	<5	<5	<5	<5	<5	<5	<5	<100	NA	NA	NA	NA	NA	NA	NA	<15
MW-15	3/13/1991	<2	<2	2.4	9.8	<2.0	<2.0	<2.0	<2.0	<10	<10	<10	<10	<2	<2	<2	<2	<2.0
MW-15	11/14/1991	<2	<2	<2	11	2.7	<2	<2	5.1	<10	<10	<10	<10	<2	<2	<2	<2	<2
MW-15	12/19/2000	<5	<5	<5	<5	<5	<5	<5	<5	<100	NA	NA	NA	NA	NA	NA	NA	<15
MW-16	12/18/2000	<5	<5	<5	<5	<5	<5	<5	<5	<100	NA	NA	NA	NA	NA	NA	NA	<15
MW-17	12/18/2000	<5	<5	<5	<5	<5	<5	<5	<5	<100	NA	NA	NA	NA	NA	NA	NA	<15
MW-18	11/14/1991	<2	<2	<2	<2	<2	<2	<2	<2	<10	<10	<10	<10	<2	<2	<2	<2	<2
MW-18	12/18/2000	<5	<5	<5	<5	<5	<5	<5	<5	<100	NA	NA	NA	NA	NA	NA	NA	<15
MW-19	11/14/1991	<2	<2	<2	<2	<2	<2	<2	<2	<10	<10	<10	<10	<2	<2	3.2	<2	<2
MW-19	12/18/2000	<5	<5	<5	<5	<5	<5	<5	<5	<100	NA	NA	NA	NA	NA	NA	NA	<15
MW-20	12/18/2000	<5	<5	<5	<5	<5	<5	<5	<5	<100	NA	NA	NA	NA	NA	NA	NA	<15
MW-21	12/18/2000	<5	<5	<5	<5	<5	<5	<5	<5	<100	NA	NA	NA	NA	<2	NA	NA	<15
PZ-1	9/28/1990	<5	<5	<5	<5	<5	<5	<5	<5	<100	<100	<50	<100	<5	<5	<5	<5	<10
TB-1	12/19/2000	<5	<5	<5	<5	<5	<5	<5	<5	<100	NA	NA	NA	NA	NA	NA	NA	<15
TB-2	12/19/2000	<5	<5	<5	<5	<5	<5	<5	<5	<100	NA	NA	NA	NA	NA	NA	NA	<15
EB-1	12/19/2000	<5	<5	<5	<5	<5	<5	<5	<5	<100	NA	NA	NA	NA	NA	NA	NA	<15
FB-2	3/13/1991	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<10	<10	<10	<10	<2	<2	<2	<2	<2.0

Notes:

NA=	Not Analyzed
VOCs =	Volatile Organic Compounds
B =	This analyte was found in the associated Method Blank
L=	This analyte is a common laboratory contaminant
µg/L	Micrograms per liter (parts per billion)

Abbr	Chemical
PCE =	Tetrachloroethene
TCE =	Trichloroethene
DCM =	Methylene Chloride
1,1-DCA =	1,1-Dichloroethane
1,1-DCE =	1,1-Dichloroethene

Abbr	Chemical
cis-1,2-DC	cis-1,2-Dichloroethene
CDS =	Carbon Disulfide
1,1,1-TCA	1,1,1 Trichloroethane
1,2-DCA =	1,2 Dichloroethane
BDCM =	Bromodichloromethane

Abbr	Chemical
4-M,2-P =	4-methyl-2-pentanone

Table 6
Metals Detected in Ground Water Samples
Pittsburg River Park LLC
Former Johns Manville Plant
Pittsburg, California

Sample Location	Date	Sb (µg/L)	Ar (µg/L)	Ba (µg/L)	Be (µg/L)	Ca (µg/L)	Cd (µg/L)	Cr (µg/L)	Co (µg/L)	Cu (µg/L)	Fe (µg/L)	K (µg/L)	Mg (µg/L)	Mn (µg/L)	Mo (µg/L)	Na (µg/L)	Pb (µg/L)	Hg (µg/L)	Ni (µg/L)	Ag (µg/L)	Tl (µg/L)	V (µg/L)	Zn (µg/L)
Historical Monitoring Well Data (HLA, ROUX)																							
MW-1	7/17/1986	<1,000	70	6,000	20	NA	200	4,500	1,000	6,000	NA	NA	NA	NA	NA	NA	12,000	19	22,000	<100	<1,000	2,000	48,000
MW-1	2/27/1991	<5	200	NA	20	NA	5	1,500	NA	770	NA	NA	NA	NA	NA	NA	180	1	1,300	52	<50	NA	2,300
MW-2	7/17/1986	<1,000	60	17,000	20	NA	100	2,000	1,000	1,400	NA	NA	NA	NA	NA	NA	1,000	6	7,600	100	<1,000	3,000	4,000
MW-2	10/1/1990	<10	NA	550	<1	NA	<5	<5	<5	<10	NA	NA	NA	NA	50	NA	NA	<0.3	190	<10	<40	10	<10
MW-2	3/27/1991	NA	18	510	NA	93,000	NA	<10	NA	10	170	63,000	3,800	41	59	690,000	NA	NA	110	NA	NA	NA	<10
MW-2	3/28/1991	<5	<5	NA	<10	NA	<1	<5	NA	7	NA	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA
MW-3	7/17/1986	<1,000	60	4,000	20	NA	100	3,600	1,000	4,400	NA	NA	NA	NA	NA	NA	4,400	8	18,000	<100	<1,000	3,000	20,000
MW-3	9/28/1990	10	NA	670	2	NA	<5	14	<5	<5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-3	3/28/1991	<5	<5	NA	<10	NA	<1	<5	NA	10	NA	<5	NA	NA	NA	NA	NA	<0.2	<50	7	<50	NA	9
MW-4	9/28/1990	<10	3	600	<1	NA	<5	5	<5	<10	NA	NA	NA	NA	NA	NA	<30	NA	NA	NA	NA	NA	NA
MW-4	3/27/1991	NA	<5	<10	NA	10,000	NA	6	NA	11,000	1,100,000	20,000	190,000	61,000	<500	350,000	NA	NA	<5	NA	NA	NA	69,000
MW-4	3/28/1991	<5	<5	<10	<1	NA	<1	<5	NA	<2	NA	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA
MW-5	9/27/1990	<10	4	140	<1	NA	<5	<5	<5	<10	NA	NA	NA	NA	20	NA	<30	<3	<10	<10	<40	<10	<10
MW-5	12/19/2000	<10	<5	680	<5	NA	<5	<5	<5	<5	NA	NA	NA	NA	12	NA	<15	<0.2	<5	<5	<10	11	280
MW-6	9/28/1990	<10	3	44	1	NA	<5	6	<5	<10	NA	NA	NA	NA	60	NA	NA	<0.3	<10	<10	<10	<10	<10
MW-6	3/14/1991	NA	<5	30	NA	48,000	NA	<5	NA	<10	180,000	21,000	84,000	2,900	<500	650,000	NA	NA	<5	NA	NA	NA	330
MW-6	12/19/2000	<10	<5	430	<5	NA	<5	<5	<5	<5	NA	NA	NA	NA	23	NA	<15	<0.2	7	<5	<10	<10	230
MW-7	9/28/1990	<10	15	680	<1	NA	<5	<5	<5	<10	NA	NA	NA	NA	<10	NA	NA	<0.3	<10	<10	<40	80	<10
MW-8	9/27/1990	20	7	18	1	NA	<5	<5	<5	<10	NA	NA	NA	NA	50	NA	<30	<3	<10	<10	<40	30	<10
MW-8	12/19/2000	<10	<5	260	<5	NA	<5	<5	<5	<5	NA	NA	NA	NA	13	NA	<15	<0.2	31	<5	<10	14	200
MW-9	9/27/1990	10	16	43	1	NA	<5	<5	<5	<10	NA	NA	NA	NA	50	NA	<30	NA	NA	NA	NA	50	NA
MW-9	3/14/1991	NA	22	20	NA	110,000	NA	<5	NA	240	230,000	23,000	94,000	4,000	<500	350,000	NA	NA	<5	NA	NA	NA	600
MW-9	12/19/2000	<10	12	210	<5	NA	<5	<5	<5	<5	NA	NA	NA	NA	58	NA	<15	<0.2	<5	<5	<10	40	100
MW-10	3/14/1991	NA	<5	160	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	<500	NA	NA	NA	9	NA	NA	NA	NA
MW-10	12/19/2000	120	<5	210	<5	NA	<5	8	<5	51	NA	NA	NA	NA	71	NA	<15	<0.2	36	<5	<10	16	130
MW-11	3/14/1991	NA	<5	200	NA	95,000	NA	6	NA	26	4,000	5,400	63,000	99	<500	480,000	NA	NA	<5	NA	NA	NA	300
MW-12	3/14/1991	NA	6	25	NA	61,000	NA	<5	NA	42	59,000	7,000	61,000	1,200	<500	270,000	NA	NA	<5	NA	NA	NA	33
MW-12	12/19/2000	<10	<5	430	<5	NA	<5	<5	<5	<5	NA	NA	NA	NA	6	NA	<15	<0.2	<5	<5	<10	<10	280
MW-13	3/14/1991	NA	<5	15	NA	51,000	NA	11	NA	<10	5,900	3,400	40,000	110	<500	69,000	NA	NA	<5	NA	NA	NA	<10
MW-14	3/14/1991	NA	22	12	NA	58,000	NA	<5	NA	88	99,000	10,000	32,000	1,300	<500	170,000	NA	NA	<5	NA	NA	NA	170
MW-14	12/19/2000	<10	<5	490	<5	NA	<5	<5	<5	7	NA	NA	NA	NA	12	NA	<15	<0.2	<5	<5	<10	<10	120

Table 6
Metals Detected in Ground Water Samples
Pittsburg River Park LLC
Former Johns Manville Plant
Pittsburg, California

Sample Location	Date	Sb (µg/L)	Ar (µg/L)	Ba (µg/L)	Be (µg/L)	Ca (µg/L)	Cd (µg/L)	Cr (µg/L)	Co (µg/L)	Cu (µg/L)	Fe (µg/L)	K (µg/L)	Mg (µg/L)	Mn (µg/L)	Mo (µg/L)	Na (µg/L)	Pb (µg/L)	Hg (µg/L)	Ni (µg/L)	Ag (µg/L)	Tl (µg/L)	V (µg/L)	Zn (µg/L)
MW-15	3/14/1991	NA	<5	13	NA	51,000	NA	<5	NA	14	3,600	2,500	53,000	250	<500	190,000	NA	NA	<5	NA	NA	NA	<10
MW-15	12/19/2000	<10	<5	440	<5	NA	<5	<5	<5	<5	NA	NA	NA	NA	6	NA	<15	<0.2	6	<5	<10	<10	230
MW-16	12/18/2000	<10	<10	190	<5	NA	<5	<5	<5	5	NA	NA	NA	NA	61	NA	<15	<0.2	10	<5	<20	<10	95
MW-17	12/18/2000	<10	26	150	<5	NA	<5	<5	<5	<5	NA	NA	NA	NA	73	NA	<15	<0.2	<5	<5	<20	<10	210
MW-18	12/18/2000	<10	11	260	<5	NA	<5	<5	<5	<5	NA	NA	NA	NA	<5	NA	<15	<0.2	<5	<5	<20	<10	110
MW-19	12/18/2000	<10	38	110	<5	NA	<5	6	<5	<5	NA	NA	NA	NA	6	NA	<15	<0.2	7	<5	23	<10	110
MW-20	12/18/2000	<10	13	210	<5	NA	<5	<5	<5	<5	NA	NA	NA	NA	<5	NA	<15	<0.2	6	<5	<20	<10	270
MW-21	12/18/2000	<10	7	140	<5	NA	<5	<5	<5	<5	NA	NA	NA	NA	8	NA	<15	<0.2	11	<5	<20	<10	200
FB-2	3/14/1991	NA	NA	NA	NA	<1,000	NA	NA	NA	<10	<10	<1,000	<1,000	<10	<500	<500	NA	NA	NA	NA	NA	NA	<10
PZ-1	9/28/1990	<10	2	58	<1	NA	<5	<5	7	10	NA	NA	NA	NA	60	NA	<30	<0.3	40	<10	<40	<10	<10

Notes:
NA = Not Analyzed
< 10 Compound not detected at or above stated Method Detection Limti
µg/L Micrograms per liter (parts per billion)
ERM believes that the large concentrations of some metals and minerals detected during pre-1992 sampling events are anomolous or are indicative of unfiltered samples. These concentrations are also inconsistent with more recent sampling results for which we know the sampling pr and method.

Abbr	Chemical		
Sb =	Antimony	Mg =	Magnesium
Ar =	Arsenic	Mn =	Manganese
Ba =	Barium	Mo =	Molybdenum
Be =	Beryllium	Na =	Sodium
Ca =	Calcium	Pb =	Lead
Cd =	Cadmium	Hg =	Mercury
Cr =	Chromium	Ni =	Nickel
Co =	Cobalt	Ag =	Silver
Cu =	Copper	V =	Vanadium
Fe =	Iron	Zn =	Zinc
K =	Potassium		

Table 7
Natural Attenuation Parameters in Ground Water
Pittsburg River Park LLC
Former Johns Manville Plant
Pittsburg, California

Sample Location	Date	Bicarbonate Alkalinity (µg/L)	Ammonia (µg/L)	Nitrogen as Ammonia (µg/L)	Chloride (µg/L)	Hardness (µg/L)	Nitrate (µg/L)	Phosphate (µg/L)	Sulfate (µg/L)	Hydroxide Alkalinity (µg/L)
Historical Monitoring Well Data (HLA, ROUX)										
MW-2	3/27/1991	NA	8,900	8,900	NA	NA	<100	1,200	9,600	NA
MW-2	3/27/1991	<1,000	NA	NA	530,000	250,000	8,900	1,200	9,600	<100
MW-4	3/27/1991	1,300,000	NA	NA	390,000	1,000,000	NA	NA	NA	NA
MW-5	3/13/1991	NA	<100	<100	NA	NA	2,000	<1,000	130,000	NA
MW-6	3/14/1991	1,300,000	NA	NA	150,000	400,000	NA	NA	NA	<100
MW-6	3/13/1991	NA	<100	<100	NA	NA	<100	1,200	270,000	NA
MW-7	3/13/1991	NA	<100	540	NA	NA	7,400	<1,000	520,000	NA
MW-8	3/13/1991	NA	<100	<100	NA	NA	17,000	<1,000	22,000	NA
MW-9	3/13/1991	NA	<100	<100	NA	NA	<100	<1,000	100,000	NA
MW-9	3/14/1991	710,000	NA	NA	65,000	300,000	NA	NA	NA	<100
MW-10	3/13/1991	NA	<100	990	NA	NA	5,600	<1,000	600,000	NA
MW-11	3/13/1991	NA	<100	<100	NA	NA	70,000	<1,000	470,000	NA
MW-11	3/14/1991	570,000	NA	NA	310,000	580,000	NA	NA	NA	66,000
MW-12	3/13/1991	NA	<100	<100	NA	NA	19,000	<1,000	230,000	NA
MW-12	3/14/1991	390,000	NA	NA	250,000	460,000	NA	NA	NA	<100
MW-13	3/13/1991	NA	<100	<100	NA	NA	14,000	<1,000	78,000	NA
MW-13	3/14/1991	270,000	NA	NA	52,000	260,000	NA	NA	NA	<100
MW-14	3/13/1991	NA	<100	<100	NA	NA	14,000	<1,000	160,000	NA
MW-14	3/14/1991	310,000	NA	NA	23,000	140,000	NA	NA	NA	<100
MW-15	3/13/1991	NA	<100	<100	NA	NA	4,200	<1,000	170,000	NA
MW-15	3/14/1991	430,000	NA	NA	130,000	330,000	NA	NA	NA	<100
FB-2	3/14/1991	3,900	<100	<100	<200	28,000	<100	<100	3,100	<100

Notes:

NA = Not Analyzed

< 100 Compound not detected at ar above stated Method Detecttion Limit

µg/L Micrograms per liter (parts per billion)

Table 8
Site Conceptual Model
Johns Manville Exposure Pathway Analysis
Pittsburg, California

Primary Sources (Constituent Types)	Primary Release Mechanism	Secondary Sources	Secondary Release Mechanism	Tertiary Release Mechanism	Exposure Medium	Exposure Route	Potential Human Receptors				
							Current Site User[1]	Future Construction Worker/Utility Worker[2]	Future Commercial Worker (e.g., Building Maintenance Worker)	Future Landscape[3] Maintenance Worker	Future Resident[4]
Industrial Activities (Asbestos, VOCs, PAHs, PCBs, Total Petroleum Hydrocarbons, and Heavy Metals)	Ground Water		Volatile Emissions		Air	Inhalation (Indoor)	I	I	C	I	C
						Inhalation (Outdoor)	I	C	C	C	C
						Inhalation (Trench)	I	C	I	I	I
					Groundwater	Incidental Ingestion	I	C	I	I	I
						Dermal Contact	I	C	I	I	I
	Waste Disposal in evaporation pond and asbestos storage area	Soil/fill	Dust		Air	Inhalation	I	C	C	C	C
			Volatile Emissions		Air	Inhalation (Indoor)	I	I	C	I	C
						Inhalation (Outdoor)	I	C	C	C	C
						Inhalation (Trench)	I	C	I	I	I
						Ingestion	I	C	C	C	C
						Dermal Contact	I	C	C	C	C

Notes:
1 = All site buildings are vacant and security fencing/systems preclude trespassers.
2 = The ground water table is 8 ft bgs, presenting potential risks via inhalation, dermal, and incidental ingestion. However, ground water is not a potable drinking water source.
3 = Landscaping is typically performed 0-2 feet below grade and may generate airborne dust.
4 = Human activity will disrupt surface soil and potentially generate airborne dust. In addition, newly constructed homes may be impacted by volatile organic compounds migrating through the soil and into the overlying structures.
VOCs have been detected in Site soil and/or ground water.
C = Complete exposure pathway
I = Incomplete exposure pathway
NE = Not Evaluated; Off-site soil investigations have not been performed

Table 9
Soil and Fill Materials Remedial Technologies and Process Options
Pittsburg River Park LLC
Former Johns Manville Plant
Pittsburg, California

General Response Action	Remedial Technology	Process Option	Description	Effectiveness	Implementability	Cost	Summary of Screening
No Action	No Action	None	No institutional controls or treatment.	Not effective for protecting human health and environment.	Implementable but not acceptable to the general public or government agencies.	None	Required as a baseline for comparison by the National Contingency Plan. Retained
Institutional Controls / Limited Action	Institutional Control	Deed Notification /Restriction	Implement deed notification to inform future owners of the presence of potentially hazardous substances at the site and /or implement deed restriction to restrict future use of site.	Effectiveness for protection of human health would depend on enforcement of and compliance with deed restrictions	Technically implementable. Specific legal requirements and authority would need to be met.	Low capital	Not consistent with proposed future land use. Not retained.
	Access Control	Fencing /warning signage	Construct or maintain existing site fencing and signage to control site access by the general public thereby reducing potential exposure to contaminants	Effective for reducing exposure risk to the general public provided fencing and signage is maintained in the long term.	Technically implementable but not consistent with proposed future land use.	Low capital.	Not consistent with proposed future land use. Not retained.
In Situ Soil Treatment	Biological Treatment	Bioventing	Oxygen is supplied through direct low-flow air injection into residual contamination in soil.	Effective for petroleum hydrocarbons and non-halogenated VOCs. Generally ineffective for halogenated VOCs.	Technically implementable. Monitoring of off-gasses at ground surface may be required .	Low capital and O&M. Low cost relative to other in situ options.	Potentially applicable for VOC removal in soils. Does not address the fill material or ACM. Not retained.
		Enhanced Bioremediation	Stimulation of naturally occurring microbes by circulating water-based solutions through the contaminated soils to enhance in situ biological degradation of organic contaminants or immobilize inorganic contaminants.	Effective for VOCs, SVOCs, PAHs, and petroleum hydrocarbons.	Technically implementable. However, optimal distribution of water/nutrients in unsaturated zone may be difficult to achieve. Circulation of water/nutrients may encourage contaminant mobility and impact to groundwater.	High capital. Moderate O&M. High cost relative to other in situ options	High cost relative to competing technologies. Not retained.
		Natural Attenuation	Natural biotransformation processes such as volatilization, biodegradation, adsorption, and chemical reactions with soil materials can reduce contaminant concentrations to acceptable levels.	Generally not effective for reducing risk to human health and ongoing threats to groundwater	Technically implementable. Generally not perceived as an acceptable response by the local community or government agencies	Negligible capital. Low O&M. Low cost relative to other in situ options	Generally not acceptable to the State or local community. Not retained
		Phytoremediation	Process that uses plants to remove, transfer, stabilize, and destroy contaminants in soil.	Still in the demonstration phase. Potentially effective for metals, solvents, and petroleum hydrocarbons	Technically implementable, but inconsistent with proposed future land use. Emerging technology still in the demonstration stage and generally unfamiliar or unacceptable to governmental regulators.	Low capital and O&M. Low cost relative to other in situ options	Inconsistent with proposed future land use. Not retained.
	Physical/Chemical Treatment	Soil Flushing	The extraction of contaminants from soil with aqueous solution accomplished by passing fluid through in-place soils using an injection or infiltration process. Extraction fluids must be recovered from underlying aquifer.	Effective for VOCs and inorganic chemicals. Presence of fine grained soils limits effectiveness.	Technically implementable. However, there has been little commercial application. Regulatory concerns over potential to wash contaminants beyond fluid capture zones and introduction of surfactants in to the subsurface make permitting difficult.	High capital and O&M. High cost relative to other in situ options	High cost relative to competing technologies. Not retained.
		Soil Vapor Extraction	Vacuum is applied through extraction pipes to create a pressure/concentration gradient in impacted areas, which induces gas-phase volatiles to diffuse through soil to extraction wells. The process includes a system for treating off-gas. Air flow also induces aerobic bioremediation of petroleum hydrocarbons.	Effective for VOCs in granular soils. Presence of fine grained soils reduces effectiveness.	Technically implementable. Application of technology is well understood.	Low capital - systems already in place at source areas. Moderate O&M. Moderate cost relative to other in situ options	Potentially applicable for VOC removal in soils. Does not address the fill material or ACM. Not retained.
		In Situ Vitrification	Uses an electric current to melt soil at extremely high temperatures and thereby immobilize most inorganics and destroy organic pollutants by pyrolysis.	Effective for SVOCs and inorganic chemicals. Less effective for VOCs, and not effective for fuels.	Technically implementable. Resulting fused material in subsurface could interfere with redevelopment plans and future land use	Very high capital. Low O&M. High cost relative to other in situ options	Limited effectiveness for VOCs. High cost relative to competing technologies. Not retained.
		Thermally Enhanced Soil Vapor Extraction	Uses electrical resistance, electromagnetic, or hot-air/steam injection to increase the volatilization rate of semivolatiles and facilitate extraction.	Enhancement technology effective in soils with high moisture content. Effective for mobilizing SVOCs. Limited added benefit for VOCs	Technically implementable. However, implementation would require replacement of existing SVE wells with heat resistant wells.	High capital. Moderate O&M. High cost relative to other in situ options	High cost relative to competing technologies. Not retained.
Removal	Removal/Off-Site Disposal	Excavation	Excavation of impacted material with disposal at an off-site location	Effective for complete range of contaminant groups.	Technically implementable in some areas. Pretreatment of excavated material may be required to meet land disposal restrictions.	Moderate to high capital. Negligible O&M. High cost relative to competing technologies.	Potentially applicable. Retained.

Table 9
Soil and Fill Materials Remedial Technologies and Process Options
Pittsburg River Park LLC
Former Johns Manville Plant
Pittsburg, California

General Response Action	Remedial Technology	Process Option	Description	Effectiveness	Implementability	Cost	Summary of Screening
Off-site management	Land disposal	Landfill	Disposal of impacted material at a permitted, off-site landfill	Effective for complete range of contaminant groups.	Technically implementable. Impacted material must be profiled and meet land disposal restrictions. Pre-treatment may be required if material does not meet restrictions.	High capital depending on types of waste present. Negligible O&M	Potentially applicable disposal option for excavated materials. Retained.
On-site management	Consolidation	Landfill	Consolidation and capping of impacted fill material on site at the North Parcel.	Effective for complete range of contaminant groups in proposed unrestricted land use areas. Effective for preventing exposure. Less effective than land disposal for protection of groundwater	Technically implementable.	Moderate capital costs. Low O&M. Groundwater monitoring may be required to ensure contaminants are not impacting groundwater.	Potentially applicable disposal option for excavated materials. Retained.
		Landfill	Consolidation of impacted fill material on site in a berm consisting of engineered storage cells.	Effective for complete range of contaminant groups in proposed unrestricted land use areas. Effective for preventing exposure. Limits infiltration and leachate formation, but less effective than land disposal for protection of groundwater	Technically implementable.	Moderate capital costs. Low O&M. Groundwater monitoring may be required to ensure contaminants are not impacting groundwater.	Potentially applicable disposal option for excavated materials. Retained.
Ex Situ Soil Treatment	Biological Treatment	Biopiles	Excavated soils are mixed with soil amendments and placed on a treatment area that includes leachate collection systems and some form of aeration.	Solid-phase (soil) process is most effective for non-halogenated VOCs and fuel hydrocarbons. Not effective for some halogenated VOCs and SVOCs	Difficult to implement. Treatment area may require complete enclosure. Addition of amendment material results in volumetric increase in treated material. Leachate and off-gas may require treatment.	Moderate capital and O&M. Moderate cost relative to other ex situ biological technologies	Difficult to implement and high cost relative to other competing technologies. Does not address the fill material or ACM. Not retained
		Composting	Controlled biological process by which excavated soils are mixed with bulking agents and organic amendments to enhance microorganism conversion of organic contaminants to innocuous, stabilized byproducts.	Most effective for treatment of fuels and PAHs. Moderately effective for treatment of halogenated VOCs.	Difficult to implement. Treatment area may require complete enclosure. Addition of amendment material results in volumetric increase in treated material. Off-gas may require treatment.	Moderate capital and O&M. High cost relative to other ex situ biological technologies	Difficult to implement and high cost relative to other competing technologies. Does not address the fill material or ACM. Not retained
		Slurry Phase Biological Treatment	The controlled treatment of excavated soil in a bioreactor, where the contaminated soil is maintained in suspension with water and mixed with nutrients and oxygen.	Effective for treatment of non-halogenated VOCs and SVOCs. Treatment of halogenated compounds requires addition of specially adapted cometabolite organisms	Difficult to implement. Sizing (sorting) of heterogeneous materials prior to treatment, dewatering of fine grained material after treatment, and treatment of resulting wastewater can be difficult and expensive.	High capital and O&M. High cost relative to other ex situ biological technologies	Difficult to implement and high cost relative to competing technologies. Not retained
	Physical/Chemical Treatment	Chemical Reduction / Oxidation	Oxidizing/reducing agents are added to soils to convert hazardous contaminants to compounds that are less toxic, more stable, or inert. Dehalogenation processes rely on reagents and heating in a reactor to dechlorinate halogenated VOCs.	Most effective for inorganics. Less effective for non-halogenated organic chemicals. Effectiveness can be limited by incomplete dechlorination and breakdown of chlorinated compounds to daughter compounds with greater mobility and toxicity than parent compounds.	Technically implementable. Not recommended for waste with high contaminant concentrations because of the large amounts of oxidizing/reducing agent required	High capital. Low O&M. High cost relative to other ex situ physical/chemical technologies	High cost relative to competing technologies. Not retained
		Soil Washing	Wash soil with water-based surfactants, detergents, acids, etc., to remove chemicals from soil particles. Treat or dispose of high chemical concentration residuals fluids.	Most effective for inorganic chemicals, SVOCs and fuels. Less effective for VOCs. Removal of organics adsorbed to clay-sized particles may be difficult	Difficult to implement for complex waste mixtures. Complex mixtures of contaminants can make formulation of washing fluids difficult. Residuals may be difficult to extract from matrix and may require additional treatment/disposal.	High capital and O&M. High cost relative to other ex situ physical/chemical technologies	Difficult to implement. Difficult to formulate washing fluids for complex waste mixtures. Soils may remain toxic due to difficulty extracting residual fluids. High cost relative to competing technologies. Not retained.
		Incineration	High temperatures, 871-1,204 ^{o} C (1,600-2,200 ^{o} F), are used to combust (in the presence of oxygen) organic constituents in hazardous wastes.	Effective for removing/destroying chlorinated hydrocarbons. Not effective for inorganic chemicals.	Technically implementable. Incineration would be accomplished at a permitted off-site facility.	High capital and high O&M. High cost relative to other ex situ technologies	High cost relative to competing technologies. Not retained.
		Thermal Desorption	Wastes are heated within a continuous flow reactor to 320 to 560 ^{o} C to volatilize organic contaminants. A carrier gas or vacuum system transports volatilized organics to the gas treatment system.	Effective for VOCs, SVOCs and fuels. Fine grained soils increase treatment time as a result of binding of contaminants to soil.	Technically implementable. However, particles size screening, dewatering to achieve acceptable moisture content, and off-gas treatment may be required.	High capital. High O&M. Lower cost than incineration.	High cost relative to competing technologies. Extensive preparation for treatment will be required. Not retained.

Notes:
Shading indicates Process Option not retained
O&M = operation and maintenance
PAH = polycyclic aromatic hydrocarbon
SVE = Soil Vapor Extraction
SVOC = semivolatile organic compound
VOC = volatile organic compound

Table 10
Ground Water Remedial Technologies and Process Options
Pittsburg River Park LLC
Former Johns Manville Plant
Pittsburg, California

General Response Action	Remediation Technology	Process Option	Description	Effectiveness	Implementability	Cost	Summary of Screening
No Action	No Action	None	No institutional controls or treatment.	No way to determine the progress of natural attenuation.	Implementable but generally not acceptable to the general public or government agencies.	None	Required as a baseline for comparison by the National Contingency Plan. Retained
Institutional Controls / Limited Action	Institutional Control	Deed Notification /Restriction	Implement deed notification to inform future owners of the presence of potentially hazardous substances at the site and /or implement deed restriction to restrict future use of site.	Effectiveness for protection of human health would depend on enforcement of and compliance with deed restrictions	Technically implementable. Specific legal requirements and authority would need to be met.	Low capital	Potentially Applicable. Retained.
	Long term monitoring	Ground water monitoring	Long term gauging and sampling of monitoring well network to assess plume stability and contaminant concentration trends over time.	Effective for tracking plume migration over time.	Technically implementable. Monitoring well network already established at and surrounding the site.	Negligible capital. Moderate O&M.	Potentially applicable in combination with other technologies. Retained
Containment	Physical ground water barrier	Low Permeability Wall	Construction of a low-permeability vertical barrier to restrict ground water flow and contaminant migration in the downgradient direction. Long-term monitoring of containment structure required.	Effective for containing impacted ground water, diverting impacted ground water from drinking water intake, or providing a barrier for ground water treatment systems.	Technically implementable. Application of technology is well understood.	High capital. Negligible O&M.	High cost relative to competing technologies. Not retained
In Situ Ground Water Treatment	Monitored Natural Attenuation	Intrinsic Bioremediation	Reduction of dissolved concentrations through naturally occurring processes such as dilution, volatilization, biodegradation, or adsorption. Sampling and analysis of ground water sample for indicators of natural attenuation is generally included.	Effective for fuel hydrocarbons, and halogenated and non-halogenated VOCs. Previous studies indicate that natural attenuation is occurring at the site.	Technically implementable. Monitoring well network already established at site.	Negligible capital. Moderate O&M. Low overall cost relative to active remediation options.	Potentially applicable. Retained.
	Thermal Treatment	Steam Heating	Steam heating involves the installation of a series of steam injection wells within the ground water treatment area. Steam is generated in a boiler on site and injected at the wells, which gradually raises the temperature of the ground water and soil. This technology also uses an SVE system to control buildup of volatilized contaminants and non-condensable gases.	Effective for fuels and SVOCs and VOCs.	Technically implementable. SVE would be required to capture steam and vaporized contaminants. High temperatures will require destruction of existing ground water vapor and monitoring wells and installation of heat resistant wells.	High capital and O&M. High cost relative to other in situ options	High cost relative to competing technologies. Not retained
	Physical Treatment	In-well air stripping	In-well aerators perform air stripping of ground water within the well. Ground water is not removed from the well, but is circulated between an upper and lower screen in the well. Stripped volatile compounds enter the vapor phase and are recovered by vapor extraction.	Effective for halogenated and non halogenated VOCs, SVOCs and fuels. Cost effective in areas with deep water tables because impacted ground water does not have to be pumped to surface.	Technically implementable. However, based on experience with above ground air strippers, iron fouling may make stripping wells unusable within a brief timeframe. Pilot testing would be required to demonstrate implementability.	Moderate capital. Low O&M. Moderate cost enhancement option	Potentially applicable for impacted ground water in source areas. Pilot testing required to demonstrate effectiveness and implementability. Retained.
		Air Sparging	Air is injected into the saturated zone to induce mechanical stripping and volatilization of contaminants. Introduction of oxygen also enhances biodegradation. SVE is required to capture vapor phase contaminants	Effective for VOCs and fuels.	Technically implementable. The presence of the clay or tight formations inhibits vertical flow and limits recovery of stripped VOCs in some source areas.	Moderate capital. Low O&M. Moderate cost relative to other in situ treatment options	May be applicable in combination with installation of vent wells to penetrate clayey silt layer. Retained
In Situ Ground Water Treatment (continued)	Biological Treatment	Enhanced Aerobic Bioremediation	Injection of oxygen or oxygen-releasing material into or upgradient of the contaminated zone to enhance degradation of organic compounds through respiration.	Effective for non-halogenated VOCs, SVOCs, and fuels. More effective for dichloroethene and vinyl chloride. However, may not be effective because of high soil oxidant demand.	Technically implementable. Most case studies indicate application requires a dense injection grid. Consequently this option is difficult to implement in areas occupied by historical buildings and structures or off-site developed areas.	High capital. Low O&M. High cost relative to other in situ treatment options	May not be effective because of high soil oxidant demand. Higher cost than competing alternatives and difficult to implement in developed areas. Not retained

Table 10
Ground Water Remedial Technologies and Process Options
Pittsburg River Park LLC
Former Johns Manville Plant
Pittsburg, California

General Response Action	Remediation Technology	Process Option	Description	Effectiveness	Implementability	Cost	Summary of Screening
Collection/Ex Situ Treatment	Ground water pumping	Extraction wells or trenches	Ground water pumping using extraction wells or trenches. Objectives of ground water extraction include removal of dissolved contaminants from the subsurface and containment of contaminated ground water to prevent migration	Effective for plume containment and source area migration control.	Technically implementable. Groundwater must be treated prior to reinjection.	Moderate capital. Moderate O&M. Treatment of Groundwater is required as well as continued monitoring.	Potentially applicable for contaminant mass removal in source areas and South Plume migration control. Retained.
	Chemical/Physical Treatment	Air Stripping	Extracted water is passed downward against a stream of rising air. The countercurrent stream of air strips VOCs from the water. The resulting VOC laden air is treated following removal from the vessel, if required.	Effective for removal of VOCs from extracted ground water. Not effective for inorganic chemicals or organic compounds with low volatility	Technically implementable. Treatment of off-gas may be required.	High O&M. Moderate cost relative to other ex situ treatment options.	Applicable for treatment of VOCs dissolved in ground water but not suitable for compounds with low volatility. Not Retained.
		Liquid-phase carbon adsorption	Extracted water or vapor is passed through vessels containing granular activated carbon. Organic compounds with an affinity for carbon are transferred from the aqueous or vapor phase to the solid phase by sorption to the carbon.	Most effective for hydrocarbons and SVOCs. Less effective for halogenated VOCs	Technically implementable.	Moderate capital. High O&M.	Applicable for treatment of extracted ground water. Retained.
		UV Oxidation /reduction.	UV light and/or oxidizing chemicals (e.g., hydrogen peroxide) can be used to destroy organic constituents.	Effective for most organic compounds including petroleum hydrocarbons and halogenated VOCs.	Technically implementable.	High capital and moderate O&M. High cost relative to other ex situ treatment options	Higher cost than competing technologies. Not retained.
	Biological Treatment	Bioreactor contact Beds	Water is passed through a reactor vessel that contains a fixed bacterial film. Contaminants are aerobically degraded by the bacteria as the water passes through the reactor vessel.	Effective for fuel hydrocarbons and SVOCs. Treatment of halogenated compounds may require addition of specially adapted cometabolite organisms	Technically implementable. However, sustaining microbial populations can be difficult.	High capital and moderate O&M. High cost relative to other ex situ treatment options	Higher cost than competing technologies. Not retained.
Disposal	Off-site Disposal	Discharge to Publicly-Owned Treatment Works (POTW)	Discharge of extracted ground water to the sanitary sewer for conveyance to a local POTW for treatment and discharge.	Effective for disposal of extracted ground water.	Technically implementable. Requires sampling to ensure compliance with permit discharge standards. Treatment may be required prior to discharge.	Negligible capital. Low O&M.	Treatment would be required prior to disposal of extracted ground water. Not Retained.
	On-Site Disposal	Injection wells	Discharge of extracted ground water back into aquifer using injection wells	Effective for disposal of extracted ground water.	Technically implementable. Permits can be difficult to obtain.	Moderate capital. Low O&M.	More costly than POTW discharge. Not retained.

Notes:
Shading indicates Process Option not retained
O&M = operation and maintenance
POTW = Publically owned treatment works
SVE = Soil Vapor Extraction
SVOC = semivolatile organic compound
UV = ultra violet
VOC = volatile organic compound

Table 11
Comparative Analysis of Soil/Fill Material Remedial Alternatives
Pittsburg River Park LLC
Former Johns Manville Plant
Pittsburg, California

Evaluation Criteria	Remedial Alternatives			
	1	**2**	**3**	**4**
	No Action	**Excavation and Off-Site Disposal**	**Excavation and Consolidation at North Parcel**	**Excavation and Consolidation in Eastern Boundary Berm**
Overall Protection of Human Health	Not Protective	Protective	Protective	Protective
Compliance with ARARs	None	Complies	Complies	Complies
Long-Term Effectiveness and Permanence	Low	Highly effective	Highly effective	Highly effective
Reduction of Toxicity, Mobility, or Volume through Treatment	Low	Moderate	Moderate	Moderate
Short-Term Effectiveness	Highly effective	Moderately effective	Moderately effective	Moderately to Highly effective
Implementability	High	High	High	High
Cost (Present Worth)	$0	$3,104,000	$2,073,000	$2,453,000
State and Community Acceptance	Low	Moderate	Low	High

Table 12
Comparative Analysis of Ground Water Remedial Alternatives
Pittsburg River Park LLC
Former Johns Manville Plant
Pittsburg, California

Evaluation Criteria	Remedial Alternatives			
	1	**2**	**3**	**4**
	No Action	**Extraction/Treatment with Monitored Natural Attenuation**	**Monitored Natural Attenuation**	**Natural Attenuation with LandUse Restriction**
Overall Protection of Human Health	Moderate	Protective	Protective	Protective
Compliance with ARARs	None	Complies	Complies	Complies
Long-Term Effectiveness and Permanence	Moderate to Highly effective	Highly effective	Highly effective	Highly effective
Reduction of Toxicity, Mobility, or Volume through Treatment	Moderate to High	High	Moderate to High	Moderate to High
Short-Term Effectiveness	Highly effective	Moderately effective	Moderately to Highly effective	Highly effective
Implementability	High	High	High	High
Cost (Present Worth)	$0	$485,000	$139,000	$80,000
State and Community Acceptance	Low	Moderate	High	Moderate to High

Appendix A
Treatability Study Report

The following information describes activities associated with planning, implementing, maintaining, and documenting the effectiveness of the Vacuum Enhanced Extraction (VEE) Treatability Study (treatability study) for the fill materials within the former evaporation pond. This information is presented pursuant to the *Project Reporting* section of the DTSC-approved *Final Treatability Study Workplan*, prepared by ERM-West, Inc. (ERM) and dated 18 May 2005.

The treatability study for petroleum hydrocarbons found in fill materials and ground water within the former evaporation pond focused on removal of nonaqueous-phase liquid (NAPL) using VEE, while enhancing the natural biodegradation of residual petroleum hydrocarbons. This process entailed applying a vacuum through wells near what is understood to be the source of heavy petroleum hydrocarbons within fill materials in the central portion of the former evaporation pond. The intended effect of this system was to:

- Enhance the mobility of petroleum hydrocarbons and to periodically remove accumulated NAPL from wells;
- Promote biodegradation of residual petroleum hydrocarbons in the soil through increased subsurface airflow; and
- Mobilize incidental volatile constituents of the petroleum hydrocarbons and treat them through granular activated carbon (GAC) before discharge to the atmosphere.

The components of the completed VEE program include:

- Installation of 39 extraction wells, manifolded with suitable above-ground soil vapor extraction (SVE) piping network;
- Application of a low-level vacuum using a 1,000 cubic feet per minute (cfm) blower skid to enhance product collection/accumulation at the extraction wells;
- Weekly removal and off-site disposal of total fluids from each well (i.e., standing water and collected NAPL) using a vacuum truck;
- Operation and monitoring of the VEE system for permit compliance as well as biological degradation parameters; and
- Implementation of a NAPL skimmer pump in an effort to focus NAPL recovery from selected wells, which continued to yield limited quantities of free-phase hydrocarbons.

Details for the system are presented below. All work described herein was conducted under a site-specific Health and Safety Plan (HASP) prepared in accordance with Title 8, Section 5192, of the California Code of Regulations.

PRE-FIELD ACTIVITIES

Prior to implementing the treatability study pursuant to DTSC approval, ERM coordinated all permitting and site clearance activities. ERM applied for and received permits from Contra Costa County Health Services Department, Hazardous Materials Programs, to construct the vapor extraction wells. In addition, we applied for and received a permit to construct and operate the SVE system from the Bay Area Air Quality Management District.

ERM also coordinated and implemented the performance of a survey at the well locations by a licensed underground utilities location contractor. ERM prepared a site-specific HASP addressing physical and chemical hazards associated with the specific scope of work. All ERM employees, subcontractors, and other site visitors were required to review and comply with the HASP prior to entering the work zone. Additionally, ERM performed daily "tailgate" health and safety meetings to address planned activities prior to implementing daily site work.

SYSTEM INSTALLATION

ERM installed 39 vapor extraction wells on 50-foot centers and approximately 3,500 feet of conveyance piping. Based on the composition of fill materials and distribution of NAPL within the former evaporation pond, as presented in ERM's March 2005 *Data Summary Report*, ERM constructed the extraction well network so as to maximize potential recovery of separate-phase petroleum hydrocarbons. A cross section identifying typical well construction relative to fill thickness and extent of petroleum hydrocarbon impacts is presented in Figure A-1. A skid-mounted blower, knockout vessel, and the GAC vessels were located inside the warehouse to minimize site disruptions. A process flow diagram of the system is presented in Figure A-2. The final layout of the wells, piping, and equipment is shown in Figure A-3. During the initial startup, perimeter noise data emanating from the VEE blower was collected. To alleviate the potential noise nuisance to site neighbors, a sound enclosure was installed. Subsequently, noise data with the sound enclosure in place indicated that noise levels were reduced satisfactorily.

Maximum depth of extraction wells, dependent upon the factors described above, ranged from approximately 20 to 25 feet below ground surface (bgs), and each well was constructed with 4-inch PVC casing (Figure A-1). The wells were screened from the top of the petroleum-hydrocarbon-impacted zone (based on boring log data) to the bottom of the well (approximately 5 to 20 feet bgs). The wells were completed above the ground surface to facilitate the installation of piping materials. During well installation, ERM collected soil samples from selected depths (approximately every 5 feet) at each location to supplement existing information on the distribution of petroleum hydrocarbons in shallow soils. Samples were analyzed for total petroleum hydrocarbons in the diesel range (TPH-d) and TPH in the motor oil range (TPH-mo) using United States Environmental Protection Agency (USEPA) Method 8015-modified.

Following installation of the extraction wells, well casings and ground surface elevations of the wells were surveyed to the nearest 0.01 foot, and the x and y coordinates to the nearest 0.1 foot, by a licensed land surveyor. All site surveying was from a local datum referenced to mean sea level. The horizontal coordinate values were surveyed relative to the 1983 North American Datum (NAD83). Elevations were surveyed relative to the 1929 National Geodetic Vertical Datum (NGVD29).

A process flow diagram for the system is presented on Figure A-2 and consists of the following:

- An SVE blower skid with a blower rated for 1,000 cfm air-flow and approximately 80-inch water column vacuum and an interlocked moisture knockout pot;
- Vapor abatement using two parallel sets of 1,000-pound and 2,000-pound GAC canisters piped in series;
- The SVE blower was connected to extraction wells via 6-inch-diameter PVC conveyance piping placed on the ground surface approximately consistent with the location shown on Figure A-3;
- Each extraction well had a well-head valve arrangement to isolate the individual well from the SVE system during the weekly NAPL/liquids removal event;
- Each extraction well was also equipped with a sample port and a vacuum gauge to monitor well-head performance;
- Conveyance piping was connected to the SVE skid and GAC canisters with a suitable system of piping and hoses to facilitate spent GAC changeouts; and

- The system was energized with three-phase electrical power from a convenient on-site location.

SYSTEM OPERATION

The system was initially started on 15 June 2005, but operations were intermittent due to excessive water accumulation in the knockout vessel and only daytime system operation to alleviate potential noise nuisance to the neighboring community. Full-time operation of the system began on 24 June 2005, after optimizing system vacuum and subsequent to the construction of the noise enclosure. Since then, system operation parameters have been collected weekly and are summarized on Table A-1.

Based on the distribution of the NAPL, perimeter wells have been operated in "air induction mode." In this mode, they were left isolated with the caps off to allow ambient air to flow into the subsurface in the direction of NAPL-rich areas and to also enhance the biodegradation in the area of interest. Also, three wells (SVE-23, SVE-29, and SVE-30; Figure A-3) were isolated from the system due to the high water levels in each well, which were causing a higher rate of water accumulation in the knockout drum. No free-phase product was ever observed in wells SVE-23 and SVE-29; only a sheen was periodically noted in well SVE-30.

Weekly site visits were made to obtain operational data such as vapor concentrations at wells, bioremediation parameters (i.e., carbon dioxide, oxygen, and methane), and vacuum measurements. ERM used portable equipment such as a PID, an oxygen/carbon dioxide meter, and vacuum gages to collect field parameters. In addition, fluid level measurements were collected during the weekly site visits using an oil/water interface probe to evaluate the effectiveness of the system at removing NAPL in the ground water. The results of the weekly measurements are presented in Table A-2 for the six wells in which appreciable amounts of NAPL were measured consistently. The behavior of these wells during the course of the treatability study is discussed below.

- In general, water levels appear to have decreased in all wells over the course of the treatability study.
- Product thickness in SVE-20 started at 0.83 foot and dropped to 0.01 foot after the first mobile high-vacuum extraction (HVE) event. Since then, product thickness ranged from a sheen to 0.07 foot, and is currently at 0.01 foot.
- Product thickness in SVE-21 initially ranged from 0.90 foot to 5.59 feet. SVE-21 has consistently shown the highest NAPL accumulations likely due to being located at the lowest part of the fill area. To enhance

NAPL recovery at SVE-21, a skimmer was initially placed from 4 to 18 August. The NAPL skimmer operation was resumed in SVE-21 on 23 August to address the increase in NAPL thickness to 4.44 feet. Currently the measurable product thickness is 0.37 foot. Overall, approximately 19.2 gallons of free product have been removed from the well using the NAPL skimmer.

- Measurable product thickness in SVE-22 has ranged from a sheen to 0.90 foot. The skimmer operation was implemented at SVE-22 from 18 to 23 August, during which the product thickness decreased to 0.03 foot. Overall, approximately 0.02 gallon of free product was removed from SVE-22. Product thickness is currently 0.45 foot.
- Measurable product thickness in SVE-28 has typically ranged from a sheen to 0.93 foot, with a single outlier of a measurement of 2.43 feet. Disregarding the outlier, the average product thickness has been 0.47 foot. Currently, measurable product thickness is 0.76 foot.
- Measurable product thickness in SVE-30 has ranged from nondetect to 2.07 feet. Currently, measurable product thickness is 0.69 foot.
- Free product was not measured in SVE-38 until 28 July, at which time a sheen was detected. The product thickness has steadily increased to the current measurement of 1.50 feet.
- Generally, oxygen and carbon dioxide measurements in the extraction wells indicate that favorable conditions exist for the occurrence of petroleum hydrocarbon biodegradation in the subsurface, due to air delivery from the VEE.

Mobile HVE events were conducted weekly at all 18 of the interior wells. Ten extraction events were completed between 24 June and 26 August 2005. During these events, total fluids were removed from each extraction well by isolating the well from the system using the wellhead control valve and inserting a 2-inch stinger into the well. A vacuum of approximately 29 inches mercury was applied using a vacuum truck contracted through Evergreen Environmental Services. The vacuum was applied for approximately 5 minutes at each location and 10 minutes at the wells that contained measurable NAPL. In addition to recovering NAPL, ERM discovered that this total fluids removal approach generally dewatered the low-permeability fill materials and underlying native clay, enhancing flow of NAPL into individual wells. During each HVE event, the evacuated fluids were periodically passed through a knockout tank to estimate the fraction of NAPL in total liquids removed. The results of the HVE events are summarized on Table A-3 and are discussed below.

Overall, 14,120 gallons of total fluids have been removed, of which approximately 201.7 gallons are NAPL and approximately 104.3 gallons were removed in the dissolved phase.

GROUND WATER MONITORING

ERM also implemented a limited ground water monitoring program to evaluate reductions in dissolved-phase petroleum hydrocarbons in the immediate vicinity of the former evaporation pond. Near the beginning of the HVE events, ERM collected a sample from SVE-20 to aid in evaluating dissolved-phase removal of product. Existing monitoring wells MW-6 (downgradient and north of the pond) and MW-10 (upgradient and south of the pond, based on historical data), along with SVE-36 (cross-gradient and east of the pond), were later used as monitoring points to evaluate the reduction of dissolved-phase concentrations. Locations of these wells are shown in Figure A-3. Each well was purged and sampled in accordance with applicable California Well Standards.

Samples were analyzed by a California-certified analytical laboratory for TPH-mo and TPH-d using USEPA Method 8015-modified. Additionally, each sample was analyzed for chlorinated and aromatic volatile organic compounds (VOCs) using USEPA Method 8260B. The results of these samples are summarized in Table A-4 and discussed below.

Historically, MW-4 (last sampled in February 2002) reported TPH-mo and TPH-d ranges at concentrations of 10,000 and 51,000 micrograms per liter (µg/L), respectively. The most recent data for MW-10 (last sampled in December 2000) indicated nondetectable concentrations for TPH. The most recent data for MW-6 (last sampled in December 2000) indicate TPH-mo and TPH-d concentrations of 310 and 220 µg/L, respectively.

A sample was collected from SVE-20 on 11 July 2005. The results indicated a concentration of 6,200,000 µg/L of TPH-mo. This concentration was used to calculate the overall dissolved-phase product removal.

ERM performed sampling pursuant to the *Final Treatability Study Workplan* in July and August 2005. Samples collected from MW-6 and MW-10 indicate maximum TPH-mo concentrations of 1,500 and 970 µg/L, respectively. The elevated TPH detection in MW-10 suggests the potential for an off-site, upgradient source (Figure A-3). The sample collected from SVE-36 (located 50 feet west of MW-4) indicated a TPH-diesel concentration of 590,000 µg/L. VOC concentrations in MW-6 and MW-10

were nondetectable. However, benzene, toluene, and xylenes were detected in SVE-36 at concentrations of 2.1, 0.63, and 1.2 µg/L, respectively.

CONCLUSIONS

ERM has made the following conclusions regarding the VEE treatability study effectiveness:

- The VEE treatability study has removed in excess of 300 gallons of mobile petroleum hydrocarbons.
- Subsequent implementation of a NAPL skimmer at selected wells has aided in the removal of an additional 20 gallons of NAPL.
- The application of VEE has had a secondary benefit of causing aerobic biodegradation of residual petroleum hydrocarbons.
- Since VEE system installation, only six out of 39 SVE wells indicated measurable product (thickness in excess of a sheen), which could be cost-effectively addressed by implementing mobile HVE or a NAPL skimmer. NAPL occurrence has been localized generally near the deepest part of former evaporation pond centered around SVE-21.
- Measured NAPL thicknesses at six of the 39 SVE wells have significantly dropped since the implementation of VEE, with current thicknesses ranging from 0.01 to a maximum of 1.5 feet. The apparent product thickness is typically 5 to 10 times lower than measured values (Appendix A, EPA/600/R-98/128, September 1998). Thus, the range of apparent thickness of the mobile NAPL remaining at the site is between a sheen to 0.15 feet.
- Ground water monitoring results pursuant to implementation of the treatability study indicate that TPH constituents are not appreciably migrating away from the former evaporation pond area, and that an off-site, upgradient source of TPH may be present.
- At apparent NAPL thicknesses near 0.10 foot, continuation of mobile HVE in tandem with VEE operation for NAPL recovery is not cost-effective.

RECOMMENDATIONS

ERM recommends the following for the future operation of the VEE treatability study at the site:

- Discontinue implementation of mobile HVE for NAPL recovery at the site.

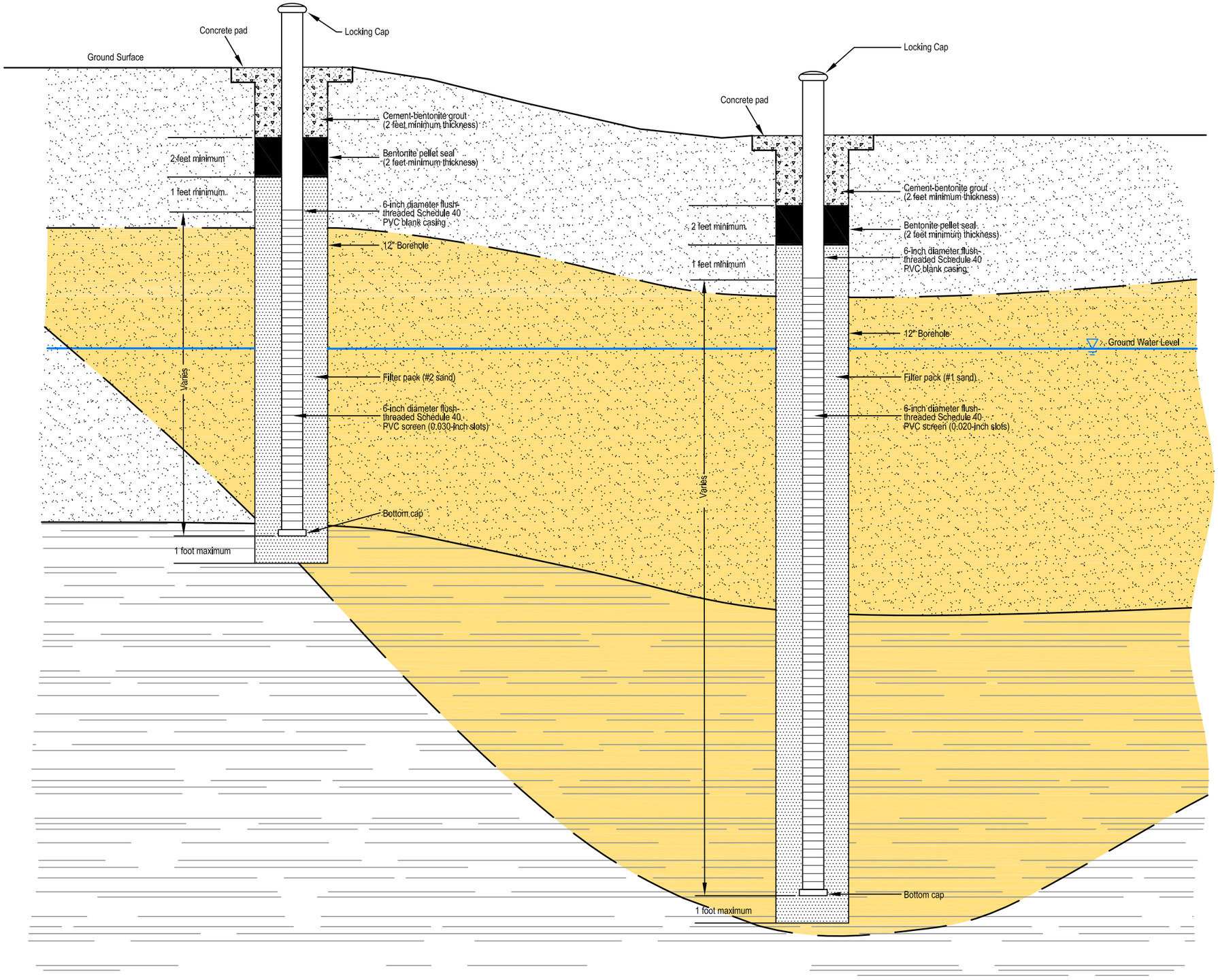
- Continue operation of VEE for 2 additional weeks with NAPL recovery using a skimmer that is rotated between selected wells centered around SVE-21, where NAPL accumulations have been historically highest.
- Shut down VEE operation after 2 weeks and continue with skimmer operation at selected wells to remove remaining quantities of accumulated NAPL.

Project No. 0025556.04

Date: 08/30/05

Drawn By: D. Ludlam

CAD File: G:\0025556\04\0025556-07.dwg



LEGEND

- Fill/Sand
- Clay
- Oil/Tar Impact Area

Note: Well screen slot and filter pack determined by lithology.

NOT TO SCALE

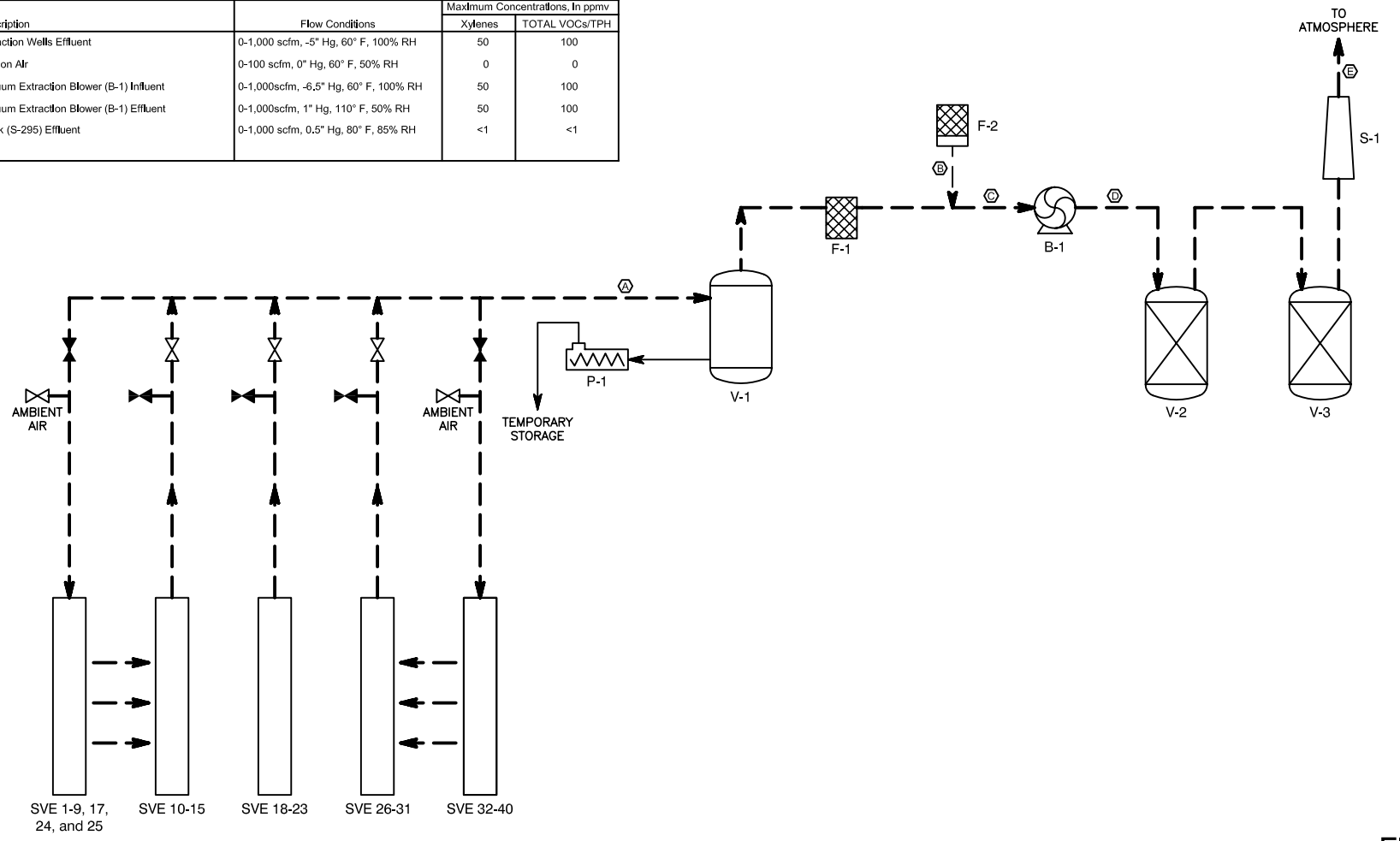
Figure A-1
Idealized Well Construction Details
Pittsburg River Park, LLC
(Former Johns Manville Plant)
420 East 3rd Street
Pittsburg, California

ERM 08/05

CAD File:	Drawn By:	Date:	Project No.
G:\\002556\01\2555604-06.dwg	D. Ludlam	08/30/05	0025556.04

PROCESS STREAM CHARACTERISTICS

Stream	Description	Flow Conditions	Maximum Concentrations, In ppmv	
			Xylenes	TOTAL VOCs/TPH
A	Extraction Wells Effluent	0-1,000 scfm, -5" Hg, 60° F, 100% RH	50	100
B	Dilution Air	0-100 scfm, 0" Hg, 60° F, 50% RH	0	0
C	Vacuum Extraction Blower (B-1) Influent	0-1,000scfm, -6.5" Hg, 60° F, 100% RH	50	100
D	Vacuum Extraction Blower (B-1) Effluent	0-1,000scfm, 1" Hg, 110° F, 50% RH	50	100
E	Stack (S-295) Effluent	0-1,000 scfm, 0.5" Hg, 80° F, 85% RH	<1	<1



VACUUM EXTRACTION SUBSYSTEM

SVE 1-40
SOIL VAPOR EXTRACTION WELLS
4" DIA. PVC, APPROX. 20' TOTAL DEPTH
SCREENED INTERVAL: 5'-20' B.G.S

S-1
STACK
4" DIA. x 10' HIGH

V-1
MOISTURE KNOCKOUT POT

P-1
CONDENSATE TRANSFER PUMP

F-1/2
SOIL GAS FILTER

B-1
VACUUM EXTRACTION BLOWER
1,000 SCFM
-6.5" Hg @ INLET, 1" Hg @ OUTLET
10hp

V-2/3
VAPOR PHASE
CARBON ADSORBER
USF/WESTATES MODEL VSC-2000
MAX FLOW: 1,000 CFM
2,000 LBS. ACTIVATED CARBON EACH

Figure A-2

Process Flow Diagram Vacuum Extraction System
Pittsburg River Park, LLC
(Former Johns Manville Plant)
420 East Third Street
Pittsburg, California

ERM 08/05

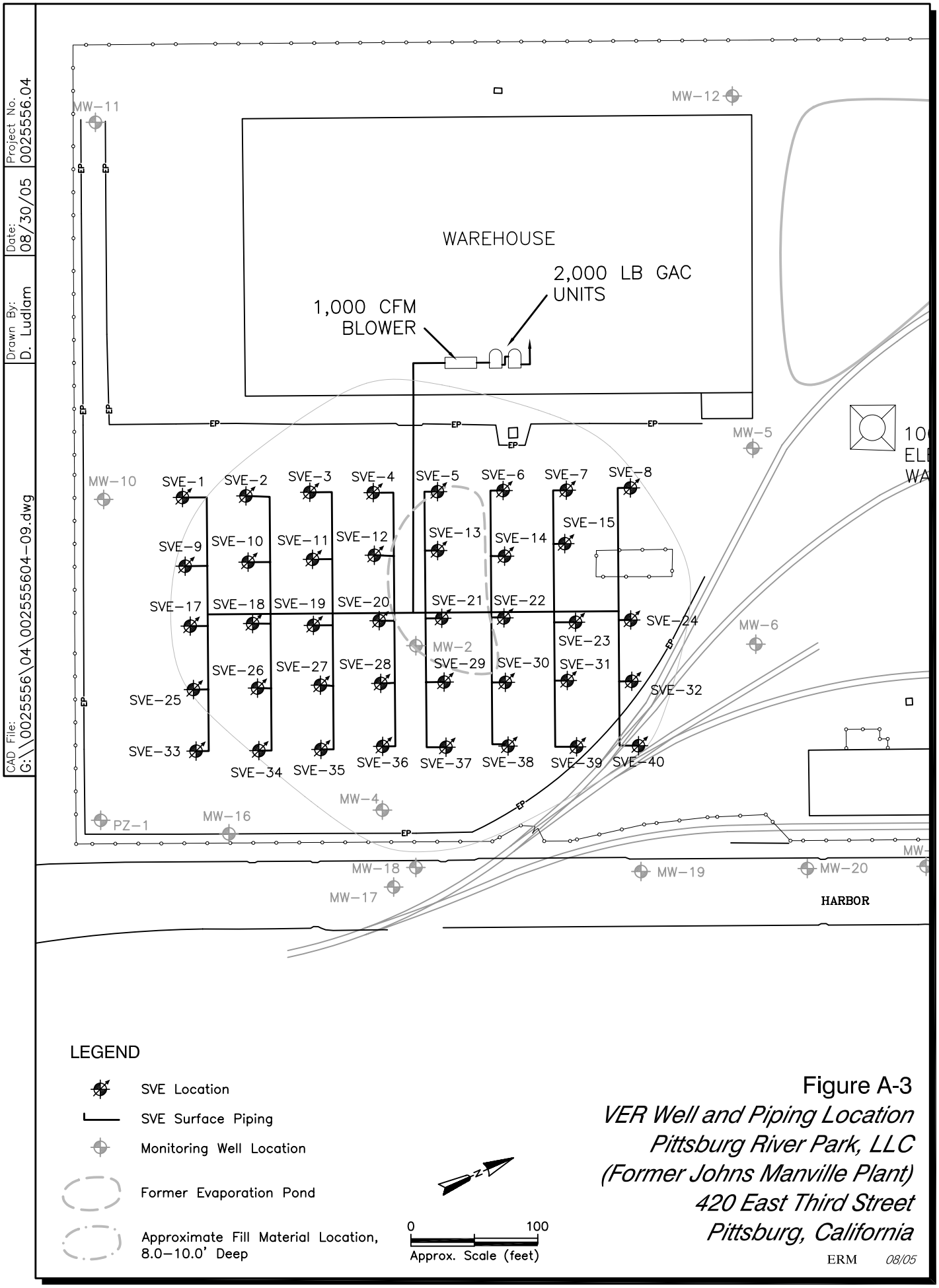


Figure A-3

VER Well and Piping Location
Pittsburg River Park, LLC
(Former Johns Manville Plant)
420 East Third Street
Pittsburg, California

ERM 08/05

Table A-1
Product Volume Removal Summary
Former Johns Manville Plant Site
Pittsburg, California

SYSTEM OPERATION MEASUREMENTS

Date	Time	Vac @ system (in. Hg)	Flow (fpm)	Flow (scfm)	PID (ppm)	O_2 (%)	CO_2 (%)	LEL (%)	LEL (ppm)
6/24/2005	13:20	4.5	2,800	244	9.8				
6/27/2005	8:00	3.0	2,900	253	9.7				
6/30/2005	8:00	3.5	3,070	268	1.3	17.4	0.7	3	1,660
7/1/2005	8:00	3.5	3,070	268	1.3	17.4	0.7	3	1,660
7/7/2005	8:15	1.5	5,000	437	0.0	18.6	1.0	1	780
7/11/2005	8:00	1.5	5,000	437	0.0	18.6	1.0	1	780
7/14/2005	8:00	2	5,730	500	0.1	20.9	0.0	0	0
7/15/2005	8:00	2	5,730	500	0.1	20.9	0.0	0	0
7/22/2005	15:56	3.5	5,588	488	2.1	12.4	2.9	3	1,760
7/25/2005	8:00	3.5	5,588	488	2.1	12.4	2.9	3	1,760
7/28/2005	13:04	5	6,917	604	2.4	20.9	0.8	0	380
7/29/2005	8:00	5	6,917	604	2.4	20.9	0.8	0	380
8/4/2005	8:00	2	4,980	435	3.0	16.7	3.8	1	880
8/5/2005	8:00	2	4,980	435	3.0	16.7	3.8	1	880
8/11/2005	8:00	3	1,969	172	7.1	15.0	4.8	2	1,200
8/12/2005	8:00	3	1,969	172	7.1	15.0	4.8	2	1,200
8/19/2005	8:00	2	1,210	106	19.0	14.7	-2.0	5	2,840
8/25/2005	8:00	0.5	1,273	111	7.7	11.4	7.4	2	1,380
8/26/2005	8:00	0.5	1,273	111	7.7	11.4	7.4	2	1,380

PRODUCT VOLUME REMOVAL VIA EXTRACTION [1]

Date of Extraction Event	Total Volume Removed (gallons)	Free Product Volume Removed (gallons)	Sample Concentration (ppm)	Equivalent Pure Product Removed in Dissolved Phase (gallons)	Total Volume Removed During Extraction Event (gallons)	Cumulative Product Removed (gallons)
6/24/2005	1,200	23.52	6200	8.86	32.38	32.38
7/1/2005	1,000	19.60	6200	7.39	26.99	59.37
7/11/2005	1,730	33.91	6200	12.78	46.69	106.06
7/15/2005	1,475	17.85	6200	10.90	28.74	134.80
7/25/2005	1,455	28.52	6200	10.75	39.27	174.07
7/29/2005	1,660	32.54	6200	12.26	44.80	218.87
8/5/2005	1,200	23.52	6200	8.86	32.38	251.25
8/12/2005	1,000	4.57	6200	7.39	11.96	263.21
8/19/2005	1,400	9.52	6200	10.34	19.86	283.07
8/26/2005	2,000	8.20	6200	14.77	22.97	306.04
Total	**14,120**					

Free Product volume removed is estimated from Knockout Drum data
Where incomplete Knockout Drum Data was collected a value of 1.96% was used

PRODUCT VOLUME REMOVAL VIA SKIMMER PUMP IN SVE-21

Date	Cumulative Product Removed (gallons)
8/11/2005	5.9
8/15/2005	11.6
8/16/2005	13.4
8/16/2005	13.8
8/18/2005	14.0
8/25/2005	17.0
8/26/2005	19.2

Skimmer pump was placed in SVE-21 on 8-04-05, removed on 8-18-05, reinstalled on 8-23-05.

[1] Volume removal includes estimate of pure product and dissolved phase removal via direct extraction. Free product volume is estimated from the knockout drum collected during the extraction event.
Volume removal from dissolved phase estimated using (concentration in water ppm) * (gallons of water) * (8.34 lb/gal water density) / (density of product) = gallons of dissolved phase product removed.

Mass removal of VOCs (PID) in vapor stream is not considered due to extremely low concentrations

(Assumed density of product of 7.0 lb/gallon)

Table A-2
Field Measurements
Former Johns Manville Plant Site
Pittsburg, California

Date	Well	Vac @ well (in. Hg)	Flow Velocity (fpm)	Flow Rate (cfm)	DTP (ft)	DTW (ft)	Product Thickness (ft)	PID (ppm)	O2 (%)	CO2 (%)	LEL (%)	LEL (ppm)
6/9/2005	SVE-20	NA			4.82	5.64	0.82		20.0	0.2		>10,000
6/24/2005		2.5			3.05	3.88	0.83	2.3	20.9	0.0	0	0
6/30/2005		2			5.80	5.81	0.01	1.3	20.9	0.8	-3	-1,660
7/7/2005		1.5			5.78	5.85	0.07	1.5	20.9	0.0	0	80
7/14/2005		1	640	56	6.28	6.30	0.02	0.0	20.1	0.0	18	9,500
7/21/2005		NA	NA	NA	6.93	6.95	0.02	3.6	11.3	2.0	93	>10,000
7/28/2005		1.5	659	58	6.73	6.79	0.06	2.2	15.6	1.6	75	>10,000
8/4/2005		0.5	360	31	7.19	7.21	0.02	0.0	16.9	0.1	48	>10,000
8/11/2005		1	290	25	7.98	8.01	0.03	1.4	18.6	0.0	47	>10,000
8/18/2005		0	332	29	Sheen	8.05	Sheen	24.4	14.4	0.3	97	>10,000
8/19/2005		NA	NA	NA	Sheen	9.29	Sheen	NA	NA	NA	NA	NA
8/23/2005		NA	NA	NA	Sheen	8.19	Sheen	NA	NA	NA	NA	NA
8/25/2005		0	242	21	8.47	8.48	0.01	0.0	16.5	0.4	69.0	>10,000

Table A-2
Field Measurements
Former Johns Manville Plant Site
Pittsburg, California

Date	Well	Vac @ well (in. Hg)	Flow Velocity (fpm)	Flow Rate (cfm)	DTP (ft)	DTW (ft)	Product Thickness (ft)	PID (ppm)	O2 (%)	CO2 (%)	LEL (%)	LEL (ppm)
6/9/2005	SVE-21	NA			11.63	12.53	0.90		7.0	5.9		>10,000
6/24/2005		2			7.23	7.70	0.47	0.0	20.4	0.1	11	
6/30/2005		2			11.02	16.85	5.83	1.3	20.9	0.0	0	0
7/7/2005		1			13.58	17.62	4.04	0.6	20.9	0.0	1	800
7/14/2005		1	520	45	14.33	18.95	4.62	0.0	20.7	0.4	20	>10,000
7/21/2005		NA	NA	NA	12.33	17.83	5.50	3.6	20.7	0.8	30	>10,000
7/28/2005		1	637	56	12.34	17.26	4.92	1.4	20.1	1.1	38	>10,000
8/3/2005		NA	NA	NA	12.16	17.75	5.59	NA	NA	NA	NA	NA
8/4/2005		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
8/11/2005		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
8/12/2005		NA	NA	NA	14.30	15.07	0.77	NA	NA	NA	NA	NA
8/16/2005		NA	NA	NA	13.46	13.48	0.02	NA	NA	NA	NA	NA
8/18/2005		NA	NA	NA	13.42	13.48	0.06	NA	NA	NA	NA	NA
8/19/2005		NA	NA	NA	13.24	13.81	0.57	NA	NA	NA	NA	NA
8/19/2005		NA	NA	NA	Sheen	18.57	Sheen	NA	NA	NA	NA	NA
8/23/2005		NA	NA	NA	13.68	18.12	4.44	NA	NA	NA	NA	NA
8/25/2005		NA	NA	NA	15.85	16.22	0.37	NA	NA	NA	NA	NA

Table A-2
Field Measurements
Former Johns Manville Plant Site
Pittsburg, California

Date	Well	Vac @ well (in. Hg)	Flow Velocity (fpm)	Flow Rate (cfm)	DTP (ft)	DTW (ft)	Product Thickness (ft)	PID (ppm)	O2 (%)	CO2 (%)	LEL (%)	LEL (ppm)
6/9/2005	SVE-22	NA			5.92	6.06	0.14		20.4	0.2		1,840
6/24/2005		3			-	6.13	-	0.7	20.9	0.2	1	
6/30/2005		1			5.79	5.80	0.01	20.5	20.9	0.0	0	0
7/7/2005		0.5			Sheen	6.00	Sheen	0.5	20.9	0.0	0	0
7/14/2005		0.5	500	44	-	6.19	-	0.0	20.9	0.0	0	40
7/21/2005		NA	NA	NA	Sheen	6.29	Sheen	53.7	19.9	0.6	5	2,860
7/28/2005		0	590	52	Sheen	6.33	Sheen	4.9	13.8	6.6	2	920
8/4/2005		0.25	360	31	Sheen	6.43	Sheen	0.0	13.8	5.0	2	1,300
8/11/2005		0	317	28	6.51	6.58	0.07	9.8	11.9	6.1	7	3,600
8/18/2005		0	353	31	6.59	7.49	0.90	10.4	NA	NA	NA	NA
8/19/2005		NA	NA	NA	6.77	6.79	0.02	NA	NA	NA	NA	NA
8/23/2005		NA	NA	NA	6.74	6.77	0.03	NA	NA	NA	NA	NA
8/25/2005		0	271	24	6.72	7.07	0.35	3.8	12.1	7.8	5.0	2,560
8/26/2005		NA	NA	NA	6.78	7.23	0.45	NA	NA	NA	NA	NA
6/9/2005	SVE-28	NA			6.73	7.32	0.59		11.5	2.8		>10,000
6/24/2005		4			7.02	9.45	2.43	0.0	18.9	0.6	77	>10,000
6/30/2005		2			7.07	7.70	0.63	0.0	15.6	2.6	22	>10,000
7/7/2005		1			Sheen	7.12	Sheen	2.3	15.4	1.1	46	>10,000
7/14/2005		0.5	620	54	7.25	7.75	0.50	0.0	13.5	1.8	48	>10,000
7/21/2005		NA	NA	NA	7.20	7.75	0.55	1.8	-1.8	9.6	>100	>10,000
7/28/2005		2	701	61	7.27	7.74	0.47	2.3	11.1	5.4	46	>10,000
8/4/2005		1.5	420	37	7.26	8.19	0.93	0.0	16.9	1.3	12	6,400
8/11/2005		1.5	315	27	7.34	7.91	0.57	3.3	11.5	4.4	34	>10,000
8/18/2005		1	284	25	7.34	7.98	0.64	2.5	11.2	3.0	36	>10,000
8/19/2005		NA	NA	NA	7.80	7.81	0.01	NA	NA	NA	NA	NA
8/23/2005		NA	NA	NA	Sheen	7.38	Sheen	NA	NA	NA	NA	NA
8/25/2005		0	292	25	7.42	8.18	0.76	0.9	12.1	5.1	24.0	>10,000

Table A-2
Field Measurements
Former Johns Manville Plant Site
Pittsburg, California

Date	Well	Vac @ well (in. Hg)	Flow Velocity (fpm)	Flow Rate (cfm)	DTP (ft)	DTW (ft)	Product Thickness (ft)	PID (ppm)	O2 (%)	CO2 (%)	LEL (%)	LEL (ppm)
6/9/2005	SVE-30	NA			Sheen	5.87	Sheen		20.8	0.3		4,650
6/24/2005		3			-	5.77	-	0.0	20.9	0.4	1	
6/30/2005		1			5.70	5.90	0.2	1.3	20.9	0.0	0	0
7/7/2005		1.5			5.88	5.97	0.09	0.8	20.9	0.0	0	60
7/14/2005		1	460	40	6.05	7.74	1.69	0.0	20.9	0.0	0	80
7/21/2005		NA	NA	NA	6.13	7.77	1.64	3.2	-3.2	>100	>100	>10,000
7/28/2005		1	599	52	5.68	7.75	2.07	4.2	12.1	7.4	13	7,000
8/4/2005		0.25	330	29	Sheen	6.45	Sheen	0.0	7.2	10.1	14	7,200
8/11/2005		NA	NA	NA	6.45	7.60	1.15	2.0	21.0	0.0	0	60
8/18/2005		NA	NA	NA	6.53	7.53	1.00	0.6	1.0	-2.0	23	>10,000
8/19/2005		NA	NA	NA	7.00	7.03	0.03	NA	NA	NA	NA	NA
8/23/2005		NA	NA	NA	Sheen	6.58	Sheen	NA	NA	NA	NA	NA
8/25/2005		0	308	27	6.66	7.35	0.69	1.9	11.1	15.6	10.0	4,820
6/9/2005	SVE-38	NA			-	5.58	-		20.7	0.2		9,820
6/24/2005		NA			-	5.66	-					
6/30/2005		NA			-	5.44	-					
7/7/2005		NA			-	5.67	-					
7/14/2005		NA	NA	NA	-	5.85	-					
7/21/2005		NA	NA	NA	-	5.92	-					
7/28/2005		NA	NA	NA	Sheen	6.06	Sheen					
8/4/2005		NA	NA	NA	6.13	6.44	0.31					
8/11/2005		NA	NA	NA	6.18	6.90	0.72					
8/18/2005		NA	NA	NA	6.22	7.36	1.14					
8/23/2005		NA	NA	NA	6.24	7.06	0.82	NA	NA	NA	NA	NA
8/25/2005		NA	NA	NA	6.34	7.84	1.50					

Table A-2
Field Measurements
Former Johns Manville Plant Site
Pittsburg, California

Date	Well	Vac @ well (in. Hg)	Flow Velocity (fpm)	Flow Rate (cfm)	DTP (ft)	DTW (ft)	Product Thickness (ft)	PID (ppm)	O2 (%)	CO2 (%)	LEL (%)	LEL (ppm)

Notes:

6-9-05 Prior to any startup.
6-13-05 10:30, System first turned on for testing.
6-16-05 9:55, Turn on system for full operation.
8-04-05 to 8-18-05 skimmer pump in SVE-21
8-18-05 to 8-23-05 skimmer pump in SVE-22
8-23-05 skimmer pump in SVE-21
8-19-05 measurements are immediately following HVE extraction
Shaded wells are turned off from the system due to high water levels

Table A-3
Knockout Drum Data
Former Johns Manville Plant Site
Pittsburg, California

Date	Well	Time extracted into knockout (min)	DTP (ft)	DTW (ft)	Total Fluids (gal)	Product (gal)	% prod
6/24/2005	No data						
				Overall	1,200	23.52	Estimated

Date	Well	Time extracted into knockout (min)	DTP (ft)	DTW (ft)	Total Fluids (gal)	Product (gal)	% prod
7/1/2005	SVE-10	5	-	1.73	13.11	-	0.00
	SVE-11	5	Sheen	1.21	21.63	0.16	0.76
	SVE-12	5	Sheen	0.80	28.34	0.16	0.58
	SVE-13	5	-	1.08	23.76	-	0.00
	SVE-14	5	Sheen	0.97	25.56	0.16	0.64
	SVE-15	5	-	1.60	15.24	-	0.00
	SVE-18	5	Sheen	0.8	28.34	0.16	0.58
	SVE-19	5	Sheen	0.8	28.34	0.16	0.58
	SVE-20	5	1.34	1.35	19.50	0.16	0.84
	SVE-21	5	1.85	2.25	11.14	6.55	58.82
	SVE-22	5	Sheen	1.14	22.77	0.16	0.72
	SVE-23	10	Sheen	1.81	11.80	0.16	1.39
	SVE-26	3	-	0.30	36.54	-	0.00
	SVE-27	5	Sheen	1.90	10.32	0.16	1.59
	SVE-28	5	0.85	0.86	27.53	0.16	0.60
	SVE-29	5	Sheen	0.65	30.80	0.16	0.53
	SVE-30	5	Sheen	0.10	39.81	0.16	0.41
	SVE-31	5	-	0.10	39.81	-	0.00
				Total	434.34	8.52	1.96
				Overall	1,000	19.62	

Table A-3
Knockout Drum Data
Former Johns Manville Plant Site
Pittsburg, California

Date	Well	Time extracted into knockout (min)	DTP (ft)	DTW (ft)	Total Fluids (gal)	Product (gal)	% prod
7/11/2005	SVE-10	10	Sheen	0.96	25.72	0.16	0.00
	SVE-11	5	Sheen	1.21	21.63	0.16	0.76
	SVE-12	5	-	0.20	38.18	-	0.00
	SVE-13	Broken					
	SVE-14	Broken					
	SVE-15	Broken					
	SVE-18	3	Sheen	0.64	30.97	0.16	0.53
	SVE-19	3	Sheen	0.28	36.86	0.16	0.44
	SVE-20	15	1.27	1.29	20.64	0.33	1.59
	SVE-21	5	2.00	2.45	8.68	7.37	84.91
	SVE-22	Broken					
	SVE-23	Broken					
	SVE-26	5	-	0.16	38.83	-	0.00
	SVE-27	5	Sheen	1.20	21.79	0.16	0.75
	SVE-28	5	1.10	1.12	23.43	0.33	1.40
	SVE-29	Broken					
	SVE-30	Broken					
	SVE-31	Broken					
				Total	266.73	8.85	3.32
				Overall	1,730	57.38	

Table A-3
Knockout Drum Data
Former Johns Manville Plant Site
Pittsburg, California

Date	Well	Time extracted into knockout (min)	DTP (ft)	DTW (ft)	Total Fluids (gal)	Product (gal)	% prod
7/15/2005	SVE-10	5	-	0.98	25.40	-	0.00
	SVE-11	5	-	0.71	29.82	-	0.00
	SVE-12	5	-	1.11	23.27	-	0.00
	SVE-13	5	-	0.19	38.34	-	0.00
	SVE-14	5	-	0.81	28.18	-	0.00
	SVE-15	5	-	1.24	21.14	-	0.00
	SVE-18	3	-	0.88	27.03	-	0.00
	SVE-19	5	-	0.42	34.57	-	0.00
	SVE-20	20	1.01	1.02	24.90	0.16	0.66
	SVE-21	20	2.21	2.53	5.24	5.24	100.00
	SVE-22	3	-	0.75	29.16	-	0.00
	SVE-23	5	-	1.44	17.86	-	0.00
	SVE-26	5	-	0.21	38.01	-	0.00
	SVE-27	5	-	0.27	37.03	-	0.00
	SVE-28	5	1.34	1.35	19.50	0.16	0.84
	SVE-29	5	-	0.23	37.68	-	0.00
	SVE-30	3	0.21	0.25	38.01	0.66	1.72
	SVE-31	5	-	0.21	38.01	-	0.00
				Total	513.15	6.23	1.21
				Overall	1,475	17.90	

Table A-3
Knockout Drum Data
Former Johns Manville Plant Site
Pittsburg, California

Date	Well	Time extracted into knockout (min)	DTP (ft)	DTW (ft)	Total Fluids (gal)	Product (gal)	% prod
7/25/2005	SVE-10	5	Sheen	2.23	4.92	0.16	3.33
	SVE-11	5	-	1.27	20.64	-	0.00
	SVE-12	5	-	2.05	7.86	-	0.00
	SVE-13	5	-	0.75	29.16	-	0.00
	SVE-14	Broken					
	SVE-15	Broken					
	SVE-18	5	-	0.042	40.76	-	0.00
	SVE-19	5	-	1.65	14.42	-	0.00
	SVE-20	7	Sheen	2.05	7.86	0.16	2.08
	SVE-21	10	2.20	2.53	5.41	5.41	100.00
	SVE-22	3	1.65	1.66	14.42	0.16	1.14
	SVE-23	Broken					
	SVE-26	3	Sheen	1.67	14.09	0.16	1.16
	SVE-27	5	Sheen	2.40	2.13	0.16	7.69
	SVE-28	5	Sheen	2.25	4.59	0.16	3.57
	SVE-29	5	-	1.24	21.14	-	0.00
	SVE-30	3	0.75	0.88	29.16	2.05	7.02
	SVE-31	Broken					
	SVE-37	Broken					
				Total	216.57	8.44	3.90
				Overall	1,455	56.69	

Date	Well	Time extracted into knockout (min)	DTP (ft)	DTW (ft)	Total Fluids (gal)	Product (gal)	% prod
7/29/2005	No data						
				Overall	1,660	32.54	Estimated

Date	Well	Time extracted into knockout (min)	DTP (ft)	DTW (ft)	Total Fluids (gal)	Product (gal)	% prod
8/5/2005	No data						
				Overall	1,200	23.52	Estimated

Table A-3
Knockout Drum Data
Former Johns Manville Plant Site
Pittsburg, California

Date	Well	Time extracted into knockout (min)	DTP (ft)	DTW (ft)	Total Fluids (gal)	Product (gal)	% prod
8/12/2005	SVE-10	5	Sheen	1.65	14.42	0.16	1.14
	SVE-11	5	-	0.88	27.12	-	0.00
	SVE-12	5	-	-0.08	42.76	-	0.00
	SVE-13	5	-	1.28	20.48	-	0.00
	SVE-14	5	Sheen	0.83	27.85	0.16	0.59
	SVE-15	5	-	1.92	9.99	-	0.00
	SVE-18	5	-	1.88	10.65	-	0.00
	SVE-19	5	-	0.25	37.36	-	0.00
	SVE-20	5	Sheen	1.87	10.81	0.16	1.52
	SVE-21	Pump					
	SVE-22	5	0.79	0.81	28.51	0.33	1.15
	SVE-23	5	Sheen	1.99	8.85	0.16	1.85
	SVE-26	5	-	0.25	37.36	-	0.00
	SVE-27	5	-	-	-	-	
	SVE-28	7	1.44	1.47	17.86	0.49	2.75
	SVE-29	5	Sheen	1.74	12.94	0.16	1.27
	SVE-30	5	Sheen	-0.13	43.50	0.16	0.38
	SVE-31	5	-	-0.17	44.19	-	0.00
	SVE-37	5					
	SVE-38	5					
				Total	394.65	1.80	0.46
				Overall	1,000	4.57	

Table A-3
Knockout Drum Data
Former Johns Manville Plant Site
Pittsburg, California

Date	Well	Time extracted into knockout (min)	DTP (ft)	DTW (ft)	Total Fluids (gal)	Product (gal)	% prod
8/19/2005	SVE-10	5	Sheen	2.20	12.45	0.16	1.32
	SVE-11	5	Sheen	1.61	22.12	0.16	0.74
	SVE-12	5	Sheen	1.21	28.67	0.16	0.57
	SVE-13	5	Sheen	1.93	16.88	0.16	0.97
	SVE-14	5	1.68	1.69	20.97	0.16	0.78
	SVE-15	5	Sheen	2.42	8.85	0.16	1.85
	SVE-18	5	Sheen	1.91	17.20	0.16	0.95
	SVE-19	5	-	0.45	41.07	-	0.00
	SVE-20	5	Sheen	2.08	14.42	0.16	1.14
	SVE-21	5	2.69	2.71	4.42	0.33	7.41
	SVE-22	Pump					
	SVE-23	5	Sheen	2.39	9.34	0.16	1.75
	SVE-26	5	Sheen	0.43	41.41	0.16	0.00
	SVE-27	5	Sheen	2.05	14.91	0.16	1.10
	SVE-28	7	1.63	1.65	21.79	0.33	1.50
	SVE-29	5	Sheen	1.49	24.08	0.16	0.68
	SVE-30	5	0.30	0.32	43.58	0.38	0.86
	SVE-31	5	Sheen	0.30	43.63	0.16	0.38
				Total	385.81	2.62	0.68
				Overall	1,400	9.51	

Table A-3
Knockout Drum Data
Former Johns Manville Plant Site
Pittsburg, California

Date	Well	Time extracted into knockout (min)	DTP (ft)	DTW (ft)	Total Fluids (gal)	Product (gal)	% prod
8/26/2005	SVE-10	5	-	1.51	16.71	-	0.00
	SVE-11	5	-	1.00	25.07	-	0.00
	SVE-12	5	-	0.33	43.09	-	0.00
	SVE-13	5	-	1.07	23.92	-	0.00
	SVE-14	5	-	0.38	42.35	-	0.00
	SVE-15	5	Sheen	1.92	9.99	0.16	1.64
	SVE-18	5	-	0.81	28.13	-	0.00
	SVE-19	5	-	0.42	41.62	-	0.00
	SVE-20	5	Sheen	2.12	6.72	0.16	2.44
	SVE-21	Pump					
	SVE-22	5	0.97	0.99	25.56	0.33	1.28
	SVE-23	5	Sheen	1.93	9.83	0.16	1.67
	SVE-26	5	-	0.25	44.40	-	0.00
	SVE-27	7	-	1.58	15.56	-	0.00
	SVE-28	5	1.10	1.14	23.43	0.66	2.80
	SVE-29	5	-	1.47	17.37	-	0.00
	SVE-30	5	Sheen	0.38	42.27	0.16	0.39
	SVE-31	5	Sheen	1.38	18.84	0.16	0.87
				Total	434.87	1.80	0.41
				Overall	2,000	8.29	

Note:

Use 0.01 ft product thickness when a sheen is measured

Table A-4
TPH, VOCs Detected in Groundwater Samples
Former Johns Manville Plant Site
Pittsburg, California

		Total Petroleum Hydrocarbons							
		Diesel	Motor Oil	Gasoline	Oil & Grease	Benzene	Ethyl-benzene	Toluene	Xylenes
Sample Location	Date	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW-4	2/19/2002	**51,000**	**10,000**	NA	NA	<1	<1	<1	<1
MW-6	12/19/2000	**220**	**310**	<50	<5,000	<5	<5	<5	<5
	8/16/2005	<50	**1,500**	NA	NA	<0.50	<0.50	<0.50	<0.50
MW-10	12/19/2000	<57	<280	<50	<5,000	ND	ND	ND	ND
	8/16/2005	<50	**970**	NA	NA	<0.50	<0.50	<0.50	<0.50
SVE-20	7/11/2005	<25,000	**6,200,000**	NA	NA	NA	NA	NA	NA
SVE-36	8/16/2005	**59,000**	<10,000	NA	NA	**2.1**	<0.50	**0.63**	**1.2**

Appendix B
Results of
Johnson & Ettinger
Soil Gas Modeling

Appendix B
Results of Johnson & Ettinger Soil Gas Modeling

Ground Water Models

DATA ENTRY SHEET

GW-SCREEN
Version 3.0; 04/03

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES [X]

DTSC
Vapor Intrusion Guidance
Interim Final 12/04
(last modified 1/21/05)

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
91203	1.30E+01	Naphthalene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	304.8	S	24	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
		1.00E-08		1.5	0.43	0.15

MORE ↓

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
1.0E-06	1	70	30	30	350

Used to calculate risk-based groundwater concentration.

CHEMICAL PROPERTIES SHEET

ABC

Diffusivity in air, D_a (cm^2/s)	Diffusivity in water, D_w (cm^2/s)	Henry's law constant at reference temperature, H (atm-m^3/mol)	Henry's law constant reference temperature, T_R (°C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (°K)	Critical temperature, T_C (°K)	Organic carbon partition coefficient, K_{oc} (cm^3/g)	Pure component water solubility, S (mg/L)	Unit risk factor, URF $(\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
5.90E-02	7.50E-06	4.82E-04	25	10,373	491.14	748.40	2.00E+03	3.10E+01	3.4E-05	3.0E-03

END

INTERMEDIATE CALCULATIONS SHEET

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^V (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Thickness of capillary zone, L_{cz} (cm)	Total porosity in capillary zone, n_{cz} (cm^3/cm^3)	Air-filled porosity in capillary zone, $\theta_{a,cz}$ (cm^3/cm^3)	Water-filled porosity in capillary zone, $\theta_{w,cz}$ (cm^3/cm^3)	Floor-wall seam perimeter, X_{crack} (cm)
289.8	0.280	#N/A	#N/A	#N/A	1.00E-08	17.05	0.375	0.122	0.253	4,000

Bldg. ventilation rate, $Q_{building}$ (cm^3/s)	Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. groundwater temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. groundwater temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. groundwater temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Capillary zone effective diffusion coefficient, D^{eff}_{cz} (cm^2/s)	Total overall effective diffusion coefficient, D^{eff}_T (cm^2/s)
3.39E+04	1.00E+06	5.00E-03	15	12,768	4.48E-04	1.84E-02	1.80E-04	4.61E-03	4.08E-04	2.87E-03

Diffusion path length, L_d (cm)	Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, $exp(Pe^f)$ (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)	Unit risk factor, URF $(\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
289.8	15	2.39E+02	1.25	8.33E+01	4.61E-03	5.00E+03	5.18E+15	2.61E-04	6.24E-02	3.4E-05	3.0E-03

RESULTS SHEET

RISK-BASED GROUNDWATER CONCENTRATION CALCULATIONS:

Indoor exposure groundwater conc., carcinogen (µg/L)	Indoor exposure groundwater conc., noncarcinogen (µg/L)	Risk-based indoor exposure groundwater conc., (µg/L)	Pure component water solubility, S (µg/L)	Final indoor exposure groundwater conc., (µg/L)
NA	NA	NA	3.10E+04	NA

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
8.7E-07	2.0E-02

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

GW-SCREEN
Version 3.0; 04/03

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES X

DTSC
Vapor Intrusion Guidance
Interim Final 12/04
(last modified 1/21/05)

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
120127	2.10E+00	Anthracene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	304.8	S	24	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
		1.00E-08		1.5	0.43	0.15

MORE ↓

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
1.0E-06	1	70	30	30	350

Used to calculate risk-based groundwater concentration.

CHEMICAL PROPERTIES SHEET

ABC

Diffusivity in air, D_a (cm^2/s)	Diffusivity in water, D_w (cm^2/s)	Henry's law constant at reference temperature, H (atm-m^3/mol)	Henry's law constant reference temperature, T_R (°C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (°K)	Critical temperature, T_C (°K)	Organic carbon partition coefficient, K_{oc} (cm^3/g)	Pure component water solubility, S (mg/L)	Unit risk factor, URF $(\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
3.24E-02	7.74E-06	6.50E-05	25	19,355	613.15	783.15	2.35E+04	4.34E-02	0.0E+00	1.1E+00

END

INTERMEDIATE CALCULATIONS SHEET

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Thickness of capillary zone, L_{cz} (cm)	Total porosity in capillary zone, n_{cz} (cm^3/cm^3)	Air-filled porosity in capillary zone, $\theta_{a,cz}$ (cm^3/cm^3)	Water-filled porosity in capillary zone, $\theta_{w,cz}$ (cm^3/cm^3)	Floor-wall seam perimeter, X_{crack} (cm)
289.8	0.280	#N/A	#N/A	#N/A	1.00E-08	17.05	0.375	0.122	0.253	4,000

Bldg. ventilation rate, $Q_{building}$ (cm^3/s)	Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. groundwater temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. groundwater temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. groundwater temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Capillary zone effective diffusion coefficient, D^{eff}_{cz} (cm^2/s)	Total overall effective diffusion coefficient, D^{eff}_T (cm^2/s)
3.39E+04	1.00E+06	5.00E-03	15	29,774	5.49E-05	2.25E-03	1.80E-04	2.56E-03	4.60E-04	2.02E-03

Diffusion path length, L_d (cm)	Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, $exp(Pe^f)$ (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)	Unit risk factor, URF $(\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
289.8	15	4.73E+00	1.25	8.33E+01	2.56E-03	5.00E+03	1.84E+28	1.90E-04	8.97E-04	NA	1.1E+00

RESULTS SHEET

RISK-BASED GROUNDWATER CONCENTRATION CALCULATIONS:

Indoor exposure groundwater conc., carcinogen (µg/L)	Indoor exposure groundwater conc., noncarcinogen (µg/L)	Risk-based indoor exposure groundwater conc., (µg/L)	Pure component water solubility, S (µg/L)	Final indoor exposure groundwater conc., (µg/L)
NA	NA	NA	4.34E+01	NA

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	8.2E-07

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

GW-SCREEN
Version 3.0; 04/03

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES [X]

DTSC
Vapor Intrusion Guidance
Interim Final 12/04
(last modified 1/21/05)

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
71432	2.10E+00	Benzene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	304.8	S	24	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
		1.00E-08		1.5	0.43	0.15

MORE ↓

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
1.0E-06	1	70	30	30	350

Used to calculate risk-based groundwater concentration.

CHEMICAL PROPERTIES SHEET

ABC

Diffusivity in air, D_a (cm^2/s)	Diffusivity in water, D_w (cm^2/s)	Henry's law constant at reference temperature, H (atm-m^3/mol)	Henry's law constant reference temperature, T_R (°C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (°K)	Critical temperature, T_C (°K)	Organic carbon partition coefficient, K_{oc} (cm^3/g)	Pure component water solubility, S (mg/L)	Unit risk factor, URF ($\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
8.80E-02	9.80E-06	5.54E-03	25	7,342	353.24	562.16	5.89E+01	1.79E+03	2.9E-05	3.0E-02

END

INTERMEDIATE CALCULATIONS SHEET

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^V (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Thickness of capillary zone, L_{cz} (cm)	Total porosity in capillary zone, n_{cz} (cm^3/cm^3)	Air-filled porosity in capillary zone, $\theta_{a,cz}$ (cm^3/cm^3)	Water-filled porosity in capillary zone, $\theta_{w,cz}$ (cm^3/cm^3)	Floor-wall seam perimeter, X_{crack} (cm)
289.8	0.280	#N/A	#N/A	#N/A	1.00E-08	17.05	0.375	0.122	0.253	4,000

Bldg. ventilation rate, $Q_{building}$ (cm^3/s)	Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. groundwater temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. groundwater temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. groundwater temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Capillary zone effective diffusion coefficient, D^{eff}_{cz} (cm^2/s)	Total overall effective diffusion coefficient, D^{eff}_T (cm^2/s)
3.39E+04	1.00E+06	5.00E-03	15	7,977	5.29E-03	2.17E-01	1.80E-04	6.86E-03	5.67E-04	4.15E-03

Diffusion path length, L_d (cm)	Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, $exp(Pe^f)$ (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)	Unit risk factor, URF $(\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
289.8	15	4.56E+02	1.25	8.33E+01	6.86E-03	5.00E+03	3.50E+10	3.61E-04	1.64E-01	2.9E-05	3.0E-02

RESULTS SHEET

RISK-BASED GROUNDWATER CONCENTRATION CALCULATIONS:

Indoor exposure groundwater conc., carcinogen (µg/L)	Indoor exposure groundwater conc., noncarcinogen (µg/L)	Risk-based indoor exposure groundwater conc., (µg/L)	Pure component water solubility, S (µg/L)	Final indoor exposure groundwater conc., (µg/L)
NA	NA	NA	1.79E+06	NA

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
2.0E-06	5.3E-03

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

GW-SCREEN
Version 3.0; 04/03

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES [X]

DTSC
Vapor Intrusion Guidance
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(last modified 1/21/05)

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
75092	9.50E+01	Methylene chloride

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	304.8	S	24	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
		1.00E-08		1.5	0.43	0.15

MORE ↓

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
1.0E-06	1	70	30	30	350

Used to calculate risk-based groundwater concentration.

CHEMICAL PROPERTIES SHEET

ABC

Diffusivity in air, D_a (cm^2/s)	Diffusivity in water, D_w (cm^2/s)	Henry's law constant at reference temperature, H ($atm\text{-}m^3/mol$)	Henry's law constant reference temperature, T_R (^oC)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (^oK)	Critical temperature, T_C (^oK)	Organic carbon partition coefficient, K_{oc} (cm^3/g)	Pure component water solubility, S (mg/L)	Unit risk factor, URF $(\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
1.01E-01	1.17E-05	2.18E-03	25	6,706	313.00	510.00	1.17E+01	1.30E+04	1.0E-06	4.0E-01

END

INTERMEDIATE CALCULATIONS SHEET

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^V (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Thickness of capillary zone, L_{cz} (cm)	Total porosity in capillary zone, n_{cz} (cm^3/cm^3)	Air-filled porosity in capillary zone, $\theta_{a,cz}$ (cm^3/cm^3)	Water-filled porosity in capillary zone, $\theta_{w,cz}$ (cm^3/cm^3)	Floor-wall seam perimeter, X_{crack} (cm)
289.8	0.280	#N/A	#N/A	#N/A	1.00E-08	17.05	0.375	0.122	0.253	4,000

Bldg. ventilation rate, $Q_{building}$ (cm^3/s)	Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. groundwater temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. groundwater temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. groundwater temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_V (cm^2/s)	Capillary zone effective diffusion coefficient, D^{eff}_{cz} (cm^2/s)	Total overall effective diffusion coefficient, D^{eff}_T (cm^2/s)
3.39E+04	1.00E+06	5.00E-03	15	6,884	2.10E-03	8.62E-02	1.80E-04	7.88E-03	6.57E-04	4.78E-03

Diffusion path length, L_d (cm)	Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, $\exp(Pe^f)$ (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)	Unit risk factor, URF $(\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
289.8	15	8.18E+03	1.25	8.33E+01	7.88E-03	5.00E+03	1.54E+09	4.07E-04	3.33E+00	1.0E-06	4.0E-01

RESULTS SHEET

RISK-BASED GROUNDWATER CONCENTRATION CALCULATIONS:

Indoor exposure groundwater conc., carcinogen (µg/L)	Indoor exposure groundwater conc., noncarcinogen (µg/L)	Risk-based indoor exposure groundwater conc., (µg/L)	Pure component water solubility, S (µg/L)	Final indoor exposure groundwater conc., (µg/L)
NA	NA	NA	1.30E+07	NA

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
1.4E-06	8.0E-03

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

GW-SCREEN Version 3.0; 04/03

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION (enter "X" in "YES" box and initial groundwater conc. below)

YES [X]

DTSC
Vapor Intrusion Guidance
Interim Final 12/04
(last modified 1/21/05)

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
100414	1.50E+00	Ethylbenzene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	304.8	S	24	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
		1.00E-08		1.5	0.43	0.15

MORE ↓

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
1.0E-06	1	70	30	30	350

Used to calculate risk-based groundwater concentration.

CHEMICAL PROPERTIES SHEET

ABC

Diffusivity in air, D_a (cm^2/s)	Diffusivity in water, D_w (cm^2/s)	Henry's law constant at reference temperature, H ($atm\text{-}m^3/mol$)	Henry's law constant reference temperature, T_R (°C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (°K)	Critical temperature, T_C (°K)	Organic carbon partition coefficient, K_{oc} (cm^3/g)	Pure component water solubility, S (mg/L)	Unit risk factor, URF $(\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
7.50E-02	7.80E-06	7.86E-03	25	8,501	409.34	617.20	3.63E+02	1.69E+02	0.0E+00	1.0E+00

END

INTERMEDIATE CALCULATIONS SHEET

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^V (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Thickness of capillary zone, L_{cz} (cm)	Total porosity in capillary zone, n_{cz} (cm^3/cm^3)	Air-filled porosity in capillary zone, $\theta_{a,cz}$ (cm^3/cm^3)	Water-filled porosity in capillary zone, $\theta_{w,cz}$ (cm^3/cm^3)	Floor-wall seam perimeter, X_{crack} (cm)
289.8	0.280	#N/A	#N/A	#N/A	1.00E-08	17.05	0.375	0.122	0.253	4,000

Bldg. ventilation rate, $Q_{building}$ (cm^3/s)	Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. groundwater temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. groundwater temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. groundwater temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Capillary zone effective diffusion coefficient, D^{eff}_{cz} (cm^2/s)	Total overall effective diffusion coefficient, D^{eff}_T (cm^2/s)
3.39E+04	1.00E+06	5.00E-03	15	9,994	7.43E-03	3.05E-01	1.80E-04	5.85E-03	4.82E-04	3.54E-03

Diffusion path length, L_d (cm)	Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe^f) (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)	Unit risk factor, URF $(\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
289.8	15	4.57E+02	1.25	8.33E+01	5.85E-03	5.00E+03	2.36E+12	3.14E-04	1.43E-01	NA	1.0E+00

RESULTS SHEET

RISK-BASED GROUNDWATER CONCENTRATION CALCULATIONS:

Indoor exposure groundwater conc., carcinogen (µg/L)	Indoor exposure groundwater conc., noncarcinogen (µg/L)	Risk-based indoor exposure groundwater conc., (µg/L)	Pure component water solubility, S (µg/L)	Final indoor exposure groundwater conc., (µg/L)
NA	NA	NA	1.69E+05	NA

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	1.4E-04

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

GW-SCREEN Version 3.0; 04/03

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION (enter "X" in "YES" box and initial groundwater conc. below)

YES [X]

DTSC
Vapor Intrusion Guidance
Interim Final 12/04
(last modified 1/21/05)

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
86737	5.60E+00	Fluorene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	304.8	S	24	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
		1.00E-08		1.5	0.43	0.15

MORE ↓

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
1.0E-06	1	70	30	30	350

Used to calculate risk-based groundwater concentration.

CHEMICAL PROPERTIES SHEET

ABC

Diffusivity in air, D_a (cm^2/s)	Diffusivity in water, D_w (cm^2/s)	Henry's law constant at reference temperature, H ($atm\text{-}m^3/mol$)	Henry's law constant reference temperature, T_R (°C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (°K)	Critical temperature, T_C (°K)	Organic carbon partition coefficient, K_{oc} (cm^3/g)	Pure component water solubility, S (mg/L)	Unit risk factor, URF $(\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
3.63E-02	7.88E-06	6.34E-05	25	12,666	570.44	870.00	1.38E+04	1.98E+00	0.0E+00	1.4E-01

END

INTERMEDIATE CALCULATIONS SHEET

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Thickness of capillary zone, L_{cz} (cm)	Total porosity in capillary zone, n_{cz} (cm^3/cm^3)	Air-filled porosity in capillary zone, $\theta_{a,cz}$ (cm^3/cm^3)	Water-filled porosity in capillary zone, $\theta_{w,cz}$ (cm^3/cm^3)	Floor-wall seam perimeter, X_{crack} (cm)
289.8	0.280	#N/A	#N/A	#N/A	1.00E-08	17.05	0.375	0.122	0.253	4,000

Bldg. ventilation rate, $Q_{building}$ (cm^3/s)	Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. groundwater temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. groundwater temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. groundwater temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Capillary zone effective diffusion coefficient, D^{eff}_{cz} (cm^2/s)	Total overall effective diffusion coefficient, D^{eff}_T (cm^2/s)
3.39E+04	1.00E+06	5.00E-03	15	16,091	5.79E-05	2.37E-03	1.80E-04	2.86E-03	4.76E-04	2.21E-03

Diffusion path length, L_d (cm)	Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, $\exp(Pe^f)$ (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)	Unit risk factor, URF $(\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
289.8	15	1.33E+01	1.25	8.33E+01	2.86E-03	5.00E+03	1.88E+25	2.06E-04	2.74E-03	NA	1.4E-01

RESULTS SHEET

RISK-BASED GROUNDWATER CONCENTRATION CALCULATIONS:

Indoor exposure groundwater conc., carcinogen (µg/L)	Indoor exposure groundwater conc., noncarcinogen (µg/L)	Risk-based indoor exposure groundwater conc., (µg/L)	Pure component water solubility, S (µg/L)	Final indoor exposure groundwater conc., (µg/L)
NA	NA	NA	1.98E+03	NA

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	1.9E-05

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

GW-SCREEN
Version 3.0; 04/03

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES [X]

DTSC
Vapor Intrusion Guidance
Interim Final 12/04
(last modified 1/21/05)

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
91203	5.30E+00	Naphthalene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	304.8	S	24	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
		1.00E-08		1.5	0.43	0.15

MORE ↓

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
1.0E-06	1	70	30	30	350

Used to calculate risk-based groundwater concentration.

CHEMICAL PROPERTIES SHEET

ABC

Diffusivity in air, D_a (cm^2/s)	Diffusivity in water, D_w (cm^2/s)	Henry's law constant at reference temperature, H ($atm\text{-}m^3/mol$)	Henry's law constant reference temperature, T_R (°C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (°K)	Critical temperature, T_C (°K)	Organic carbon partition coefficient, K_{oc} (cm^3/g)	Pure component water solubility, S (mg/L)	Unit risk factor, URF $(\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
5.90E-02	7.50E-06	4.82E-04	25	10,373	491.14	748.40	2.00E+03	3.10E+01	3.4E-05	3.0E-03

END

INTERMEDIATE CALCULATIONS SHEET

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^V (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Thickness of capillary zone, L_{cz} (cm)	Total porosity in capillary zone, n_{cz} (cm^3/cm^3)	Air-filled porosity in capillary zone, $\theta_{a,cz}$ (cm^3/cm^3)	Water-filled porosity in capillary zone, $\theta_{w,cz}$ (cm^3/cm^3)	Floor-wall seam perimeter, X_{crack} (cm)
289.8	0.280	#N/A	#N/A	#N/A	1.00E-08	17.05	0.375	0.122	0.253	4,000

Bldg. ventilation rate, $Q_{building}$ (cm^3/s)	Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. groundwater temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. groundwater temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. groundwater temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Capillary zone effective diffusion coefficient, D^{eff}_{cz} (cm^2/s)	Total overall effective diffusion coefficient, D^{eff}_T (cm^2/s)
3.39E+04	1.00E+06	5.00E-03	15	12,768	4.48E-04	1.84E-02	1.80E-04	4.61E-03	4.08E-04	2.87E-03

Diffusion path length, L_d (cm)	Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe^f) (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)	Unit risk factor, URF $(\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
289.8	15	9.74E+01	1.25	8.33E+01	4.61E-03	5.00E+03	5.18E+15	2.61E-04	2.54E-02	3.4E-05	3.0E-03

RESULTS SHEET

RISK-BASED GROUNDWATER CONCENTRATION CALCULATIONS:

Indoor exposure groundwater conc., carcinogen (µg/L)	Indoor exposure groundwater conc., noncarcinogen (µg/L)	Risk-based indoor exposure groundwater conc., (µg/L)	Pure component water solubility, S (µg/L)	Final indoor exposure groundwater conc., (µg/L)
NA	NA	NA	3.10E+04	NA

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
3.6E-07	8.1E-03

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

GW-SCREEN
Version 3.0; 04/03

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES [X]

DTSC
Vapor Intrusion Guidance
Interim Final 12/04
(last modified 1/21/05)

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
95476	3.30E+00	o-Xylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	304.8	S	24	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
		1.00E-08		1.5	0.43	0.15

MORE ↓

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
1.0E-06	1	70	30	30	350

Used to calculate risk-based groundwater concentration.

CHEMICAL PROPERTIES SHEET

ABC

Diffusivity in air, D_a (cm^2/s)	Diffusivity in water, D_w (cm^2/s)	Henry's law constant at reference temperature, H (atm-m^3/mol)	Henry's law constant reference temperature, T_R (°C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (°K)	Critical temperature, T_C (°K)	Organic carbon partition coefficient, K_{oc} (cm^3/g)	Pure component water solubility, S (mg/L)	Unit risk factor, URF ($\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
8.70E-02	1.00E-05	5.18E-03	25	8,661	417.60	630.30	3.63E+02	1.78E+02	0.0E+00	1.0E-01

END

INTERMEDIATE CALCULATIONS SHEET

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Thickness of capillary zone, L_{cz} (cm)	Total porosity in capillary zone, n_{cz} (cm^3/cm^3)	Air-filled porosity in capillary zone, $\theta_{a,cz}$ (cm^3/cm^3)	Water-filled porosity in capillary zone, $\theta_{w,cz}$ (cm^3/cm^3)	Floor-wall seam perimeter, X_{crack} (cm)
289.8	0.280	#N/A	#N/A	#N/A	1.00E-08	17.05	0.375	0.122	0.253	4,000

Bldg. ventilation rate, $Q_{building}$ (cm^3/s)	Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. groundwater temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. groundwater temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. groundwater temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Capillary zone effective diffusion coefficient, D^{eff}_{cz} (cm^2/s)	Total overall effective diffusion coefficient, D^{eff}_T (cm^2/s)
3.39E+04	1.00E+06	5.00E-03	15	10,245	4.88E-03	2.00E-01	1.80E-04	6.79E-03	5.61E-04	4.11E-03

Diffusion path length, L_d (cm)	Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, $\exp(Pe^f)$ (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)	Unit risk factor, URF $(\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
289.8	15	6.61E+02	1.25	8.33E+01	6.79E-03	5.00E+03	4.63E+10	3.57E-04	2.36E-01	NA	1.0E-01

RESULTS SHEET

RISK-BASED GROUNDWATER CONCENTRATION CALCULATIONS:

Indoor exposure groundwater conc., carcinogen (µg/L)	Indoor exposure groundwater conc., noncarcinogen (µg/L)	Risk-based indoor exposure groundwater conc., (µg/L)	Pure component water solubility, S (µg/L)	Final indoor exposure groundwater conc., (µg/L)
NA	NA	NA	1.78E+05	NA

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	2.3E-03

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

GW-SCREEN
Version 3.0; 04/03

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES [X]

DTSC
Vapor Intrusion Guidance
Interim Final 12/04
(last modified 1/21/05)

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
129000	3.50E+01	Pyrene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	304.8	S	24	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
		1.00E-08		1.5	0.43	0.15

MORE ↓

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
1.0E-06	1	70	30	30	350

Used to calculate risk-based groundwater concentration.

CHEMICAL PROPERTIES SHEET

ABC

Diffusivity in air, D_a (cm^2/s)	Diffusivity in water, D_w (cm^2/s)	Henry's law constant at reference temperature, H ($atm\text{-}m^3/mol$)	Henry's law constant reference temperature, T_R (^oC)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (^oK)	Critical temperature, T_C (^oK)	Organic carbon partition coefficient, K_{oc} (cm^3/g)	Pure component water solubility, S (mg/L)	Unit risk factor, URF $(\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
2.72E-02	7.24E-06	1.10E-05	25	14,370	667.95	936.00	1.05E+05	1.35E+00	0.0E+00	1.1E-01

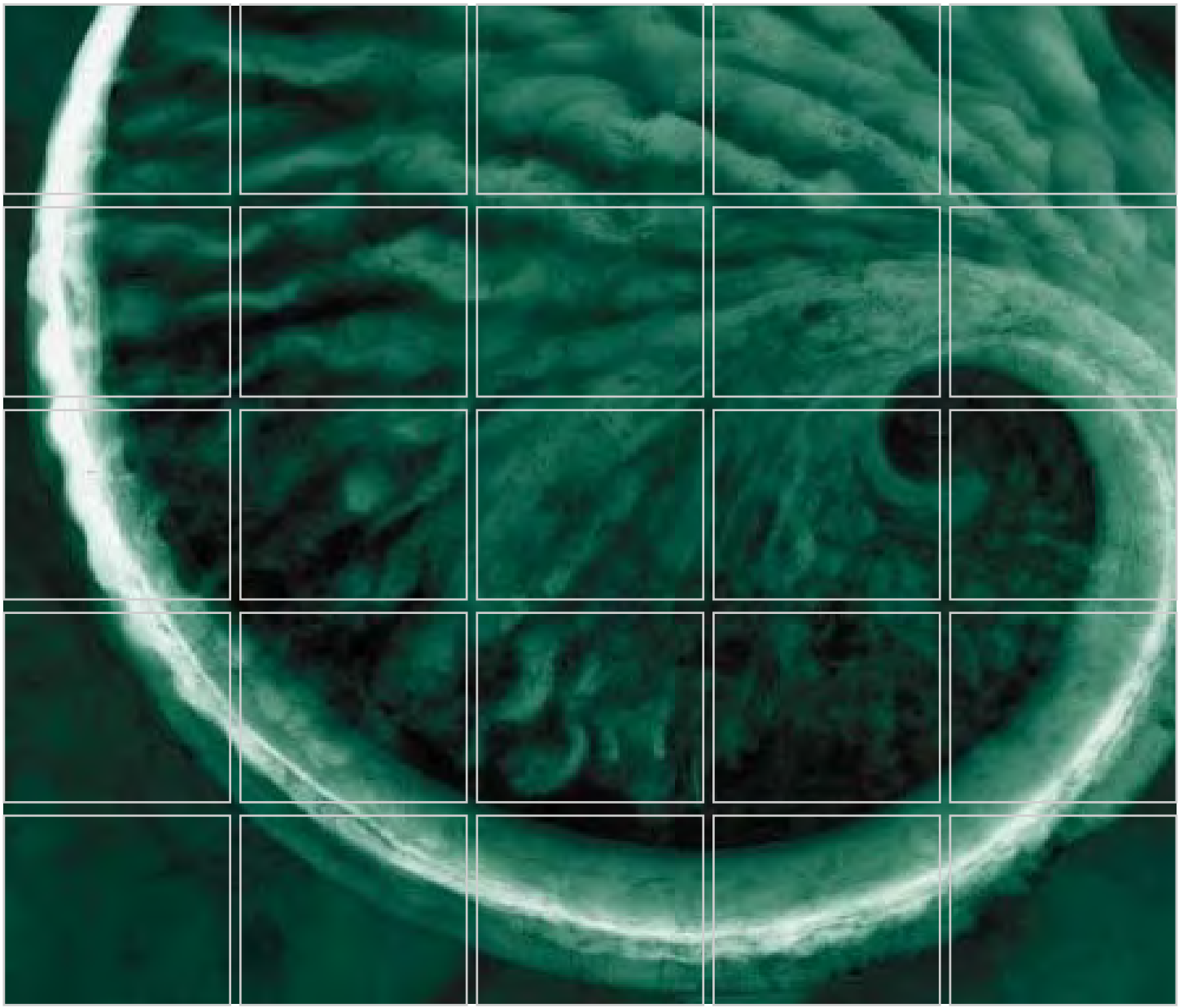
END

INTERMEDIATE CALCULATIONS SHEET

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^V (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Thickness of capillary zone, L_{cz} (cm)	Total porosity in capillary zone, n_{cz} (cm^3/cm^3)	Air-filled porosity in capillary zone, $\theta_{a,cz}$ (cm^3/cm^3)	Water-filled porosity in capillary zone, $\theta_{w,cz}$ (cm^3/cm^3)	Floor-wall seam perimeter, X_{crack} (cm)
289.8	0.280	#N/A	#N/A	#N/A	1.00E-08	17.05	0.375	0.122	0.253	4,000

Bldg. ventilation rate, $Q_{building}$ (cm^3/s)	Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. groundwater temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. groundwater temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. groundwater temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Capillary zone effective diffusion coefficient, D^{eff}_{cz} (cm^2/s)	Total overall effective diffusion coefficient, D^{eff}_T (cm^2/s)
3.39E+04	1.00E+06	5.00E-03	15	20,516	9.77E-06	4.00E-04	1.80E-04	2.30E-03	1.50E-03	2.23E-03

Diffusion path length, L_d (cm)	Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, $\exp(Pe^f)$ (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)	Unit risk factor, URF $(\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
289.8	15	1.40E+01	1.25	8.33E+01	2.30E-03	5.00E+03	3.14E+31	2.08E-04	2.91E-03	NA	1.1E-01



Draft Remedial Design and Implementation Plan

Harbor Park Development
(Former Johns Manville Plant)

Pittsburg, California

June 2006

Prepared for:
Pittsburg River Park LLC

www.erm.com

ERM

Delivering sustainable solutions in a more competitive world

Pittsburg River Park LLC

Draft Remedial Design and Implementation Plan

Harbor Park Development
(Former Johns Manville Plant)
Pittsburg, California

June 2006

Project No.0025556.04

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LIST OF ACRONYMS

ASTM	American Society for Testing and Materials
UST	Underground storage tank
VOC	Volatile organic compound
RDIP	Remedial Design and Implementation Plan
ERM	ERM-West, Inc.
PRPLLC	Pittsburg River Park LLC
CC&Rs	Covenants, Conditions and Restrictions
JM	Johns Manville
RWQCB	California Regional Water Quality Control Board
RAP	Remedial Action Plan
DTSC	Department of Toxic Substances Control
ACM	Asbestos containing material
VCA	Voluntary Cleanup Agreement
bgs	below ground surface
TPH	Total petroleum hydrocarbon
PCB	Polychlorinated biphenyls
SVOC	Semivolatile organic compound
RDA	City of Pittsburg Redevelopment Agency
ENGEO	ENGEO, Inc.
RAO	Remedial Action Objectives
O&M	Operation & Maintenance
County	Contra Costa County Environmental Health Division, Hazardous Materials Program
BTEX	benzene, toluene, ethylbenzene, and xylenes
USEPA	United States Environmental Protection Agency
MCL	Maximum Contaminant Level
AOC	Area of Concern
SMP	Site Management Plan
OSHA	Occupational Safety & Health Administration

SWPPP	Storm Water Pollution Prevention Plan
POTW	Publicly owned treatment works
BMP	Best management practice
PLM	Polarized Light Microscopy
NIOSH	National Institute of Occupational Safety and Health
PPE	Personal protective equipment

1.0 INTRODUCTION

1.1 PURPOSE

This Remedial Design and Implementation Plan (RDIP) was prepared by ERM-West, Inc. (ERM) for Pittsburg River Park LLC (PRPLLC) to present a detailed engineering plan for implementing the chosen remedial alternatives for soil/fill materials and ground water at the Harbor Park Development (former Johns Manville [JM] Plant Site; also referred to herein as "site"). These remedial alternatives were described in detail in the *Final Remedial Action Plan* (RAP) (ERM, 2006). The site is at the approximate intersection of East Third and Harbor Streets in Pittsburg, Contra Costa County, California (Figure 1).

1.2 SITE DESCRIPTION AND LAND USE HISTORY

The following sections describe general site conditions and historical land use of the JM Plant Site and surrounding areas.

1.2.1 Site Description

The former JM facility consists of two distinct properties located at the approximate intersection of East Third Street and Harbor Street in Pittsburg, California.

The first parcel, approximately 1,000 feet south of New York Slough and Suisun Bay, is referred to as the "Plant Site" or "site," which is the primary subject of remedial actions addressed in this RDIP. This 21-acre parcel is bounded to the north by a Tesoro coke facility and Third Street; to the east by Harbor Street, several small light industrial businesses, and USS Posco Corporation; and to the south and west by residential properties. Most recently, until the facility terminated operations in 2003, it was used for the manufacture of commercial roofing materials. The Plant Site formerly consisted of Buildings 1 through 4 in the northern portion of the property, a warehouse in the southwestern portion of the site, and the former evaporation pond area, which is currently paved with asphalt. Railroad tracks bisect the central portion of the property. Currently, the site is undergoing complete demolition of all structures, improvements and subsurface features (utilities, vaults, tanks, rail tracks, etc). A Site Detail

Map showing historical physical site features and sampling locations is provided as Figure 2. Remedial actions described in this document address only the Plant Site.

The current land use and zoning for the Plant Site was changed from Marine Commercial to Downtown High Density Residential, Downtown Medium Density Residential, and Downtown Commercial through an entitlement process undertaken by Pittsburg River Park LLC. The entitlements, a General Plan Amendment approved by the Pittsburg City Council in December 2005, will allow for single-and multi-family residential reuse of the plant portion of the former JM site.

1.2.2 Land Use History of the Site and Surrounding Area

The primary manufacturing plant was built sometime between 1925 and 1928. In 1957, a large warehouse was constructed south of the main manufacturing facility. Asbestos-cement products, asphalt roofing materials, and asbestos-containing pipe covering were the primary products produced prior to termination of asbestos-containing product manufacturing in 1980. A series of four asphalt stills, located along the southwestern margin of Building 4, was used to convert heavy oil to asphalt. The stills were fueled by fuel oil and later with natural gas. In the process of converting heavy oil to asphalt, off-gas vapors were collected, condensed, and mixed with water to form an oil-water slurry that was transported via an underground pipe to the evaporation pond. The residual oil in the evaporation pond was reportedly burned approximately twice a year. Use of the evaporation pond began in 1946. It remained relatively constant in size until 1959, when discharge of effluent was discontinued, and it was subsequently filled with scrap and construction debris. The size of the pond when it closed was approximately 150 feet long by 75 feet wide with a maximum depth of 10 feet below ground surface (bgs) (Figure 3).

From the 1980s until the plant's closure in approximately 2003, JM manufactured commercial roofing materials using fiberglass mat, asphalt, sand, and limestone. Petroleum-based resins and solvents were also used on site.

Classes of chemicals associated with historical site operations are primarily asbestos and total petroleum hydrocarbons (TPH). Additional related chemical classes, detected sporadically or infrequently at the site are as follows:

- Metals (as constituents of TPH mixtures);
- Polychlorinated biphenyls (PCBs; as constituents of TPH mixtures);
- Semivolatile organic compounds (SVOCs; as constituents of TPH mixtures and as TPH combustion products); and
- Volatile organic compounds (VOCs; as constituents of TPH mixtures).

As noted above, the areas to the north and east of the Plant Site have historically been used for industrial or commercial purposes. To the south, west, and northwest are residential developments. Immediately west of the site is a residential area that was redeveloped in the mid-1990s. Prior to its redevelopment, this area, referred to in previous documentation as the Eastside Redevelopment Area (ENGEO, Inc. [ENGEO], 1991), was characterized by vacant lots, single-family residences and apartment units, vacant commercial buildings, a bakery, and Riverside Fire Station No. 84. Anecdotal information obtained by ERM suggests that some of the prior residences may have been historically used as illicit drug manufacturing laboratories, resulting in some of the minimal ground water impacts observed in the ENGEO report. Based on concentrations of similar contaminants detected in ground water samples collected at the former JM site, upgradient of the former pond area, it is possible some of this contamination has migrated to the east onto the former JM property.

1.3 SUMMARY OF APPROVED REMEDIAL ACTION

The remedial action approved for impacted soil/fill materials at the site consists of consolidating impacted materials into an engineered berm along the eastern property boundary. Fill materials within the areas of concern will be excavated and consolidated on site in the construction of an engineered berm along the eastern site boundary. Appropriate deed restrictions and an Operation and Maintenance (O&M) Agreement will be implemented prior to certification of the site. The deed restriction will limit access to and use of the bermed area. Selection of this alternative is based primarily on its demonstrated effectiveness, consistency with future land use, cost-effectiveness, and ease and speed of implementation.

The remedial action approved for impacted ground water consists of natural attenuation of residual chemicals. Also, in accordance with 22 CCR Section 67391.1, Division 4.5, Chapter 39, an institutional control prohibiting the use of ground water for purposes other than site

remediation or construction dewatering will be included in the remedial action. This institutional control will be in the form of homeowners' association Codes, Covenants, and Restrictions (CCRs). Specific details associated with any other restrictions considered appropriate by DTSC will be addressed in a Final O&M Agreement following implementation of the remedy. Selection of this alternative is based primarily on demonstrated effectiveness, consistency with future land use, cost-effectiveness, and the ease and speed of implementation. This remedial alternative includes a post-removal action ground water investigation to evaluate concentrations of potential constituents of concern in ground water. Should samples of ground water demonstrate that the concentrations are below applicable cleanup objectives, an application for closure will be submitted to DTSC.

The approved remedial actions for soil/fill materials and ground water meet each of the established Remedial Action Objectives (RAOs) for the site.

1.4 REPORT ORGANIZATION

The remainder of this RDIP is organized as follows:

- Section 2 describes the overall RAOs and the location and extent of the areas undergoing remediation;
- Section 3 presents details of the remedial program, including the plans for soil excavation and berm construction and actions related to potential ground water issues;
- Section 4 describes the O&M Agreement and Plan;
- Section 5 presents a schedule and details of construction activities; and
- Section 6 presents references cited or reviewed in preparation of the RDIP.

The main text is followed by figures and appendices containing supporting information.

2.0 REMEDIAL ACTION OBJECTIVES

This section provides the objectives of the remedial action and describes the location and known extent of areas of concern as of 1 June 2006.

2.1 OVERALL OBJECTIVES OF THE REMEDIAL ACTION

The RAOs are based on residential site usage and include the following:

- Prevent exposure (i.e., via incidental ingestion, dermal contact, inhalation of fugitive dust, and inhalation of volatile emissions) to soil/fill materials that are impacted with TPH at concentrations in excess of the cleanup goals established for the site (see Table C-6 of the RAP). (Note: These cleanup goals are not risk-based, because TPH includes varying mixtures of constituents and, as such, the associated risks would also be variable. Risks associated with TPH are addressed by the cleanup goals established for specific TPH constituents [i.e., benzene, toluene, ethylbenzene, and xylenes (BTEX)]). The proposed TPH cleanup goals for soil will be consistent with those commonly used by the Contra Costa County Environmental Health Division, Hazardous Materials Programs (County) in evaluating remedial actions for proposed residential sites. These cleanup objectives are based on California Regional Water Quality Control Board (RWQCB) Environmental Screening Levels, and vary on a case-by-case basis.
- Ensure that asbestos is not present in soil/fill materials at detectable levels in any portions of the Plant Site (analysis will be Polarized Light Microscopy (PLM) per National Institute for Occupational Safety and Health (NIOSH) 9002, *Asbestos by Polarized Light Microscopy* or equivalent).
- Prevent exposure to soil/fill materials that are impacted with site-related chemicals at concentrations in excess of health-risk-based cleanup goals established for the site (i.e., PCBs, SVOCs, and VOCs, see Table C-6 of the RAP).
- Prevent migration of constituents in soil/fill materials that would result in ground water contamination in excess of California Maximum Contaminant Levels (MCLs) or other applicable water quality standards. As described below in section 3.4, we present a ground water sampling program to address this issue.

- Prevent exposure to ground water within the footprint of the former evaporation pond.
- Reduce the concentrations of TPH-related constituents in ground water (i.e., BTEX) to below their respective MCLs.

2.2 *LOCATION AND EXTENT OF AREAS OF CONCERN*

Figure 3 shows the location and extent of the known areas of contamination at the Plant Site as of 1 June 2006. These areas include the former evaporation pond and other locations found during the ongoing demolition phase of the project. Site demolition continued beyond 1 June 2006 and any additional Areas of Concern (AOCs) identified after that date will be addressed during the work described in Section 3. The full extent of all AOCs discovered during the performance of the work will be documented in the Remedial Action Certification Request.

3.0 DESCRIPTION OF THE REMEDIAL PROGRAM

This section defines the methodology and standard practices to control the quality of work performed at the site during remediation activities specified in this RDIP. Appendix A is the Site Management Plan (SMP), which was prepared prior to beginning the abatement and demolition phase of the project. The SMP includes several sections of construction-related requirements, which are also applicable to this phase of construction, including, but not limited to:

- Site Specific Health and Safety Plan;
- Air Monitoring Plan;
- Storm Water Pollution Prevention Plan (SWPPP);
- Dust Control – Section 4.3.1;
- Soil Excavation and Confirmation Sampling Protocol – Section 4.4; and
- Stockpile Management – Section 4.

3.1 EXCAVATING IMPACTED SOIL

3.1.1 Excavation Plan and Details

In accordance with Section 15.88 of the City of Pittsburg Municipal Code, the following requirements will be met by Entact, the selected remediation contractor (Contractor or Entact) during the execution of the excavation and stockpile work. In addition, Section 4 of the SMP shall be used as a reference during all site activities.

- It is anticipated that the contractor will use standard construction equipment (excavators, front-end loaders, dump trucks, etc.) to perform the work. All equipment must be in legal operating condition and all operators will be qualified to operate the equipment.
- All soil removed from the excavations will be segregated into stockpiles of like materials, i.e., not impacted, ACM, and TPH-impacted soils.
- During excavation work, unknown debris such as concrete, asphalt, and metal may be intermixed with the soil. Debris is defined as an object that does not serve a purpose and, if removed from the

subsurface, other objects, systems, and/or structures are not negatively impacted. The debris will be removed from the excavation areas and transported off site for disposal if deemed not geotechnically suitable for placement within the berm.

- During excavation and stockpile work, dust control will be implemented to mitigate visible dust. Should moisture limits associated with compaction requirements impair dust suppression, the contractor shall be prepared to amend water as needed (using surfactants, polymers, etc). Perimeter dust concentrations in air shall not exceed 0.18 milligram per cubic meter. PLM asbestos samples shall not exceed 0.01 structure per cubic centimeter.
- The contractor shall be prepared to erect moveable windscreens upwind and no further than 50 feet from any and all active excavation or compaction areas. Each windscreen will be a minimum of 6 feet high and 40 feet wide.
- All exposed contaminated materials shall be covered at the end of each workday. Covers shall be maintained at all times, except on active piles or excavation areas.
- Excavation work will be performed in compliance with all Occupational Safety and Health Administration (OSHA) rules and regulations. This includes following the requirements for sloping, benching, and shoring as presented in Title 29 of the Code of Federal Regulations, Part 1926, Subpart P – Excavations. The excavations shall be constructed to allow entrance and egress as needed for confirmation sampling.
- Excavation of the areas shown on Figure 3 (with the exception of the berm excavation) will be performed under the direction of the Construction Manager. The excavations will be performed in 1 foot lifts, and the Construction Manager will inspect each lift and either clear the excavation or require further excavation to remove any remaining contaminated materials. Details for the construction of the berm are described in the section below.

3.1.2 Excavation Dewatering and Water Management

3.1.2.1 Ground Water or Perched Water

Ground water or perched water will likely be encountered in the former evaporation pond area as well as in the excavation for the proposed berm. This water will be removed from the excavation with a dewatering

system. It is not anticipated that treatment of the water will be required to meet discharge requirements. However, if treatment is required, the water will be conveyed to a water treatment system located on site. If treatment is required, the water treatment system will consist of oil/water separator tanks, sediment tanks, filters and/or granular activated carbon units (or other similar equipment) as needed to achieve Publicly Owned Treatment Works (POTW) discharge limits, and ultimately be discharged to the Delta Diablo Sanitary District sewer system. Any recovered free-phase product will be removed and disposed at an approved off site facility. Any discharges to the sanitary sewer system will be under an approved Special Discharge Permit in accordance with Section 13.20 of the City of Pittsburg Municipal Code.

3.1.2.2 Storm Water

The site is currently undeveloped and in rough grade conditions. All storm water and sanitary sewer utilities have been removed from the site. During all soil remediation activities, storm water management will be performed such that the adjacent off-site storm water collection system is not adversely impacted by site activities. The storm water management requirements are detailed in the SWPPP attached as Appendix B of the SMP and are summarized below.

- All storm water management activities will be performed in accordance with Section 13.28 of the City of Pittsburg Municipal Code.
- All stockpile areas will be constructed and maintained to contain fluids that come in contact with the stockpiled material. The contractor is responsible for constructing the stockpile areas to achieve this requirement. Stockpiles with impacted soils will not be placed close to the edge of the property adjacent to either Harbor Street or Third Street. Until all stockpiles are removed, the contractor will prevent any flow of sediment and non-visible pollutants off site by covering the stockpiles with plastic sheeting. The sheeting will be securely fastened so wind does not blow it away and cause a nuisance.
- Other examples of storm water best management practices (BMPs) anticipated to be used around the stockpile areas are straw wattles, silt fencing, and straw bales.
- The catch basins adjacent to the property on Harbor and Third Streets will be protected with a BMP that prevents silt and sediment from entering the catch basin, such as a catch basin insert.

- The contractor will include in the health and safety tailgate meetings periodic training for employees addressing proper implementation of storm water BMPs.
- Storm water accumulated within contaminated excavation areas will be assumed contaminated until proven otherwise. Any water that cannot be proven clean will be pumped out of the excavation into the on site storage tanks.

3.1.3 Excavation Confirmation Sampling

Once impacted soil is removed in accordance with RDIP specifications, confirmation sampling will be performed at the excavation floors and sidewalls to verify that sufficient impacted soil has been removed to meet cleanup goals.

The bottoms and sidewalls of all excavations are to be sampled according to protocols set forth in American Society for Testing and Materials (ASTM) E1903-97, *Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process*, and ASTM D4700-91, *Standard Guide for Soil Sampling from the Vadose Zone*. These documents are attached as Appendices C and D of the SMP, respectively. The following sections summarize the protocols as they apply to the subject work.

3.1.3.1 Confirmation Sampling Frequency

For the excavations, soil confirmation samples will be collected from the excavation sidewalls and floors in evenly spaced locations. Frequency of samples and analytes evaluated are a function of the individual constituents of concern and the frequency they have been identified across the site (based on historical sampling results), as follows:

- ACM: 50-foot centers (approximately 300 samples, site-wide);
- TPH: 20 percent of the samples collected within the former evaporation pond (approximately 30 samples) plus approximately 10 samples site-wide;
- Metals: 10 percent of the samples collected within the former evaporation pond (approximately 15 samples) plus approximately 5 samples site-wide;
- SVOCs: 10 percent of the samples collected within the former evaporation pond (approximately 15 samples) plus approximately 5 samples site-wide; and

- VOCs: 10 percent of the samples collected within the former evaporation pond (approximately 15 samples) plus approximately 5 samples site-wide.

Samples to be analyzed for TPH, metals, SVOCs, and VOCs as indicated above will be selected based olfactory or other visual evidence of potential impacts from constituents of concern.

All soil sampling locations will be staked, documented, and their location marked on a site drawing. The sidewall samples will be collected at an approximate depth of 6 inches above the excavation floor or 6 inches above standing water within the excavation, whichever is higher

3.1.3.2 Confirmation Sampling Methods

Soil samples will be collected either by manually pushing pre-cleaned, brass or stainless-steel liners into the soil, or by using a steel core sampler with pre-cleaned, brass or stainless-steel liners attached to an extension rod with a slide hammer apparatus. Alternatively, a clean, stainless-steel trowel may be used for sample collection into 4-ounce glass jars if the aforementioned methods cannot be used in the event that refusal is encountered.

Each excavation confirmation sample will be assigned a unique sample identification number that will include the excavation designation and sample location. For example, EP-CONF-01 would be the evaporation pond area confirmation sample number 01. All sample locations will be documented on a site map and surveyed via global positioning system for future reference.

All field sampling equipment will be decontaminated before and after use. Wash water and other fluids generated during decontamination will be put into containers and disposed of properly.

3.1.3.3 Confirmation Sampling Analysis

The results of the post-excavation confirmation sampling will determine if further excavation or product removal is required (re-excavation, followed by additional confirmation sampling) or if excavation work can be terminated. At a minimum, each sample collected on 50-foot centers will be analyzed for ACM by PLM NIOSH 9002. Other samples will be analyzed according to the frequency described above for the following

constituents based upon their location and historical data, and upon physical evidence of potential impacts:

- TPH as diesel and motor oil by USEPA Method 8015;
- SVOCs by USEPA Method 8270;
- VOCs by USEPA Method 8020; and
- California Title 22 Metals by USEPA Methods 6010B and 7470 (for mercury).

The results of post-excavation confirmation sampling will determine if further excavation is required (re-excavation, followed by additional confirmation sampling) or if excavation work can be terminated. If confirmation sampling results exceed remedial objectives, as defined in Table C-6 of the RAP), additional soil will be excavated and resampled until remedial objectives are achieved.

3.1.4 Backfill and Restoration

All excavation areas will be backfilled and restored to rough grade conditions for future development. To the extent possible, backfill material will be clean soil existing on site either from building pad fill or clean soil excavated during the berm excavation. In some cases, available on-site crushed rock may be used where geotechnically suitable. The deepest excavations will be backfilled first. Backfilling will be completed using compaction techniques suitable for the intended future use, i.e., with excavator buckets and excavator mounted compactor wheels.

Additional clean material that may need to be imported to complete the backfilling of the excavations shall include a certification letter from the supplier and/or manufacturer. All imported materials shall be uncontaminated and geotechnically suitable as fill material for future construction.

3.1.5 Excavation Health and Safety and Air Monitoring

The Health and Safety Plan for this project is included as Appendix A in the SMP for reference. A third-party Industrial Hygiene contractor will perform on-site air monitoring. The Air Monitoring Plan is included as Appendix E of the SMP. Although these documents were written for the abatement and demolition phases of the project, the information, methods, and practices outlined therein are applicable to this remediation phase.

3.2 CONSTRUCTION OF ON-SITE EASTERN BOUNDARY BERM

3.2.1 Details of Eastern Boundary Berm

The Eastern Boundary Berm is designed to store impacted soil previously excavated from various locations around the site, including the former evaporation pond area. The berm consists of an excavated trench, backfilled and mounded contaminated soil, drainage features, and a clean fill cover layer with vegetation and irrigation.

3.2.2 Geotechnical Settlement Issues

According to the *Geotechnical Investigation Report* produced by Treadwell & Rollo (T&R) (T&R, 2006a) regarding geotechnical stability of the proposed berm, up to 21 inches of settlement may be expected. This report is included as Appendix B to this RDIP. T&R also submitted a *Supplemental Geotechnical Consultation Letter Report* (T&R, 2006b), which is included as Appendix C. To compensate for the predicted settlement, several sections of the berm will be constructed such that following settlement (approximately 10 years) the top surface alignment of the berm will be within the designed 10 feet above existing ground surface. Design contours shown on Figure 4 depict this compensation. A detailed geotechnical evaluation and contours have been submitted to the City of Pittsburg with the grading permit application.

3.2.3 Berm Construction Details

The final berm excavation depth will be approximately 10 feet below the existing ground surface. Based upon previous investigations and water levels measured from nearby monitoring wells, maintaining a separation between the bottom of the trench and ground water is not possible. To reduce the possibility of impacting ground water with hydrocarbon-impacted soil, the backfilled soils will be segregated so that ACM-impacted soils are placed at the bottom and soils containing petroleum hydrocarbons are placed near the top of the excavation.

The excavation area is outlined on Figure 4 and will be 75 feet wide and approximately 1,300 feet long. The excavated soils will be segregated into clean and impacted stockpiles. Stockpile management will be the same as that described in Section 3.1.1.

3.2.4 Berm Backfill and Completion Details

The previously stockpiled, contaminated soils will be placed in the trench and compacted in accordance with the methods described in Section 3.1.4. The Construction Manager shall direct the selection of the materials to be placed. A typical cross-section of the berm is shown in Figure 5. The impacted soils will be placed to a final thickness of 8 feet above existing ground surface at the center with a table of approximately 25.33 feet. The sides will be sloped at 2.25 feet horizontal to 1 foot vertical.

Following placement of the impacted soil, a layer of Mirafi 140NC filter fabric, or Engineer-approved like material, will be placed over the soil surface and vertically on the side walls to serve as a visual demarcation liner and prevent accidental exposure to the impacted materials contained below. A 2-foot-thick clean soil cover will then be placed over the entire berm to support landscaping features. The soil cover will consist of clean soil from the excavation stockpile amended as directed by a landscape architect to support the growth of the selected vegetation to be planted. Typical soil amendments might include 25 percent by volume washed sand and 30 percent by volume redwood and compost. The cover will extend to the edge of the proposed property line as shown on Figure 5.

Drainage swales will be constructed adjacent to the berm and will be graded such that collected storm water runoff will drain north towards a catch basin tied into the Third Street storm line. The design details of these swales are shown on Figure 5.

3.2.5 Berm Landscaping Features

Landscaping features for the berm cover will be non-inviting, low maintenance, drought-tolerant plants. In accordance with Section 18.84 Article 7 of the City of Pittsburg Municipal Code, a Landscaping and Irrigation Plan will be submitted to the City prior to installation. The plan will describe the plants, layout, and irrigation details.

3.2.6 Berm Secondary Structures and Aesthetic Details

A permanent fence will be installed along the proposed property line to deter future contact with the berm and its contents. The fence will be a sturdy decorative fence at least 6 feet tall, designed to discourage climbing and trespassing. Details of the fence construction are depicted on Figure 6. Vehicle access gates will be placed at one end of each berm section and two personnel gates will be installed along the western side of the northern

berm section. These gates will be locked at all times and only authorized maintenance personnel will be allowed access.

3.2.7 Construction Health and Safety and Air Monitoring

The Health and Safety Plan for this project is included as Appendix A of the SMP for reference. A third-party Industrial Hygiene contractor will perform on-site air monitoring. The Air Monitoring Plan is included as Appendix E of the SMP. Although these documents were written for the abatement and demolition phases of the project, the information, methods, and practices outlined therein are applicable to this remediation phase.

3.3 DISPOSAL OF SURPLUS IMPACTED SOIL

3.3.1 Destination of Waste Material

Should the amount of excavated waste exceed the capacity of the impoundment berm, the surplus material will require transportation off site for disposal. Some debris mixed in the soil, along with asphalt and concrete debris may have to be transported off site as well.

3.3.1.1 Debris

The surface of the former evaporation pond is currently capped with asphalt that will be removed to excavate the impacted soil in that area. As feasible, the contractor will segregate debris based on material type. All debris will be transported off site and either recycled or properly disposed of in a landfill. The contractor will select the off-site recycling facility and off-site landfill.

If the debris is transported to an off-site recycling facility, the facility will be legally authorized to recycle and process the debris. If the debris is not recycled, it will be transported to an off-site landfill that is legally authorized to receive the debris. Copies of the recycling facility or the landfill's permits to legally operate will be submitted to PRPLLC prior to beginning work. The contractor is responsible for supplying any waste-profiling analytical results and/or other information either to the recycler or landfill operator to facilitate recycling or disposal.

3.3.1.2 Soil

Due to the proposed volume of the berm, and the expected quantities of contaminated materials on site, it is not anticipated there will be surplus material to be disposed of off site. However, any surplus soil removed from the excavation areas that cannot be placed into the berm will be transported off site and disposed of in accordance with all applicable rules and regulations. The contractor will select the off-site landfill and provide PRPLLC with copies of the landfill's permits to operate.

The contractor will be responsible for coordinating with the landfill the sampling frequency necessary to characterize or profile the soil for disposal. The sampling frequency will include the number of samples per stockpiled volume of soil and the necessary laboratory analyses. The contractor will be responsible for verifying that all soil and wastes transported and disposed of off site meet landfill requirements.

3.3.2 Mode of Transportation

The debris and soil will be transported in dump trucks licensed to operate on public streets and highways, and to carry debris and hazardous waste loads as applicable. The trucks will be driven by appropriately qualified and licensed operators. The trucks will be operated on public or private roads and will follow all applicable state and federal laws.

3.3.3 Loading, Route, and Traffic Control

Debris and soil will be stockpiled on site in segregated piles. After the wastes are properly profiled and the off-site recycling facility or landfill has authorized acceptance of the material, the material will be loaded into the dump trucks. The dump trucks will be staged at the stockpile area, and the materials will be directly loaded into the trucks. The dump trucks will be tarped and then leave the site.

All truck traffic to and from the site will be conducted along Harbor Street, which is an approved City truck route. Truck traffic along other City streets will be prohibited.

3.3.4 Record-Keeping

The contractor will maintain a daily record of quantities of all debris, soil, and other wastes transported off site. The daily record will be maintained on site and available for review. The daily record will also include:

- The name of the trucking company for each truckload;
- Weigh ticket showing the weight of load;
- Volume ticket showing the volume of load; and
- Waste manifest for each load, as applicable.

Waste manifests for each truckload will be prepared by the contractor. The contractor will provide PRPLLC or its designated representative sufficient time to sign the manifests prior to off-site transportation.

The Construction Manager will maintain a daily activity log, a photo log, a record of sample locations, and provide an updated map of unexpected features encountered during the course of the work.

3.3.5 Contingency Plan

The contractor will verify that the trucking company has an emergency contingency program in place for all roadway shipments of materials. A summary of the general procedures for addressing accidental releases during truck shipments is presented below.

- In the event of an accident, the truck driver or other first responder will assess the potential for immediate threat to workers and people on or nearby the accident. The driver will take appropriate corrective steps to rectify the problem and notify local emergency agencies.
- After identifying the problem (approximate size of release, type of material, potential threat to human health or the environment), the first responder will notify PRPLLC as well as the truck hauler's responsible Person.
- For contaminated material spilled onto the ground surface along a transportation route, cleanup will consist of collection and disposal of the contaminated soil at a disposal facility. All cleanup work will be done in accordance with a site-specific Health and Safety Plan and in cooperation with appropriate state and local agencies.
- For accidental releases of contaminated material in or near a stream, river, or lake, the same general response procedures will apply, with particular emphasis on preventing the spilled waste from reaching the water body. In the event of an actual release of contaminated material into a body of water, all work will be coordinated with state and local agencies to select practical and appropriate cleanup methods based on specific circumstances of the release.

3.4 GROUND WATER ISSUES

3.4.1 Well Abandonment/Relocation (as needed)

Several on site wells have already been abandoned in accordance with Contra Costa County (County) regulations. The remainder of the wells will be abandoned during the remediation phase via excavation. Well abandonment permits will be acquired, as necessary, from the County prior to abandonment.

3.4.2 Post-Construction Ground Water Monitoring

As described in the RAP, this RDIP also includes a post-construction action ground water investigation to determine the need for further ground water monitoring.

The post-construction ground water monitoring program will take place following the excavation and subsequent backfill and rough grading of the contaminated materials. The sampling will include ground water grab samples, collected via direct push/hydropunch approach, at a minimum of five (5) locations within the footprint of the former evaporation pond and five (5) other locations across the site, based on historical ground water data. Ground water grab samples will be analyzed for TPH and VOCs in accordance with the methodologies described above for soil confirmation sampling.

If the applicable remedial objectives for any constituents are not met, a formal ground water monitoring program (including natural attenuation parameters) may be required and will be negotiated with DTSC, as appropriate.

3.4.3 Ground Water Monitoring Program Details (if needed)

No remedial activities for ground water will be implemented. However, in accordance with Title 22 of the California Code of Regulations, Section 67391.1, Division 4.5, Chapter 39, an institutional control prohibiting the use of ground water for purposes other than site remediation or construction dewatering will be part of the proposed remedy associated with this alternative. As mentioned in Section 1.3, this institutional control would be in the form of homeowners' association CC&Rs.

The ground water monitoring program, if required, will include, at a minimum, annual reporting of ground water monitoring results to DTSC.

A DTSC Operation and Maintenance (O&M) Agreement will be written following completion of the construction of the containment berm which will discuss the ground water monitoring program, if applicable. If the investigation demonstrates that constituents of concern concentrations in ground water do not exceed the applicable remedial objectives, as defined in Section 5 of the RAP, a ground water closure request will be prepared and submitted to DTSC. Pending DTSC approval of the request, no further activities associated with ground water issues will be performed for the site.

4.0 POST-CONSTRUCTION OPERATION AND MAINTENANCE

The following section summarizes the O&M approach, which will be detailed in a Post-Construction O&M Plan that will be prepared following the completion of the berm construction.

4.1 ACCESS CONTROL

Public access to the berm and its contents will be restricted. A security fence will be installed around the perimeter of the berm and access gates will be locked at all times. Gate locks will be tamper resistant. Only authorized personnel will be allowed entry within the fence for maintenance, inspection, or other approved activity. All applicable City of Pittsburg Municipal Code requirements will be followed in the installation of the fence.

4.2 MAINTENANCE

4.2.1 Regular Maintenance

Regular maintenance for cover integrity, landscaping, and irrigation will be discussed in detail in the Post-Construction O&M Plan.

4.2.2 Accidental Breaches and Exposure

Accidental breaches of the berm cover, with potential exposure to the public could occur as the result of several instances, such as broken irrigation lines, misguided utility line repairs, vehicle collision with the berm, burrowing animals, or trespassers. A contingency plan and an emergency response plan will be developed and included in the Post-Construction O&M Plan. A 24-hour contact number will be listed in the plan to facilitate emergency response.

Additionally, as indicated in Section 4.1 of the RAP, none of the waste materials that will be encapsulated in the berm are acutely hazardous, and the primary routes of exposure are via incidental ingestion, dermal contact, and inhalation of fugitive dust. As a result, there would be no immediate or acute threat to human health or the environment should

these materials become temporarily or suddenly exposed due to an accidental release or a breach of the berm cover.

5.0 CONSTRUCTION ACTIVITIES

5.1 SITE PREPARATION AND SECURITY MEASURES

Before starting remediation work, certain mobilization and site preparation activities will occur. Mobilization and site preparation is the act of establishing administrative procedures and bringing personnel, equipment, materials, and tools to support the remediation work. Mobilization will be performed in a phased approach by bringing equipment, materials, tools, and personnel to the site on an as-needed basis. Mobilization and site preparation include the following components:

- Procurement of remediation contractor and vendors (this has been completed);
- Obtaining permits and notifications (this is in process);
- Establishment of temporary facilities and site security;
- Utility and monitoring well demolition;
- Pre-Excavation survey;
- Implementation of worker health and safety; and
- Documentation and record-keeping of project activities.

5.1.1 Contractor and Vendor Procurement

Prior to performing on-site remediation work, procurement of a qualified remediation contractor will be performed. This will be accomplished by preparation of contract documents, and awarding the work to the successful contractor. The contract documents will include this RDIP, drawings, and any other site-related information. The contract documents will also detail the measurement and payment requirements for the contractor's compensation.

5.1.2 Permits and Notifications

The contractor will conduct all work in accordance with applicable local, state, and federal laws and regulations. With the exception of the grading and well destruction permits, the contractor will be responsible for

obtaining and maintaining all permits and notifications prior to executing the work. A grading permit will be obtained from the City and the appropriate well abandonment permits will be obtained from the County. The remaining anticipated permits and notifications are:

- Excavation permit from OSHA;
- Traffic control plan from the City (if required);
- Permits for off-site transportation and disposal (if required);
- Bay Area Air Quality Management District notification for the excavation, removal, and disposal of friable ACM;
- Discharge permit from the City or County (if required); and
- Encroachment permit from the City (as necessary).

Copies of these permits and any other permits and notifications necessary to execute the work will be maintained on site by the contractor during execution of the work.

5.1.3 Temporary Facilities and Site Security

Temporary facilities, project-control setup, and site access and security are necessary so each component of the soil remediation work can be performed. These include:

- A location established for a field office, equipment, storage bins, materials, and sanitary facilities. The contractor is responsible for any utility connections and disconnections that may be required.
- A parking area for workers' personal vehicles. The parking area will be at a location on site such that the work will not be hindered.
- Fencing and signs around specific work areas to prevent unauthorized entrance. An entry/exit point to the project site will be established. At the entry/exit point, signs will be placed to direct visitors and vendors to either a field office or designated area where they can check in with the site superintendent.
- The contractor shall be responsible for all site security, including perimeter fences and controlling all access.

5.1.4 Utility and Monitoring Well Demolition

The fieldwork location has been cleared of all known active utilities. In the event an unknown utility is encountered, the contractor shall stop

work and the site superintendent shall be notified. Upon verification of the utility construction material, the utility shall be removed and disposed of in accordance with all applicable rules and regulations.

As described in Section 3.4.1, existing monitoring wells and extraction wells in the former evaporation pond area may be encountered during the work. These shall be abandoned in accordance with County regulations for well abandonment.

5.1.5 Pre-Excavation Survey

The lateral excavation limits for the berm, as identified in Figure 4, will be staked out by a California Licensed Surveyor. When the excavation areas are delineated, the surveyor will tie the excavation areas with permanent features adjacent to the site such that post-excavation survey work can be performed and as-built drawings can be produced.

5.1.6 Implementation of Worker Health and Safety

A Health and Safety Plan has been prepared for the project (Appendix A of the SMP) to address worker health and safety, including:

- Physical and chemical hazards at the site and requirements for worker personal protective equipment (PPE);
- Criteria for upgrades in PPE;
- Minimum training requirements for site workers;
- Emergency information such as directions to the nearest hospital and emergency telephone numbers; and
- Specific administrative requirements such as documentation of training and daily health and safety tailgate meetings.

5.1.7 Documentation and Record-keeping

Prior to executing the project work, the contractor will establish a record-keeping system for project documentation of all soil remediation activities. The documentation and record-keeping will be maintained on site during the project and kept up to date. At the conclusion of the project, this information will be used to prepare a summary report of the soil remediation activities. At a minimum, the documentation and record-keeping system will include:

- Copies of current training and medical surveillance certificates for all on-site workers;
- Completed health and safety signature sheets;
- Completed daily tailgate health and safety forms;
- Copies of permits and notifications;
- On-site superintendent daily field log;
- As-built drawings of the final excavation limits and drainage utilities;
- On-site soil/stockpile material tracking log;
- Analytical results for soil confirmation sampling and analysis;
- Analytical results for soil profiling for off-site transportation and disposal;
- Waste manifests and weigh tickets for any soil and debris transported and disposed of off site;
- A certification letter from the off-site disposal facilities for all wastes showing that the off-site facility has approved receiving the waste; and
- Geotechnical testing for placement of backfill.

5.2 FIELD DOCUMENTATION

Daily field documentation of the on-site remediation activities will be performed by the Construction Manager and shall include contractor manpower, equipment used, work performed, soils removed, soil/stockpile management, and other site-related activities.

5.3 CONSTRUCTION SCHEDULE

The grading permit is expected to be issued by the City of Pittsburg no later than 1 August 2006. Excavation and backfill of the berm is expected to occur concurrently from 1 August 2006 to 4 September 2006. All work is anticipated to be completed by 22 September 2006.

5.4 CONSTRUCTION COMPLETION REPORT

Upon completion of the work a Construction Completion Report will be submitted PRPLLC. This report will consist of:

- Field documentation including the Construction Manager's field notes and pictures;
- As-built drawings showing the final excavation limits, locations of drainage structures, confirmation sample locations, etc.;
- Analytical results for all samples collected for profiling and confirmation purposes; and
- Waste manifests for off-site transportation and disposal.

The report will also be submitted to DTSC along with the following documents to ensure complete closure:

- O&M Agreement;
- O&M Plan; and
- Deed Restriction for Berm Parcel

Upon approval of the above listed report and associated documents, the DTSC should submit a Remedial Action Completion Certification letter to PRPLLC allowing for the intended use of the site.

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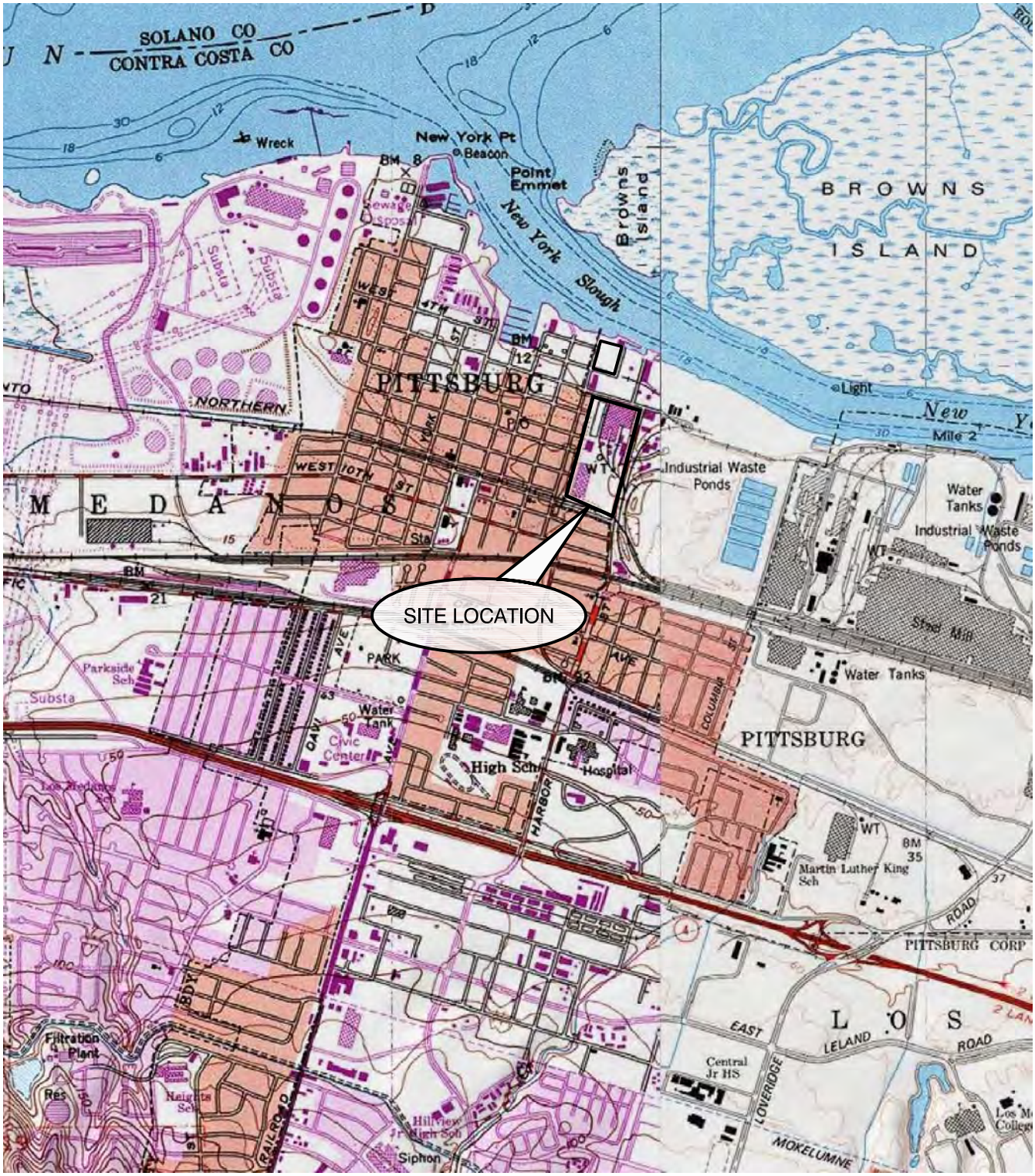
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Figures

Project No. 0025556.04
Date: 05/20/06
Drawn By: D. Ludlam
CAD File: G:\0025556\Site Location Map.dwg



SCALE 1:24,000

1 1/2 0 1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 .5 0 1 KILOMETER

N

References:
U.S.G.S. 7.5 Minute Series (Topographic) Quadrangle,
Honker Bay, California
Dated: 1980

Figure 1
Site Location Map
Pittsburg River Park, LLC
(Former Johns Manville Plant)
420 East 3rd Street
Pittsburg, California

ERM 06/05

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Drawn By: D. Ludlam
Date: 05/24/06
Project No. 0025556.04

RIA CT

RDA-MW-2

MW-03

MW-11

MW-12

MW-13

WAREHOUSE

BUILDING #1

BUILDING #2

BUILDING #3

BUILDING #4

MW-5

100,000-GAL. ELEVATED STEEL WATER TANK

MW-14

MW-15

MW-10

SVE-1 SVE-2 SVE-3 SVE-4 SVE-5 SVE-6 SVE-7 SVE-8

SVE-9 SVE-10 SVE-11 SVE-12 SVE-13 SVE-14 SVE-15

SVE-17 SVE-18 SVE-19 SVE-20 SVE-21 SVE-22 SVE-23 SVE-24

MW-2

MW-6

SVE-25 SVE-26 SVE-27 SVE-28 SVE-29 SVE-30 SVE-31 SVE-32

SVE-33 SVE-34 SVE-35 SVE-36 SVE-37 SVE-38 SVE-39 SVE-40

MW-7

PZ-1

MW-16

MW-4

MW-18

MW-17

MW-19

MW-20

MW-21

MW-8

MW-9

3RD STREET

EAST

HARBOR STREET

LEGEND

- Monitoring Well Location, Abandoned in Grey
- Soil Vapor Extraction Well Location, Abandoned in Grey
- Former Building Locations

N

0 100

Approx. Scale (feet)

Figure 2

Site Detail Map

Pittsburg River Project, LLC

(Former Johns Manville Plant)

420 East 3rd Street

Pittsburg, California

ERM *05/06*

CAD File: G:\0025556\04\002555604-27.dwg
Drawn By: D. Ludlam
Date: 06/13/06
Project No. 0025556.04

RDA-MW-2
MW-03
MW-11
MW-12
MW-13
MW-14
MW-15
MW-10
MW-5
MW-6
MW-2
MW-16
MW-4
MW-18
MW-17
MW-19
MW-20
MW-21
MW-8
MW-9
PZ-1
TP-5

WAREHOUSE
BUILDING #1
BUILDING #2
BUILDING #3
BUILDING #4
100,000-GAL. ELEVATED STEEL WATER TANK

ERM-TP-1
ERM-TP-2
ERM-TP-3
ERM-TP-4
ERM-TP-5
ERM-TP-6
ERM-TP-7
ERM-TP-8
ERM-TP-9

ERM-B-1
ERM-B-2
ERM-B-3
ERM-B-4
ERM-B-5
ERM-B-6

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EP
SS
SD
W

HARBOR STREET
3RD STREET EAST

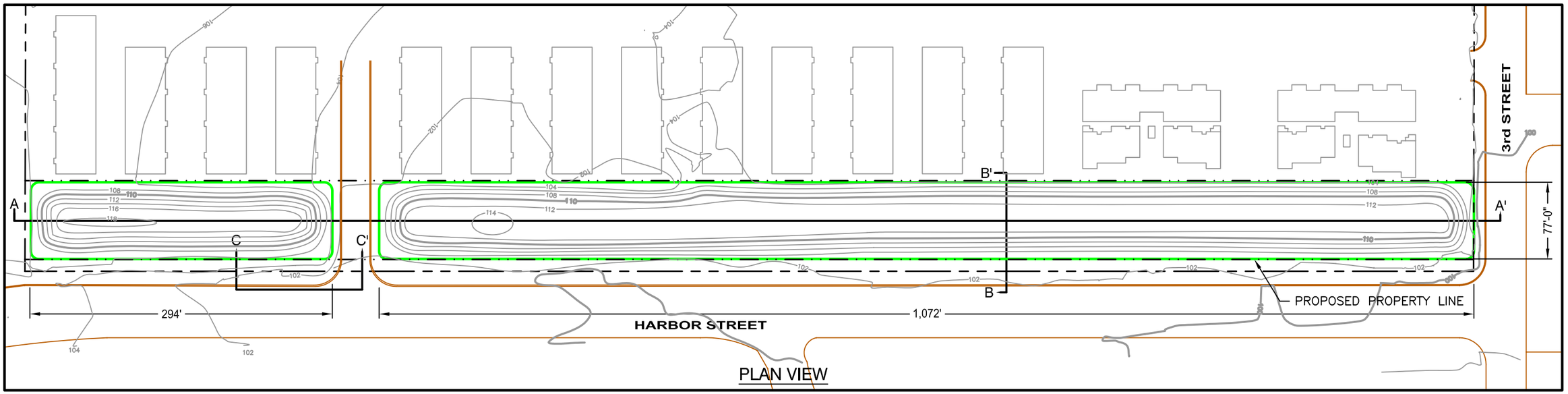
LEGEND

- Monitoring Well (HLA and ROUX)
- Monitoring Well, Abandoned
- Soil Boring (ROUX)
- Soil Boring (ERM)
- Test Pit (ERM), Shallow, 2'–3' Deep (5'x5')
- Test Pit (ERM), Deep, 8'–10' Deep (5'x15')
- Approximate Areal Extent of Petroleum Hydrocarbon Impacts (Harding ESE, 2002)
- Former Evaporation Pond
- Approximate Fill Material Location, 8.0–10.0' Deep
- Surficial ACM and/or TPH Impacts from Former Laydown Area and Manufacturing Process Remaining to be Excavated
- Areas of ACM Impacts Already Excavated

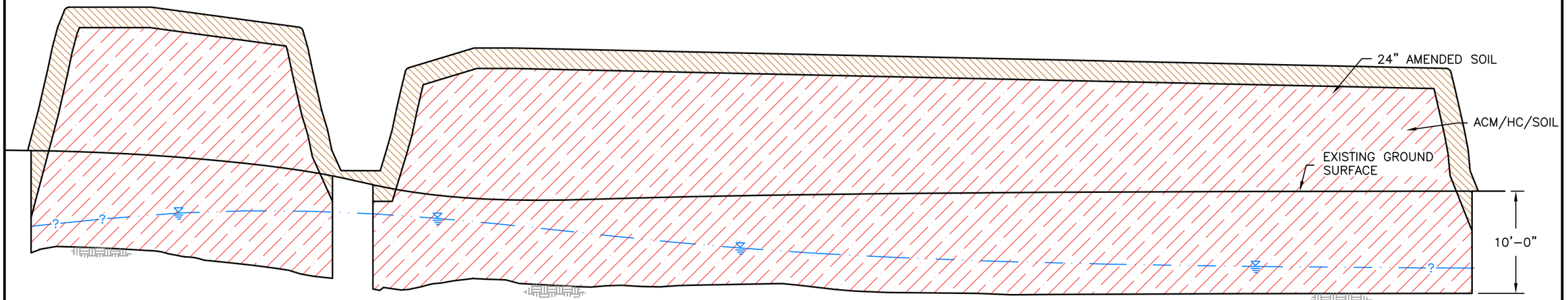
0 100
Approx. Scale (feet)

Figure 3
Areas of Contamination
Pittsburg River Park, LLC
(Former Johns Manville Plant)
420 East 3rd Street
Pittsburg, California
ERM 06/06

Project No. 0025556.04
Date: 06/05/06
Drawn By: D. Ludlam
CAD File: G:\0025556\04\0025555604-26.dwg



PLAN VIEW



PROFILE VIEW A-A'

VERTICAL EXAGGERATION 10X

LEGEND

- A — A' Line of Section
- Amended Soil
- ACM and Hydrocarbon Contaminated Fill
- Native Soil
- Groundwater Elevation, March 16, 2006

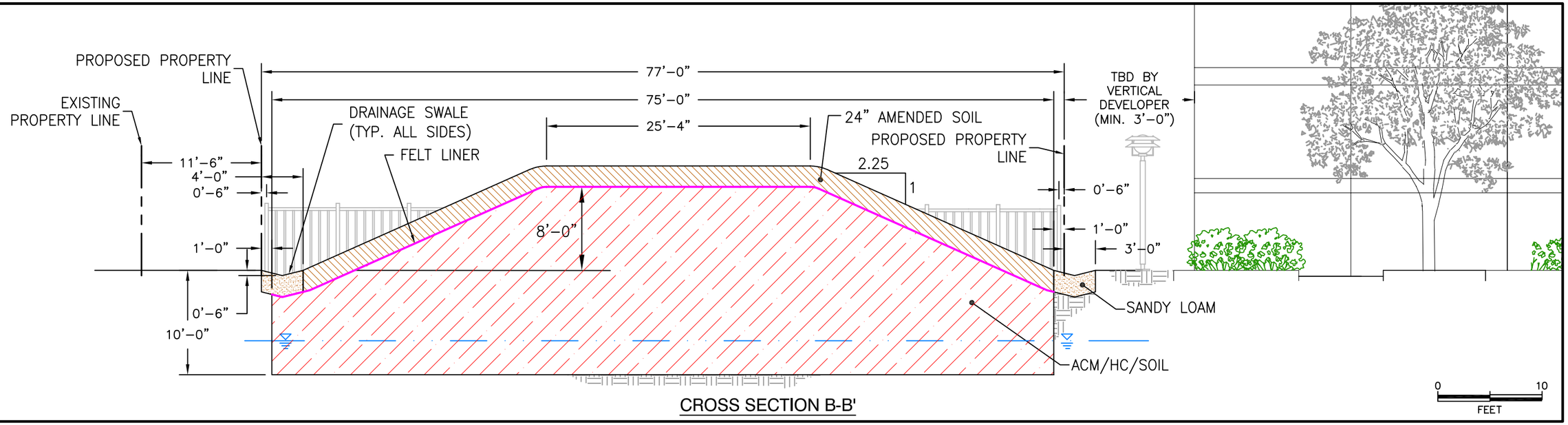
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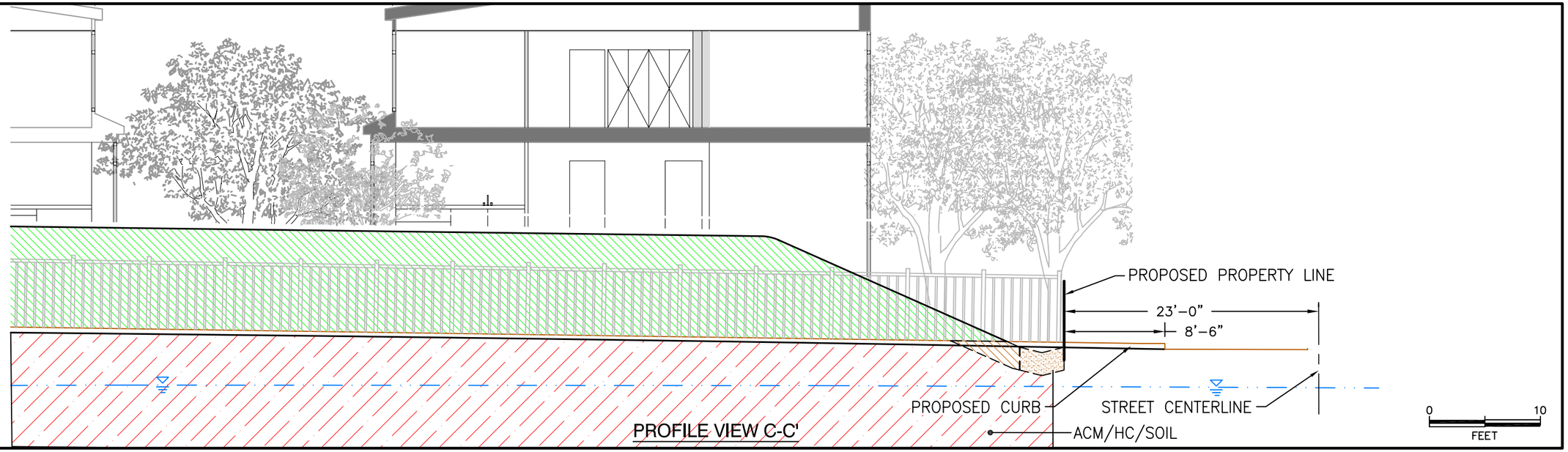
Figure 4
Conceptual Eastern Boundary Berm Layout
Pittsburg River Park, LLC
(Former Johns Manville Plant)
420 East 3rd Street
Pittsburg, California

ERM 05/06

Project No. 0025556.04
Date: 06/13/06
Drawn By: D. Ludlam
CAD File: G:\0025556\04\0025555604-26.dwg



CROSS SECTION B-B'



PROFILE VIEW C-C'

LEGEND

- Amended Soil
- ACM and Hydrocarbon Contaminated Fill
- Native Soil
- Groundwater Elevation, March 16, 2006

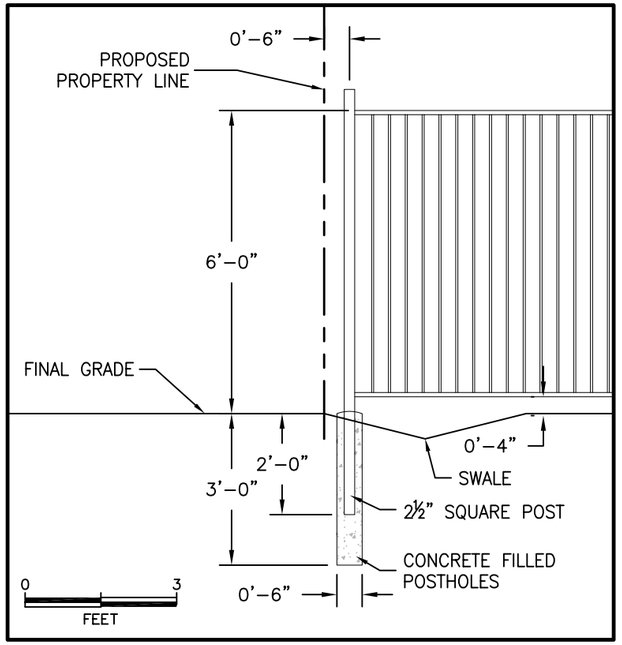
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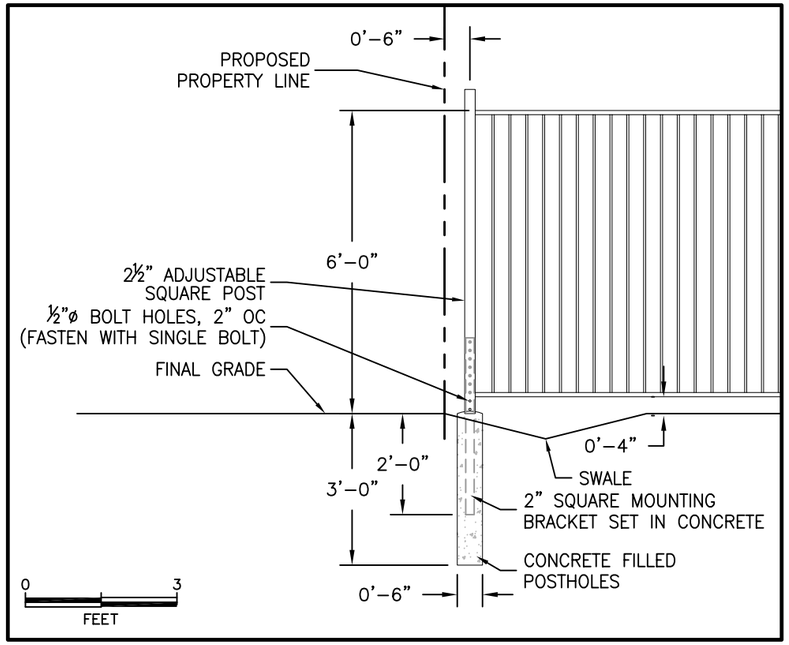
Figure 5
Conceptual Eastern Boundary Berm Sections
Pittsburg River Park, LLC
(Former Johns Manville Plant)
420 East 3rd Street
Pittsburg, California

ERM 05/06

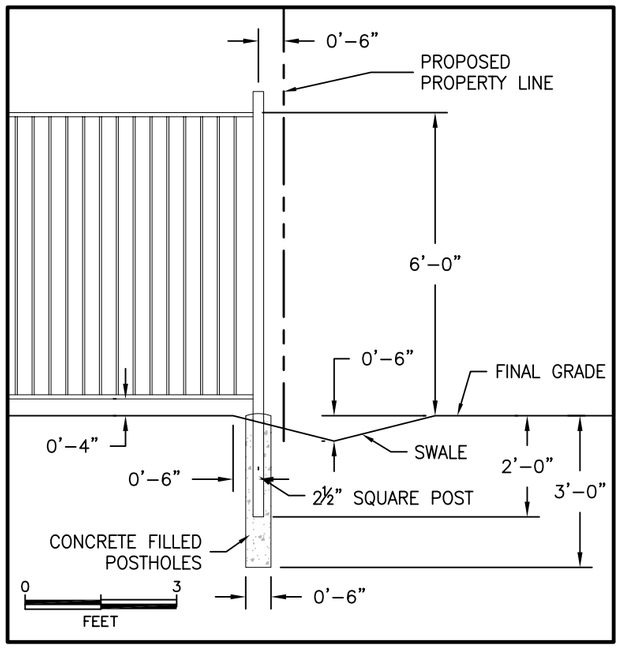
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Drawn By: D. Ludlam
Date: 06/13/06
Project No. 0025556.04



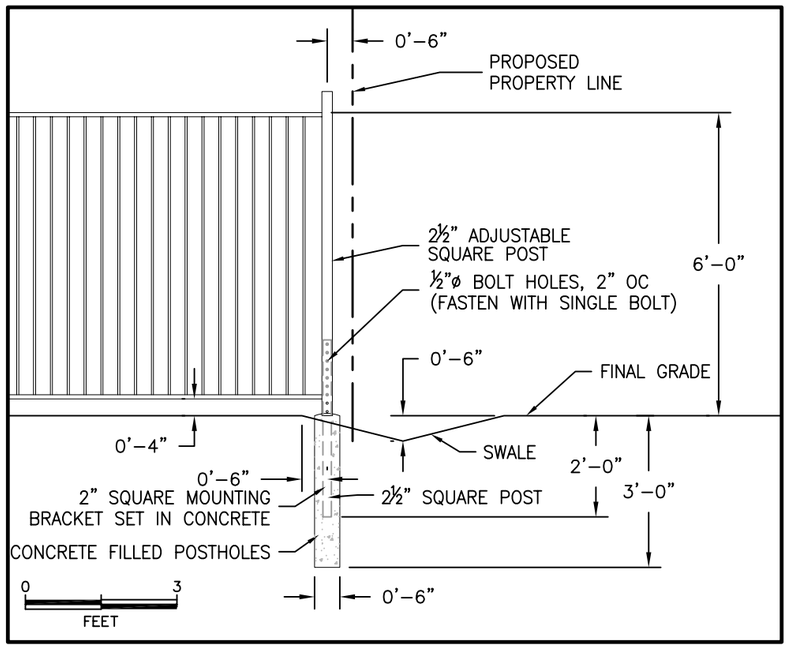
PERIMETER FENCE POST (1)
(TYP. EAST SIDE AND ENDS)



ALTERNATE FENCE POST (2)
(TYP. EAST SIDE WITH HIGH SETTLEMENT POTENTIAL)



PERIMETER FENCE POST (3)
(TYP. WEST SIDE)



ALTERNATE FENCE POST (4)
(TYP. WEST SIDE WITH HIGH SETTLEMENT POTENTIAL)

DRAFT

Figure 6
Conceptual Eastern Boundary Berm Details
Pittsburg River Park, LLC
(Former Johns Manville Plant)
420 East 3rd Street
Pittsburg, California

ERM 06/06

Appendix A
Site Management Plan



Site Management Plan

Former Johns Manville Plant Site
Pittsburg, California

30 September 2005

Prepared for:
Pittsburg River Park LLC

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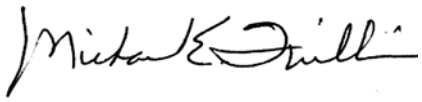
Pittsburg River Park LLC

Site Management Plan

Former Johns Manville Plant Site
Pittsburg, California

30 September 2005

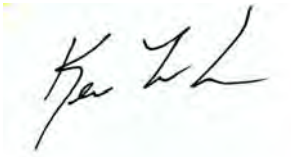
Project No. 25556.08



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(Figures immediately follow the text)

1 ***Site Location Map***

2 ***Site Features***

LIST OF ACRONYMS

ACM	Asbestos-containing material
AMP	Air Monitoring Plan
ASTM	American Society for Testing and Materials
BAAQMD	Bay Area Air Quality Management District
CCR	California Code of Regulations
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHSC	California Health and Safety Code
EH&S	Environmental, health, and safety
EPCRA	Emergency Planning and Community Right-To-Know Act
ERM	ERM-West, Inc.
FID	Flame ionization detector
HSP	Health and Safety Plan
IH	Industrial Hygienist
LBP	Lead-based paint
MCOCs	Materials and chemicals of concern
NESHAP	National Emission Standards for Hazardous Air Pollutants
NPDES	National Pollutant Discharge Elimination System
NEPA	National Environmental Policy Act
OSHA	Occupational Safety and Health Administration
PID	Photoionization detector
PM_{10}	Particulate matter 10 microns or less in diameter
PRPLLC	Pittsburg River Park LLC
RCRA	Resource Conservation and Recovery Act
RWQCB	Regional Water Quality Control Board
SMP	Site Management Plan
TPH	Total petroleum hydrocarbon
TSCA	Toxic Substances Control Act
USCS	Unified Soil Classification System
USEPA	United States Environmental Protection Agency
UST	Underground storage tank

1.0 INTRODUCTION

On behalf of Pittsburg River Park LLC (Owner), ERM-West, Inc. (ERM) has prepared this Site Management Plan (SMP) to mitigate potential risks associated with the Owner's upcoming abatement and demolition project. This project comprises the 21-acre site known as the Former Johns Manville Plant Site located in Pittsburg, California (hereafter "site" or "Plant Site"). A site location map is included as Figure 1. Specifically, this SMP addresses the complete abatement and demolition of the current site infrastructure to rough grade conditions in preparation for the future redevelopment of the site.

This SMP provides guidelines to ensure that the abatement and demolition of the site is conducted in a manner protective of the health and safety of site workers, future site residents, nearby residents and community, and the environment.

1.1 REPORT ORGANIZATION

This SMP is organized as follows:

- Section 1.0 presents site background information and describes the objectives, implementation, and oversight of the SMP;
- Section 2.0 briefly describes the pertinent environmental concerns at the site;
- Section 3.0 presents risk management measures to be implemented prior to site demolition, including abatement management;
- Section 4.0 presents risk management measures to be implemented during site demolition; and
- Section 5.0 lists references used to prepare this SMP.

Appendices to this SMP include:

- Appendix A – Health and Safety Plan
- Appendix B – Construction-Specific Storm Water Pollution Prevention Plan
- Appendix C – ASTM E1903-97: Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process

- Appendix D – ASTM Standard D4700-91: Guide for Soil Sampling From the Vadose Zone
- Appendix E – Air Monitoring Plan

1.2 BACKGROUND

The former JM Plant Site is located at the approximate intersection of East Third Street and Harbor Street in Pittsburg, California (Figure 2). The site is approximately 1,000 feet south of New York Slough and Suisun Bay. This 21-acre parcel is bounded to the north by a Tesoro coke facility and Third Street; to the east by Harbor Street, several small light industrial businesses, and USS Posco Corporation; and to the south and west by residential properties. Most recently, until the facility terminated operations in 2003, the facility was used for the manufacture of commercial roofing materials. The Plant Site consists of Buildings 1 through 4 in the northern portion of the property, a warehouse in the southwestern portion of the site, and a former evaporation pond area, which is currently paved with asphalt. Railroad tracks bisect the central portion of the property.

The current land use and zoning for the Plant Site is industrial. The Owner is currently in negotiations with the City of Pittsburg to re-entitle the Plant Site parcel for single-family residential, multi- family residential and commercial uses.

1.3 OBJECTIVES

The objective of this SMP is to document the following:

- Historical site activities and the nature and extent of materials and chemicals of concern (MCOCs) in site building materials, soils, and ground water;
- Mitigation efforts to be implemented to minimize exposure of human or environmental receptors to MCOCs that may be present at the site prior to, during, and following demolition; and
- Protocols for ensuring that work conducted at the site is performed in accordance with applicable state and federal environmental, health, and safety (EH&S) regulations.

1.4 IMPLEMENTATION AND OVERSIGHT

The risk mitigation efforts specified in this SMP are to be implemented by the entity (hereafter the "Contractor") selected by the Owner to perform abatement and demolition activities at the site. These activities will include abatement of all asbestos-containing materials (ACM) and lead-based paint (LBP), and demolition of the existing structures and utilities on the site. A licensed engineer, geologist, or other environmental professional familiar with environmental monitoring equipment will oversee implementation of the SMP, EH&S regulations and general industrial hygiene practices.

Oversight of ACM abatement at the site will be performed by a third-party Industrial Hygienist (hereafter the "IH") selected by the Owner.

ACM abatement at the site will be performed under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD).

1.5 APPLICABLE INSTITUTIONAL CONTROLS, STATUTES, AND REGULATIONS

Following is a list of all institutional controls, and local, state, and federal laws and regulations that may apply to site abatement and demolition activities.

1.5.1 Federal Statutes and Regulations

National Environmental Policy Act (NEPA), 42 United States Code (USC) 4321 – Administered by the Council on Environmental Quality (CEQ) and the United States Environmental Protection Agency (USEPA), this act addresses projects that constitute major federal actions with the potential to significantly impact the environment.

The NEPA process often invokes one or several other federal statutes as described further in this section. In California, NEPA requirements are often addressed under the California Environmental Quality Act (CEQA), discussed below in Section 1.5.2.

Section 404, Clean Water Act, 33 USC 1344 – Administered by the U.S. Army Corps of Engineers, this act addresses discharges to navigable waters of the United States (including wetlands and streams that are

tributaries to navigable waters), and may apply to discharges of excavated soil or ground water generated by construction and dewatering.

Endangered Species Act, 16 USC 1536 – Administered by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service, this act regulates activities affecting federally protected species. It also protects listed species from harm or "take," which is broadly defined as *"harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct."* The definition of "take" further includes unintentional or incidental take, which might be associated with construction or other activities.

Coastal Zone Management Act, 16 USC 1451 – Administered by the National Oceanic and Atmospheric Administration, this act regulates projects in the coastal zone.

Resource Conservation and Recovery Act of 1976 (RCRA), 42 USC 692 – Administered by the USEPA, this act manages hazardous wastes from "cradle to grave," governing the generation, storage, transportation, and disposal of hazardous waste. This includes excavated soil and/or ground water that exceeds threshold criteria. RCRA also governs underground storage tanks (USTs).

Toxic Substances Control Act of 1976 (TSCA), 15 USC 2601 et seq. – Administered by the USEPA, this act governs the introduction, manufacture, and importation/exportation of chemicals produced in the United States. Relevant to this SMP, TSCA also governs asbestos and lead-based paint hazards.

Emergency Planning and Community Right to Know Act of 1986 (EPCRA), 42 USC 11001 – Also known as Title III of SARA, this act is designed to help communities protect public health, safety, and the environment from chemical hazards. Through the Toxics Release Inventory, a list of all chemicals used and emitted by businesses small and large, it also gives individuals the right to obtain information regarding chemical hazards in their communities. It established the State Emergency Response Commission, responsible for the development of emergency action plans.

Occupational Safety and Health Administration (OSHA) Regulations, 29 Code of Federal Regulations (CFR) Sections 1910.120 and 1926.65 – These regulations govern the applicability and scope of training requirements for personnel involved in the handling of hazardous wastes.

1.5.2 State Statutes and Regulations

CEQA, California Public Resources Code 21000 et seq. and the CEQA Guidelines, 14 California Code of Regulations (CCR) 15000 et seq. – This act creates the state companion to the federal NEPA process, and is invoked by any nonexempt development project that requires public agency approval. This process can require, among other things, an Environmental Impact Report evaluating potentially significant environmental impacts related to the proposed project, as well as associated mitigation measures.

Porter-Cologne Water Quality Control Act of 1969, California Water Code, Division 7, Section 13000 et seq. – This act authorizes the Regional Water Quality Control Boards (RWQCBs) as the lead agencies in protecting the waters of the state. This is accomplished through implementation of the National Pollutant Discharge Elimination System (NPDES) permitting program for surface waters, and through issuing Waste Discharge Requirements for discharges potentially affecting ground water quality.

Safe Drinking Water and Toxic Enforcement Act of 1986, California Health and Safety Code (CHSC) Section 25249.6 et seq. (Proposition 65), 22 CCR 12000 et seq. – Proposition 65 is a voter ballot initiative passed in 1986 that requires the Governor to publish and update at least annually a list of chemicals known by the State of California to cause cancer or reproductive harm. The law prohibits businesses from discharging such chemicals into sources of drinking water and requires that warnings be given to potentially exposed individuals. Section 25249.6 of Proposition 65 requires "clear and reasonable warning" for specified potential chemical exposures.

Air Toxic Hot Spots Information and Assessment Act of 1987, AB 2588 – This requires the Air Resources Board to inventory sources of over 700 toxic air contaminants to assess the health risks of toxic air releases, and notify potentially exposed populations.

CHSC Section 39000 et seq. – The California Clean Air Act empowers regional air quality districts to enact rules and regulations that bring sources of air pollution into compliance with state and federal requirements. Section 41700 prohibits *"discharge from any source whatsoever of such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to…the public."*

California Endangered Species Act, Fish and Game Code, Sections 2050 et seq. – This act mirrors the Federal Endangered Species Act and is implemented by the California Department of Fish and Game. It is specific to the protection of state listed species; identified in the CESA and its implementing regulations.

Title 8 CCR – These regulations, implemented and enforced by the California Division of OSHA, complement the federal statutes governing worker health and safety in hazardous environments and in the presence of hazardous materials.

1.5.3 Local Statutes, Regulations, and Institutional Controls

BAAQMD Rules and Regulations – Local regulations regarding discharge of air contaminants in the BAAQMD, which includes the site. Particularly germane with respect to redevelopment of the site are BAAQMD Regulation 6, which addresses "Particulate Matter and Visible Emissions," and Regulation 8, Rule 40, which addresses "Aeration of Contaminated Soil."

City of Pittsburg Community Noise Ordinance – This ordinance affects the development project in that it restricts the hours of operation for heavy construction machinery.

2.0 ENVIRONMENTAL CONDITIONS

This section summarizes historical operations, site features, and the nature and extent of hazardous materials found on the site, in soils, and in ground water as determined during previous site investigations. Risk mitigation measures to be taken regarding these materials are outlined in Sections 3 and 4.

2.1 SITE-WIDE CONDITIONS

2.1.1 Asbestos-Containing Materials

Previous environmental investigations at the site have revealed the presence of ACMs. These materials include, but are not limited to, transite wall and roofing panels, transite piping, pipe insulation, roofing mastic, vinyl tile flooring, and various ACM debris.

These materials are located throughout the site within the buildings as well as under the concrete slab on the northern side of the warehouse structure on the eastern side of the site.

A description, as well as quantities, and locations of ACMs are reported in the Asbestos Survey Report prepared by Aurora Industrial Hygiene.

2.1.2 Lead-Based Paint Materials

Based upon the date of construction of the buildings on site, it is possible that LBP is present on site structures.

2.1.3 Total Petroleum Hydrocarbon Materials

Based upon the prior site use for manufacturing roofing shingles, the possibility exists of encountering residual total petroleum hydrocarbon (TPH) materials within storage tanks, distribution piping, equipment, and soil.

Previous investigation results at the site have revealed TPH detections in minor amounts, and should not be a concern during the demolition.

2.1.4 Hazardous Materials

Other hazardous materials that will be encountered on site include fluorescent light tubes, sodium-vapor lights, and fluorescent light ballasts.

3.0 RISK MANAGEMENT MEASURES TO BE IMPLEMENTED PRIOR TO DEMOLITION

The following sections include procedural guidelines to ensure that abatement and demolition activities at the site are conducted in accordance with applicable federal, state, and local EH&S regulations.

3.1 RISK COMMUNICATION

3.1.1 Employee Risk Communication

Prior to commencing work in the SMP Area, personnel employed in activities at the site shall be aware of the risks associated with materials present at the site. This communication shall contains at least the following information:

- A general description of historical site activities and the MCOCs associated with such activities;
- A list of known MCOCs present, including a description of the health risks, appearance, exposure symptoms, and means of field identification of these materials, if any; and
- Risk management protocols for the discovery of areas of unknown MCOCs or subsurface structures.

In addition, HSPs prepared for the facility shall include provisions for daily tailgate safety briefings, during which the above information shall be disseminated.

3.1.2 Community Risk Communication

Prior to and during site redevelopment activities, members of the public in neighboring communities shall be made aware of upcoming activities at the site. This public notification shall include quarterly postings in the local newspaper and at local community centers including Pittsburg City Hall. The newspaper and community postings shall contain the following information:

- A description of the site background;
- A schedule of major milestones and upcoming activities;

- The telephone numbers for the relevant regulatory agencies;
- The location(s) of the information repositories for documents associated with the site; and
- Information on how to obtain copies of relevant site documents.

3.2 WORKER HEALTH AND SAFETY

3.2.1 Site-Specific Health and Safety Plan

Site-specific Health and Safety Plans (HSPs) are designed to ensure that site construction activities are performed in a manner protective of the health and safety of site construction workers and interim site users in the vicinity of construction. This SMP is designed primarily to ensure the health and safety of current and future site users outside the immediate vicinity of construction; the development of a site-specific HSP is the responsibility of the Contractor and is beyond the scope of this SMP. ERM's HSP is included as Appendix A.

Following is a list of minimum requirements that any Contractor's site-specific HSP must meet for that Contractor to perform or oversee redevelopment:

- The HSP must be approved by the Site Engineer;
- A discussion of chemical hazards at the site, including acute and chronic health effects, and established occupational exposure limits of chemicals of potential concern identified at the site;
- A discussion of physical hazards known or reasonably expected to be present at the site based on proposed construction, including but not limited to hazards associated with equipment use, environmental hazards (heat stress, etc.), and noise;
- A discussion of engineering controls to be employed to minimize exposure of site workers to hazardous materials encountered during site activities;
- A discussion of required worker qualifications, including training requirements, medical surveillance, and record-keeping (also see Section 3.2.2, below);
- An exposure monitoring plan, including personal workspace monitoring and sampling protocols, appropriate action levels, and field monitoring logs;

- A discussion of general safe work procedures, including site control and security measures, illumination, required personal protective equipment, establishment of work zones and decontamination procedures, and documented daily tailgate safety meetings; and
- Emergency response procedures, including a map to the nearest hospital, an evacuation plan, first-aid procedures, fire protection and response procedures, spill containment procedures, and emergency references (key telephone numbers, addresses, etc.).

3.2.2 Health and Safety Training and Certification

Based on known environmental conditions at the site, the use of personnel trained and certified in EH&S procedures pursuant to OSHA 29 CFR 1910.120, HAZWOPER Training Requirements (OSHA-certified), is advisable on the entire site during abatement and intrusive construction activities. Intrusive construction activities include subgrade utility removal, excavating, trenching, and grading. OSHA-certified workers are required in the following areas if intrusive construction activities are to be performed:

- Previously identified underground transite utility piping; and
- The identified asbestos storage location north of the warehouse structure.

Intrusive construction at locations within the site other than those listed above may be performed by non-OSHA-certified employees. If unknown areas of contamination or subsurface structures are identified pursuant to Section 4.4.2, OSHA-certified employees must perform all remaining intrusive construction at the area in question.

3.3 ABATEMENT MANAGEMENT TO BE IMPLEMENTED DURING DEMOLITION

3.3.1 ACM Abatement

The Asbestos Survey Report conducted at the site by Aurora Industrial Hygiene has identified materials at the site that are both friable and nonfriable ACMs. ACM removal is regulated by the USEPA and BAAQMD pursuant to the National Emission Standards for Hazardous Air Pollutants (NESHAP) portion of the Clean Air Act and BAAQMD

regulations. The following Federal, State and local regulations apply to asbestos abatement:

- 29 CFR Sections 1910.12, 1910.20, 1910.134, 1910.145, and 1910.1001;
- 29 CFR Section 1926.1101;
- 34 CFR Section 231;
- 40 CFR Section 61, Subparts A and M;
- 8 CCR Sections 1529 and 5208;
- 8 CCR Article 2.5;
- 22 CCR Division 4; and
- San Francisco BAAQMD Regulation 11, Hazardous Pollutants Rule 2.

Removal of ACMs at the site must be performed in accordance with NESHAP requirements, BAAQMD regulations, and the Air Monitoring Plan (AMP), prepared by the IH. Collectively, these requirements include provisions for worker health and safety, prevention of releases to the environment, and materials handling and disposal.

A majority of the ACMs will be removed prior to the demolition phase of the project. However, since some of the materials are underground it will be more practical to remove those as they are encountered. An IH will be available at all times to assist in the proper management of all ACMs encountered during the project.

3.3.2 LBP Abatement

Because all buildings at the site were constructed prior to 1978, LBP is likely to be associated with site structures. Regulation 40 CFR 745.113 has relevance regarding LBP removal.

According to 8 CCR Section 1532.1 and 17 CCR Sections 35000-36100, loose and flaking LBP must be removed prior to demolition of impacted structures. Appropriate measures to control the generation of dust particles during building demolition must then be implemented prior to demolition. LBP abatement will be performed according to all applicable regulations and statutes. General dust control measures to be employed during demolition are discussed in Section 4.3.1.

3.3.3 Hazardous Materials Abatement

Fluorescent light tubes, sodium-vapor lights, and fluorescent light ballasts are considered hazardous materials and must be removed intact prior to demolition.

4.0 RISK MANAGEMENT MEASURES TO BE IMPLEMENTED DURING DEMOLITION

This section identifies appropriate risk management measures to be implemented at the site to minimize the potential for human or environmental exposure to materials encountered during demolition activities. Where applicable, the risk management activities address individual environmental media and provide risk mitigation efforts for each.

4.1 ACCESS CONTROL DURING DEMOLITION

The potential for unauthorized access to the construction site and the accompanying risk of exposure to hazardous materials shall be managed as follows:

- A 6-foot-high, chain-link fence exists around the site perimeter. Access to the site will be restricted by control points (i.e., gates) that will be monitored and locked during non-construction hours. The fence shall be examined daily and any necessary repairs made.
- "No Trespassing" signs in both English and Spanish shall be posted every 500 linear feet along the fence line.
- As mandated in Proposition 65, public notices shall be posted along the fence line alerting the public that materials with known adverse health effects are being recovered at the site.

4.2 IDENTIFICATION OF DEMOLITION ACTIVITIES THAT COULD IMPACT HUMAN AND/OR ENVIRONMENTAL HEALTH

Demolition of the site is likely to include various site activities that may create airborne dust. The following activities have the potential to impact human or environmental receptors:

- Unauthorized access to the SMP area during construction;
- Dust generation associated with demolition of buildings, intrusive construction, movement of demolition and transportation equipment, and winds traversing exposed soils or stockpiles;
- Off-site transport of sediment by surface runoff;

- Stockpiling and reuse of hazardous soil;
- Inadvertent off-site transport of soils on truck wheels or from unsecured truck beds; and
- Dewatering.

4.2.1 Subsurface Structure Demolition

Subsurface utilities and structures harboring hazardous materials may be brought to the surface during demolition activities. If the location of these structures is known and anticipated, then demolition will be conducted in accordance with the soil management guidelines presented in Section 4.4.1.

In the event that unknown subsurface structures are encountered, demolition activities will be conducted in accordance with the contingency protocols set forth in Section 4.4.2.

4.3 RISK MITIGATION EFFORTS TO ADDRESS MCOCS IN AIR

4.3.1 Dust Control

Contractors shall implement one or more of the following dust control measures during demolition to minimize dust generation, and to maintain compliance with the Air Monitoring Plan (AMP). Successful dust mitigation will accomplish the following goals:

- Reduce the potential for health impacts to construction workers;
- Prevent violations of ambient air quality standards;
- Minimize nuisance dust complaints from facility neighbors; and
- Minimize the migration of MCOCs adhered to fugitive dust particles outside the site.

4.3.1.1 Specific Dust Control Measures

Dust control measures to be implemented at the site during construction are identified below. These dust control measures were developed in accordance with BAAQMD particulate matter (PM_{10}) control measures outlined in the CEQA Guidelines. These dust control measures shall include the following:

- Water all active construction areas twice daily, or more frequently if needed, to prevent visible dust plumes from leaving the site;
- Mist or spray water while loading or unloading soil transportation vehicles as needed to prevent dust generation;
- Minimize drop heights when loading transportation vehicles carrying sand, soil, or other loose materials;
- Use tarpaulins or other effective covers for trucks carrying sand, soil, or other granular loose material, or maintain 2 feet of freeboard in all such trucks;
- Pave, apply water 3 times per day, or apply non-toxic soil binders on all unpaved access roads, parking areas, and staging areas at construction sites;
- Sweep all paved access routes, parking areas, and staging areas daily if soil is visible;
- Sweep public streets daily if visible soil material is carried into the street;
- Limit vehicular and equipment traffic speeds on all unpaved roads to 15 miles per hour;
- Line all boundaries between construction areas and public roadways with hay bales or silt fencing;
- Establish stationary downwind monitoring points and implement a monitoring program to determine whether fugitive dust levels leaving the property are below site-specific thresholds at all times;
- Apply non-toxic soil stabilizers to inactive, unvegetated construction areas where native soil was disturbed, if such areas have been inactive for 2 weeks;
- Enclose, cover, stabilize, or water any stockpiles in accordance with Section 4.4.1.3; and
- Implement erosion control measures to prevent soil from migrating off site in surface runoff in accordance with Section 4.5.1.

Should mitigation efforts prove inadequate to prevent visible dust plumes from leaving the site, one or more of the following additional dust control measures shall be implemented at the contractor's discretion:

- Wash all truck and equipment wheels and tracks prior to leaving the site;

- Install wind breakers at the windward sides of construction areas;
- Suspend excavation and grading activities when instantaneous wind gusts exceed 25 miles per hour; and/or
- Limit the area subject to excavation, grading, or other dust-generating activity to one area at a time.

Should these dust control measures prove inadequate to prevent visible dust plumes from leaving the site, excavation and grading activities shall be suspended until wind speeds have diminished.

To minimize the creation of additional exhaust emissions, the following protocols shall be followed:

- Construction equipment shall be stored at the facility, except when not in continuous use;
- Alternative-fueled vehicles and equipment shall be used as practicable;
- Idling times shall be minimized, and not more than 5 minutes;
- Equipment shall be tuned and maintained per manufacturer's instructions; and
- Heavy equipment usage shall be restricted from 7 AM to 7 PM from Monday through Friday, and from 8 AM to 5 PM on Saturday, as specified in the City of Pittsburg Community Noise Ordinance.

4.3.1.2 Documentation of Dust Control Measures

Contractors will be required to record all dust mitigation activities daily. Logs are to be maintained for 60 days following the completion of construction where dust mitigation was implemented.

4.3.2 Air Monitoring Plan

In addition to dust control measures, an AMP has been developed by Aurora Industrial Hygiene to ensure the health and safety of off-site residents during construction. The AMP uses downwind perimeter and constituent-specific air monitoring action levels to ensure that constituents migrating off site, including dust, do not exceed state or federal ambient air quality standards. The AMP is included as Appendix E.

4.4 RISK MITIGATION TO ADDRESS MCOCS IN SOIL

4.4.1 Soil Management Protocols during Site Demolition

All handling, movement, stockpiling, and reuse of soils within the site are subject to protocols delineated in this section. This section also specifies contingency protocols to manage risk in the event that unknown MCOCs or structures are discovered.

4.4.1.1 Soil Excavation and Confirmation Sampling

The bottoms and sidewalls of any excavations are to be sampled according to protocols set forth in American Society for Testing and Materials (ASTM) E1903-97, *Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process*, and ASTM D4700-91, *Standard Guide for Soil Sampling from the Vadose Zone*. These documents are attached as Appendices C and D, respectively.

At a minimum, one sample from the excavation bottom and one sample composited from the four excavation sidewalls (post-excavation samples) will be analyzed for the following:

- TPH as diesel and motor oil by USEPA Method 8010;
- Semivolatile organic compounds by USEPA Method 8270;
- Volatile organic compounds by USEPA Method 8020; and
- California Title 22 Metals by USEPA Methods 6010B and 7470 (for mercury).

Should an excavation wall exceed 100 feet in length, samples should be collected at a minimum of every 100 linear feet and composited. If the excavation exceeds 400 square feet in area, one bottom sample should be collected from each 400-square-foot section and composited to characterize post-excavation soil quality.

4.4.1.2 Soil Movement and Handling

Soil may be handled and moved from one portion of the site to another, as needed, within the limitations established in Section 4.4.1.7. Potential impacts associated with movement and handling are addressed in the AMP (see Section 4.3.2). Soil movement shall be conducted pursuant to the Traffic Management Plan prepared by the Contractor.

4.4.1.3 *Soil Stockpiles and Dust Generation*

Soils excavated from the site may require stockpiling prior to reuse or disposal. The risk management measures discussed below will address potential risks from wind transport, surface erosion, and unauthorized access.

All stockpiles shall be placed atop water-impermeable plastic sheeting within a soil berm, as per the Storm Water Pollution Prevention Plan (Appendix B). Several alternatives exist to minimize the generation of dust from soil stockpiles:

- Cover the stockpiles with anchored impermeable sheeting;
- Enclose the stockpiles in a covered structure;
- Hydroseed the stockpiles;
- Apply a non-toxic soil stabilizer to the surface of the stockpiles; or
- Regularly spray stockpiles with water to control dust.

One or more of these dust mitigation methods will be selected based on field conditions such as weather and the size of the stockpile(s). Selection of stabilization efforts shall be at the Contractor's discretion, provided compliance with the AMP and BAAQMD regulations are ensured.

Soils that are stockpiled for greater than 90 days must first be analyzed to determine whether they meet the criteria for a hazardous waste under federal or state regulations. Should the soils meet any of the hazardous waste criteria, they must be disposed of accordingly within 90 days of generation. This waste characterization shall be performed pursuant to the USEPA's Guidance Document SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (USEPA, 2001b).

4.4.1.4 *Soil Stockpiles and Erosion Management*

This section applies to the following types of stockpiles:

- Stockpiles left in place for more than 30 days;
- Stockpiles in active construction areas that exceed 4 acres in size;
- Any stockpile left in place during the rainy season (15 October through 1 April); and
- Stockpiles of soils saturated with free product.

The guidelines below will ensure that stockpiled soils do not erode and potentially impact off-site receptors. For stockpiles meeting any of the criteria listed above, erosion control measures shall be implemented and maintained, and shall include the following:

- Construction of a geotextile (filter) fence around the stockpile;
- Construction of a hay bale barrier around the stockpile;
- Use of a secured, impermeable stockpile cover;
- Use of drainage basin silt sacks in drainage basins within 250 feet of the stockpile; and
- Collection, containerization, waste characterization, and disposal in accordance with applicable regulations of any water that collects within the soil berm surrounding the stockpile.

4.4.1.5 Soil Stockpiles and Access Management

Provided that stockpiles will be located within active construction zones, the access restrictions set forth in Section 4.1 will be sufficient to control stockpile access. However, should the stockpile be located outside an active construction zone, access will be controlled using a chain-link fence with locked gates and appropriate warning signs in English and Spanish.

Stockpiles of the following types of soil shall be segregated from soils of different origin and surrounded by a 6-foot-high, locked, chain-link fence until determined to be nonhazardous or disposed of off-site within 90 days:

- Soils saturated with free product; and
- Soils suspected or shown to be hazardous.

4.4.1.6 Soil Stockpiles and Monitoring

Daily inspection of stockpiles shall be conducted for stockpiles of contaminated or uncharacterized materials, any stockpile located outside an active construction zone, any stockpile in place during a storm event lasting longer than 48 hours, and on the day following a storm event. Weekly inspection shall be conducted for 4 weeks after generation of any stockpile, and weekly for 4 weeks following the implementation of any erosion control device or observance of a failure thereof. Quarterly inspections shall be conducted in all other cases. Inspections of the integrity of the stockpile shall include an assessment of the following:

- The integrity of erosion control efforts;
- The effectiveness of access control measures; and
- The need for repairs to maintain erosion or access control.

Tears in a stockpile cover shall be repaired or the cover replaced, if the tears exceed 6 inches in length and one-eighth inch in width. Soil washouts are to be replaced and recovered.

To facilitate adherence to the SMP, a stockpile log shall be kept by the on-site environmental professional. The log shall include the following information:

- Date(s) of soil generation;
- Approximate location of excavation(s) generating stockpiled soils;
- Location of stockpile;
- Final destination of stockpiled soils;
- Log of any erosion control measures implemented or modifications made; and
- Stockpile inspection documentation.

4.4.1.7 Soil Reuse

It is the Owner's request that excavated soils be reused at the site to the extent possible. Soils described below are restricted from relocation and reuse at the site:

- Soils that are saturated with free-phase petroleum product; and
- Soils exhibiting other evidence of apparent MCOCs, prior to characterization of such soils proving them to be nonhazardous.

Contractors shall avoid commingling soils meeting any of the above-referenced criteria with soils excavated from other areas. Soils meeting any of the above criteria shall be stockpiled in accordance with Section 4.4.1.5. If shown to exceed either hazardous criteria or industrial Preliminary Remediation Goals following laboratory analysis, soils shall be disposed of according to the provisions of Section 4.4.1.8, below. Under no circumstances shall soils characterized as hazardous be reused at the site.

4.4.1.8 *Soil Disposal*

Excavated soils that are not reused at the site must be fully characterized for disposal and managed accordingly. If characterization determines that soils are hazardous under RCRA or California USEPA Hazardous Waste guidelines, they require appropriate handling and disposal at a licensed hazardous waste treatment, storage, and disposal facility.

4.4.1.9 *Soil Transportation*

Soils requiring off-site transportation must be fully characterized prior to removal from the site. If characterization determines the material is hazardous under RCRA or California EPA Hazardous Waste guidelines, the materials must be managed in accordance with RCRA and/or California EPA waste-tracking protocols. If characterization determines that the material is a designated waste, it will be managed and transported under Bill of Lading protocols.

4.4.2 ***Contingency Protocols for the Discovery and Management of Unknown MCOCs or Structures***

During excavation of subgrade utilities, it is reasonably anticipated that unknown MCOCs and/or structures may be encountered. If such unknown structures are encountered, risk mitigation measures should be implemented in these areas as described in the subsections below.

4.4.2.1 *Identification and Management of Unknown Areas of MCOCs*

Prior to commencement of construction at the site, the contractor shall review available data to identify any known areas of chemical presence, including chemical location, type, and concentration.

Contingency monitoring protocols will be triggered by the identification of any nonconforming soil or ground water conditions. Such conditions may be noted by visual or olfactory differences, or differences in physical composition from surrounding soils, and shall include, but not be limited to, the following:

- Oily or shiny soils;
- Soils saturated with a liquid other than water (i.e., free-phase liquids);
- Soils with an appreciable chemical or hydrocarbon odor;

- Soils with elevated organic vapor measurements (as measured with a photoionization detector [PID] or flame ionization detector [FID]); and
- Soil discoloration not related to lithologic facies changes.

If areas of previously unidentified apparent MCOCs are encountered, work shall cease in that area immediately. The on-site environmental professional shall be contacted immediately and their assistance requested in determining further sampling or mitigation. Further construction in the area shall not proceed until authorized by the on-site environmental professional. Materials that trigger these protocols shall be handled pursuant to Section 4.4.1 until proven nonhazardous.

To minimize down time, samples should be collected immediately and analyzed by a state-certified laboratory for any suspected MCOCs. Target analytes should be based on a review of field evidence, as well as existing analytical data from the area. Should the unidentified material prove to be contaminated, further actions shall be undertaken only by OSHA-certified personnel and under proper oversight.

4.4.2.2 Identification and Management of Unknown Structures

During intrusive construction activities at the site, it is possible that underground storage tanks (USTs), sumps, drainage structures, or other previously unidentified subsurface structures may be encountered.

CHSC Chapter 6.7 governs the removal and remediation of contamination associated with USTs. The RWQCB is responsible for oversight of UST removal and any associated remediation activities. In the event that a UST or associated vents or piping are discovered, the RWQCB shall be contacted and their assistance requested.

Other underground structures shall be assessed as follows:

1. The structure shall be inspected to assess whether it contains any indication of chemical residuals or free-phase liquids other than water. This assessment shall be conducted by the Contractor's designated environmental professional, and shall be based on visual evidence and the results of vapor monitoring using a PID or FID. Under no circumstances shall any personnel enter an unknown subsurface structure at any time. If chemicals are not indicated within the structure by the above-referenced means, the Contractor may remove the structure in a safe manner.

2. If liquids are present in the structure, samples shall be collected and submitted to a state-certified laboratory for analysis. Liquids may be temporarily drummed or collected by vacuum truck while analysis is pending. Based on analytical results, the liquids shall be disposed of under the direction of the Contractor's environmental professional in accordance with all applicable environmental laws and disposal requirements.
3. If solids are present in the structure and MCOCs are suspected, they shall be sampled and managed as described above.
4. If contaminated liquid or solid media are present in the structure, the structure shall be inspected for physical integrity following removal of the contaminated media. The Contractor's environmental professional shall document the results of this inspection, including an estimation of the volume and former use of the structure. The structure shall then be excavated and disposed of at the direction of the environmental professional.
5. Once the structure is removed, soils adjacent to and beneath the structure shall be assessed for MCOCs through visual observation and organic vapor analysis and the results documented. If MCOCs are suspected, soils should be managed as discussed in Section 4.4.1.

4.5 RISK MITIGATION EFFORTS TO ADDRESS MCOCS IN SURFACE AND/OR GROUND WATER

4.5.1 Off-Site Runoff Control

To prevent the migration of soil from the site into adjacent areas by surface drainage, runoff control measures shall be implemented around the perimeter of the active construction site and shall include the following:

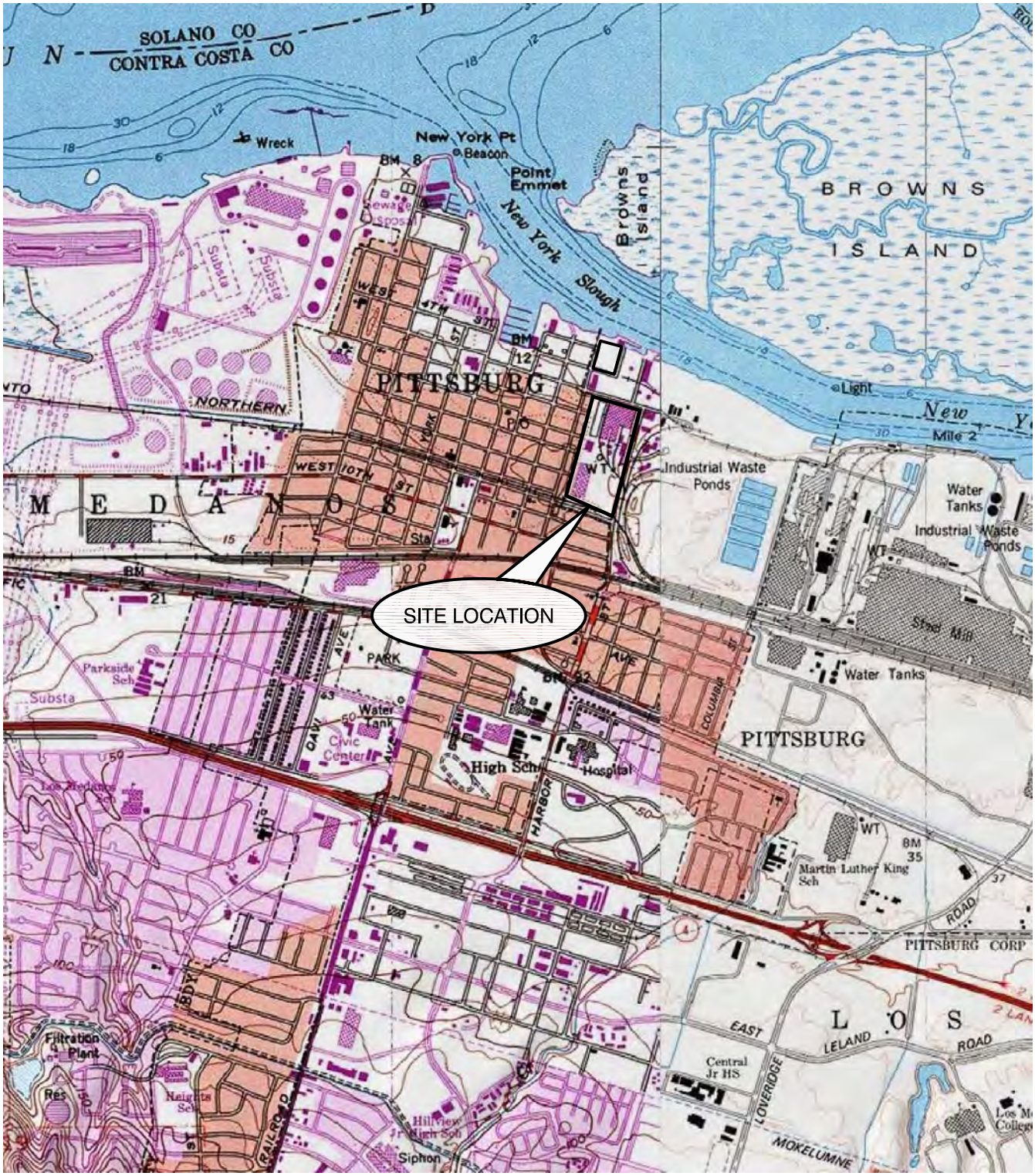
- Erection of a filter fabric fence around the entire active construction site;
- Construction of a hay bale barrier around the entire active construction site; and
- Placement of silt sacks in catch basins in the active construction area and public streets immediately adjacent to the active construction area.

Runoff controls shall be inspected daily during storm events of greater than 48 hours' duration, weekly during the rainy season (15 October

through 1 April) and quarterly during the remaining months. Any failures of the runoff control devices shall be immediately rectified. If visible soil runoff is observed leaving the site, runoff control measures will be amended immediately by the Contractor.

Figures

Project No. 0025556.04
Date: 08/30/05
Drawn By: D. Ludlam
CAD File: G:\0025556\Site Location Map.dwg



SCALE 1:24,000

1 1/2 0 1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 .5 0 1 KILOMETER

N

References:
U.S.G.S. 7.5 Minute Series (Topographic) Quadrangle,
Honker Bay, California
Dated: 1980

Figure 1
Site Location Map
Pittsburg River Park, LLC
(Former Johns Manville Plant)
420 East 3rd Street
Pittsburg, California

ERM 08/05

CAD File: G:\0025556\04\002555604-13.dwg
Drawn By: D. Ludlam
Date: 10/03/05
Project No. 0025556.04

MW-03
MW-11
MW-12
MW-13
WAREHOUSE
BUILDING #1
BUILDING #2
BUILDING #3
BUILDING #4
100,000-GAL. ELEVATED STEEL WATER TANK
MW-5
MW-14
MW-10
MW-3
MW-6
MW-15
MW-2
MW-7
MW-16
MW-4
PZ-1
MW-9
MW-20
MW-21
MW-8
MW-18
MW-19
MW-17
HARBOR STREET
3RD STREET EAST
EP

LEGEND

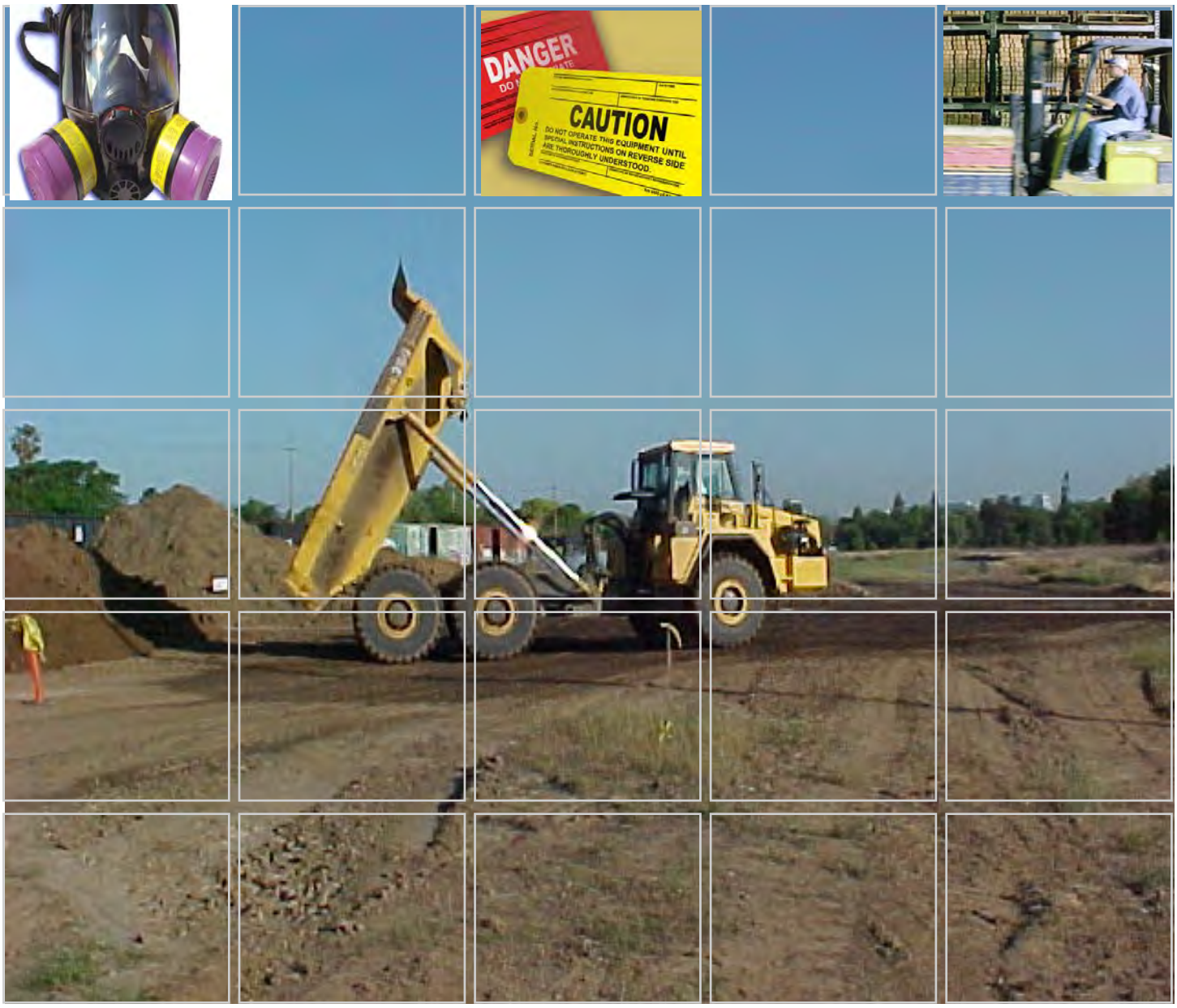
- Monitoring Well (HLA and ROUX)
- Monitoring Well, Abandoned

0 100
Approx. Scale (feet)

Figure 2
Site Detail Map
Pittsburg River Park, LLC
(Former Johns Manville Plant)
420 East 3rd Street
Pittsburg, California

ERM *10/05*

Appendix A
Health and Safety Plan



Health and Safety Plan for Abatement and Demolition Activities

Former Johns Manville Plant Site
Pittsburg, California

30 September 2005

Prepared for:
Pittsburg River Park LLC

www.erm.com

Pittsburg River Park LLC

Health and Safety Plan for Abatement and Demolition Activities

Former Johns Manville Plant Site
Pittsburg, California

30 September 2005

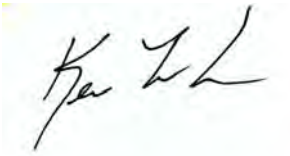
Project No. 25556.08



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1.0 INTRODUCTION

This Health and Safety Plan (HSP) has been developed by ERM-West, Inc. (ERM) to establish the health and safety procedures required to minimize potential hazards to personnel involved in activities associated with the abatement and demolition activities at the Former Johns Manville Plant Site (hereafter the "site"). The site location is shown on Figure 1. The purpose of the current scope of work is the abatement of all on-site hazardous materials and demolition of the site structures to rough-grade conditions in preparation for the future redevelopment of the site.

Field activities generally include daily oversight of abatement and demolition activities, media sampling for characterization of unknown materials, and progress and recordkeeping of daily activities.

The provisions of this HSP directly apply to ERM personnel and contractors who will be potentially exposed to safety and/or health hazards related to this project. This HSP does not directly apply to client personnel, although ERM will advise the client on the safety and health aspects of the work based on the guidelines specified in this HSP.

This HSP has been written to comply with ERM's health and safety policies and requirements. The procedures in this HSP have been developed based on current knowledge regarding the specific chemical and physical hazards that are known or anticipated to be potentially associated with the site. All contractors who use this HSP must read and sign the "Disclaimers and Limitations on Use" included in Attachment A-1.

It is ERM's policy that activities covered by this HSP must be conducted in complete compliance with this HSP and with all applicable federal, state, and local health and safety regulations, including:

- California Occupational Health and Safety Administration (CAL-OSHA), Title 8 of the California Code of Regulations (CCR), Section 5192; and
- Federal Occupational Health and Safety Administration (FED-OSHA) Construction Industry Standards in Title 29 of the Code of Federal Regulations (CFR), Part 1926.

On-site personnel who cannot, or will not, comply with the policies and requirements incorporated into this HSP will be excluded from project activities. Prior to the commencement of field activities, all ERM and

subcontractor personnel covered by this HSP must review this document and sign and return the Health and Safety Signature Sheet to the Project Manager. A copy of this form is provided in Attachment A-1.

1.1 SITE DESCRIPTION AND HISTORY

This section provides information regarding the site location and proposed activities at the site. Site location and land use are described, hazardous chemicals associated with site activities and known releases are identified, and general site characteristics are presented below.

1.1.1 Site Location

The former JM Plant Site is located at the approximate intersection of East Third Street and Harbor Street in Pittsburg, California (Figure 2). The site is approximately 1,000 feet south of New York Slough and Suisun Bay. This 21-acre parcel is bounded to the north by a Tesoro coke facility and Third Street; to the east by Harbor Street, several small light industrial businesses, and USS Posco Corporation; and to the south and west by residential properties. The Plant Site consists of Buildings 1 through 4 in the northern portion of the property, a warehouse in the southwestern portion of the site, and a former evaporation pond area, which is currently paved with asphalt. Railroad tracks bisect the central portion of the property.

The current land use and zoning for the Plant Site is industrial. The Owner is currently in negotiations with the City of Pittsburg to re-entitle the Plant Site parcel for single-family residential, multi- family residential and commercial uses.

1.1.2 Operations History

The main manufacturing plant was constructed between 1925 and 1928. In 1957, a large warehouse was constructed south of the main manufacturing facility. The principal products produced at the site prior to 1980 (the year that manufacture of asbestos-containing product was terminated) included asbestos-cement products, asphalt roofing materials, and asbestos-containing pipe covering. A series of four asphalt stills were used to convert heavy oil to asphalt. The stills were fueled by fuel oil and later with natural gas. During the process of converting heavy oil to asphalt, off-gas vapors were collected, condensed, and mixed with water to form an oil-water slurry. The slurry was conveyed through an underground pipe to an evaporation pond on the site, where it was

burned approximately twice a year. The evaporation pond was in use in 1946 and remained relatively constant in size until 1959, when it was filled with scrap and construction debris.

Until its closure in 2003, the site manufactured roofing materials and blows asphalt, which involves the conversion of asphalt flux to blown asphalt. During the processes, petroleum-based resins and solvents are used. During the asphalt-blowing process, off-gas vapors are collected and transferred via condenser lines and mixed with water to form an oil-water slurry that is conveyed to a 8,000-gallon aboveground storage tank. The oily water is transferred to an oil-recycling facility as needed by an outside contractor.

1.2 CONSTITUENTS OF CONCERN

The following sections summarize constituents historically detected in soil and ground water at the site.

1.2.1 Semivolatile Organic Compounds Detected in Soil

The semivolatile organic compounds chrysene, diethylphthalate, 2-methylnaphthalene, naphthalene, and phenanthrene were detected at maximum concentrations of 0.27, 0.12, 0.26, 0.39, and 26 milligrams per kilogram (mg/kg) respectively.

1.2.2 Petroleum Hydrocarbons

According to analytical results, petroleum hydrocarbons have been identified in site soil. Investigations at the site detected concentrations of petroleum hydrocarbons ranging from 400 to 93,000 mg/kg.

Ground water analytical results from samples collected at the site have identified impacts of total petroleum hydrocarbons as diesel and motor oil (TPH-d and TPH-mo, respectively). Based on the results, detected concentrations of TPH-d ranged from 0.14 to 51.0 mg/kg, and detected concentrations of TPH-mo ranged from 0.31 mg/kg to 10.0 mg/kg.

1.2.3 Metals Concentrations Detected in Ground Water

Arsenic, antimony, barium, chromium, copper, molybdenum, nickel, thallium, and zinc were detected in soil samples at the site. Maximum concentrations of these metals are summarized as follows:

Metals	Maximum Concentration in Ground Water (mg/kg)
Arsenic	0.038
Antimony	0.12
Barium	0.68
Chromium	0.008
Copper	0.051
Molybdenum	0.073
Nickel	0.036
Thallium	0.023
Zinc	0.28

1.2.4 Volatile Organic Compounds

The volatile organic compounds (VOCs) toluene, ethylbenzene, and xylenes were detected in soil samples collected at the site at maximum concentrations of 0.11, 0.15, and 1.2 mg/kg respectively.

The VOCs methylene chloride, 1,1-dichloroethane, and 1,1-dichloroethene were detected in ground water samples collected at the site at maximum concentrations of 0.095, 0.028, and 0.0051 mg/kg respectively.

1.2.5 Asbestos-Containing Materials

Asbestos-containing materials (ACMs) are known to be present as building materials throughout the site. These materials include, but are not limited to, transite cement wall and roof panels, transite utility piping, pipe insulation, roofing mastic, vinyl tile flooring, and various ACM debris. These materials are documented in the *Asbestos Survey Report* prepared by Aurora Industrial Hygiene in September 2004.

ACM are known to be present within fill materials found in the former evaporation pond. Site investigation performed by Sensible Environmental Solutions (SES) under ERM's direction in July 2004 found various types of ACM in debris within the fill materials. Sampling performed by SES found concentrations of chrysotile ACM ranging from nondetectable to 80 percent.

1.3 PROPOSED SCOPE OF WORK

Work scheduled to be performed at the site may consist of, but is not limited to, the following activities:

- ACM abatement;
- Lead-based paint abatement;
- Demolition of building structures;
- Demolition of subgrade utilities and structures;
- Rough grading; and
- If necessary, confirmation soil sampling.

2.0 KEY PERSONNEL

The organization and responsibilities for implementing safe project activities, and more specifically, the requirements contained in this HSP, are discussed in this section. The key personnel for this project are listed in Table 1.

Table 1 Key Project Personnel

Title	ERM Personnel
Project Manager (PM)	Mike Quillin
Task Manager/Site Health & Safety Officer (TM/HSO)	Don Ludlam
Internal Health and Safety Coordinator (IHSC)	Robin Woolson
Certified Asbestos Consultant (CAC)	Independent Contractor
Principal-in-Charge (PIC)	Ben Leslie-Bole
Project Engineer	Kevin Mucha
Field Personnel	Josh Pfaff, Chris Gonzales, Rob Dyer, Jason Flattery

All contractors must have received FED-OSHA training per 29 CFR 1910.120, and must be certified to work on hazardous waste sites.

2.1 PROJECT MANAGER

ERM's PM is responsible for ensuring the overall health and safety of this project and for ensuring that the requirements described herein are understood and followed by key project personnel. The PM often serves in the role of TM/HSO and in such cases the PM is responsible for the tasks and responsibilities described in Section 2.2.

2.2 TASK MANAGER/SITE HEALTH AND SAFETY OFFICER

The ERM TM/HSO has primary responsibility for ensuring the overall health and safety of this project, including the primary responsibility for enforcing HSP requirements once work begins.

The TM/HSO has the authority to immediately correct all situations where HSP noncompliance is noted and to immediately stop work in cases where an immediate danger is perceived.

The TM/HSO's specific responsibilities include:

- Ensuring that all project personnel have received a copy of and have read this HSP, and have completed the Health and Safety Signature Sheet (Attachment A-1);
- Ensuring that all contractors who use this HSP read and sign the "Disclaimers and Limitations on Use" (Attachment A-1);
- Requiring the attendance of all site personnel to a Job Safety Briefing (also referred to as tailgate safety briefing) apprising them of the contents of this HSP and specific hazards identified to be present at the facility prior to performing work and if work locations or task(s) change during a day, and documenting this briefing on the Job Safety Briefing Form (included in Attachment A-1);
- Ensuring that sufficient personal protective equipment (PPE), as required by this HSP, is available during the project, and procuring and distributing the PPE and air monitoring instrumentation needed for the project;
- Verifying that all PPE and health and safety equipment is in good working order;
- Obtaining all subcontractor documentation of employee participation in a medical monitoring and training plan;
- Maintaining a high level of health and safety consciousness among employees at the facility;
- Maintaining communications with the IHSC, as referenced in the following section, in the event of any health and safety conflicts;
- Setting up and maintaining the personnel decontamination facility;
- Controlling site entry for unauthorized personnel;
- Supervising and monitoring the safety performance of all personnel to ensure that required health and safety procedures are followed and correcting any deficiencies;
- Conducting accident/incident investigations and preparing investigation reports (an Accident/Incident Investigation Form is included in Attachment A-1); and
- Initiating emergency response procedures.

2.3 INTERNAL HEALTH AND SAFETY COORDINATOR

ERM's IHSC is responsible for the preparation, interpretation, and modification of this HSP. Modifications to this HSP that may result in less stringent precautions cannot be undertaken by the TM/HSO without the approval of the IHSC.

Specific responsibilities of the IHSC include:

- Advising the TM/HSO on matters relating to health and safety on this project;
- Maintaining contact with the PIC in the case of injury, exposure, or other related issues;
- Recommending appropriate PPE and air monitoring instrumentation to protect personnel from potential hazards present on site;
- Performing field audits, when necessary, to monitor compliance with the HSP and its effectiveness;
- Conducting or directing personal exposure monitoring, where required and where deemed necessary, to determine the adequacy of protective measures and PPE specified by this HSP;
- Maintaining contact with the TM/HSO to regularly evaluate project conditions and new information that might require modification to this HSP;
- Working with the TM/HSO to ensure that sufficient PPE is available at the site; and
- Conducting briefing meetings, when necessary, to apprise personnel of the contents of this HSP and the project hazards.

2.4 CERTIFIED ASBESTOS CONSULTANT

All ACM abatement work will be performed under the direction of, and in consultation with, a California Certified Asbestos Consultant (CAC) working under an independent contract with the owner of the site. During site work, the CAC's role will be to visually observe all ACM abatement activities and ensure that those activities are performed in accordance with applicable asbestos regulations. The CAC will also conduct oversight for the appropriate dust abatement during those operations. The CAS will be available for consultation during site activities, as needed. Additionally, the CAC may collect samples of suspect ACMs identified during abatement and demolition activities.

If collected, those samples will be transferred to a certified asbestos laboratory where they will be analyzed by polarized light microscopy, consistent with the proposed scope of work for the abatement and demolition activities.

2.5 PRINCIPAL-IN-CHARGE

ERM's PIC is responsible for assisting the IHSC in case of injury, exposure, or with any other issues in which the IHSC may need guidance or technical support. The PIC may also serve in the role of IHSC, and in such cases, the PIC is responsible for ensuring the tasks as described in Section 2.3 are accomplished as necessary.

2.6 FIELD PERSONNEL

All field and subcontractor personnel are responsible for following HSP procedures and for performing their work in a safe and responsible manner. Specific requirements include:

- Obtaining a copy of this HSP and reading it, in its entirety, prior to the start of field activities;
- Signing the Health and Safety Signature Sheet (Attachment A-1), acknowledging receipt and understanding of this HSP;
- Bringing forth any questions or concerns regarding the content of the HSP to the TM/HSO or IHSC prior to the start of work;
- Reporting accidents/incidents and the presence of potentially hazardous working situations to the TM/HSO; and
- Complying with the requests of the TM/HSO.

3.0 PARTICIPANT QUALIFICATIONS

To participate in this project, employees must be trained, as well as involved with medical surveillance and recordkeeping programs. The details associated with these requirements are briefly described below.

3.1 TRAINING REQUIREMENTS

All ERM and subcontractor personnel working on the site will have completed an extensive training course and have previously worked at least 3 days at a hazardous waste site. The training course must be designed to meet the requirements of 29 CFR 1910.120. The training course must consist of a combination of 40 hours of classroom and field exercises, plus an annual 8-hour refresher.

All site participants will be required to show proof of current training (less than 1 year since initial or refresher training) prior to field activities. Intended participants without current training documentation will be barred from site activities.

Additionally, all personnel who are required to use respirators and other PPE must be trained in their proper selection, use, and limitations (see Section 6.1 - Personal Protection).

3.2 MEDICAL SURVEILLANCE

All on-site personnel, subcontractors, and visitors will be required to have a written statement from a licensed physician stating they have had a medical examination that meets the requirements of 29 CFR 1910.120. This examination must include pulmonary function testing, as well as certification by the physician of the employee's ability to wear a negative-pressure respirator and perform strenuous work. If a person sustains an injury or contracts an illness related to work on site that results in lost work time, he/she must obtain written approval from a physician to regain access to the site.

3.3 RECORDKEEPING

Air monitoring via industrial hygiene monitoring or direct reading instrumentation will become part of the written record. Both medical and air monitoring data will be retained for 30 years. Training records shall be maintained in project files and are available for inspection at any time. Subcontractor training and medical surveillance certification will also be maintained.

4.0 HAZARD EVALUATION

The following subsections summarize the potential chemical and physical hazards associated with site activities based on known conditions.

4.1 CHEMICAL HAZARDS

Based on existing analytical data for soil and ground water collected at the site, a discussion of the potential primary chemicals of concern at the site include (VOCs, polynuclear aromatic hydrocarbons [PAHs], TPH, and metals) is presented in the following subsections. Based on the site's operational history and the building materials present on site, asbestos is addressed as well.

4.1.1 Polynuclear Aromatic Hydrocarbons

PAHs constitute a class of materials of which benzo[a]pyrene (BaP) is one of the most common and also the most hazardous. In general, PAHs can be formed in any hydrocarbon combustion process and may be released from oil spills. The less efficient the combustion process, the higher the PAH emission factor is likely to be. The major sources are stationary sources, such as heat and power generation, and refuse burning; and industrial activity; such as coke ovens and coal refuse heaps. Because of the large number of sources, people are exposed to very low levels of PAHs every day.

Certain PAHs, such as the more common BaP, have been demonstrated to be carcinogenic at relatively high exposure levels in laboratory animals. BaP is a yellowish crystalline solid that consists of five benzene rings joined together. It is highly soluble in fat tissue and has been shown to produce tumors in the stomachs of laboratory mice. In addition, skin cancers have been induced in a variety of animals at very low levels and unspecified lengths of application.

It is important to recognize the PAHs ability to adhere to soil and other particulates. Therefore, good particulate emission controls and the use of air-purifying respirators with particulate filters are required for protection against airborne PAH hazards. The current CAL-OSHA permissible exposure limit (PEL) is listed as 0.2 milligrams per cubic meter (mg/M^3) for benzene-soluble coal tar pitch volatiles.

4.1.2 Total Petroleum Hydrocarbons

Exposure to petroleum hydrocarbons can produce narcotic effects such as dizziness, headaches, and giddiness similar to alcohol intoxication. Petroleum hydrocarbons are also an irritant to the mucous membranes and can irritate the eyes, throat, and skin.

4.1.2.1 Total Petroleum Hydrocarbons as Diesel

Diesel is a mix of hydrocarbons, chiefly of the methane series having 10 to 16 carbon atoms per molecule. It is a severe skin irritant with systemic effects by ingestion. Diesel is combustible when exposed to heat or flame and can react with oxidizing materials. The vapor is also moderately explosive when exposed to heat or flame.

4.1.2.2 Total Petroleum Hydrocarbons as Motor Oil

Heavy waste oils, including lubricants, grease, and used motor and hydraulic fluids, have been shown to cause skin cancer during prolonged dermal exposure in laboratory animals. Therefore, dermal protection must be provided when contact with used oil is suspected. Contaminated skin should be washed as soon as possible.

4.1.3 Metals

Specific metals of concern detected at the site and the respective exposure hazards for these metals are summarized below.

4.1.3.1 Antimony

Antimony is a silvery-gray, lustrous metal. It is an experimental poison and a questionable carcinogen with experimental carcinogenic data. It is a moderate fire and explosion hazard in the forms of dust and vapor when exposed to heat or flame. Antimony can react violently with acids, halogens, and oxidants. The current Cal-OSHA PEL is listed as 0.5 mg/M^3.

4.1.3.2 Arsenic

Arsenic is a naturally occurring, gray, metal-like, element, which is normally found in the environment combined with other elements such as oxygen, chlorine, and sulfur (inorganic arsenic). Organic forms of arsenic are usually less harmful than inorganic forms. Inorganic arsenic has no smell or taste. Health effects via ingestion include irritation of the stomach and intestines, pain, nausea, vomiting, and diarrhea. Blood cell

changes, blood vessel damage and impaired nerve function can also result from chronic arsenic ingestion. Other effects include skin changes, irritation of the throat, increased risk of cancer of the liver, bladder, kidney, and lung. The current Cal-OSHA PEL is listed as 10 micrograms per cubic meter ($\mu g/m^3$) for inorganic forms of arsenic.

4.1.3.3 Chromium

Chromic acid and its salts have a corrosive action on the skin and mucous membranes. The lesions are confined to the exposed parts, affecting chiefly the skin of the hands and forearms, and the mucous membranes of the nasal septum. Chromate salts are human and experimental carcinogens of the lungs, nasal cavity, and paranasal sinus, and are also experimental carcinogens of the stomach and larynx. Hexavalent compounds are more toxic than trivalent. The CAL-OSHA PELs for trivalent and metal chromium compounds are both 0.5 mg/M^3. The PELs for water-soluble hexavalent compounds and water-insoluble hexavalent compounds are 0.05 mg/M^3 and 0.01 mg/M^3, respectively.

4.1.3.4 Copper

In its elemental form, copper is a common metal with a distinct reddish color. Human systemic effects by ingestion include nausea and vomiting. In animals, inhalation of copper dust has caused hemolysis of the red blood cells, deposition of hemofuscin in the liver and pancreas, and injury to the lung cells. The current Cal-OSHA PEL for copper (as a dust) is listed as 1 mg/M^3.

4.1.3.5 Nickel

Nickel dust has been classified as a Class A carcinogen by the EPA. It has been shown to cause lung and nasal cancer upon prolonged exposures. It is a poison by ingestion. Ingestion of soluble nickel salts causes nausea, vomiting, and diarrhea. Hypersensitivity to nickel is common and can cause allergic contact dermatitis, pulmonary asthma, conjunctivitis, and inflammatory reactions around nickel-containing medical implants and prostheses. The current CAL-OSHA PEL for nickel is listed as 0.1 mg/M^3 for soluble compounds, and 1 mg/M^3 for insoluble compounds.

4.1.3.6 Zinc

Zinc is a bluish-white, lustrous metallic element. Human systemic effects by ingestion include cough, dyspnea, and sweating. It is a human skin irritant. Pure zinc powder, dust, and fume are relatively non-toxic to

humans by inhalation. However, the inhalation of zinc oxides may cause a sweet taste, throat dryness, cough, weakness, generalized aches, chills, nausea, and vomiting. Zinc dust is flammable when exposed to heat or flame and may ignite spontaneously in air when dry. Zinc dust is explosive when reacted with acids. The current CAL-OSHA PEL for zinc (as an oxide fume) is listed as 5 mg/M^3.

4.1.4 Volatile Organic Compounds

4.1.4.1 1,1-Dichloroethane (1,1-DCA)

1,1-DCA is moderately toxic by ingestion and is an experimental tumorigen and teratogen, as well as a suspect human carcinogen. The current Cal-OSHA PEL for 1,1-DCA is listed as 100 parts per million (ppm).

4.1.4.2 1,1-Dichloroethene (1,1-DCE)

1,1-DCE is an experimental carcinogen, tumorigen, and teratogen. It is a poison by inhalation and ingestion and can cause general anesthesia, liver and kidney changes, and reproductive effects. The current Cal-OSHA PEL is listed as 1 ppm due to its identification as a carcinogen by the National Institute for Occupational Safety and Health (NIOSH).

4.1.4.3 Ethylbenzene

Ethylbenzene is mildly toxic by inhalation and skin contact. Inhalation can cause eye, sleep, and pulmonary changes. It is an eye and skin irritant at levels as low as 0.1% (1,000 ppm) of the vapor in air. At higher concentrations, it is extremely irritating at first, and then can cause dizziness, irritation of the nose and throat, and a sense of constriction in the chest. The current Cal-OSHA PEL is listed as 100 ppm.

4.1.4.4 Methylene Chloride

Methylene chloride is an experimental carcinogen and tumorigen. Human systemic effects upon inhalation include: altered sleep time, convulsions, euphoria, and change in cardiac rate. It is an eye and severe skin irritant. Data in humans suggest it may be a mutagen. Methylene chloride also exhibits the unique effect of elevating the blood carboxyhemoglobin levels, similar to the effect of exposure to carbon monoxide (CO). In fact, evidence suggests that methylene chloride can convert to CO in the body. The current Cal-OSHA PEL is listed as 25 ppm.

4.1.4.5 Toluene

Human systemic effects of exposure to toluene include: hallucinations or distorted perceptions, changes in motor activity and bone marrow, or psychophysiological alterations. It is a severe eye irritant and an experimental teratogen. The current Cal-OSHA PEL for toluene is listed as 50 ppm.

4.1.4.6 Xylene

Xylene exhibits the general chlorinated hydrocarbon central nervous system effects and olfactory (smell) changes, eye irritation, and pulmonary changes. It is a severe skin irritant. Irritation can start at 200 ppm. The current Cal-OSHA PEL is listed as 100 ppm for all three isomers (ortho, meta, and para).

4.1.5 Asbestos

Asbestos is a name given to a variety of naturally occurring minerals composed of hydrated, fibrous silicates that are crystalline in structure. The word asbestos is derived from the Greek work similarly spelled, meaning "inextinguishable." There are two groups of asbestos mineral. The first is the Serpentine group, commonly referred to as chrysotile. Chrysotile, which comprises approximately 93% of all asbestos in use in the United States, is characterized by long, soft and flexible strands that can be woven into a cloth. The second category occurs as a group of minerals called Amphiboles. Amphiboles fibers are characterized as being strong, brittle, and needle-like. The common names of the forms of the minerals within this group are: crocidolite, amosite, tremolite, anthophyllite, and actinolite.

Asbestos is virtually indestructible, has good fiber bonding, is abrasion-resistant, and is extremely resistant to heat and chemicals. The variety of desirable properties exhibited by asbestos make it very popular for use in building materials and industry. The primary drawback with its use is the known association of severe health disorders and associated liabilities with exposure to the fibers.

Exposure to asbestos can produce a lung fibrosis called asbestosis. The onset of asbestosis is usually gradual, developing over a period of 10 to 30 years of exposure to significant concentrations of asbestos. It is characterized by development of a thickening of the lung pleura (lining).

Asbestos is also a cancer-producing agent (lung cancer and mesothelioma). Heavy exposure to dust containing asbestos can also cause skin irritation. Epidemiological studies have shown that lung cancer appears to be related to the degree of exposure, the type of asbestos, and whether or not the individuals smoke cigarettes. It is significant that cigarette smoking greatly increases the risk of lung cancer in those who are exposed to asbestos. However, mesothelioma (a rare tumor of the chest cavity lining) appears to develop without regard to the amount of asbestos inhaled.

The Cal-OSHA PEL for asbestos is 0.1 fiber per cubic centimeter.

4.2 PHYSICAL HAZARDS

Physical hazards associated with site activities include slips, trips, falls, contact- and crushing-type injuries, eye abrasions, contusions, lacerations, flammability, and heat-stress concerns. The potential for such hazards necessitates the use of gloves and safety boots that meet American National Standards Institute (ANSI) Z41.1, eye protection that meets ANSI Z87.1, and hard hats that meet ANSI Z89.1. Personnel engaged in strenuous physical labor shall wear sturdy work gloves.

Additionally, previous experience indicates the noise level during use of heavy equipment may exceed the CAL-OSHA action level of 85 dBA (decibels on A-weighted scale). Therefore, all personnel working in the exclusion zone during use of this equipment shall wear hearing protection in the form of plugs and/or earmuffs.

See Table 2 for a list of potential physical hazards that may be present and the procedures that will be utilized to minimize these potential hazards.

4.2.1 Use of Equipment

Any equipment, including earth-moving equipment, drill rigs, cranes, or other heavy machinery will be operated in strict compliance with the manufacturer's instructions, specifications, and limitations, as well as any applicable regulations.

Any equipment or machinery that cannot be operated safely will be tagged and will not be operated until the unsafe condition has been removed or repaired. All repaired equipment will remain out of service until a designated qualified person has tested and inspected the equipment.

The contractor of heavy equipment operator will clearly designate the zone(s) associated with each piece of heavy equipment where the potential for injuring workers exists. No site personnel will be permitted to enter or access this zone without prior approval from the operator.

Table 2 ***Potential Physical Hazards***

Potential Hazard	Source of Hazard	Procedures to Be Used to Minimize Hazard
Struck by heavy equipment	Drill rigs, backhoes, and other heavy equipment.	Maintain eye contact with equipment operators. Use proper PPE (i.e., hard hats, steel-toed boots, reflective vests, etc.).
Puncture of utility line	Electrical, gas, water, or sewer line underground.	Locate existing utilities prior to start of operations.
Slip, trips, or falls due to refuse and debris	Construction refuse and materials, trash, or excavated materials.	Maintain clean work areas and dispose of refuse promptly.
Fire/electrical hazard	Spark or heat producing equipment in the vicinity of combustibles.	Operate equipment away from combustibles such as vegetation. Maintain portable fire extinguishers nearby.
Heat stress	Personnel working in environments with high ambient temperatures may be subject to adverse temperature-related effects.	Employ the buddy system. Each worker will be responsible to monitor his/her buddy for signs of heat stress (loss of concentration, profuse sweating, dizziness, etc.). The TM/HSO will also monitor working conditions via use of an ambient monitor when conditions warrant. Work/rest regimens may be followed (Table 3).
Dust	Automobiles/trucks/walking	Vehicles should be driven slowly and water shall be used to moisten soil if necessary.
Struck by vehicular traffic in public right-of-way	Automobiles/trucks	Utilize traffic control plan (prepared by subcontractor) and traffic control devices and maintain physical barrier between work zone and active traffic.

All heavy equipment provided or leased on site shall be equipped with audible backup warning devices. The operator is responsible for inspecting the equipment daily to ensure that it is functioning properly and safely. This inspection will include all pins, pulleys, and connections subject to faster than normal wear and all lubrication points.

When equipment with moving booms, arms, or masts are operated in the vicinity of overhead hazards, the operator, with assistance from the designated signaling person, will ensure that the moving parts of the equipment maintain safe clearance from the hazards. Equipment will be kept away from energized electrical lines by at least 25 feet. Drill rigs and other equipment not specifically designed to move with the boom, mast, or arm elevated will be returned to traveling position and condition before being moved.

All portable equipment and tools will be inspected prior to each day's use and as often as necessary to ensure safety. Defective equipment and tools will be removed from service immediately. Examples of defective tools include:

- Hooks and chains stretched beyond allowable deformations;
- Cables and ropes with more than the allowable number of broken strands;
- Missing grounding prongs on power tools;
- Defective on/off switches;
- Mushroomed heads of impact tools;
- Sprung wrench jaws;
- Missing or broken handles or guards; and
- Wooden handles that are cracked, splintered, or loose.

All equipment and tools will be used within their rated capacities and capabilities.

The location of all underground pipes, electrical conductors, fuel, water and sewer lines must be determined prior to any drilling work. All lines must be de-energized, locked-out, or blinded off where feasible.

4.2.2 Flammability Hazards

The nature of this project and the operations to be performed may increase volatilization and cause a flammability hazard. Certain solvents

can be extremely flammable. Oxidation products from burning can be extremely deadly.

All electrical equipment used during this project will be inspected to ensure that it is in good repair and has no frayed or loose connections before it may be used on site. Only approved, listed equipment and components will be used. All connections will be made in accordance with National Electric Code practices. All equipment and devices so designed will be properly grounded or bonded to an adequate grounding mechanism. Although explosive limits are not expected, only equipment listed as explosion-proof will be used in areas where explosivity is sustained at or above 5 percent of the lower explosive limit.

4.2.3 Temperature-Stress Concerns

Temperature stress includes heat stress, as well as cold injury. It should be noted that both types of temperature stress could occur simultaneously. The ambient air temperature, wind velocity, humidity, and activity level of the worker, as well as the type of protective equipment employed, are all factors that play a role in producing temperature stresses. Workers will be trained on the signs and symptoms of these forms of temperature stresses and will be encouraged to monitor themselves and others.

The human body has a regulator mechanism that maintains the body's core temperature at 98.6 degrees Fahrenheit. The body's energy is devoted to keeping the temperature within a fairly narrow range. When the body overheats, heat loss occurs primarily through evaporation via sweating and by radiant heat loss by dilation of blood vessels in the skin. When body temperature drops, involuntary shivering produces heat while constriction of the blood vessels in the skin reduces radiant heat loss.

Protective clothing designed to protect against chemicals interferes with the evaporative cooling mechanism. As a result, heat stress can develop rapidly in non-acclimated individuals. Cold stress can occur when the heat produced by intense activity is reduced by the stoppage of work. Chemical-protective clothing offers no insulation and little protection against the cold; it does not retain body heat well. The water-saturated atmosphere that can occur within protective clothing loses heat more rapidly than ambient air; thus, heat loss can occur rapidly. During episodes of heavy work, it is possible for a worker to suffer symptoms of heat stress, only to experience cold stress when activity levels decrease or the work stops.

4.2.3.1 Heat Stress

There are varying symptoms of heat stress, depending on its severity. Many heat-related problems occur in workers who are unaccustomed to heavy workloads and heat, or who are in poor physical condition. Obesity, alcohol or drug use, age, and the presence of other complicating factors, such as disease, also affect an individual's response to hot environments. In heat conditions, the work/rest regimen shown on Table 3 should be followed. Heat stress is a general term used to describe one or more of the following heat-related disabilities and illnesses:

Heat Cramps are a condition characterized by painful, intermittent spasms of the voluntary muscles following hard physical work in a hot environment. Cramps usually occur after heavy sweating and often begin at the end of a work shift.

Heat Exhaustion is a condition characterized by profuse sweating, weakness, rapid pulse, dizziness, nausea, and headache. The skin is cool and sometimes pale and clammy with sweat. Body temperature is normal or subnormal. Nausea, vomiting, and unconsciousness may occur.

Heat Stroke is a condition in which sweating is diminished or absent. The skin is hot, dry, and flushed. Increased body temperature, if uncontrolled, may lead to delirium, convulsions, coma, and even death. **Medical attention is needed immediately.**

When selecting chemical-protective clothing and equipment, each item's benefit should be carefully evaluated for its potential to increase the risk of heat stress. For example, if a lighter, less insulating suit can be worn without a sacrifice of protection, then the lighter suit should be worn.

Workers will be trained on the signs and symptoms of the forms of heat stress and will be encouraged to monitor themselves and others. In addition, experience has shown that the following work/rest regimen (Table 3) is appropriate for field workers performing various degrees of work while wearing Level D protection. When upgrading the level of personal protection is deemed necessary, heat-stress conditions should be taken into consideration.

Table 3 Work/Rest Regimen in Level D Protection

Temperature °Fahrenheit (F)/°Celsius (C)	**Water Intake (Quarts per hour)**	**Work/Rest Cycle (Minutes)**
82 – 85 (28 - 29)	At least 0.5	50/10
85 – 88 (29 – 31)	At least 1	45/15
88 - 90 (31 – 32)	At least 1.5	30/30
90 and above (above 32)	More than 2	20/40

The workload classes are defined in The American Conference of Governmental Industrial Hygienists' booklet, *Threshold Limit Values and Biological Exposure Indices for 1998*.

5.0 EXPOSURE MONITORING PLAN

To identify and prevent the exposure of workers, an exposure monitoring plan will be followed. The following subsections summarize the details of the general area monitoring program, as well as the action levels that will be used to determine mitigating actions necessary.

5.1 GENERAL AREA AND PERSONAL MONITORING

Air monitoring may be conducted to determine the presence of on-site hazardous conditions and will help determine the level of personal protection required for personnel. Environmental monitoring equipment includes a photoionization detector (PID) or a flame ionization detector (FID). In addition, a Miniature real-time aerosol monitor (Mini-RAM) dust monitor will be used during demolition activities if conditions warrant its use. Characterization with these instruments will determine airborne contaminants present and the respective concentrations in the workplace, and will help assess worker safety.

The intent of general area monitoring is to utilize generic field instruments and action levels to assess the continuous exposure to field personnel during site activities, and upgrade or downgrade PPE as appropriate. The general monitoring shall consist of daily breathing zone monitoring every 30 minutes using the PID or FID (and Mini-RAM if necessary) during site activities. Daily calibration and maintenance of the PID or FID will also be recorded and performed according to the manufacturer's recommendations (see Attachment A-1 for calibration documentation sheet). The Mini-RAM will be zeroed out during each day of use. All breathing zone readings will be recorded on ERM's Air Monitoring Form (provided in Attachment A-1).

5.2 ACTION LEVELS

The TM/HSO will establish daily background total organic vapor (TOV) or dust levels prior to initiating site activities. Under most circumstances, these levels can be determined by taking multiple readings at representative locations along the perimeter of the site, and averaging the results of sustained measurements.

Decisions to upgrade personal protection will be based on sustained breathing zone TOV or total dust that exceeds background. Breathing zone refers to the area from the top of the shoulders to the top of the head. Specific criteria for upgrading personal protection based on TOV and dust levels are presented in Table 4.

The CAC has provided objective data that demonstrate that asbestos is not capable of being released in airborne concentrations at or above the PEL under the expected conditions at the site. Exposure monitoring for asbestos will be instituted when there has been a change in the work practices that may result in new exposures above the PEL.

Table 4 Criteria for Upgrading Respiratory Protection

Sustained Breathing Zone TOV and Dust	**Level of Respiratory Protection**
Background + 5 ppm or Background + 0.5 mg/M^3	Level D (no respiratory protection)
5 to 20 ppm or 0.5 mg/M^3 to 2 mg/M^3	Level C (half-face, air-purifying respirators, equipped with organic vapor/high-efficiency particulate air [HEPA] cartridges)
20 to 50 ppm or 2 mg/M^3 to 5 mg/M^3	Level C (full-face, air-purifying respirators equipped with organic vapor/HEPA cartridges)
Above 50 ppm or 5 mg/M^3	Cease activities, evacuate the exclusion zone.

6.0 GENERAL SAFE WORK PROCEDURES

Personal protection, work zone and decontamination procedures, and general safety rules are described in the following subsections.

6.1 PERSONAL PROTECTION

Initial protection will include the Level D requirements for PPE, and will be upgraded based on sustained PID/FID readings, or Mini-Ram readings (if conditions warrant its use), compared to the action levels listed in Table 4. Levels of PPE are described below.

6.1.1 Level D Protection

Level D protection consisting of the following items is required for sustained PID/FID readings of less than 5 ppm above background, or for Mini-Ram readings of less than 0.5 mg/M^3 above background:

- Long-sleeve shirt and long pants;
- Outer nitrile gloves for material handling (inner latex or similar surgical gloves are recommended when practical);
- Steel-toed safety boots;
- Safety glasses;
- Hard hat; and
- Orange reflective vest.

Other personal protection readily available for use, if necessary, includes the following:

- Chemical-resistant gloves; and
- Hearing protection.

6.1.2 Level C Protection

Level C protection is required for sustained PID/FID readings of 5 to 20 ppm above background, or Mini-Ram readings of 0.5 mg/M^3 to 2 mg/M^3 above background. Level C protection consists of Level D protection, plus the following:

- Half-face air-purifying pespirator (APR) equipped with combination organic vapor/HEPA filter cartridges;
- Chemical-resistant clothing (i.e., Tyvek, polycoated Tyvek, or Saranex), consisting of one-piece suits with attached hoods, booties, and elastic wrist bands;
- Outer nitrile gloves and inner latex surgical gloves; and
- Steel-toed safety boots with rubber overboots.

During work activities, sustained PID/FID readings of 20 to 50 ppm above background, or Mini-Ram readings of 2 to 5 mg/M^3, require Level C protection, with the substitution of a full-face APR equipped with organic vapor/HEPA filter cartridges, in place of half-face APR and safety glasses.

Sustained PID/FID readings over 50 ppm above background, or Mini-Ram readings above or 5 mg/M^3, require an immediate cessation of activities, and an evacuation of personnel from the exclusion zone. Questions regarding personal protection and related issues should be addressed to the TM/HSO.

6.2 WORK ZONES AND DECONTAMINATION PROCEDURES

Work zones and decontamination procedures will be established in accordance with guidance provided in Chapters 9 and 10 of the *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities*, published by NIOSH, FED-OSHA, and the United States Environmental Protection Agency. An exclusion zone will be established as determined by the TM/HSO based on the type of work to be performed and the anticipated TOV and dust levels in the work area. Exclusion zones will be marked with yellow caution tape. The location of the zones may be modified to fit applicable field conditions; however, proposed modifications must be approved by the TM/HSO.

A minimum of one basin wash/rinse station will be placed in the contamination/reduction zone to facilitate cleaning and removal of PPE.

The wash/rinse station will be used by workers to clean and rinse nondisposable boots and gloves. The ground beneath these basins will be covered with plastic to ensure the ground is not contaminated with basin rinse water. A drum or another type of container will be designated to dispose of PPE that will not be reused.

All personnel must follow the appropriate order for cleansing and removal during decontamination:

1. Boots;
2. Outer gloves;
3. Coveralls or protective suit;
4. Respirators; and
5. Inner gloves.

Direct contact with contaminated protective equipment can be avoided by following the proper decontamination sequence. To avoid a potential inhalation hazard during decontamination, respirators, if used, must not be removed before leaving the contaminated area.

Water, soap, and paper towels will be available for cleaning of hands and face before breaks, eating, drinking, or smoking. On-site toilet facilities or an easily accessible toilet facility will also be available.

6.3 GENERAL SAFETY RULES

In addition to the specific requirements of this site-specific HSP, common sense should prevail at all times. The following general safety rules and practices will be in effect at the site:

- The site will be suitably marked or barricaded as necessary to prevent unauthorized visitors, but will not hinder emergency services, if needed.
- All open holes, excavations, trenches, and obstacles will be properly barricaded in accordance with local site needs. These needs will be determined by proximity to traffic ways, both pedestrian and vehicular, and site of the hole, trench, or obstacle. If holes are required to be left open during nonworking hours, they will be adequately decked over or barricaded and sufficiently lighted.
- Prior to conducting any digging or boring operations, underground utility locations will be identified. The site representative and local

utility authorities, as well as Underground Service Alert will be contacted to provide locations of underground utility lines and product piping. In addition, a private utility locating service will be contracted to identify any underground utilities. All boring, excavation, and other site work will be planned and performed with consideration for underground lines.

- Smoking and ignition sources in the vicinity of flammable or contaminated material are prohibited. Designated smoking areas will be delineated.
- Dust suppression shall be utilized during all site activities. A light water mist will be necessary and required during demolition activities to keep dust migration to an absolute minimum.
- No demolition activities will be allowed on excessively windy days. For purposes of this HSP, excessive wind will be defined as wind with sufficient velocity to render dust suppression techniques at the site inadequate. The designated TM/HSO will make this determination by visual observation. If dust is observed blowing from the work area off site, work activities will cease. Personnel should keep themselves upwind from impacted areas during windy days.
- Stockpiled soils shall be covered with plastic while not being loaded. The TM/HSO must inspect the stockpiled soil periodically to ensure that the plastic sheeting remains in place.
- Drilling, boring, movement and use of cranes and drilling rigs, erection of towers, movement of vehicles, and equipment as well as other activities will be planned and performed with consideration for the location, height, and relative position of aboveground utilities and fixtures, including signs, lights, canopies, buildings, other structures, and construction as well as natural features such as trees, boulders, bodies of water, and terrain.
- When working in areas where flammable vapors may be present, particular care must be exercised with tools and equipment that may be sources of ignition. All tools and equipment so provided must be properly bonded and/or grounded.
- Beards that interfere with respirator fit are not allowed within the site boundaries. This is necessary because all site personnel may be called upon to use respirator protection in some situations, and beards do not allow for proper respirator fit.
- No smoking, eating, or drinking will be allowed in the contaminated areas.

- Tools and hands must be kept away from the face.
- Personnel must shower at the end of the shift or as soon as possible after leaving the site.
- Each sample must be treated and handled as though it was extremely toxic.
- Do not touch obviously contaminated materials. Avoiding contact with these materials will facilitate decontamination.
- Persons with long hair and/or loose-fitting clothing that could become entangled in power equipment are not permitted in the work area.
- Employees shall be suitably dressed to perform their duties safely and in a manner that will not interfere with their vision, hearing, or free use of their hands or feet. Only waist-length shirts with sleeves and trousers that cover the entire leg are to be worn.
- Horseplay is prohibited in the work area. The TM/HSO has the authority to discharge site personnel for horseplay.
- Work while under the influence of intoxicants, narcotics, or controlled substances is prohibited.

7.0 EMERGENCY RESPONSE/ACCIDENT INVESTIGATION

The telephone numbers of the police and fire departments, ambulance services, local hospital, and ERM representatives are provided in the reference sheet in Section 8.0 of this HSP. Directions to the nearest hospital are also provided on the sheet. (A map to the hospital is provided on Figure 3). The reference sheet will be maintained at the work site by the TM/HSO.

Any accident/incident resulting in an OSHA-recordable injury or illness, treatment at a hospital or physician's office, property damage, or a near-miss accident requires that an Accident/Incident Investigation Report be completed and submitted to the ERM IHSC. A copy of this form is provided in Attachment A-1. The investigation will be initiated as soon as emergency conditions are under control. The purpose of this investigation is not to attribute blame, but to determine the pertinent facts so that repeat or similar occurrences can be avoided.

7.1 PLANNING

Prior to facility entrance, the TM/HSO shall plan emergency actions and discuss them with personnel conducting project work. Initial planning includes establishing the best means for evacuation from the area in case of a catastrophe.

7.2 EMERGENCY SERVICES

A tested system must exist for rapid and clear distress communications, preferably voice, from all personnel to the TM/HSO. The TM/HSO shall ensure that all personnel working at the facility know how to communicate with the appropriate local emergency response units as well as provide adequate and clear directions between work locations and the locations of support personnel, prior to commencing any facility investigation or operations. Emergency response contacts and telephone numbers are included in the emergency reference sheet provided in Section 8.0. A copy of this information must be posted in a visible location at the project site before operations commence.

7.3 GENERAL EVACUATION PLAN

In case of fire, explosion, or toxic vapor release and the TM/HSO orders a site evacuation, the following steps shall be performed:

1. Announce the evacuation via radio/horn. Three blasts of a car or truck air horn will be used to signal emergencies that require evacuation.
2. Evaluate the immediate situation and downwind direction. All personnel will evacuate in the upwind direction.
3. Assemble all personnel in an upwind area when the situation permits.
4. Account for all personnel.
5. Determine the extent of the problem.
6. Dispatch response teams in protective clothing and self-contained breathing apparatus on site to evaluate any missing personnel.
7. Correct the problem.

7.4 EVACUATION/MEETING POINT

In the case of an emergency, utilize the following locations as evacuation/meeting points, and provide this information to emergency personnel:

1. Site entrance on Harbor Street.
2. The intersection of Harbor and Third Streets.

The TM/HSO shall meet emergency personnel and guide them to the incident scene.

7.5 FIRST AID

Qualified personnel on site shall give first aid and stabilize any worker needing assistance. Life support techniques such as cardiopulmonary resuscitation and treatment of life-threatening problems such as bleeding, airway maintenance, and shock shall be given top priority. Professional medical assistance shall be obtained at the earliest possible opportunity. If assistance beyond first aid is required, **dial 911, and request emergency medical assistance**.

A first aid kit and emergency eyewash shall be maintained readily accessible to all workers. First aid kits must be maintained in all self-propelled equipment. The portable eyewash shall be supplemented by at least two, 5-gallon carboys full of potable water, which will substitute as the continuous-flowing eyewash facility. Emergency first aid for exposure, inhalation, or exposure to organic compounds is summarized in the following paragraphs.

7.5.1 Eyes

Flush eyes immediately with fresh water for at least 15 minutes while holding the eyelids open. If injury occurs or irritation persists, transport person to emergency room as soon as possible.

7.5.2 Skin

Wash skin thoroughly with soap and water. See a doctor if any unusual signs or symptoms or if any skin irritation occurs. Launder chemically impacted clothing.

7.5.3 Inhalation

Move exposed person to fresh air. If breathing has stopped, apply artificial respiration. **Dial 911 immediately**.

7.5.4 Ingestion

If swallowed, DO NOT induce vomiting. **Call Poison Control Center immediately at 1-800-876-4766**.

7.5.5 Heat Stress

Persons exhibiting any of the signs of heat stress should be immediately moved to a cooler environment, such as an air-conditioned trailer or vehicle. First aid for the specific types of heat stress include:

Heat Stroke. Dial 911, begin cooling the individual by soaking their clothes in cool water and fanning.

Heat Exhaustion. Replenish fluids by having the individual drink an electrolyte solution (such as Gatorade® or other sports drink). If vomiting or loss of consciousness occurs, dial 911.

Heat Cramps. Replenish salt balance by having the individual drink an electrolyte solution (see above). If cramps persist, person may need medical attention.

7.6 FIRE PROTECTION AND RESPONSE

To ensure that fire and explosion hazards are minimized, plans and procedures must be coordinated with the local Fire Department. A permit may be required before gasoline or other flammable liquids may be removed. **Dial 911 in the event of any fire at a work location**. In the event of a fire or explosion at a work location, general evacuation plan described above in Section 7.3.

At least one fire extinguisher, with a minimum class rating of 20BC, shall be provided within 50 feet of the site activities. A fire extinguisher must be kept in each piece of self-propelled equipment. Site personnel must not attempt to extinguish large fires, but rather dial 911 immediately.

8.0 EMERGENCY REFERENCES

The following subsections provide emergency telephone numbers, information regarding the nearest hospital, and directions to the site.

8.1 KEY TELEPHONE NUMBERS

AMBULANCE: 911
POLICE: 911
FIRE: 911
HOSPITAL: 911
SUTTER DELTA MEDICAL CENTER: 1-925-779-7273
NATIONAL RESPONSE CENTER: 1-800-424-8802
POISON CONTROL CENTER: 1-800-876-4766
TOXLINE: 1-301-496-1131
CHEMTREC: 1-800-424-9300
ERM HEALTH AND SAFETY COORDINATOR (R. WOOLSON): 1-714-430-1476
ERM PRINCIPAL-IN-CHARGE (MIKE QUILLIN): 1-925-946-0455
ERM TASK MANAGER (DON LUDLAM): 1-925-818-0314

8.2 NEAREST HOSPITAL

Sutter Delta Medical Center 1-925-779-7273
3901 Lone Tree Way
Antioch, California

8.2.1 Directions to Hospital

- Exit the site, proceed LEFT (WEST) on 3rd STREET.
- Turn LEFT (SOUTH) onto RAILROAD AVENUE.
- Take HIGHWAY 4 (EAST) toward Antioch.
- Exit at LONE TREE WAY.
- Proceed SOUTH on LONE TREE WAY to Hospital (on left immediately before Ridgerock Drive.

8.2.2 Directions to the Site

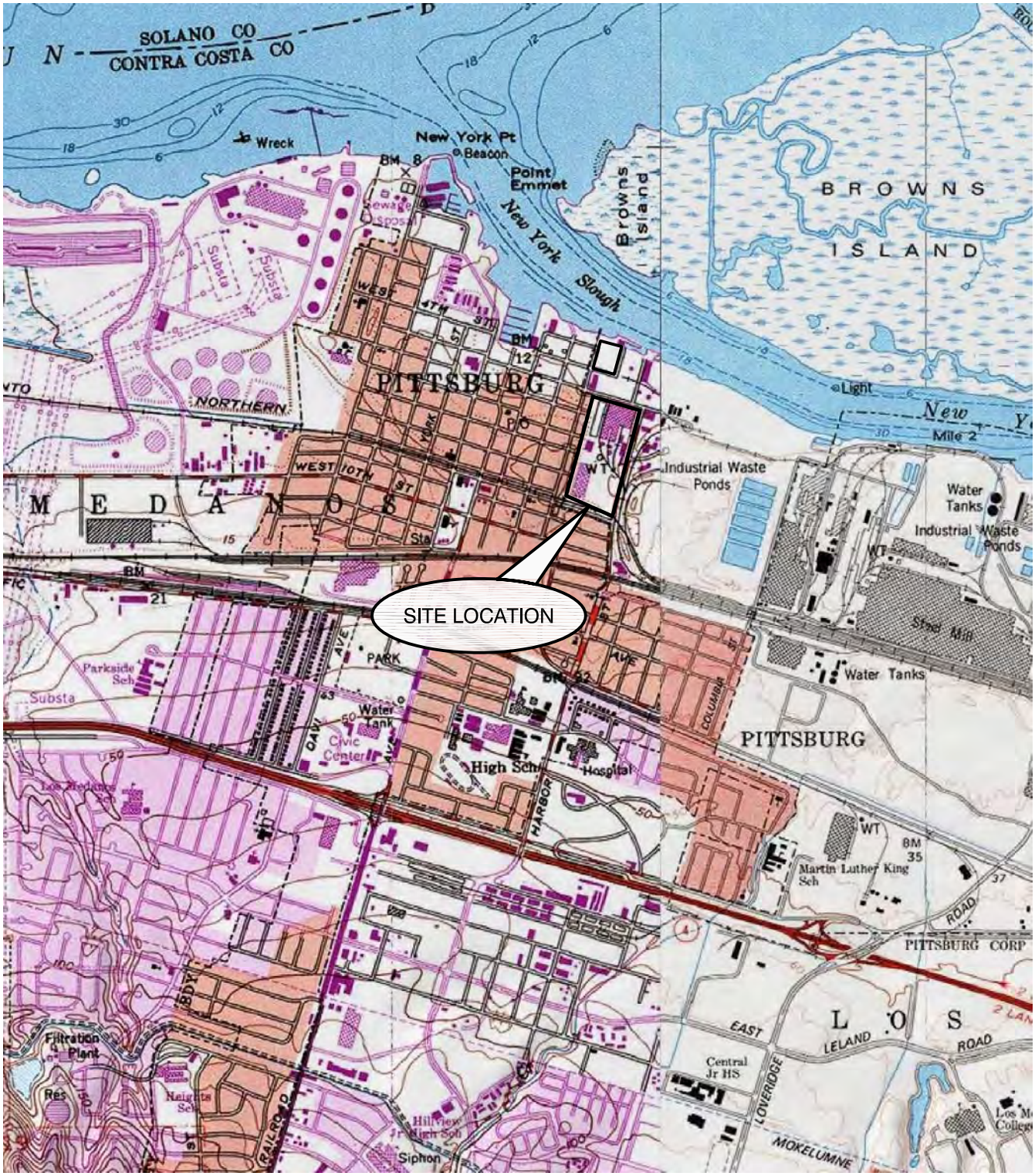
The site is located south of Highway 4 in Pittsburg, California.

Follow Highway 4 east from Concord toward Pittsburg. Take the Railroad Avenue exit in Pittsburg. Proceed south on Railroad Avenue.

Turn right turn onto Third Street. The site is on the right side of Third Street at the corner of Harbor Street.

Figures

Project No. 0025556.04
Date: 08/30/05
Drawn By: D. Ludlam
CAD File: G:\0025556\Site Location Map.dwg



SCALE 1:24,000

1 1/2 0 1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 .5 0 1 KILOMETER

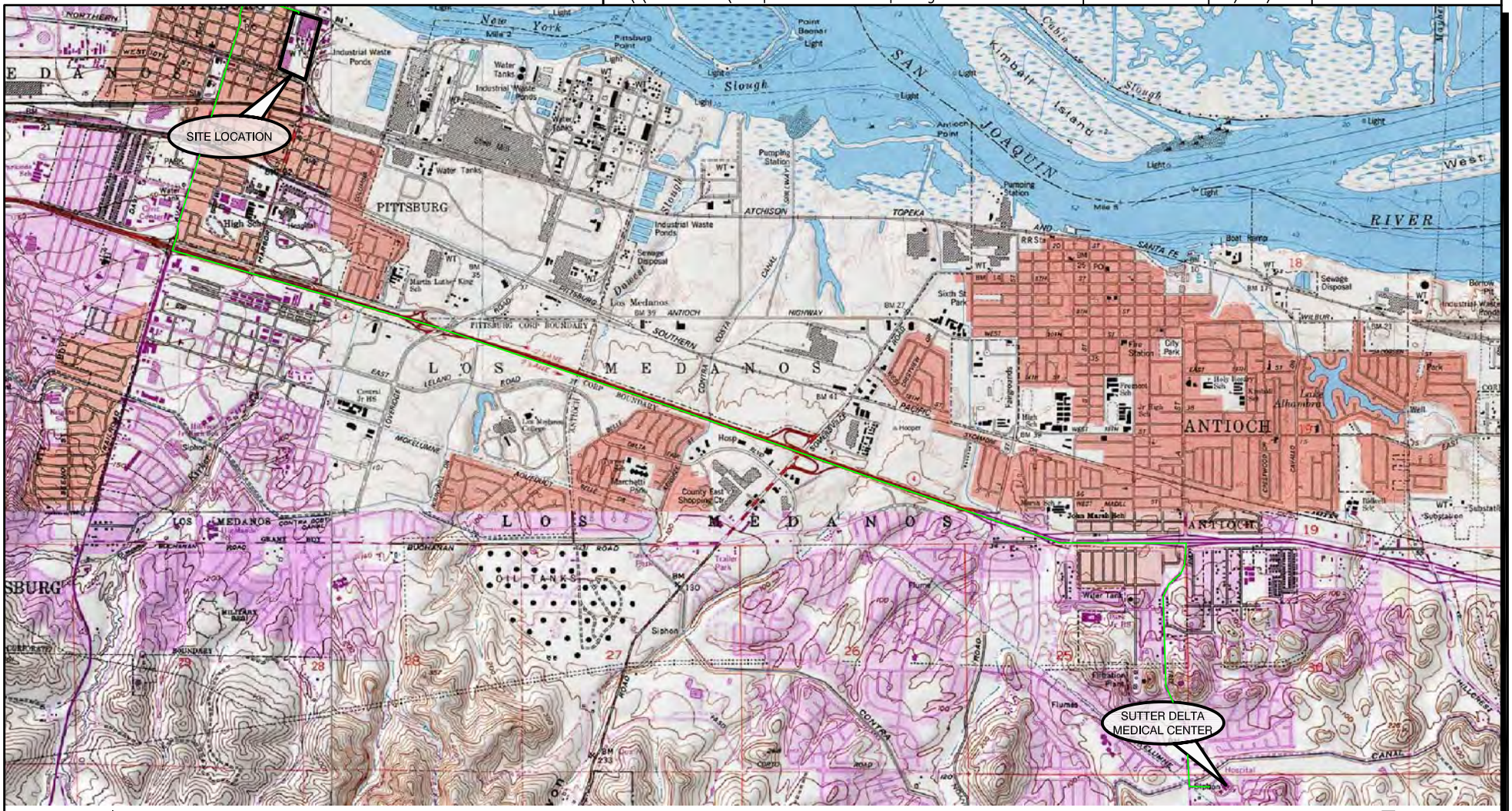
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References:
U.S.G.S. 7.5 Minute Series (Topographic) Quadrangle,
Honker Bay, California
Dated: 1980

Figure 1
Site Location Map
Pittsburg River Park, LLC
(Former Johns Manville Plant)
420 East 3rd Street
Pittsburg, California

ERM 08/05

CAD File:	Drawn By:	Date:	Project No.
G:\\0025556\Hospital Route Map.dwg	D. Ludlam	10/03/05	0025556.04



References:
U.S.G.S. 7.5 Minute Series (Topographic) Quadrangle,
Honker Bay, California, Dated: 1980

Figure 2
Route to Hospital Map
Pittsburg River Park, LLC
(Former Johns Manville Plant)
420 East 3rd Street
Pittsburg, California

ERM *10/05*

Attachment A-1
Health and Safety Forms

HEALTH AND SAFETY SIGNATURE SHEET

The following signatures indicate that the Safety and Health Program has been read and accepted by ERM management and personnel, as well as all contractors and subcontractors and their personnel.

NAME/TITLE	COMPANY	SIGNATURE/DATE

JOB SAFETY BRIEFING FORM		
DATE:	TIME:	PROJECT #:
PROJECT NAME:		
SPECIFIC LOCATION:		
TYPE OF WORK:		
CHEMICALS PRESENT:		
SAFETY TOPICS DISCUSSED		
PROTECTIVE CLOTHING/EQUIPMENT:		
ON-TRACK SAFETY AND WORKING NEAR LIVE TRACKS:		
EMERGENCY PROCEDURES AND EVACUATION MEETING POINTS:		
HAZARDS OF CHEMICALS PRESENT:		
PHYSICAL HAZARDS:		
EMERGENCY PROCEDURES:		
HOSPITAL/CLINIC:		
PHONE:	PARAMEDICS:	
HOSPITAL ADDRESS:		
SPECIAL HAZARDS:		
OTHER TOPICS:		
ATTENDEES		
Name (printed)	Signature	

SUPERVISOR'S ACCIDENT/INCIDENT INVESTIGATION REPORT		
Injured Employee:	Title:	
Date of Accident/Incident:	Dept.:	
Location:	Time on this job:	
Engaged in what work when injured:		
Nature of accident/incident:		
How did accident/incident occur?		
What can be done to prevent recurrence of the accident?		
What has been done to prevent recurrence of the accident?		
Supervisor's Signature:	Dept.:	Date:
Reviewer's Signature:	Dept.:	Date:
NOTE: Form to be submitted to the ERM Internal Health and Safety Coordinator within 2 days of the accident/incident.		

DISCLAIMERS AND LIMITATIONS ON USE

ERM-West, Inc. ("ERM") developed this site-specific Health and Safety Plan ("HSP") for use by ERM personnel and by ERM subcontractors (individually, an "ERM Contractor" and collectively, "ERM Contractors") in connection with the field activities (the "Project") being performed by ERM for RENOVA (the "Client") at the Johns Manville Plant between East Third and Harbor Streets, Pittsburg, California (the "Site"). ERM personnel must adhere to the practices and procedures specified in this HSP.

Each ERM Contractor must review this HSP and agree to accept and abide by this HSP, subject to any modifications to this HSP (to address the ERM Contractor's more stringent practices and procedures) agreed upon in writing by ERM and the ERM Contractor. The ERM Contractor shall indicate such acceptance by executing a copy of this notice of disclaimers and limitations on use as indicated below and returning it to ERM's project manager for the Project prior to its commencing work at the Site. However, if any ERM Contractor commences work at the Site, the ERM Contractor shall be deemed to have accepted this HSP and the terms hereof and the failure to execute and return to ERM a copy of this notice shall not be relevant to such interpretation.

If a contractor or a person other than the Client, ERM employees and ERM Contractors (individually, a "Third Party" and collectively, "Third Parties") receives a copy of this HSP, such Third Party should not assume that this HSP is appropriate for the activities being conducted by the Third Party. **NO THIRD PARTY HAS THE RIGHT TO RELY ON THIS HSP. EACH THIRD PARTY SHOULD ABIDE BY ITS OWN SITE-SPECIFIC HEALTH AND SAFETY PLAN IN ACCORDANCE WITH ITS OWN PROFESSIONAL JUDGMENT AND ESTABLISHED PRACTICES.**

ERM shall not be responsible for the implementation of any Third Party's safety program(s), except to the extent otherwise expressly agreed upon by ERM and a Third Party in writing. The services performed by ERM for the Client and any right of the Client and/or an ERM Contractor to rely on this HSP shall in no way inure to the benefit of any Third Party, including, but not limited to, employees, agents, or consultants and subcontractors of ERM Contractors, so as to give rise to any cause of action by such Third Party against ERM.

This HSP generated by ERM in connection with the Project is for use on a specific site and in connection with a specific project. ERM makes no representation or warranty as to the suitability of this HSP for reuse on another site or as to the suitability of this HSP for reuse on another project or for modifications made by the Client or a Third Party to this HSP.

ERM Contractors Only
Agreed and Accepted:

By: _____
Title: _____
Date: _____

HEALTH AND SAFETY READINGS PID/FID/Mini-RAM MEASUREMENTS				
Time	**Date**	**LOCATION (Breathing Zone/Downwind Perimeter)**	**PID/FID/Mini-RAM**	**Concentration (ppm)**

ERM EQUIPMENT CALIBRATION RECORD (Per Manufacturer's Instructions)				
INSTRUMENT MANUFACTURER/NAME:				
MODEL:				
SERIAL NUMBER:				
CALIBRATION GAS OR STANDARD:				
DATE	**CALIBRATED BY**	**STANDARD (±)**	**READING**	**INITIALS**

Appendix B
Construction-Specific Storm
Water Pollution Prevention Plan



Storm Water Pollution Prevention Plan (SWPPP) for Abatement and Demolition Activities

Former Johns Manville Plant Site
Pittsburg, California

Prepared for:
Pittsburg River Park LLC

30 September 2005

www.erm.com

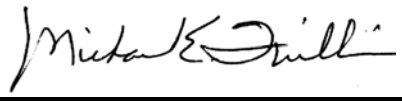
Pittsburg River Park LLC

Storm Water Pollution Prevention Plan (SWPPP) for Abatement and Demolition Activities

Former Johns Manville Plant Site
Pittsburg, California

30 September 2005

Project No. 25556.08



Michael E. Quillin, P.G.
Partner/Project Manager



Arun S. Chemburkar, P.E.
Principal-in-Charge



Kevin M. Mucha
Project Engineer

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system of those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Environmental Resources Management
1777 Botelho Drive, Suite 260
Walnut Creek, California 94596
T: 925-946-0455
F: 925-946-9968

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ATTACHMENT B-6 – RECORD OF COMPLETED INSPECTION AND MONITORING CHECKLISTS

LIST OF ACRONYMS

BMPs	Best Management Practices
CWA	Clean Water Act
ERM	ERM-West, Inc.
NPDES	National Pollutant Discharge Elimination System
RWQCB	California Regional Water Quality Control Board
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
USEPA	United States Environmental Protection Agency
WIP	Work Implementation Plan
WDRs	Waste Discharge Requirements

1.0 INTRODUCTION

On behalf of Pittsburg River Park LLC, ERM-West, Inc. (ERM) has prepared this Storm Water Pollution Prevention Plan and Monitoring Plan (SWPPP) for construction activities associated with the abatement and demolition at the Former Johns Manville Plant Site (hereafter "site" or "Plant Site"). This SWPPP is included as Appendix B of the Site Management Plan (SMP), which provides guidance for construction activities at the site. This site has been given a waste discharger's identification number 2 07C336983 by the State Water Resources Control Board (SWRCB).

The SWPPP is a requirement of the State of California's General Permit to discharge storm water associated with construction activity. The amendments made to the Clean Water Act (CWA) in 1987 require National Pollutant Discharge Elimination System (NPDES) permits for storm water dischargers associated with industrial and certain construction activities. The United States Environmental Protection Agency (USEPA) also issued regulations in 1990 that established permit application requirements for storm water discharges associated with construction activity. These regulations are contained in Parts 122, 123, and 124 of Title 40 of the Code of Federal Regulations. The CWA allows states to request USEPA authorization to administer the NPDES program instead of the USEPA. California's SWRCB has received authorization to issue the permit and to administer the NPDES program for construction sites greater than 1 acre.

This SWPPP has been prepared to comply with the SWRCB, Order No. 99–08–DWQ, NPDES General Permit No. CAS000002, *Waste Discharge Requirements (WDRs) for Discharges of Storm Water Runoff Associated with Construction Activity* (General Permit).

This SWPPP has been prepared for activities at the site including, but not limited to, the following:

- Abatement of hazardous materials;
- Demolition of all buildings and subgrade utilities;
- Soil and debris stockpiling;

- Soil and debris loading into trucks for off-site transportation and disposal; and
- Backfill and rough site grading.

Storm water Best Management Practices (BMPs) will be implemented to ensure that storm water runoff with pollutants does not leave the site. The *Caltrans Construction Site Best Management Practices (BMPs) Manual* (Caltrans, March 2003) has been used as a guide to establish the BMPs for this SWPPP. Establishing and maintaining a monitoring program to document the effectiveness of the BMPs and by modifying any deficiencies will ensure compliance with the SWPPP and the General Permit. If site conditions change beyond what is presented in this SWPPP, the SWPPP will be revised as necessary.

1.1 PURPOSE AND OBJECTIVES

The purpose of this SWPPP is to provide guidance for storm water and non-storm water management protocol during demolition activities. The Contractor and Subcontractors will be required to adhere to the guidelines established by this SWPPP. By following this SWPPP, the discharge of pollutants associated with these site activities to surface waters will be minimized. The objectives of this SWPPP are to:

- Identify sources of sediment and pollutants that may affect the quality of storm water discharges from the site;
- Identify non-storm water discharges;
- Identify, construct, implement, and maintain BMPs to reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges from the site; and
- Develop a monitoring program for BMPs installed during site activities to verify that impacted storm water does not run off from the site.

2.0 GENERAL SITE DESCRIPTION

The former JM Plant Site is located at the approximate intersection of East Third Street and Harbor Street in Pittsburg, California (Appendix B-1). The site is approximately 1,000 feet south of New York Slough and Suisun Bay. This 21-acre parcel is bounded to the north by a Tesoro coke facility and Third Street; to the east by Harbor Street, several small light industrial businesses, and USS Posco Corporation; and to the south and west by residential properties. Most recently, until the facility terminated operations in 2003, the facility was used for the manufacture of commercial roofing materials. The Plant Site consists of Buildings 1 through 4 in the northern portion of the property, a warehouse in the southwestern portion of the site, and the former evaporation pond area, which is currently paved with asphalt. Railroad tracks bisect the central portion of the property.

The current land use and zoning for the Plant Site is industrial. The Owner is currently in negotiations with the City of Pittsburg to re-entitle the Plant Site parcel for single-and multi-family residential reuse.

Under current site conditions (i.e., site is relatively impervious with asphaltic concrete and concrete surfaces), storm water runoff is generally directed towards storm drain inlets located approximately in the center of the site. This water is then collected into the City of Pittsburg storm water collection system with final discharge into New York Slough.

Demolition of the site will consist of abatement of the hazardous materials, knocking down the buildings, demolition of subgrade structures and utilities, and off-site transportation and disposal of construction debris. The type of construction activity associated with these activities requires the guidance provided in this SWPPP. The remaining SWPPP sections detail the following items:

- Description of construction activities that may negatively impact the site's storm water;
- The BMPs that will be implemented during construction to alleviate the potential for impacts to site storm water;
- The post-construction BMPs that will be implemented following construction; and

- The monitoring program that will be implemented during construction to verify compliance with the SWPPP and the General Permit.

3.0 PROJECT INFORMATION – SUMMARY OF ACTIVITIES

This section provides project information regarding the remedial activities as it pertains to storm water pollution prevention.

3.1 SITE ACTIVITIES

Site activities will include numerous activities requiring storm water BMPs. These activities include, but are not limited to:

- Demolition of all buildings and subgrade structures and utilities;
- Soil and debris stockpiling;
- Soil and debris loading into trucks for off-site transportation and disposal; and
- Backfill and rough site grading.

3.2 PROJECT CONTACTS AND RESPONSIBLE PERSONNEL

The following persons shall be responsible for ensuring adherence to the SWPPP during site construction activities:

Owner: Pittsburg River Park LLC

Mr. Chris Nelson
Renova Partners LLC
55 Hawthorne Street, Suite 555
San Francisco, California 94105
(415) 243-8162

Contractor: Plant Reclamation

Fred Glueck
Plant Reclamation
912 Harbour Way So.
Richmond, California 94804
(510) 233-6552

The Contractor performing site activities will be responsible for providing all labor, equipment, and materials necessary to adhere to the SWPPP and for installing BMPs. Mr. Glueck will maintain this SWPPP and ensure that installation of BMPs meets the minimum requirements contained in this SWPPP. Additional qualified and trained personnel, under the direction of Mr. Glueck, may perform many of the SWPPP's actions and provisions, including performance of the monitoring program presented in this SWPPP.

4.0 *IDENTIFICATION OF STORM WATER AND NON-STORM WATER POLLUTANT SOURCES AND BMP SELECTION*

The purpose of this section is to present project-specific activities and individual BMPs that will be implemented during the project. Attachment B-2 presents storm water BMPs obtained from the *Caltrans Construction Site Best Management Practices (BMPs) Manual* (Caltrans, March 2003) that may be utilized during this project. In summary, the applicable BMPs include:

Caltrans Number	BMP Title	Caltrans Number	BMP Title
SC-1	Silt Fence	NS-8	Vehicle and Equipment Cleaning
SC-5	Fiber Rolls	NS-9	Vehicle and Equipment Fueling
SC-7	Street Sweeping/Vacuuming	NS-10	Vehicle and Equipment Maintenance
SC-10	Storm Drain Inlet Protection	WM-1	Material Delivery and Storage
TC-1	Stabilized Construction Entrance/Exit	WM-2	Material Use
TC-2	Stabilized Construction Roadway	WM-3	Stockpile Management
TC-3	Entrance/Outlet Tire Wash	WM-4	Spill Prevention Control
WE-1	Wind Erosion Control	WM-5	Solid Waste Management
SS-7	Geotextiles, Plastic Covers, & Erosion Control Blankets/Mats	WM-6	Hazardous Waste Management
NS-1	Water Conservation Practices	WM-7	Contaminated Soil Management
NS-2	Dewatering Operations	WM-8	Concrete Waste Management
NS-7	Potable Water/Irrigation	WM-9	Sanitary/Septic Waste Management
		WM-10	Liquid Waste Management

For the above-listed BMPs and those detailed in Attachment B-2, many of the design features may not be applicable to the demolition project. During demolition at the site, the BMP may be implemented with some field modifications due to changes in site conditions. The sequence of implementation of BMPs will depend on the phasing of the project work. For example, BMPs associated with the site trailer and site entrance/exit will be implemented at the start of the project and remain in effect throughout the project. However, excavation BMPs will only be implemented when active excavation occurs.

For the construction activities that will occur during this project, both storm water sources and non-storm water sources for potential pollutants are present. For each construction activity and/or pollutant source, the appropriate BMPs are presented that will be implemented.

4.1 DEMOLITION

Demolition of surface buildings and structures as well as subgrade structures and utilities will be performed. In general the demolition work will involve removal of all buildings and structures, concrete foundations, concrete curbs, concrete pavements, subgrade utilities, and vegetation. The demolition work will generate asphaltic concrete, concrete, metal, and wood debris. The debris will be segregated and transported off site for disposal and/or recycling. Concrete debris will be crushed and left on site for reuse. During demolition work, dust suppression will be performed such that applicable rules and regulations of the Bay Area Air Quality Management District are followed. The dust suppression techniques may involve water spray of demolition work, placement of plastic over dusty debris, and performing work in non-windy conditions.

Demolition of the buildings and structures will be completed such that surrounding site surface drainage is not affected. During demolition work, if storm water enters an uncompleted excavation (i.e., utility trench that has not been backfilled), the water will be pumped out and discharged into the storm system. Fiber rolls and/or silt fencing (along with sidewall benching) may be implemented such that excessive erosion and sedimentation along trench sidewalls do not occur. All demolition will be completed in a safe manner such that excessive runoff during storm events does not occur. In addition, excavation work will not occur during periods of extensive forecasted rainfall.

4.1.1 Best Management Practices for Demolition Activities

During demolition work, storm water may be protected with one or more of the following BMPs:

- Placement of fiber rolls around debris piles and uncompleted excavations;
- Placement of straw bales around debris piles;
- Installation of geotextiles/filter fabric over debris piles; and
- Ensuring that excessive amounts of dust suppressing water are not applied to demolition work such that a water runoff problem is created.

4.2 SOIL AND DEBRIS HANDLING

This project will include the following soil and debris-handling processes:

- Soil and debris stockpiling;
- Soil and debris loading into trucks for off-site transportation and disposal; and
- Backfill and rough site grading.

4.2.1 Best Management Practices for Soil and Debris Handling

For each handling process certain BMPs will be implemented.

Soil and Debris Stockpiling

Soil and debris that are generated from demolition work will be placed in the stockpile area defined in the contractor's demolition plan. This soil and debris will be put inside a containment system constructed from straw bales, fiber rolls, and geotextiles such that the soil and debris are contained. The containment system will prevent excessive silt and debris from flowing into the storm water system. The stockpile containment system will be checked daily for proper function. Any deficiencies will be immediately repaired.

Backfill and Grading

When demolition excavations are complete, the excavations will be backfilled in accordance with the SMP. The backfill material will consist of existing onsite material. Placement of the backfill material will be performed such that excessive soil is not tracked off the site. The final grading of the site will be performed such that the site has positive drainage. Because the on-site storm water collection system will ultimately be removed, attention will be paid to areas where drainage towards off-site storm water inlets may occur. To the extent possible, final grading will be performed such that runoff from soil areas into inlets is minimized. A combination of silt fencing, fiber rolls, and drainage swales may be implemented to prevent discharge from final graded areas into nearby storm drain inlets.

Soil Handling Activities

During this project, the following BMPs will be implemented during soil handling activities:

- Stabilized construction roads. This includes all roads internal to the project as well as the entrance/exit roads. Preparation of the entrance/exits shall prevent unnecessary tracking of soil onto public streets.
- Maintenance of existing fencing to prevent unauthorized visitors to protect construction BMPs.
- Decontamination of equipment. To the extent possible, dry decontamination of equipment shall occur to prevent generation of wastewater. The project will also have a decontamination pad for equipment.
- No washing of on-site streets will be performed. Regular street sweeping will be performed to remove soil and dust.
- Regular maintenance of construction equipment will be performed to prevented unwarranted leaks of petroleum products from the equipment onto the site. Equipment servicing will be performed on site in one designated area away from stormwater and sanitary drain inlets and will be performed in a clean and professional manner. Bulk storage of fuels and oils will likely not occur during this project. If such storage is necessary, appropriate measures will be taken to ensure that potential releases of fuels and oils do not impact the storm water

system. Typically a service truck will be utilized to service construction equipment. If any spillage of petroleum products greater than 25 gallons occurs during this project, ERM's Task Manager/Health & Safety Officer (TM/HSO) will be notified and appropriate cleanup and disposal will occur.



5.0 MONITORING PROGRAM

The purpose of the monitoring program is to serve as a self-check to ensure that the BMPs presented in this SWPPP are performing adequately during active construction to protect storm water runoff quality. This monitoring program consists of the following requirements:

- Training;
- Compliance; and
- Inspection and Monitoring.

Records of all training, inspections, compliance certifications, and noncompliance reporting will be retained for a period of 3 years from the date generated. With the exception of noncompliance reporting, submittal of these records to the California Regional Water Quality Control Board (RWQCB) is not required unless specifically requested.

5.1 TRAINING REQUIREMENT

A requirement of the General Permit is that the SWPPP and the monitoring program must be prepared and managed by a person adequately trained in storm water management. To promote storm water management awareness specific to this project, job-site personnel will be periodically trained on the subject of storm water management at daily health and safety tailgate meetings. Plant Reclamation personnel who are trained in storm water management will be responsible for providing this information at safety tailgate meetings. The minimum documentation of the tailgate meeting will be a job safety briefing form showing the site-specific storm water topics covered, with the signatures of those who attended the tailgate meeting. Records of tailgate meetings that include discussion of SWPPP topics will be retained in Attachment B-3 to ensure compliance with this training requirement.

5.2 COMPLIANCE REQUIREMENT

The General Permit requires that the permit holder complete annual certification that construction activities are in compliance with the

requirements of the General Permit and the SWPPP. This certification is contingent upon site inspections and monitoring that are performed routinely based upon the procedures outlined in this monitoring program. The certification must be completed by 1 July of each year, and is not required for submittal to the RWQCB unless specifically requested. Yearly compliance certification, as well as site inspection checklists, will be included at the end of the SWPPP to serve as a record for complying with the General Permit and the SWPPP.

Section B.3 of the NPDES General Permit requires that if site inspections and monitoring identify a noncompliance incident, the RWQCB shall be notified by telephone at (510) 622-2300 as soon as possible, but no later than 48 hours after the incident has been discovered. This notification shall be followed by a report within 14 days. The noncompliance notification will include the following items:

- Identify the noncompliance event (including an initial assessment of any impact caused by the event);
- Describe the actions necessary to achieve compliance; and
- Include a time schedule subject to modifications by the RWQCB indicating when compliance will be achieved.

A sample annual certification is included in Attachment B-4, and all completed annual compliance certifications will also be retained in Attachment B-4.

5.3 INSPECTION AND MONITORING

This SWPPP identifies storm water and non-storm water pollutant sources associated with demolition activities at the site. Based upon these pollutant sources and the activities that will take place, appropriate BMPs have been identified and selected. Site inspections and monitoring will serve as the primary resource to verify that the BMPs are performing as required. The monitoring is based on visual inspection of runoff and adequacy of the installed BMPs.

Qualified personnel shall conduct inspections and monitoring of the BMPs prior to anticipated storm events, during extended storm events, and after actual storm events to identify areas contributing to a discharge of storm water associated with construction activity. During extended storm events (a storm event is defined as 0.5 inch of rainfall within a 24-hour

period, as measured by an on-site rain gauge or local weather report), inspections will be required each 24-hour period. If a storm event is not predicted, an inspection and monitoring event of the BMPs will be performed twice a month to ensure adequacy of the BMPs, or as otherwise already stated in this SWPPP. Any adjustments in the BMPs will be noted in the site inspection report. Attachment B-5 of this SWPPP contains a blank Inspection and Monitoring Checklist that will be completed for each inspection and monitoring event. Each completed inspection and monitoring checklist will be retained in Attachment B-6, and will support the annual compliance requirement.

5.3.1 Sampling and Analysis Contingency Plan

In addition to the visual monitoring program, the General Permit requires a sampling and analysis plan for off-site discharges resulting from construction activity. The purpose of this sampling is to determine whether the BMPs employed on a construction site are effective in controlling potential construction site pollutants from leaving the site with the storm water runoff. The sampling plan must be implemented under the following conditions:

- Sediment in storm water from the site is discharged directly into waters listed as impaired from sediment, silt, or turbidity on the SWRCB's 303(d) list; or
- Pollutants that are known, but that cannot be visually observed, are discharged from the site, causing or contributing to exceedances of water quality objectives in the receiving waters.

Storm water at this site that enters storm drain inlets is discharged to the New York Slough. The New York Slough is listed as impaired on the SWRCB's 303(d) list. Therefore, this sampling contingency plan only covers sampling for discharges of pollutants that are known, but cannot be visually observed. Sampling for nonvisible pollutants is required if storm water comes into contact with soil amendments, other exposed materials, or site contamination, and if visual inspections indicate that there has been a breach or malfunction of a BMP that could result in the discharge of pollutants to storm drain inlets. If a leakage or spill is observed during inspections, and appropriate measures are taken to fully contain and clean up the leakage or spill, then the potential for discharge of pollutants off-site no longer exists and sampling is not required.

Potential nonvisible, storm water pollutants existing at the site include possibly impacted soil, lubricants, fuel, and oil associated with on-site

equipment servicing. If any of these materials are not properly contained on site and are exposed to storm water runoff, ERM personnel will perform the sampling. Potentially impacted storm water will be sampled at locations where a BMP failure or breach has occurred that can be safely accessed. At least one background sample will be collected in a location that is not affected by the BMP breach. The samples of potentially impacted storm water and the background sample will be analyzed for the suspected contaminant of concern (i.e., if diesel tank on a truck leaks near a storm drain, then diesel will be the suspected contaminant of concern). The background sample will be used as a comparison against the samples of potentially impacted storm water.

If portable field instruments or analytical laboratory test results indicate that the storm water sample concentrations of the material in question significantly exceeds the background sample concentrations, the existing BMPs will be evaluated. The deficient BMPs shall be repaired or alternative BMPs shall be implemented. Additional BMPs may also be added. Records of all inspections, field measurements, laboratory analyses, and other documentation relating to sampling and analysis shall be kept with the project's SWPPP.

5.3.2 Identified BMPs for Construction Activities

Section 4 of the SWPPP identified the necessary BMPs required for site development activities. If properly installed and maintained, the selected BMPs will protect the storm water quality during site construction activities. During site inspection and monitoring, each BMP will be evaluated for adequacy and proper implementation, and whether additional BMPs are required. This will be accomplished by completing an Inspection and Monitoring Checklist for each inspection and monitoring event.

5.3.3 Inspection and Monitoring Checklist

Attachment B-5 contains blank Inspection and Monitoring Checklists and Attachment B-6 will retain the completed checklists. The Inspection and Monitoring Checklist contains the following information:

- Inspector information;
- Type of inspection;
- Weather information;
- List of inadequate BMPs; and

- List of corrective actions taken.

For each inspection and monitoring event, a person adequately trained and qualified in storm water management for construction sites will complete an Inspection and Monitoring Checklist.

5.4 POST-CONSTRUCTION BMPS

After construction is complete at the site, post-construction BMPs will be implemented by the Contractor. The post-construction BMPs may include the following:

- Final grading of exposed soil will be performed such that positive drainage occurs. Grading will be performed such that drainage into sanitary and storm water drain inlets does not occur.
- Fiber rolls and silt fencing will be installed at strategic places where exposed soil may be subject to erosion and sedimentation.
- Final site demobilization will include completely cleaning the site to remove debris and Contractor-generated wastes. No water will be used that would rinse soil or debris down drain inlets.
- Off-site drain inlets will be protected by one and/or a combination of the following BMPs: drop inlet filter fabrics, sand bags filled with gravel, straw bales, and fiber rolls.

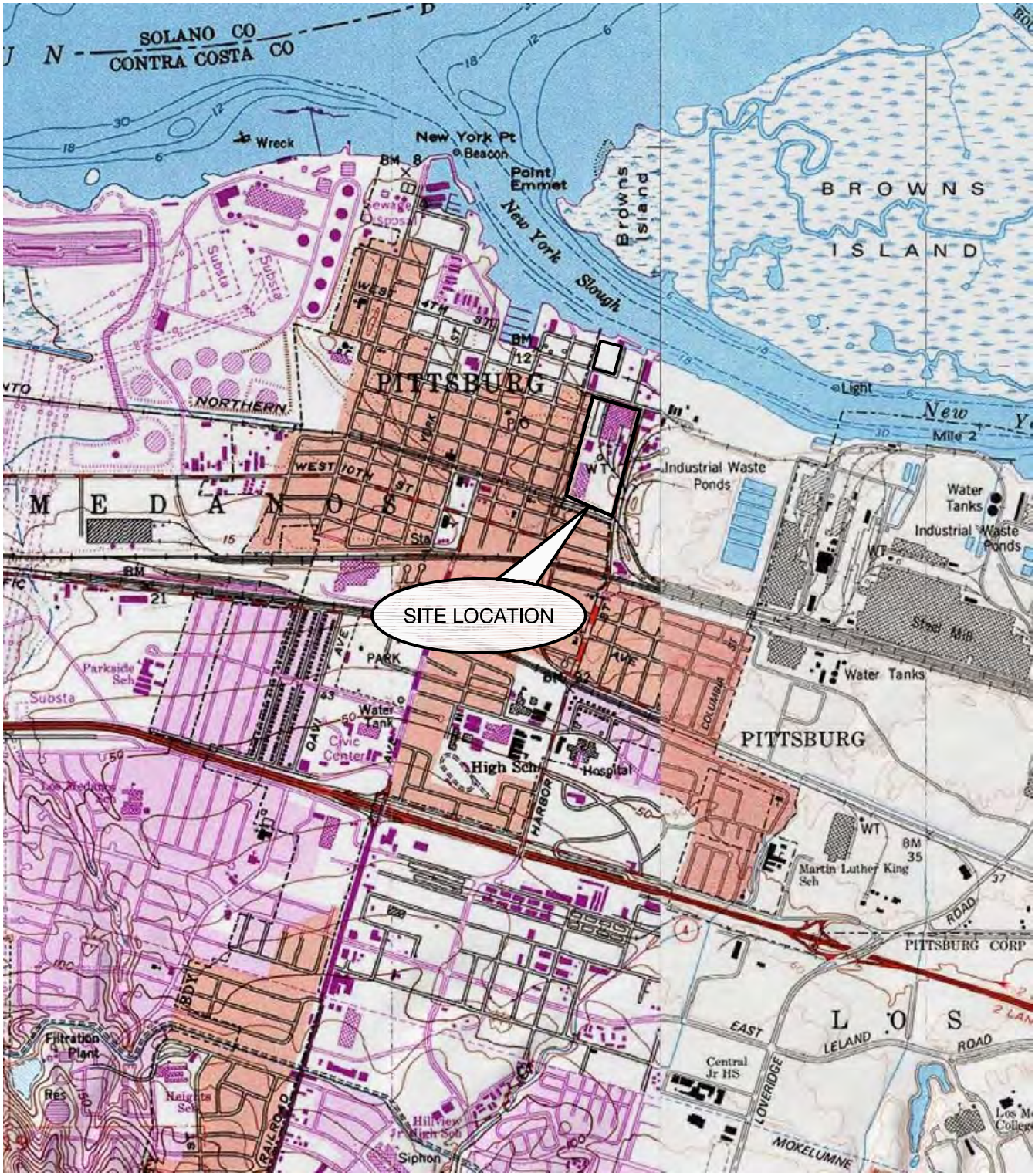
After the Contractor has demobilized from the site and the post-construction BMPs are in place, ERM will be responsible for inspection, monitoring, and improvements of these BMPs.

5.5 ADDITIONS TO THE SWPPP

This SWPPP has been prepared based on knowledge of the site and the anticipated construction activities. The purpose of this SWPPP is to provide guidance for storm water and non-storm water management protocol during such activities. By following this SWPPP, the discharge of pollutants associated with construction activities will be minimized. If unforeseen activities require additions or reductions in BMPs, appropriate action will be taken to modify the BMPs and make the necessary amendments to the SWPPP.

Attachment B-1
SWPPP Map

Project No. 0025556.04
Date: 10/03/05
Drawn By: D. Ludlam
CAD File: G:\0025556\Site Location Map.dwg



SCALE 1: 24,000

1 1/2 0 1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 .5 0 1 KILOMETER

N

Figure B-1
Site Location Map
Pittsburg River Park, LLC
(Former Johns Manville Plant)
420 East 3rd Street
Pittsburg, California

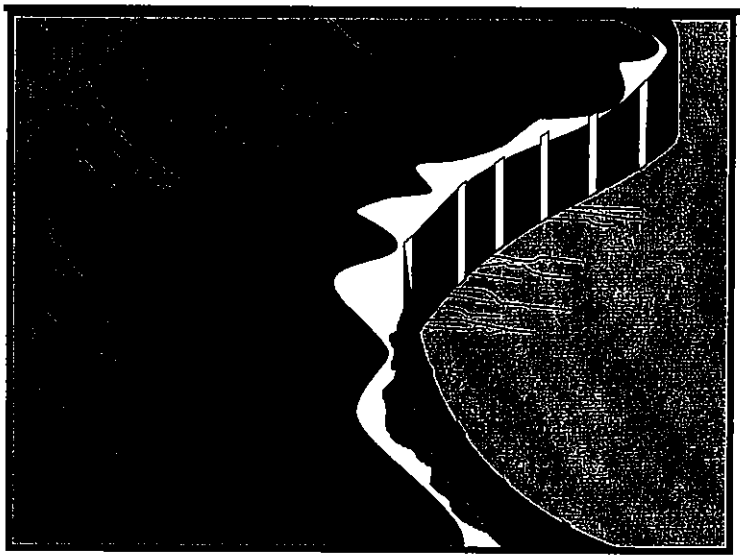
ERM 10/05

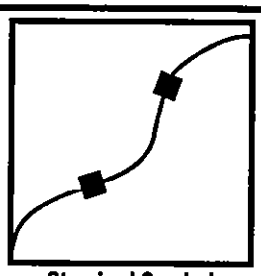
References:
U.S.G.S. 7.5 Minute Series (Topographic) Quadrangle,
Honker Bay, California
Dated: 1980

Attachment B-2
Best Management Practices

Silt Fence

SC-1





Standard Symbol

BMP Objectives

- o Soil Stabilization
- ● Sediment Control
- o Tracking Control
- o Wind Erosion Control
- o Non-Storm Water Management
- o Materials and Waste Management

Definition and Purpose

A silt fence is a temporary linear sediment barrier of permeable fabric designed to intercept and slow the flow of sediment-laden sheet flow runoff. Silt fences allow sediment to settle from runoff before water leaves the construction site.

Appropriate Applications

Silt fences are placed:

- Below the toe of exposed and erodible slopes.
- Down-slope of exposed soil areas.
- Around temporary stockpiles.
- Along streams and channels.
- Along the perimeter of a project.

Limitations

- Not effective unless trenched and keyed in.
- Not intended for use as mid-slope protection on slopes greater than 1:4 (V:H).
- Must be maintained.
- Must be removed and disposed of.
- Don't use below slopes subject to creep, slumping, or landslides.
- Don't use in streams, channels, drain inlets, or anywhere flow is concentrated.
- Don't use silt fences to divert flow.

Standards and Specifications

Design and Layout

- The maximum length of slope draining to any point along the silt fence shall be 61 m (200 ft) or less.
- Slope of area draining to silt fence shall be less than 1:1 (V:H).
- Limit to locations suitable for temporary ponding or deposition of sediment.
- Fabric life span generally limited to between five and eight months. Longer periods may require fabric replacement.
- Silt fences shall not be used in concentrated flow areas.
- Lay out in accordance with Pages 5 and 6 of this BMP.
- For slopes steeper than 1:2 (V:H) and that contain a high number of rocks or large dirt clods that tend to dislodge, it may be necessary to install additional protection immediately adjacent to the bottom of the slope, prior to installing silt fence. Additional protection may be a chain link fence or a cable fence.
- For slopes adjacent to water bodies or Environmentally Sensitive Areas (ESAs), additional temporary soil stabilization BMPs shall be used.

Materials

- Silt fence fabric shall be woven polypropylene with a minimum width of 900 mm (36 inches) and a minimum tensile strength of 0.45-kN. The fabric shall conform to the requirements in ASTM designation D4632 and shall have an integral reinforcement layer. The reinforcement layer shall be a polypropylene, or equivalent, net provided by the manufacturer. The permittivity of the fabric shall be between 0.1 sec^{-1} and 0.15 sec^{-1} in conformance with the requirements in ASTM designation D4491. Contractor must submit certificate of compliance in accordance with Standard Specifications Section 6-1.07.
- Wood stakes shall be commercial quality lumber of the size and shape shown on the plans. Each stake shall be free from decay, splits or cracks longer than the thickness of the stake or other defects that would weaken the stakes and cause the stakes to be structurally unsuitable.
- Bar reinforcement may be used, and its size shall be equal to a number four (4) or greater. End protection shall be provided for any exposed bar reinforcement.
- Staples used to fasten the fence fabric to the stakes shall be not less than 45 mm (1.75 inches) long and shall be fabricated from 1.57 mm (0.06 inch) or heavier wire. The wire used to fasten the tops of the stakes together when

joining two sections of fence shall be 3.05 mm (0.12 inch) or heavier wire. Galvanizing of the fastening wire is not required.

Installation

- Generally, silt fences shall be used in conjunction with soil stabilization source controls up slope to provide effective erosion and sediment control.
- Bottom of the silt fence shall be keyed-in a minimum of 150 mm (12 inches).
- Trenches shall not be excavated wider and deeper than necessary for proper installation of the temporary linear sediment barriers.
- Excavation of the trenches shall be performed immediately before installation of the temporary linear sediment barriers.
- Construct silt fences with a set-back of at least 1m (3 ft) from the toe of a slope. Where a silt fence is determined to be not practical due to specific site conditions, the silt fence may be constructed at the toe of the slope, but shall be constructed as far from the toe of the slope as practical.
- Construct the length of each reach so that the change in base elevation along the reach does not exceed 1/3 the height of the barrier; in no case shall the reach exceed 150 meters (490 ft).
- Cross barriers shall be a minimum of 1/3 and a maximum of 1/2 the height of the linear barrier.
- Install in accordance with Pages 5 and 6 of this BMP.

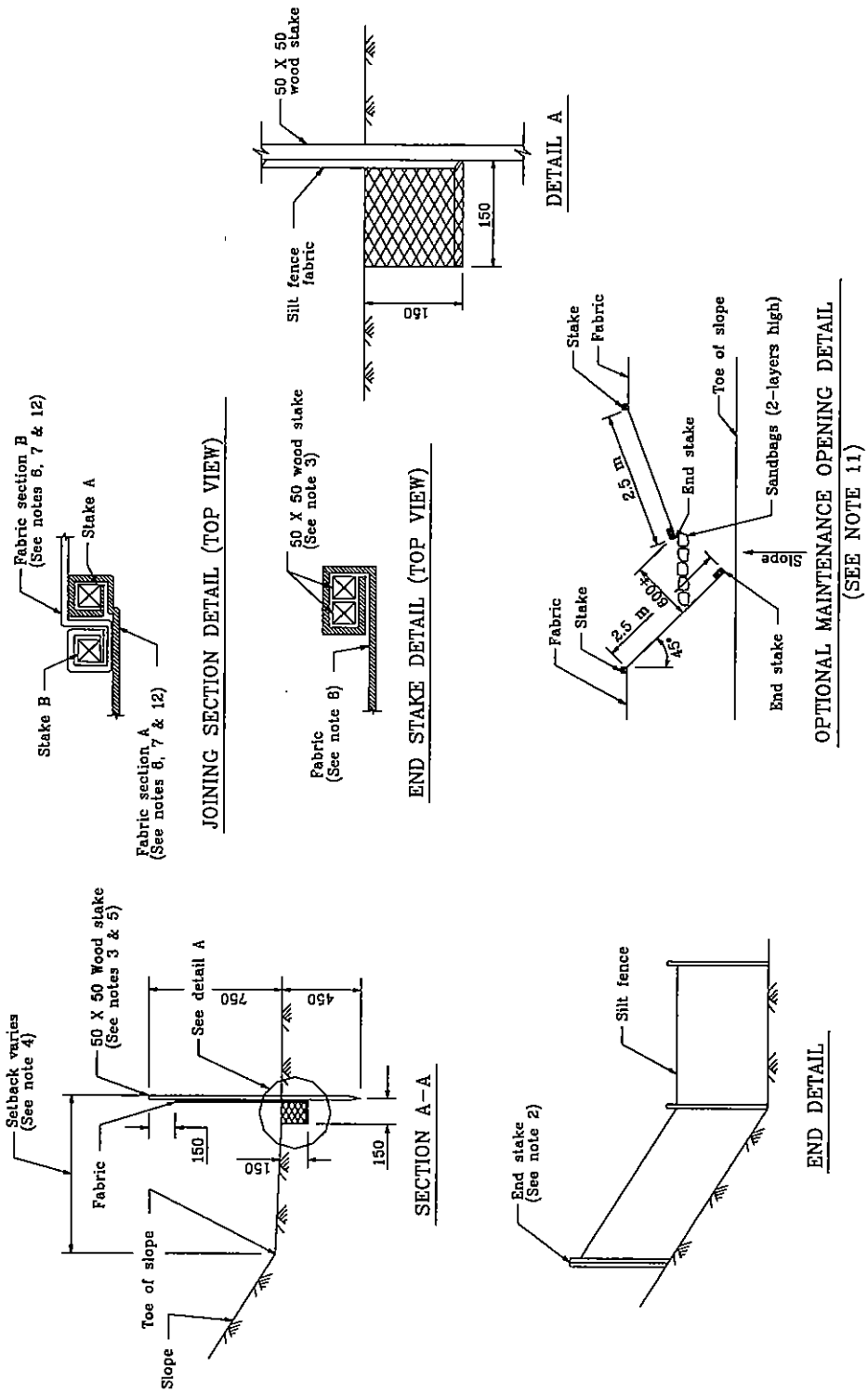
Maintenance and Inspection

- Repair undercut silt fences.
- Repair or replace split, torn, slumping, or weathered fabric.
- Inspect silt fence when rain is forecast. Perform necessary maintenance, or maintenance required by the Resident Engineer (RE).
- Inspect silt fence following rainfall events. Perform maintenance as necessary, or as required by the RE.
- Maintain silt fences to provide an adequate sediment holding capacity. Sediment shall be removed when the sediment accumulation reaches one-third (1/3) of the barrier height. Removed sediment shall be incorporated in the project at locations designated by the RE or disposed of outside the right-of-way in conformance with the Standard Specifications.
- Silt fences that are damaged and become unsuitable for the intended purpose, as determined by the RE, shall be removed from the site of work, disposed of outside the highway right-of-way in conformance with the Standard Specifications, and replaced with new silt fence barriers.

- Holes, depressions or other ground disturbance caused by the removal of the temporary silt fences shall be backfilled and repaired in conformance with the Standard Specifications.

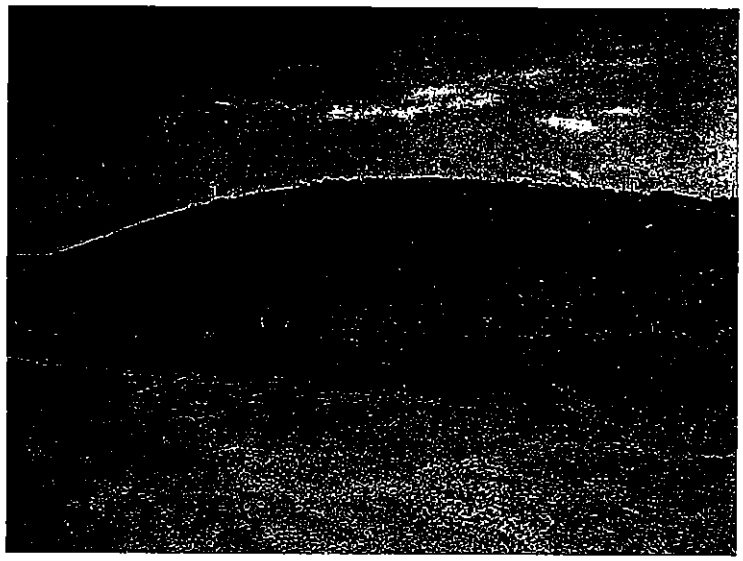
- Remove silt fence when no longer needed or as required by the RE. Fill and compact post holes and anchorage trench, remove sediment accumulation, and grade fence alignment to blend with adjacent ground.

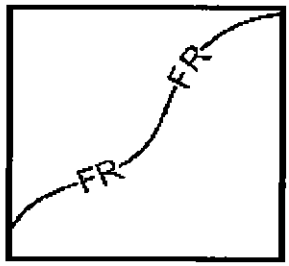
Max reach = 150 m (See note 1)
Optional maintenance opening detail
Fabric
2.5 m
Cross barrier
Cross barrier (See note 10)
Toe of slope
Slope
Wood stake
Fabric
End detail
Slope
PLAN
TEMPORARY LINEAR SEDIMENT BARRIER (TYPE SILT FENCE)
NOTES
1. Construct the length of each reach so that the change in base elevation along the reach does not exceed 1/3 the height of the linear barrier, in no case shall the reach length exceed 150m.
2. The last 2.5 m of fence shall be turned up slope.
3. Stake dimensions are nominal.
4. Dimension may vary to fit field condition.
5. Stakes shall be spaced at 2.5 m maximum and shall be positioned on downstream side of fence.
6. Stakes to overlap and fence fabric to fold around each stake one full turn. Secure fabric to stake with 4 staples.
7. Stakes shall be driven tightly together to prevent potential flow-through of sediment at joint. The tops of the stakes shall be secured with wire.
8. For end stake, fence fabric shall be folded around two stakes one full turn and secured with 4 staples.
9. Minimum 4 staples per stake. Dimensions shown are typical.
10. Cross barriers shall be a minimum of 1/3 and a maximum of 1/2 the height of the linear barrier.
11. Maintenance openings shall be constructed in a manner to ensure sediment remains behind silt fence.
12. Joining sections shall not be placed at sump locations.
13. Sandbag rows and layers shall be offset to eliminate gaps.
LEGEND
Tamped backfill
Slope direction
Direction of flow
Silt fence
Toe of slope
Slope
CROSS BARRIER DETAIL
Sandbags
See note 10
SECTION C-C
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
TEMPORARY LINEAR SEDIMENT BARRIER
(TYPE SILT FENCE)
NO SCALE
ALL DIMENSIONS ARE IN
MILLIMETERS UNLESS OTHERWISE SHOWN


50 X 50 wood stake
Silt fence fabric
150
150
DETAIL A
Fabric section B (See notes 6, 7 & 12)
Stake A
Stake B
Fabric section A (See notes 6, 7 & 12)
JOINING SECTION DETAIL (TOP VIEW)
50 X 50 wood stake (See note 3)
Fabric (See note 8)
END STAKE DETAIL (TOP VIEW)
Stake
Fabric
2.5 m
End stake
Toe of slope
Sandbags (2-layers high)
Slope
600 mm
2.5 m
45°
Fabric
Stake
End stake
OPTIONAL MAINTENANCE OPENING DETAIL (SEE NOTE 11)
Setback varies (See note 4)
50 X 50 Wood stake (See notes 3 & 5)
See detail A
750
450
150
150
150
Fabric
Toe of slope
Slope
SECTION A-A
Silt fence
End stake (See note 2)
END DETAIL

Fiber Rolls

SC-5





Standard Symbol

BMP Objectives

- ● Soil Stabilization
- ● Sediment Control
- ○ Tracking Control
- ○ Wind Erosion Control
- ○ Non-Storm Water Management
- ○ Materials and Waste Management

Definition and Purpose

A fiber roll consists of wood excelsior, rice or wheat straw, or coconut fibers that is rolled or bound into a tight tubular roll and placed on the toe and face of slopes to intercept runoff, reduce its flow velocity, release the runoff as sheet flow and provide removal of sediment from the runoff. Fiber rolls may also be used for inlet protection and as check dams under certain situations.

Appropriate Applications

- This BMP may be implemented on a project-by-project basis with other BMPs when determined necessary and feasible by the RE.
- Along the toe, top, face, and at grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow.
- Below the toe of exposed and erodible slopes.
- Fiber rolls may be used as check dams in unlined ditches if approved by the Resident Engineer (RE) or the District Construction Storm Water Coordinator (refer to SC-4 "Check Dams").
- Fiber rolls may be used for drain inlet protection if approved by the RE or the District Construction Storm Water Coordinator (refer to SC-10 "Storm Drain Inlet Protection").
- Down-slope of exposed soil areas.
- Around temporary stockpiles.
- Along the perimeter of a project.

Limitations

- Runoff and erosion may occur if fiber roll is not adequately trenched in.
- Fiber rolls at the toe of slopes greater than 1:5 may require the use of 500 mm (20" diameter) or installations achieving the same protection (i.e., stacked smaller diameter fiber rolls, etc.).
- Fiber rolls may be used for drainage inlet protection if they can be properly anchored.
- Difficult to move once saturated.
- Fiber rolls could be transported by high flows if not properly staked and trenched in.
- Fiber rolls have limited sediment capture zone.
- Do not use fiber rolls on slopes subject to creep, slumping, or landslide.

Standards and Specifications

Fiber Roll Materials

- Fiber rolls shall be either:

  (1) Prefabricated rolls.

  (2) Rolled tubes of erosion control blanket.

Assembly of Field Rolled Fiber Roll

- Roll length of erosion control blanket into a tube of minimum 200 mm (8 in) diameter.
- Bind roll at each end and every 1.2 m (4 ft) along length of roll with jute-type twine.

Installation

- Slope inclination of 1:4 or flatter: fiber rolls shall be placed on slopes 6.0 m apart.
- Slope inclination of 1:4 to 1:2: fiber rolls shall be placed on slopes 4.5 m apart.
- Slope inclination 1:2 or greater: fiber rolls shall be placed on slopes 3.0 m apart.
- Stake fiber rolls into a 50 to 100 mm (2 to 4 in) trench.

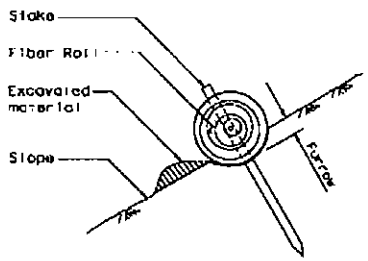
- Drive stakes at the end of each fiber roll and spaced 600 mm (2 ft) apart if Type 2 installation is used (refer to Page 4). Otherwise, space stakes 1.2 m (4 ft) maximum on center if installed as shown on Pages 5 and 6.
- Use wood stakes with a nominal classification of 19 by 19 mm (3/4 by 3/4 in), and minimum length of 600 mm (24 in).
- If more than one fiber roll is placed in a row, the rolls shall be overlapped; not abutted.

Removal

- Fiber rolls are typically left in place.
- If fiber rolls are removed, collect and dispose of sediment accumulation, and fill and compact holes, trenches, depressions or any other ground disturbance to blend with adjacent ground.

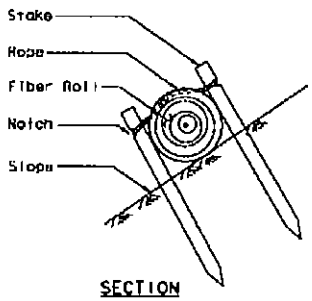
Maintenance and Inspection

- Repair or replace split, torn, unraveling, or slumping fiber rolls.
- Inspect fiber rolls when rain is forecast. Perform maintenance as needed or as required by the RE.
- Inspect fiber rolls following rainfall events and a least daily during prolonged rainfall. Perform maintenance as needed or as required by the RE.
- Maintain fiber rolls to provide an adequate sediment holding capacity. Sediment shall be removed when the sediment accumulation reaches three quarters (3/4) of the barrier height. Removed sediment shall be incorporated in the project at locations designated by the RE or disposed of outside the highway right-of-way in conformance with the Standard Specifications.

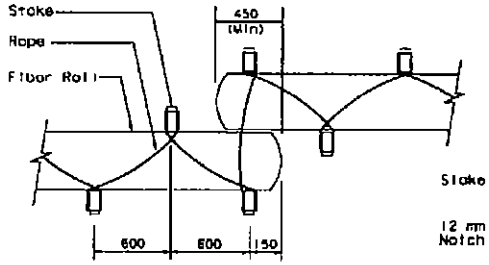


SECTION

TEMPORARY FIBER ROLL
(TYPE 1)

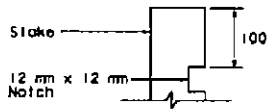


SECTION



PLAN

TEMPORARY FIBER ROLL
(TYPE 2)

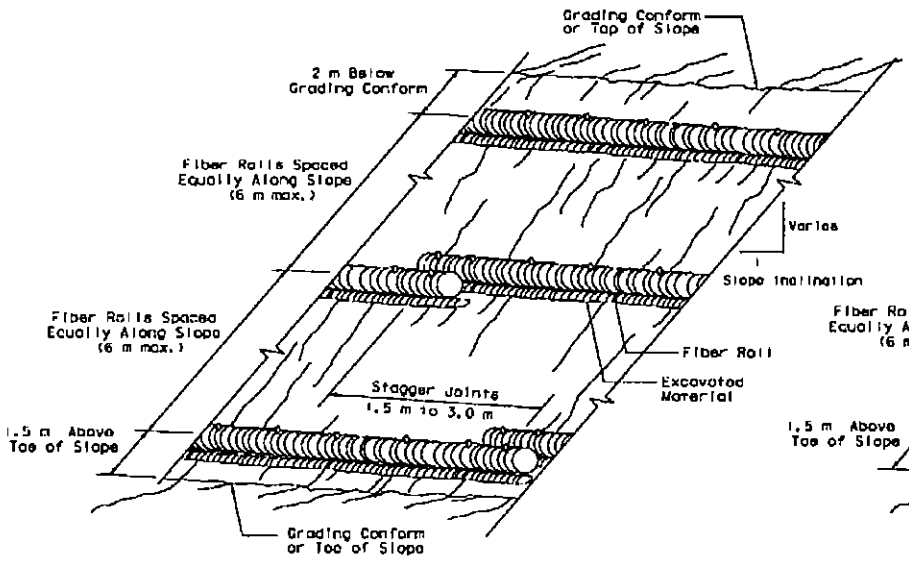


ELEVATION

NOTCH DETAIL

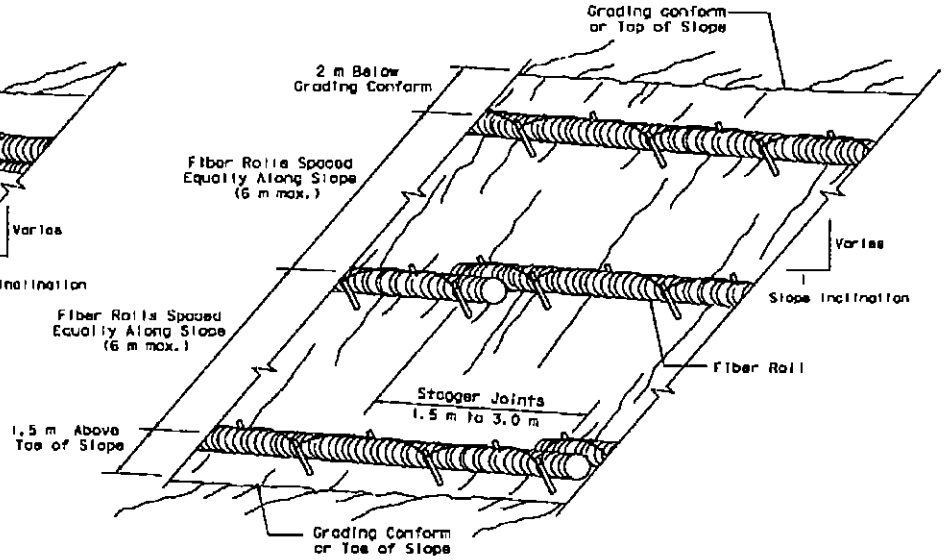
NOTE

1. Temporary fiber roll spacing varies depending upon slope inclination.



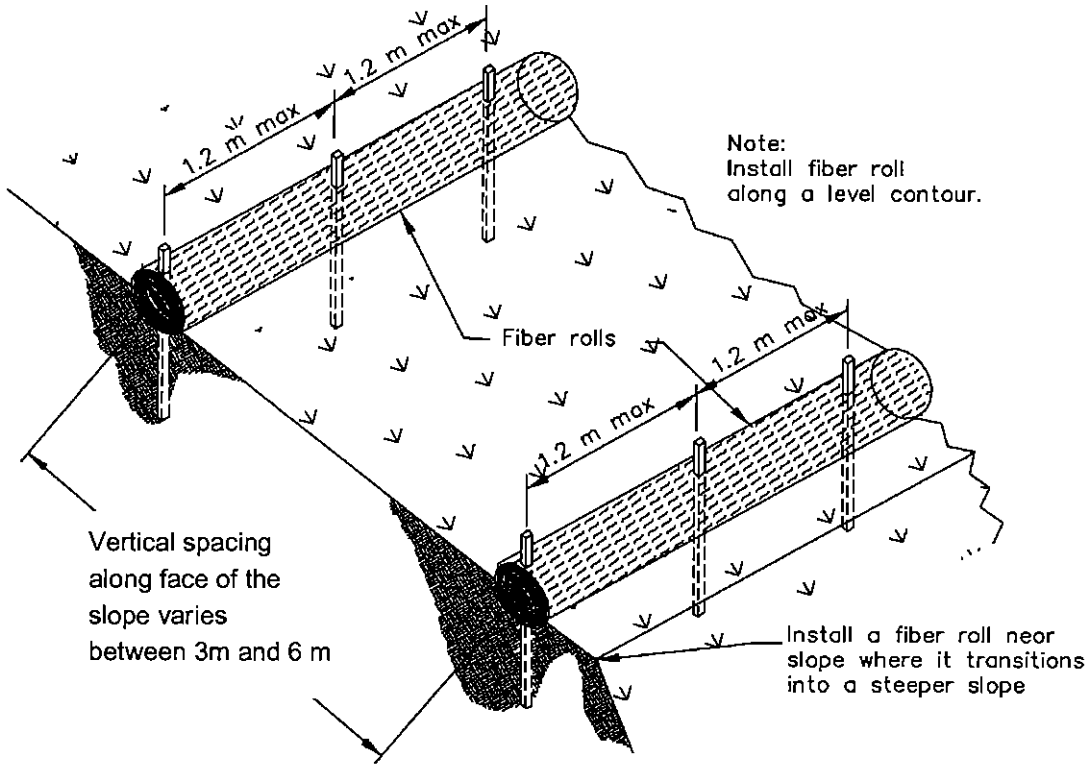
PERSPECTIVE

TEMPORARY FIBER ROLL (TYPE 1)



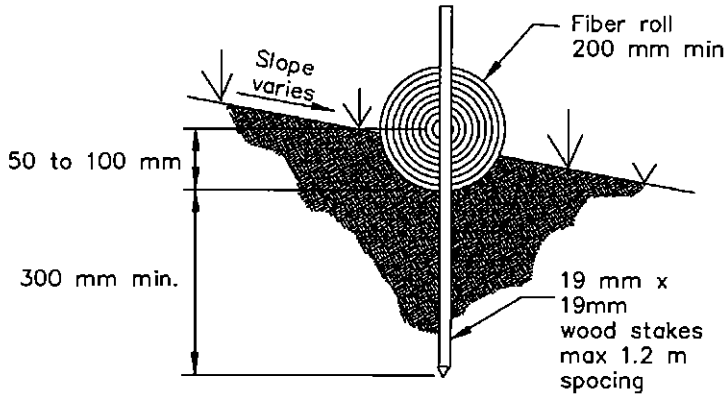
PERSPECTIVE

TEMPORARY FIBER ROLL (TYPE 2)



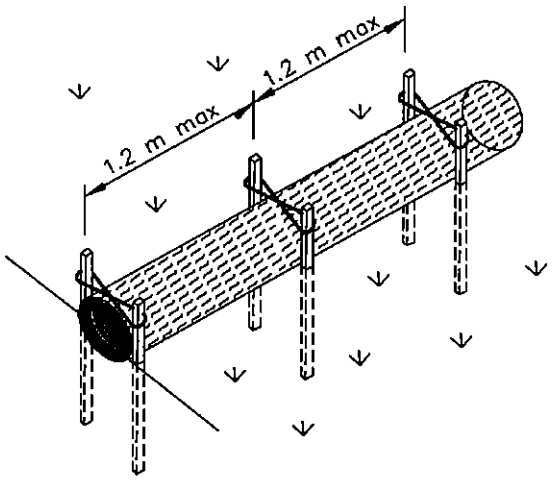
TYPICAL FIBER ROLL INSTALLATION

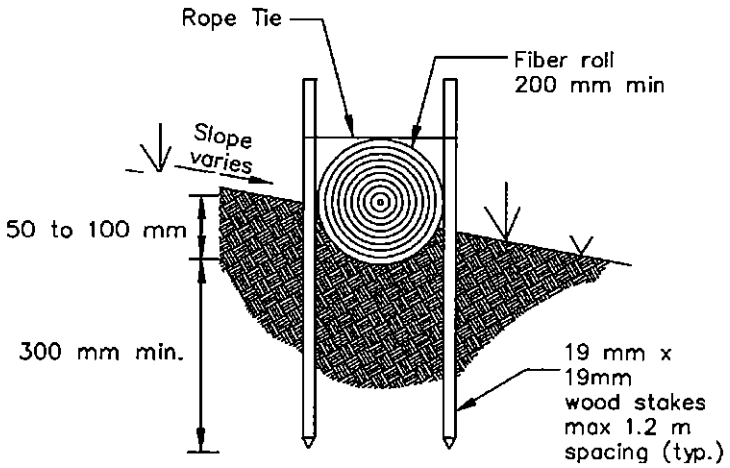
N.T.S.



ENTRENCHMENT DETAIL

N.T.S.



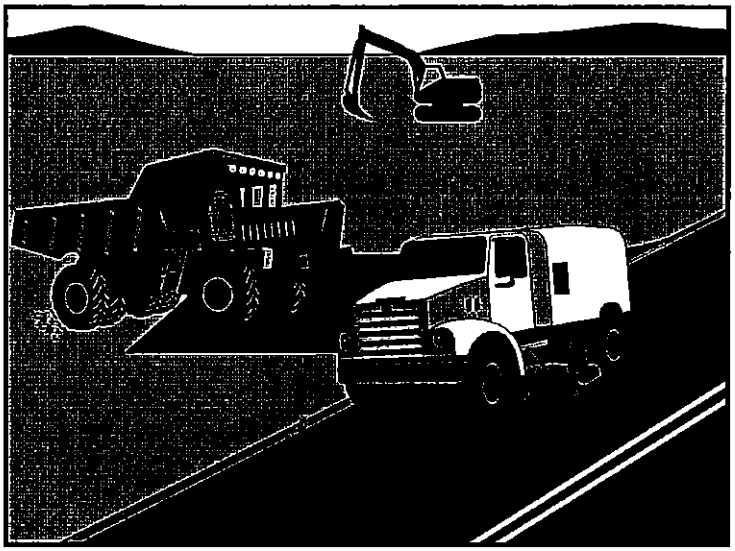


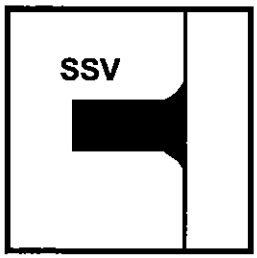
OPTIONAL ENTRENCHMENT DETAIL

N.T.S.

Street Sweeping and Vacuuming

SC-7





Standard Symbol

BMP Objectives

- ● Soil Stabilization
- ● Sediment Control
- ● Tracking Control
- o Wind Erosion Control
- o Non-Storm Water Management
- o Materials and Waste Management

Definition and Purpose

Practices to remove tracked sediment to prevent the sediment from entering a storm drain or watercourse.

Appropriate Applications

These practices are implemented anywhere sediment is tracked from the project site onto public or private paved roads, typically at points of ingress/egress.

Limitations

Sweeping and vacuuming may not be effective when soil is wet or muddy.

Standards and Specifications

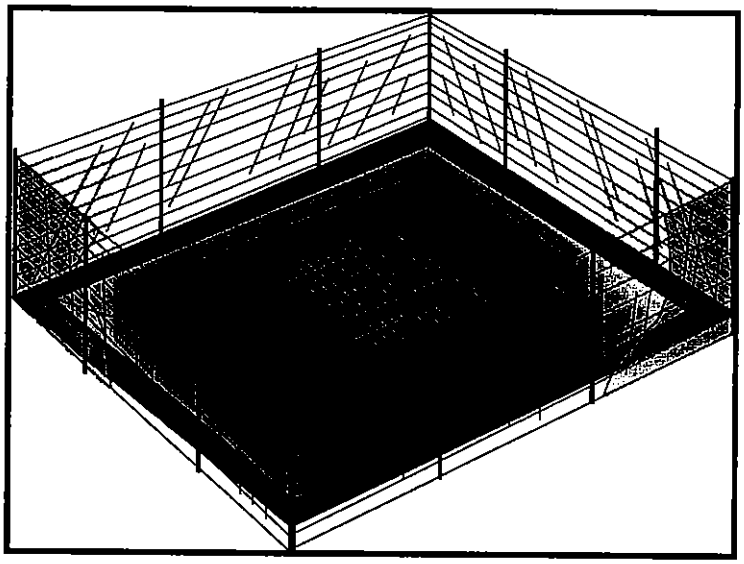
- Kick brooms or sweeper attachments shall not be used.
- Inspect potential sediment tracking locations daily.
- Visible sediment tracking shall be swept and/or vacuumed daily.
- If not mixed with debris or trash, consider incorporating the removed sediment back into the project.

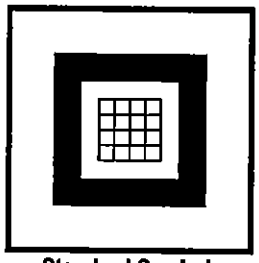
Maintenance and Inspection

- Inspect ingress/egress access points daily and sweep tracked sediment as needed, or as required by the Resident Engineer (RE).
- Be careful not to sweep up any unknown substance or any object that may be potentially hazardous.
- Adjust brooms frequently; maximize efficiency of sweeping operations.
- After sweeping is finished, properly dispose of sweeper wastes at an approved dumpsite in conformance with the provisions in Standard Specifications Section 7-1.13 .

Storm Drain Inlet Protection

SC-10





Standard Symbol

BMP Objectives

- o Soil Stabilization
- ● Sediment Control
- o Tracking Control
- o Wind Erosion Control
- o Non-Storm Water Management
- o Materials and Waste Management

Definition and Purpose

Devices used at storm drain inlets that are subject to runoff from construction activities to detain and/or to filter sediment-laden runoff to allow sediment to settle and/or to filter sediment prior to discharge into storm drainage systems or watercourses.

Appropriate Applications

- Where ponding will not encroach into highway traffic.
- Where sediment laden surface runoff may enter an inlet.
- Where disturbed drainage areas have not yet been permanently stabilized.
- Where the drainage area is 0.4 ha (1 ac) or less.
- Appropriate during wet and snow-melt seasons.

Limitations

- Requires an adequate area for water to pond without encroaching upon traveled way and should not present itself to be an obstacle to oncoming traffic.
- May require other methods of temporary protection to prevent sediment-laden storm water and non-storm water discharges from entering the storm drain system.
- Sediment removal may be difficult in high flow conditions or if runoff is heavily sediment laden. If high flow conditions are expected, use other on-site sediment trapping techniques (e.g. check dams) in conjunction with inlet protection.
- Frequent maintenance is required.
- For drainage areas larger than 0.4 ha (1 ac), runoff shall be routed to a sediment trapping device designed for larger flows. See BMPs SC-2, "Sediment/Desilting Basin," and SC-3 "Sediment Trap."

- Filter fabric fence inlet protection is appropriate in open areas that are subject to sheet flow and for flows not exceeding 0.014 m3/s (0.5 cfs).
- Gravel bag barriers for inlet protection are applicable when sheet flows or concentrated flows exceed 0.014 m3/s (0.5 cfs), and it is necessary to allow for overtopping to prevent flooding.
- Fiber rolls and foam barriers are not appropriate for locations where they cannot be properly anchored to the surface.
- Excavated drop inlet sediment traps are appropriate where relatively heavy flows are expected and overflow capability is needed.

Standards and Specifications

Identify existing and/or planned storm drain inlets that have the potential to receive sediment-laden surface runoff. Determine if storm drain inlet protection is needed, and which method to use.

Methods and Installation

- ***DI Protection Type 1 - Filter Fabric Fence*** - The filter fabric fence (Type 1) protection is illustrated on Page 5. Similar to constructing a silt fence. See BMP SC-1, "Silt Fence." Do not place filter fabric underneath the inlet grate since the collected sediment may fall into the drain inlet when the fabric is removed or replaced.
- ***DI Protection Type 2 - Excavated Drop Inlet Sediment Trap*** - The excavated drop inlet sediment trap (Type 2) is illustrated in Page 6. Similar to constructing a temporary silt fence, See BMP SC-1, "Silt Fence." Size excavated trap to provide a minimum storage capacity calculated at the rate of 130 m3/ha (67 yd3/ac) of drainage area.
- ***DI Protection Type 3 – Gravel bag*** - The gravel bag barrier (Type 3) is illustrated in Page 7. Flow from a severe storm shall not overtop the curb. In areas of high clay and silts, use filter fabric and gravel as additional filter media. Construct gravel bags in accordance with BMP SC-6, "Gravel Bag Berm." Gravel bags shall be used due to their high permeability.
- ***DI Protection Type 4 – Foam Barriers and Fiber Rolls*** – Foam barrier or fiber roll (Type 4) is placed around the inlet and keyed and anchored to the surface. Foam barriers and fiber rolls are intended for use as inlet protection where the area around the inlet is unpaved and the foam barrier or fiber roll can be secured to the surface. RE or Construction Storm Water Coordinator approval is required.

Maintenance and Inspection

General

- Inspect all inlet protection devices before and after every rainfall event, and weekly during the rest of the rainy season. During extended rainfall events, inspect inlet protection devices at least once every 24 hours.

- Inspect the storm drain inlet after severe storms in the rainy season to check for bypassed material.
- Remove all inlet protection devices within thirty days after the site is stabilized, or when the inlet protection is no longer needed.
  - Bring the disturbed area to final grade and smooth and compact it. Appropriately stabilize all bare areas around the inlet.
  - Clean and re-grade area around the inlet and clean the inside of the storm drain inlet as it must be free of sediment and debris at the time of final inspection.

Requirements by Method

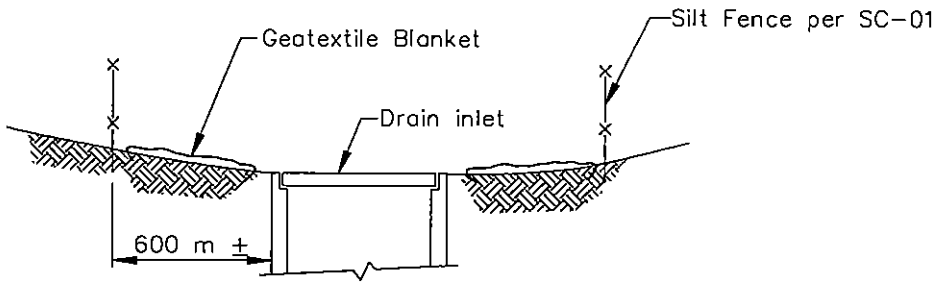
- ***Type 1 - Filter Fabric Fence***
  - This method shall be used for drain inlets requiring protection in areas where finished grade is established and erosion control seeding has been applied or is pending.
  - Make sure the stakes are securely driven in the ground and are structurally sound (i.e., not bent, cracked, or splintered, and are reasonably perpendicular to the ground). Replace damaged stakes.
  - Replace or clean the fabric when the fabric becomes clogged with sediment. Make sure the fabric does not have any holes or tears. Repair or replace fabric as needed or as directed by the RE.
  - At a minimum, remove the sediment behind the fabric fence when accumulation reaches one-third the height of the fence or barrier height. Removed sediment shall be incorporated in the project at locations designated by the RE or disposed of outside the highway right-of-way in conformance with the Standard Specifications Section 7-1.13.
- ***Type 2 – Excavated Drop Inlet Sediment Trap***
  - This method may be used for drain inlets requiring protection in areas that have been cleared and grubbed, and where exposed soil areas are subject to grading.
  - Remove sediment from basin when the volume of the basin has been reduced by one-half.
- ***Type 3 - Gravel Bag Barrier***
  - This method may be used for drain inlets surrounded by AC or paved surfaces.
  - Inspect bags for holes, gashes, and snags.

- Check gravel bags for proper arrangement and displacement. Remove the sediment behind the barrier when it reaches one-third the height of the barrier. Removed sediment shall be incorporated in the project at locations designated by the RE or disposed of outside the highway right-of-way in conformance with the Standard Specifications Section 7-1.13.

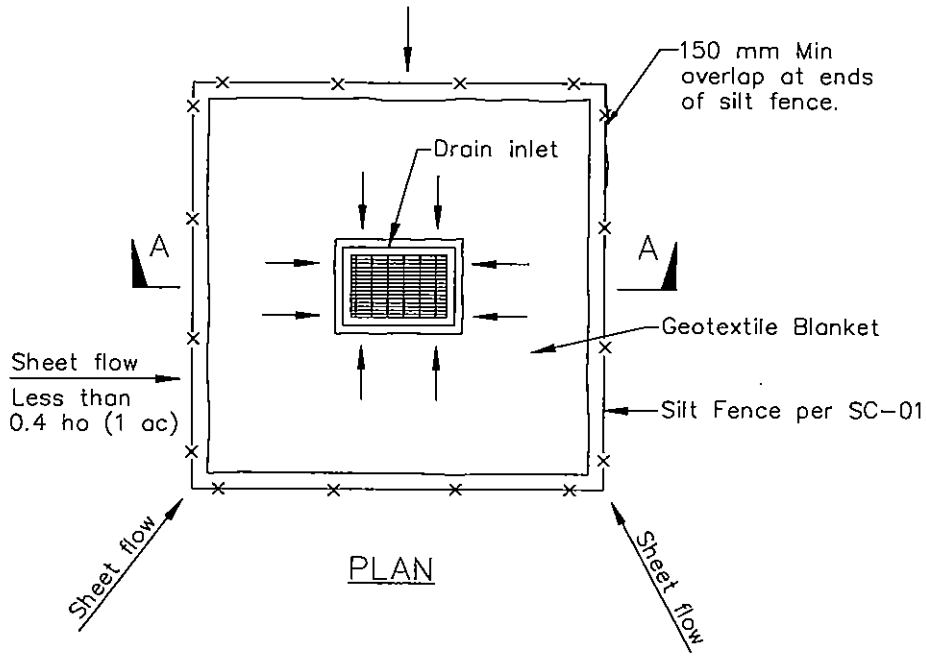
- ***Type 4 Foam Barriers and Fiber Rolls***

  - This method may be used for drain inlets requiring protection in areas that have been cleared and grubbed, and where exposed soil areas subject to grading. RE or Construction Storm Coordinator approval is required.

  - Check foam barrier or fiber roll for proper arrangement and displacement. Remove the sediment behind the barrier when it reaches one-third the height of the barrier. Removed sediment shall be incorporated in the project at locations designated by the RE or disposed of outside the highway right-of-way in conformance with the Standard Specifications.



SECTION A–A

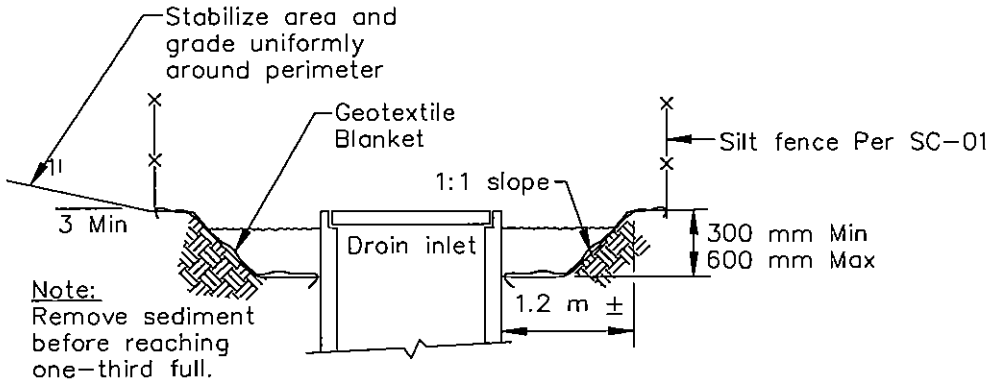


PLAN

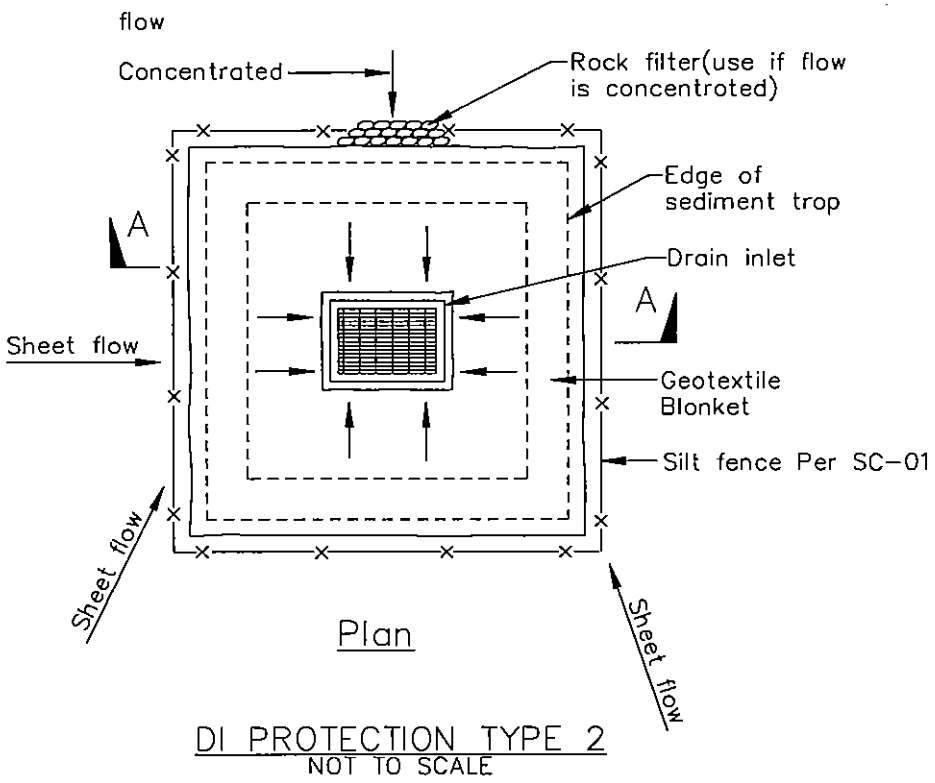
DI PROTECTION TYPE 1
NOT TO SCALE

NOTES:

1. For use in areas where grading has been completed and final soil stabilization and seeding are pending.
2. Not applicable in paved areas.
3. Not applicable with concentrated flows.



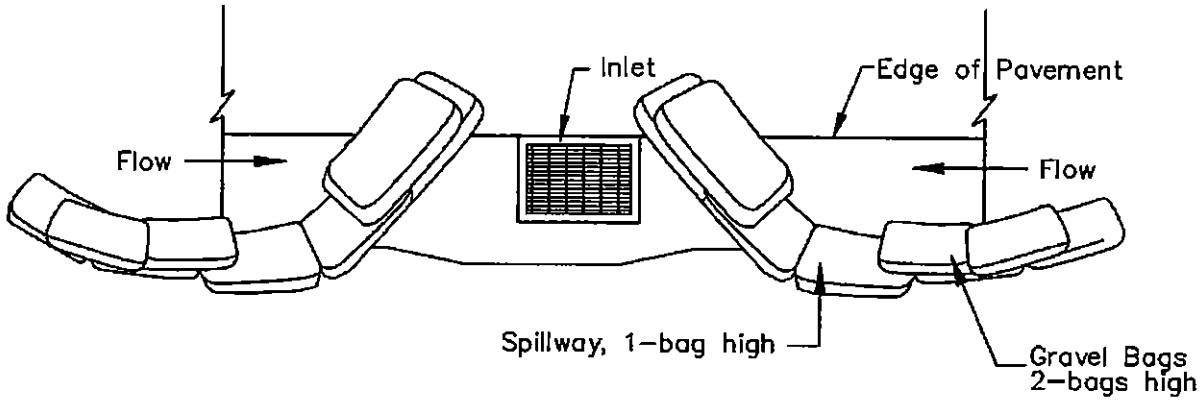
Section A–A



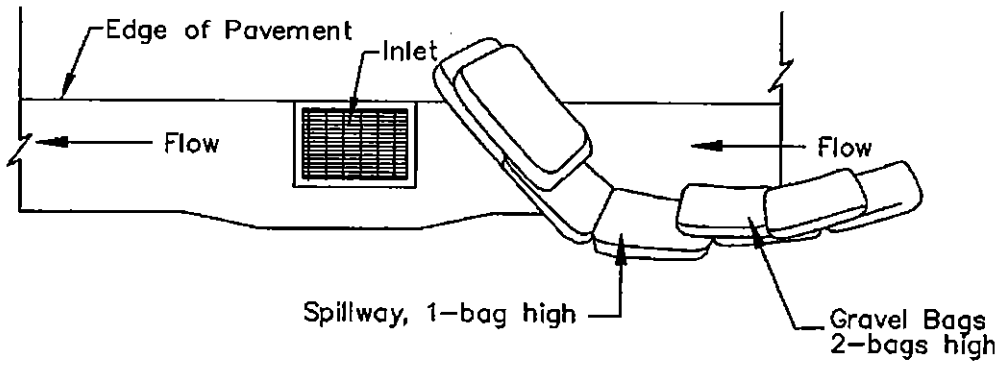
Plan

DI PROTECTION TYPE 2
NOT TO SCALE

Notes
1. For use in cleared and grubbed and in graded areas.
2. Shape basin so that longest inflow area faces longest length of trap.
3. For concentrated flows, shape basin in 2:1 ratio with length oriented towards direction of flow.



TYPICAL PROTECTION FOR INLET WITH OPPOSING FLOW DIRECTIONS



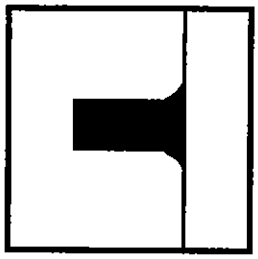
TYPICAL PROTECTION FOR INLET WITH SINGLE FLOW DIRECTION

NOTES:

1. Intended for short–term use.
2. Use to inhibit non–storm water flow.
3. Allow for proper maintenance and cleanup.
4. Bags must be removed after adjacent operation is completed
5. Not applicable in areas with high silts and clays without filter fabric.

Stabilized Construction Entrance/Exit TC-1





Standard Symbol

BMP Objectives
- ● Soil Stabilization
- ○ Sediment Control
- ● Tracking Control
- ● Wind Erosion Control
- ○ Non-Storm Water Management
- ○ Materials and Waste Management

Definition and Purpose

A stabilized construction access is defined by a point of entrance/exit to a construction site that is stabilized to reduce the tracking of mud and dirt onto public roads by construction vehicles.

Appropriate Applications

- Use at construction sites:
  - Where dirt or mud can be tracked onto public roads.
  - Adjacent to water bodies.
  - Where poor soils are encountered.
  - Where dust is a problem during dry weather conditions.
- This BMP may be implemented on a project-by-project basis in addition to other BMPs when determined necessary and feasible by the Resident Engineer (RE).

Limitations

- Site conditions will dictate design and need.

Standards and Specifications

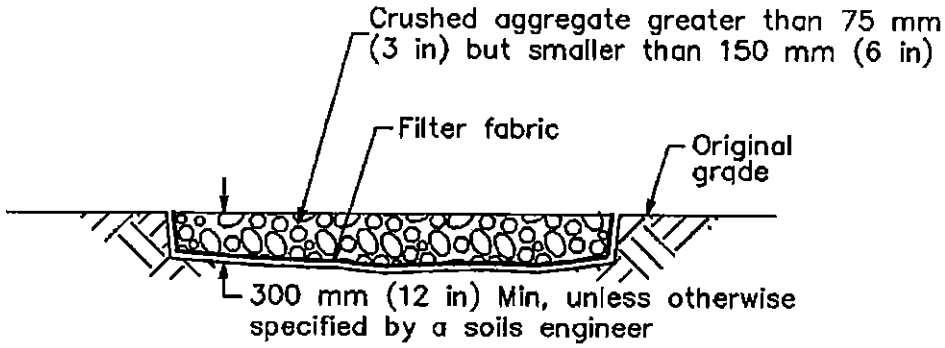
- Limit the points of entrance/exit to the construction site.
- Limit speed of vehicles to control dust.
- Properly grade each construction entrance/exit to prevent runoff from leaving the construction site.
- Route runoff from stabilized entrances/exits through a sediment-trapping device before discharge.
- Design stabilized entrance/exit to support the heaviest vehicles and equipment that will use it.

Stabilized Construction Entrance/Exit TC-1

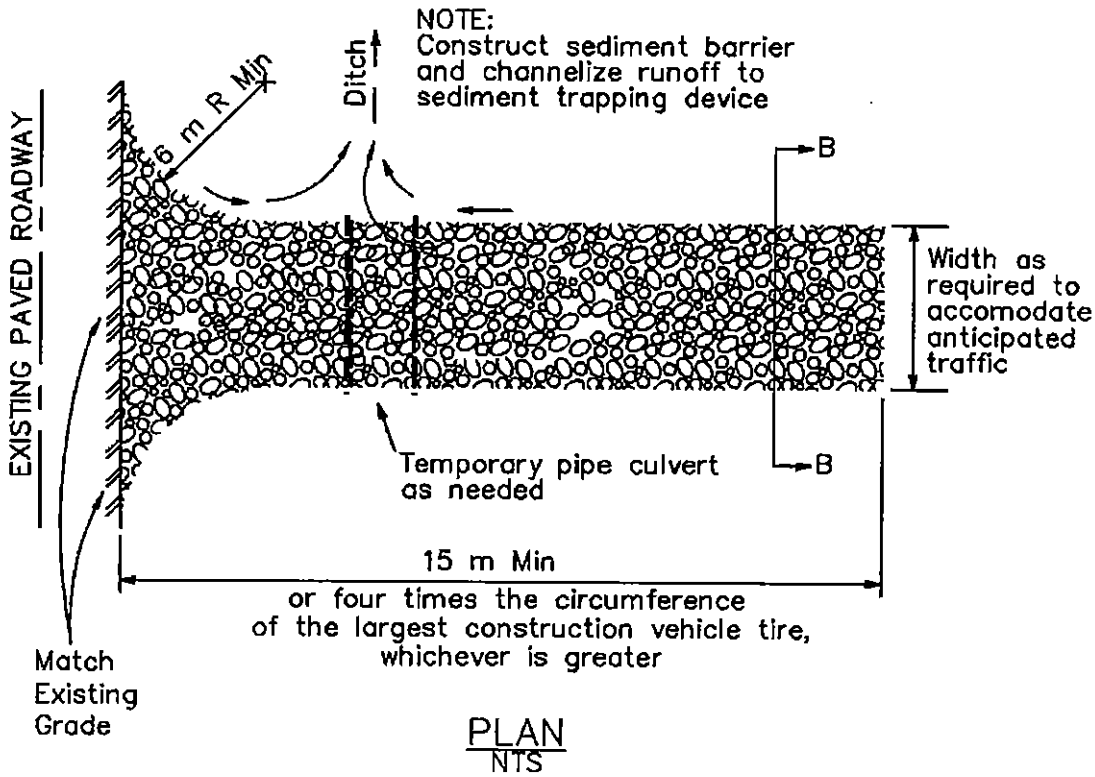
- Select construction access stabilization (aggregate, asphaltic concrete, concrete) based on longevity, required performance, and site conditions. The use of asphalt concrete (AC) grindings for stabilized construction access/roadway is not allowed.
- Use of constructed/manufactured steel plates with ribs for entrance/exit access is allowed with written approval from the RE.
- If aggregate is selected, place crushed aggregate over geotextile fabric to at least 300 mm (12 in) depth, or place aggregate to a depth recommended by the RE. Crushed aggregate greater than 75 mm (3 inches) and smaller than 150 mm (6 inches) shall be used.
- Designate combination or single purpose entrances and exits to the construction site.
- Implement BMP SC-7, "Street Sweeping and Vacuuming" as needed and as required.
- Require all employees, subcontractors, and suppliers to utilize the stabilized construction access.
- All exit locations intended to be used continuously and for a period of time shall have stabilized construction entrance/exit BMPs (TC-1 "Stabilized Construction Entrance/Exit" or TC-3 "Entrance/Outlet Tire Wash").

Maintenance and Inspection

- Inspect routinely for damage and assess effectiveness of the BMP. Remove aggregate, separate and dispose of sediment if construction entrance/exit is clogged with sediment or as directed by the RE.
- Keep all temporary roadway ditches clear.
- Inspect for damage and repair as needed.



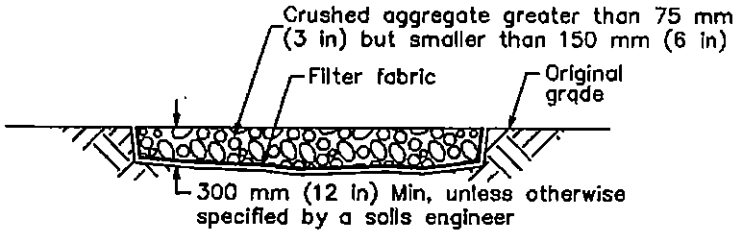
SECTION B–B
NTS



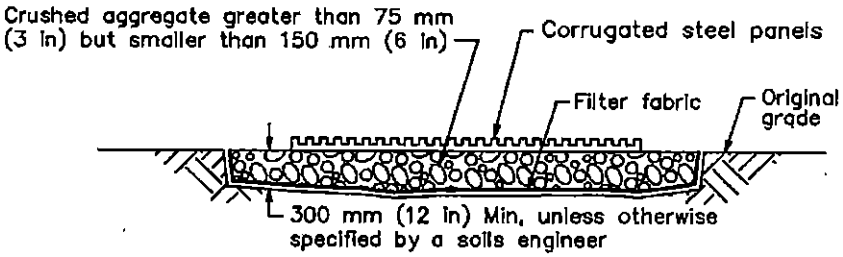
PLAN
NTS

Stabilized Contraction Entrance/Exit (Type 1)

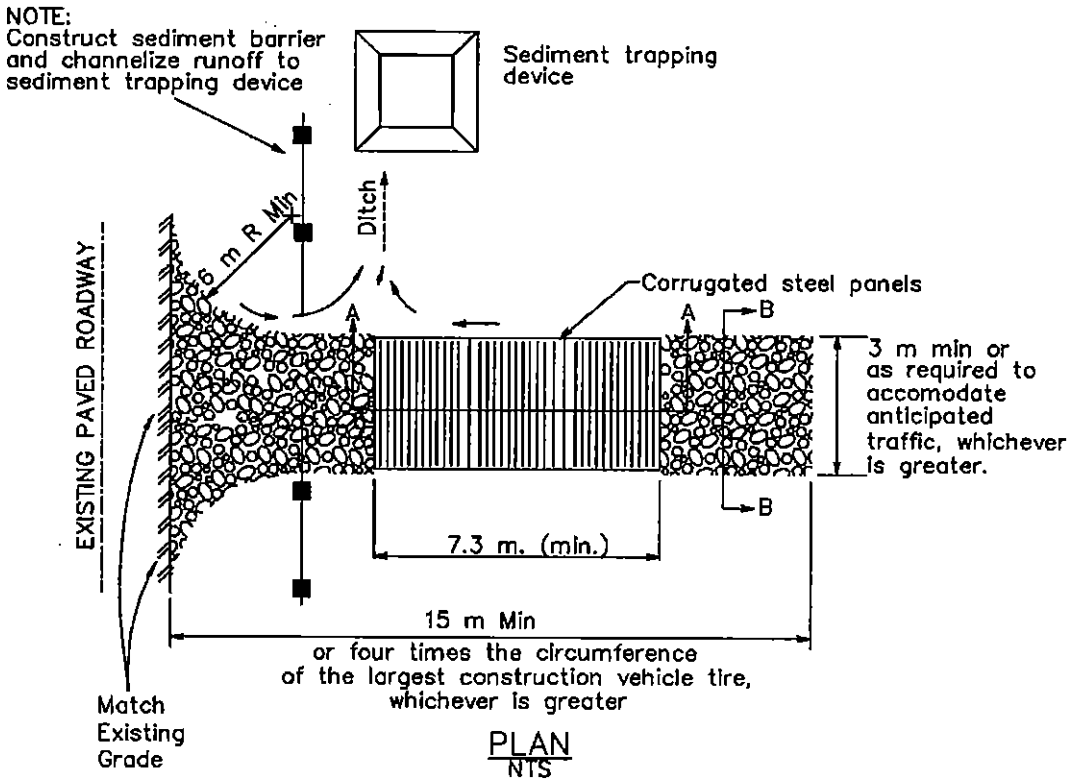
Stabilized Construction Entrance/Exit TC-1



SECTION B–B
NTS



SECTION A–A
NOT TO SCALE

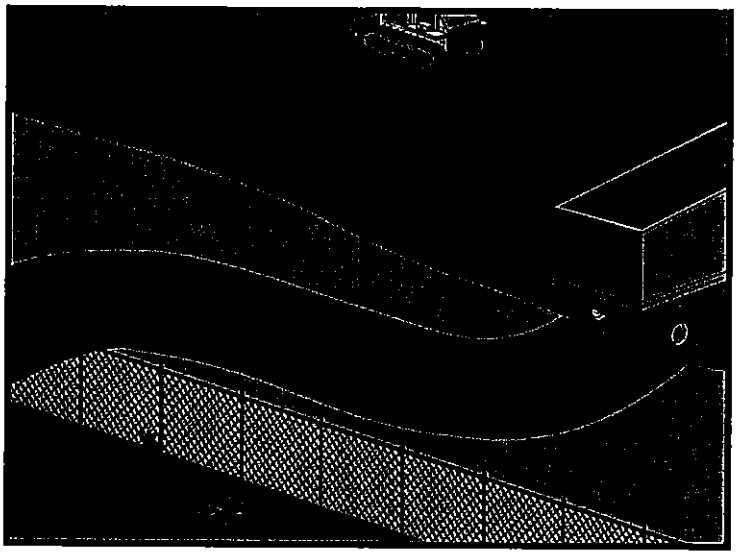


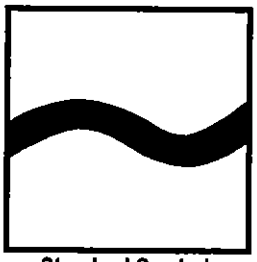
PLAN
NTS

Stabilized Construction Entrance/Exit (Type 2)

Stabilized Construction Roadway

TC-2





Standard Symbol

BMP Objectives
- ● Soil Stabilization
- o Sediment Control
- ● Tracking Control
- ● Wind Erosion Control
- o Non-Storm Water Management
- o Materials and Waste Management

Definition and Purpose

A stabilized construction roadway is a temporary access road. It is designed for the control of dust and erosion created by vehicular tracking.

Appropriate Applications

- Construction roadways and short-term detour roads:
  - Where mud tracking is a problem during wet weather.
  - Where dust is a problem during dry weather.
  - Adjacent to water bodies.
  - Where poor soils are encountered.
  - Where there are steep grades and additional traction is needed.
- This BMP may be implemented on a project-by-project basis with other BMPs when determined necessary and feasible by the Resident Engineer (RE).

Limitations

- Materials will likely need to be removed prior to final project grading and stabilization.
- Site conditions will dictate design and need.
- May not be applicable to very short duration projects.
- Limit speed of vehicles to control dust.

Stabilized Construction Roadway

TC-2

Standards and Specifications

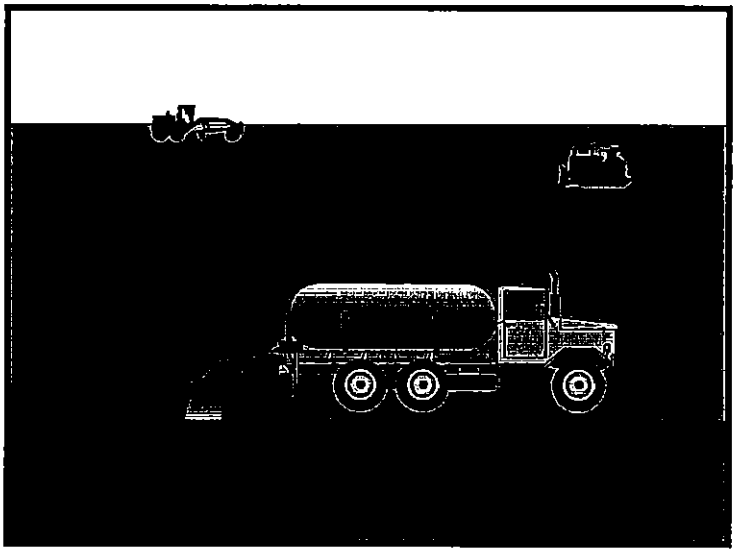
- Properly grade roadway to prevent runoff from leaving the construction site.
- Design stabilized access to support the heaviest vehicles and equipment that will use it.
- Stabilize roadway using aggregate, asphalt concrete, or concrete based on longevity, required performance, and site conditions. The use of cold mix asphalt or asphalt concrete (AC) grindings for stabilized construction roadway is not allowed.
- Coordinate materials with those used for stabilized construction entrance/exit points.
- If aggregate is selected, place crushed aggregate over geotextile fabric to at least 300 mm (12 in) depth, or place aggregate to a depth recommended by the RE or Construction Storm Water Coordinator. Crushed aggregate greater than 75 mm (3 inches) and smaller than 150 mm (6 inches) shall be used.

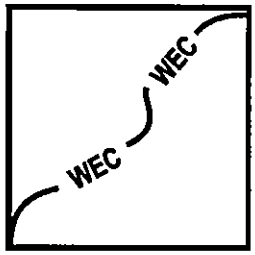
Maintenance and Inspection

- Inspect routinely for damage and repair as needed, or as directed by the RE.
- Keep all temporary roadway ditches clear.
- When no longer required, remove stabilized construction roadway and re-grade and repair slopes.

Wind Erosion Control

WE-1





Standard Symbol

BMP Objectives

- ● Soil Stabilization
- ● Sediment Control
- o Tracking Control
- ● Wind Erosion Control
- o Non-Storm Water Management
- o Materials and Waste Management

Definition and Purpose

Wind erosion control consists of applying water and/or other dust palliatives as necessary to prevent or alleviate erosion by the forces of wind. Dust control shall be applied in accordance with Caltrans standard practices. Covering of small stockpiles or areas is an alternative to applying water or other dust palliatives.

Appropriate Applications

- This practice is implemented on all exposed soils subject to wind erosion.

Limitations

- Effectiveness depends on soil, temperature, humidity and wind velocity.

Standards and Specifications

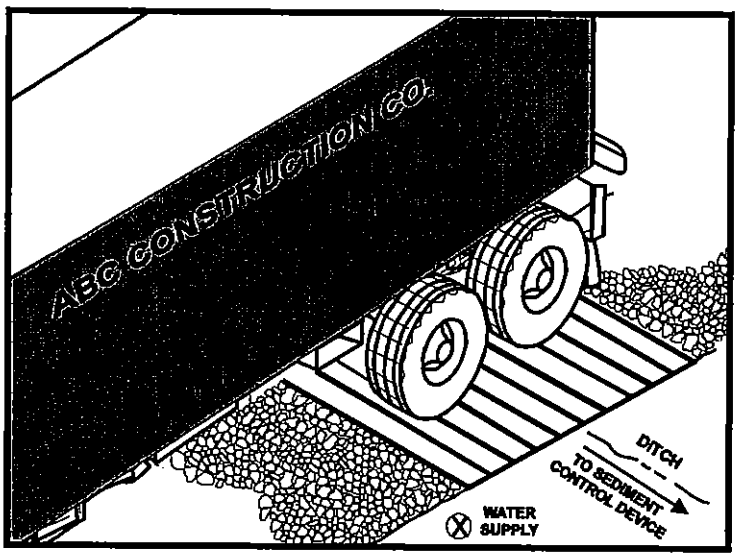
- Water shall be applied by means of pressure-type distributors or pipelines equipped with a spray system or hoses and nozzles that will ensure even distribution.
- All distribution equipment shall be equipped with a positive means of shutoff.
- Unless water is applied by means of pipelines, at least one mobile unit shall be available at all times to apply water or dust palliative to the project.
- If reclaimed water is used, the sources and discharge must meet California Department of Health Services water reclamation criteria and the Regional Water Quality Control Board requirements. Non-potable water shall not be conveyed in tanks or drain pipes that will be used to convey potable water and there shall be no connection between potable and non-potable supplies. Non-potable tanks, pipes and other conveyances shall be marked "NON-POTABLE WATER - DO NOT DRINK."
- Materials applied as temporary soil stabilizers and soil binders will also provide wind erosion control benefits.

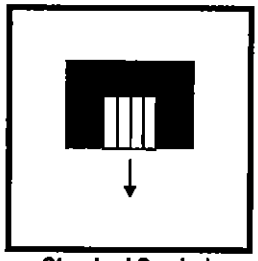
Maintenance and Inspection

- Check areas that have been protected to ensure coverage.

Entrance/Outlet Tire Wash

TC-3





Standard Symbol

BMP Objectives
- ● Soil Stabilization
- ● Sediment Control
- ● Tracking Control
- ○ Wind Erosion Control
- ○ Non-Storm Water Management
- ○ Materials and Waste Management

Definition and Purpose

A tire wash is an area located at stabilized construction access points to remove sediment from tires and undercarriages, and to prevent sediment from being transported onto public roadways.

Appropriate Applications

- Tire washes may be used on construction sites where dirt and mud tracking onto public roads by construction vehicles may occur.
- This BMP may be implemented on a project-by-project basis with other BMPs when determined necessary and feasible by the Resident Engineer (RE).

Limitations

- Requires a supply of wash water.
- Requires a turnout or doublewide exit to avoid having entering vehicles drive through the wash area.

Standards and Specifications

- Incorporate with a stabilized construction entrance/exit. See BMP TC-1, "Stabilized Construction Entrance/Exit."
- Construct on level ground when possible, on a pad of coarse aggregate, greater than 75 mm (3 inches) and smaller than 150 mm (6 inches). A geotextile fabric shall be placed below the aggregate.
- Wash rack shall be designed and constructed/manufactured for anticipated traffic loads.
- Provide a drainage ditch that will convey the runoff from the wash area to a sediment trapping device. The drainage ditch shall be of sufficient grade, width, and depth to carry the wash runoff.

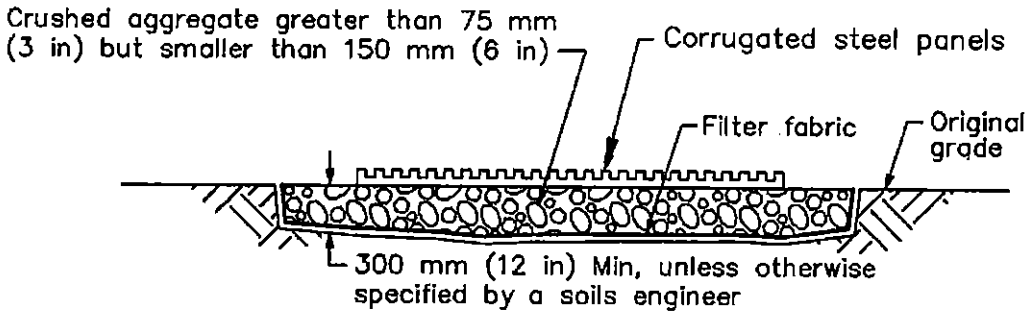
- Require all employees, subcontractors, and others that leave the site with mud-caked tires and/or undercarriages to use the wash facility.
- Implement BMP SC-7, "Street Sweeping and Vacuuming" as needed.
- Use of constructed or prefabricated steel plate with ribs for entrance/exit access is allowed with written approval of RE.

Maintenance and Inspection

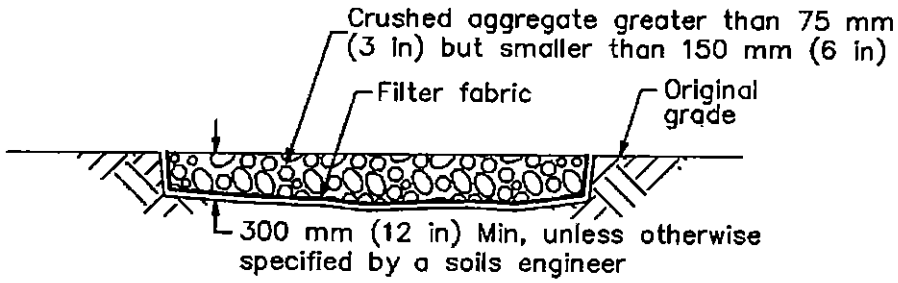
- Remove accumulated sediment in wash rack and/or sediment trap to maintain system performance.
- Inspect routinely for damage and repair as needed.

Entrance/Outlet Tire Wash

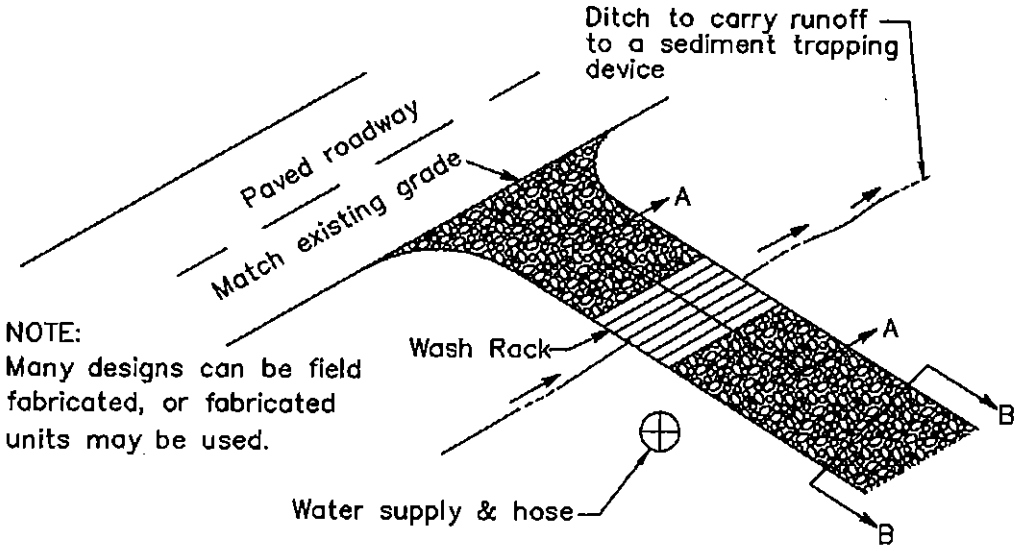
TC-3



SECTION A–A
NOT TO SCALE



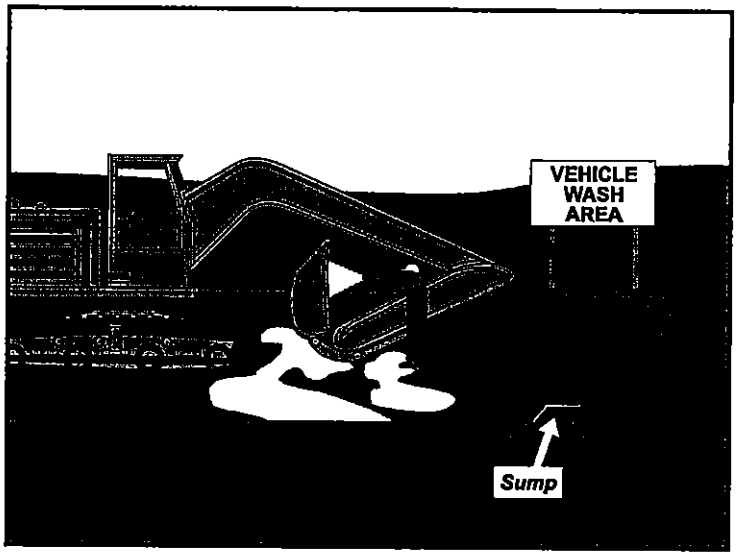
SECTION B–B
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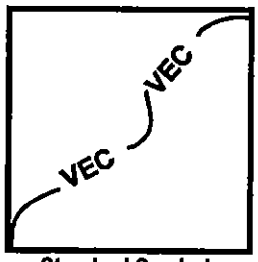


TYPICAL TIRE WASH
NOT TO SCALE

Vehicle and Equipment Cleaning

NS-8





Standard Symbol

BMP Objectives

- o Soil Stabilization
- o Sediment Control
- o Tracking Control
- o Wind Erosion Control
- ● Non-Storm Water Management
- o Materials and Waste Management

Definition and Purpose

Vehicle and equipment cleaning procedures and practices are used to minimize or eliminate the discharge of pollutants from vehicle and equipment cleaning operations to storm drain system or to watercourses.

Appropriate Applications

These procedures are applied on all construction sites where vehicle and equipment cleaning is performed.

Limitations

- None.

Standards and Specifications

- On-site vehicle and equipment washing is discouraged.
- Cleaning of vehicles and equipment with soap, solvents or steam shall not occur on the project site unless the Resident Engineer (RE) has been notified in advance and the resulting wastes are fully contained and disposed of outside the highway right-of-way in conformance with the provisions in the Standard Specifications Section 7-1.13. Resulting wastes and by-products shall not be discharged or buried within the highway right-of-way, and must be captured and recycled or disposed according to the requirements of WM-10, "Liquid Waste Management" or WM-6, "Hazardous Waste Management," depending on the waste characteristics. Minimize use of solvents. The use of diesel for vehicle and equipment cleaning is prohibited.
- Vehicle and equipment wash water shall be contained for percolation or evaporative drying away from storm drain inlets or watercourses and shall not be discharged within the highway right-of-way. Apply sediment control BMPs if applicable.
- All vehicles/equipment that regularly enter and leave the construction site must be cleaned off-site.
- When vehicle/equipment washing/cleaning must occur onsite, and the

operation cannot be located within a structure or building equipped with appropriate disposal facilities, the outside cleaning area shall have the following characteristics, and shall be arranged with the construction storm water coordinator:

- Located away from storm drain inlets, drainage facilities, or watercourses.
- Paved with concrete or asphalt and bermed to contain wash waters and to prevent run-on and runoff.
- Configured with a sump to allow collection and disposal of wash water.
- Wash waters shall not be discharged to storm drains or watercourses.
- Used only when necessary.

■ When cleaning vehicles/equipment with water:

- Use as little water as possible. High pressure sprayers may use less water than a hose, and shall be considered.
- Use positive shutoff valve to minimize water usage.
- Facility wash racks shall discharge to a sanitary sewer, recycle system or other approved discharge system and shall not discharge to the storm drainage system or watercourses.

Maintenance and Inspection

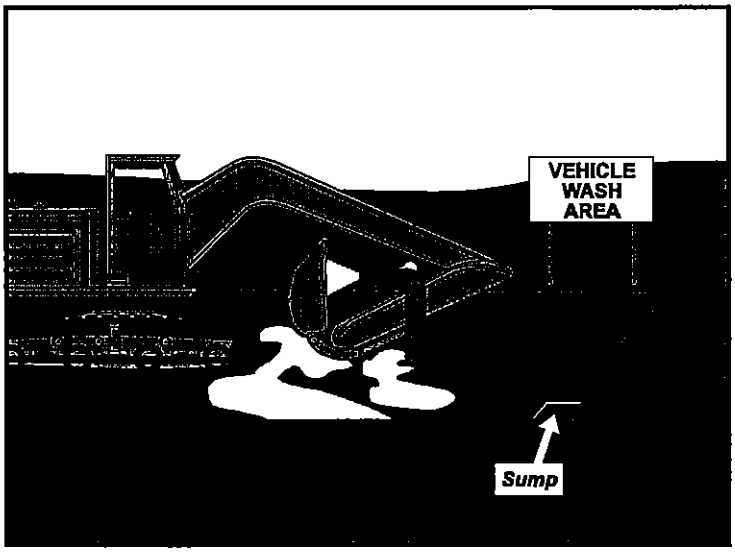
■ The control measure shall be inspected at a minimum of once a week.

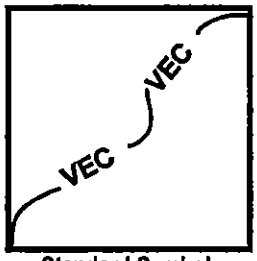
■ Monitor employees and subcontractors throughout the duration of the construction project to ensure appropriate practices are being implemented.

■ Inspect sump regularly and remove liquids and sediment as needed or as directed by the RE.

Vehicle and Equipment Cleaning

NS-8





Standard Symbol

BMP Objectives

- ○ Soil Stabilization
- ○ Sediment Control
- ○ Tracking Control
- ○ Wind Erosion Control
- ● Non-Storm Water Management
- ○ Materials and Waste Management

Definition and Purpose

Vehicle and equipment cleaning procedures and practices are used to minimize or eliminate the discharge of pollutants from vehicle and equipment cleaning operations to storm drain system or to watercourses.

Appropriate Applications

These procedures are applied on all construction sites where vehicle and equipment cleaning is performed.

Limitations

- None.

Standards and Specifications

- On-site vehicle and equipment washing is discouraged.
- Cleaning of vehicles and equipment with soap, solvents or steam shall not occur on the project site unless the Resident Engineer (RE) has been notified in advance and the resulting wastes are fully contained and disposed of outside the highway right-of-way in conformance with the provisions in the Standard Specifications Section 7-1.13. Resulting wastes and by-products shall not be discharged or buried within the highway right-of-way, and must be captured and recycled or disposed according to the requirements of WM-10, "Liquid Waste Management" or WM-6, "Hazardous Waste Management," depending on the waste characteristics. Minimize use of solvents. The use of diesel for vehicle and equipment cleaning is prohibited.
- Vehicle and equipment wash water shall be contained for percolation or evaporative drying away from storm drain inlets or watercourses and shall not be discharged within the highway right-of-way. Apply sediment control BMPs if applicable.
- All vehicles/equipment that regularly enter and leave the construction site must be cleaned off-site.
- When vehicle/equipment washing/cleaning must occur onsite, and the

operation cannot be located within a structure or building equipped with appropriate disposal facilities, the outside cleaning area shall have the following characteristics, and shall be arranged with the construction storm water coordinator:

- Located away from storm drain inlets, drainage facilities, or watercourses.
- Paved with concrete or asphalt and bermed to contain wash waters and to prevent run-on and runoff.
- Configured with a sump to allow collection and disposal of wash water.
- Wash waters shall not be discharged to storm drains or watercourses.
- Used only when necessary.

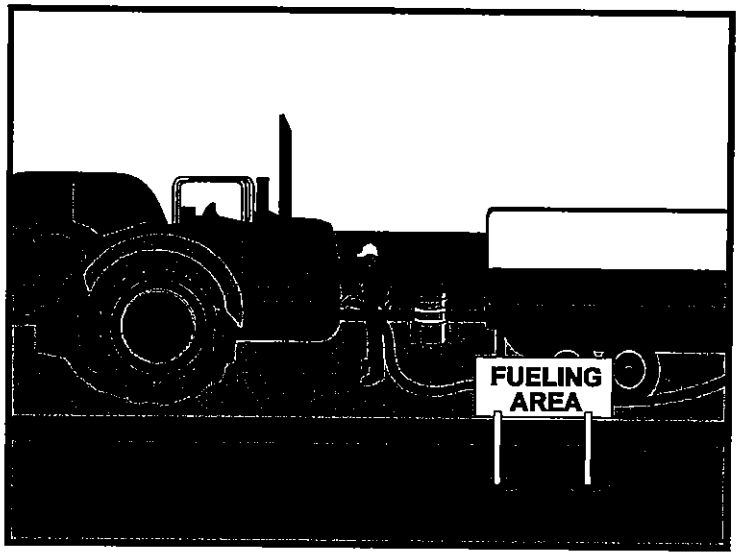
- When cleaning vehicles/equipment with water:
  - Use as little water as possible. High pressure sprayers may use less water than a hose, and shall be considered.
  - Use positive shutoff valve to minimize water usage.
  - Facility wash racks shall discharge to a sanitary sewer, recycle system or other approved discharge system and shall not discharge to the storm drainage system or watercourses.

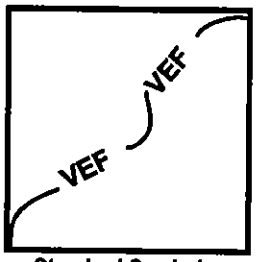
Maintenance and Inspection

- The control measure shall be inspected at a minimum of once a week.
- Monitor employees and subcontractors throughout the duration of the construction project to ensure appropriate practices are being implemented.
- Inspect sump regularly and remove liquids and sediment as needed or as directed by the RE.

Vehicle and Equipment Fueling

NS-9





Standard Symbol

BMP Objectives

- ○ Soil Stabilization
- ○ Sediment Control
- ○ Tracking Control
- ○ Wind Erosion Control
- ● Non-Storm Water Management
- ○ Materials and Waste Management

Definition and Purpose

Vehicle and equipment fueling procedures and practices are designed to minimize or eliminate the discharge of fuel spills and leaks into storm drain systems or to watercourses.

Appropriate Applications

These procedures are applied on all construction sites where vehicle and equipment fueling takes place.

Limitations

- Onsite vehicle and equipment fueling shall only be used where it's impractical to send vehicles and equipment off-site for fueling.

Standards and Specifications

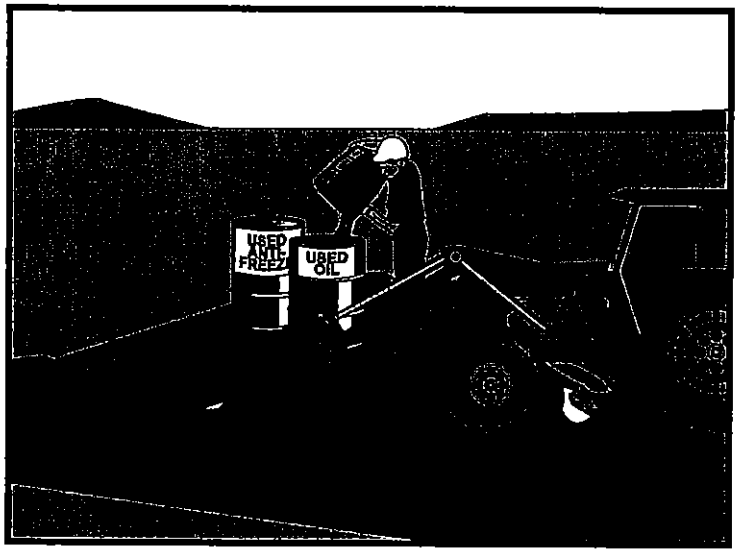
- When fueling must occur onsite, the contractor shall select and designate an area to be used, subject to approval of the Resident Engineer (RE).
- Absorbent spill clean-up materials and spill kits shall be available in fueling areas and on fueling trucks and shall be disposed of properly after use.
- Drip pans or absorbent pads shall be used during vehicle and equipment fueling, unless the fueling is performed over an impermeable surface in a dedicated fueling area.
- Dedicated fueling areas shall be protected from storm water run-on and runoff, and shall be located at least 15 m (50 ft) from downstream drainage facilities and watercourses. Fueling must be performed on level-grade areas.
- Nozzles used in vehicle and equipment fueling shall be equipped with an automatic shut-off to control drips. Fueling operations shall not be left unattended.
- Protect fueling areas with berms and/or dikes to prevent run-on, runoff, and to contain spills.

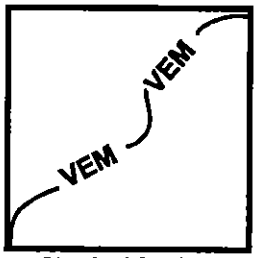
- Use vapor recovery nozzles to help control drips as well as air pollution where required by Air Quality Management Districts (AQMD). Ensure the nozzle is secured upright when not in use.
- Fuel tanks shall not be "topped-off."
- Vehicles and equipment shall be inspected on each day of use for leaks. Leaks shall be repaired immediately or problem vehicles or equipment shall be removed from the project site.
- Absorbent spill clean-up materials shall be available in fueling and maintenance areas and used on small spills instead of hosing down or burying techniques. The spent absorbent material shall be removed promptly and disposed of properly.
- Federal, state, and local requirements shall be observed for any stationary above ground storage tanks. Refer to WM-1, "Material Delivery and Storage."
- Mobile fueling of construction equipment throughout the site shall be minimized. Whenever practical, equipment shall be transported to the designated fueling area.

Maintenance and Inspection

- Fueling areas and storage tanks shall be inspected regularly.
- Keep an ample supply of spill cleanup material on the site.
- Immediately cleanup spills and properly dispose of contaminated soil and cleanup materials.

Vehicle and Equipment Maintenance NS-10





Standard Symbol

BMP Objectives

- ○ Soil Stabilization
- ○ Sediment Control
- ○ Tracking Control
- ○ Wind Erosion Control
- ● Non-Storm Water Management
- ○ Materials and Waste Management

Definition and Purpose

Procedures and practices to minimize or eliminate the discharge of pollutants to the storm drain systems or to watercourses from vehicle and equipment maintenance procedures.

Appropriate Applications

These procedures are applied on all construction projects where an onsite yard area is necessary for storage and maintenance of heavy equipment and vehicles.

Limitations

- None identified.

Standards and Specifications

- Drip pans or absorbent pads shall be used during vehicle and equipment maintenance work that involves fluids, unless the maintenance work is performed over an impermeable surface in a dedicated maintenance area.
- All maintenance areas are required to have spill kits and/or use other spill protection devices.
- Dedicated maintenance areas shall be protected from storm water run-on and runoff, and shall be located at least 15 m (50 ft) from downstream drainage facilities and watercourses.
- Drip Pans or plastic sheeting shall be placed under all vehicles and equipment placed on docks, barges, or other structures over water bodies when the vehicle or equipment is planned to be idle for more than one hour.
- Absorbent spill clean-up materials shall be available in maintenance areas and shall be disposed of properly after use. Substances used to coat asphalt transport trucks and asphalt-spreading equipment shall be non-toxic.
- Use off-site maintenance facilities whenever practical.

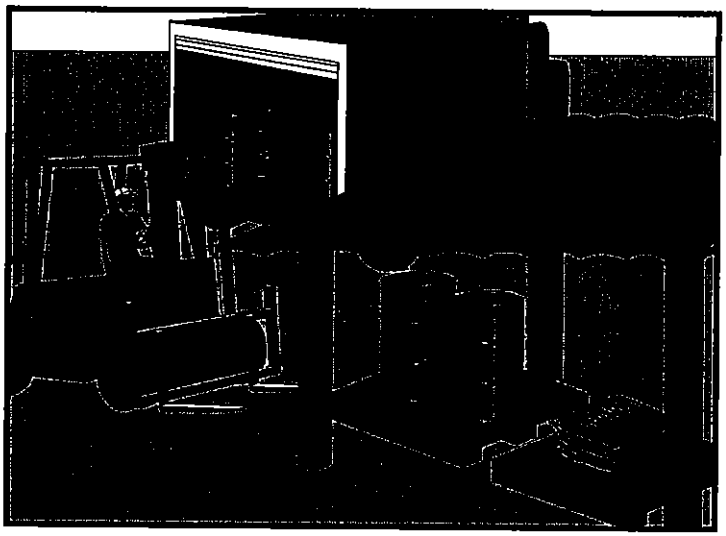
- For long-term projects, consider constructing roofs or using portable tents over maintenance areas.
- Properly dispose of used oils, fluids, lubricants, and spill cleanup materials.
- Do not dump fuels and lubricants onto the ground.
- Do not place used oil in a dumpster or pour into a storm drain or watercourse.
- Properly dispose or recycle used batteries.
- Do not bury used tires.
- Repair of fluid and oil leaks immediately.
- Provide spill containment dikes or secondary containment around stored oil and chemical drums.

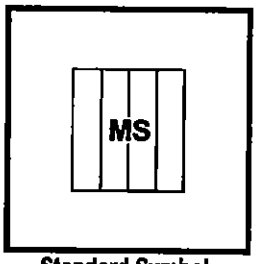
Maintenance and Inspection

- Maintain waste fluid containers in leak proof condition.
- Vehicle and equipment maintenance areas shall be inspected regularly.
- Vehicles and equipment shall be inspected on each day of use. Leaks shall be repaired immediately or the problem vehicle(s) or equipment shall be removed from the project site.
- Inspect equipment for damaged hoses and leaky gaskets routinely. Repair or replace as needed.

Material Delivery and Storage

WM-1





Standard Symbol

BMP Objectives

- ○ Soil Stabilization
- ○ Sediment Control
- ○ Tracking Control
- ○ Wind Erosion Control
- ● Non-Storm Water Management
- ● Materials and Waste Management

Definition and Purpose

Procedures and practices for the proper handling and storage of materials in a manner that minimizes or eliminates the discharge of these materials to the storm drain system or to watercourses.

Appropriate Applications

These procedures are implemented at all construction sites with delivery and storage of the following:

- Hazardous chemicals such as:
  - Acids,
  - lime,
  - glues,
  - adhesives,
  - paints,
  - solvents, and
  - curing compounds.
- Soil stabilizers and binders.
- Fertilizers.
- Detergents.
- Plaster.
- Petroleum products such as fuel, oil, and grease.
- Asphalt and concrete components.
- Pesticides and herbicides.

- Other materials that may be detrimental if released to the environment.

Limitations

- Space limitation may preclude indoor storage.
- Storage sheds must meet building & fire code requirements.

Standards and Specifications

General

- Train employees and subcontractors on the proper material delivery and storage practices.
- Temporary storage area shall be located away from vehicular traffic.
- Material Safety Data Sheets (MSDS) shall be supplied to the Resident Engineer (RE) for all materials stored.

Material Storage Areas and Practices

- Liquids, petroleum products, and substances listed in 40 CFR Parts 110, 117, or 302 shall be stored in approved containers and drums and shall be placed in temporary containment facilities for storage.
- Throughout the rainy season, each temporary containment facility shall have a permanent cover and side wind protection or be covered during non-working days and prior to and during rain events.
- A temporary containment facility shall provide for a spill containment volume able to contain precipitation from a 24-hour, 25-year storm event, plus the greater of 10% of the aggregate volume of all containers or 100% of the capacity of the largest container within its boundary, whichever is greater.
- A temporary containment facility shall be impervious to the materials stored therein for a minimum contact time of 72 hours.
- A temporary containment facility shall be maintained free of accumulated rainwater and spills. In the event of spills or leaks, accumulated rainwater and spills shall be collected and placed into drums. These liquids shall be handled as a hazardous waste unless testing determines them to be non-hazardous. All collected liquids or non-hazardous liquids shall be sent to an approved disposal site.
- Sufficient separation shall be provided between stored containers to allow for spill cleanup and emergency response access.
- Incompatible materials, such as chlorine and ammonia, shall not be stored in the same temporary containment facility.
- Materials shall be stored in their original containers and the original product labels shall be maintained in place in a legible condition. Damaged or otherwise illegible labels shall be replaced immediately.

-
- Bagged and boxed materials shall be stored on pallets and shall not be allowed to accumulate on the ground. To provide protection from wind and rain, throughout the rainy season, bagged and boxed materials shall be covered during non-working days and prior to rain events.
- Stockpiles shall be protected in accordance with BMP WM-3, "Stockpile Management."
- Minimize the material inventory stored on-site (e.g., only a few days supply).
- Have proper storage instructions posted at all times in an open and conspicuous location.
- Do not store hazardous chemicals, drums, or bagged materials directly on the ground. Place these items on a pallet and when possible, under cover in secondary containment.
- Keep hazardous chemicals well labeled and in their original containers.
- Keep ample supply of appropriate spill clean up material near storage areas.
- Also see BMP WM-6, "Hazardous Waste Management", for storing of hazardous materials.

Material Delivery Practices

- Keep an accurate, up-to-date inventory of material delivered and stored on-site.
- Employees trained in emergency spill clean-up procedures shall be present when dangerous materials or liquid chemicals are unloaded.

Spill Clean-up

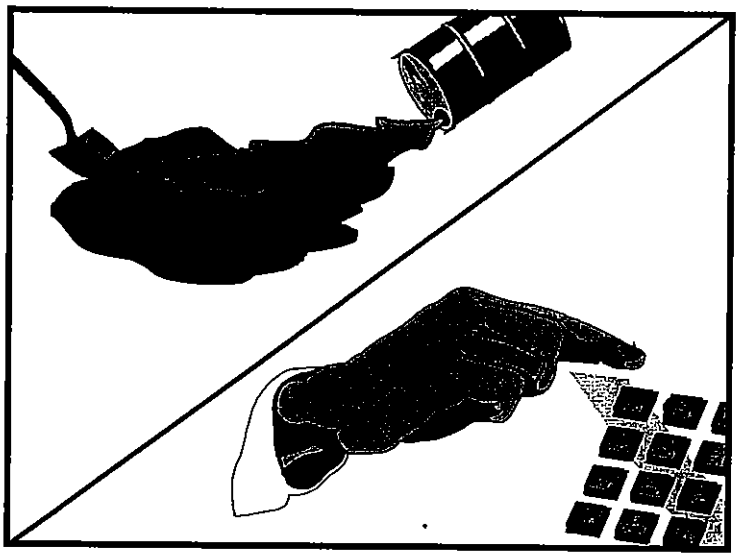
- Contain and clean up any spill immediately.
- If significant residual materials remain on the ground after construction is complete, properly remove and dispose any hazardous materials or contaminated soil.
- See BMP WM-4, "Spill Prevention and Control", for spills of chemicals and/or hazardous materials.

Maintenance and Inspection

- Storage areas shall be kept clean, well organized, and equipped with ample clean-up supplies as appropriate for the materials being stored.
- Perimeter controls, containment structures, covers, and liners shall be repaired or replaced as needed to maintain proper function.
- Inspect storage areas before and after rainfall events, and at least weekly during other times. Collect and place into drums any spills or accumulated rainwater.

Spill Prevention and Control

WM-4





Standard Symbol

BMP Objectives

- ○ Soil Stabilization
- ○ Sediment Control
- ○ Tracking Control
- ○ Wind Erosion Control
- ● Non-Storm Water Management
- ● Materials and Waste Management

Definition and Purpose

These procedures and practices are implemented to prevent and control spills in a manner that minimizes or prevents the discharge of spilled material to the drainage system or watercourses.

Appropriate Application

This best management practice (BMP) applies to all construction projects. Spill control procedures are implemented anytime chemicals and/or hazardous substances are stored. Substances may include, but are not limited to:

- Soil stabilizers/binders.
- Dust Palliatives.
- Herbicides.
- Growth inhibitors.
- Fertilizers.
- Deicing/anti-icing chemicals.
- Fuels.
- Lubricants.
- Other petroleum distillates.

To the extent that the work can be accomplished safely, spills of oil, petroleum products, substances listed under 40 CFR parts 110, 117, and 302, and sanitary and septic wastes shall be contained and cleaned up immediately.

Limitations

- This BMP only applies to spills caused by the contractor.
- Procedures and practices presented in this BMP are general. Contractor shall identify appropriate practices for the specific materials used or stored on-site.

Standards and Specifications

- To the extent that it doesn't compromise clean up activities, spills shall be covered and protected from storm water run-on during rainfall.
- Spills shall not be buried or washed with water.
- Used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose shall be stored and disposed of in conformance with the special provisions.
- Water used for cleaning and decontamination shall not be allowed to enter storm drains or watercourses and shall be collected and disposed of in accordance with BMP WM-10, "Liquid Waste Management."
- Water overflow or minor water spillage shall be contained and shall not be allowed to discharge into drainage facilities or watercourses.
- Proper storage, clean-up and spill reporting instruction for hazardous materials stored or used on the project site shall be posted at all times in an open, conspicuous and accessible location.
- Waste storage areas shall be kept clean, well organized and equipped with ample clean-up supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers and liners shall be repaired or replaced as needed to maintain proper function.

Education

- Educate employees and subcontractors on what a "significant spill" is for each material they use, and what is the appropriate response for "significant" and "insignificant" spills.
- Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.
- Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).
- Establish a continuing education program to indoctrinate new employees.
- The Contractor's Water Pollution Control Manager (WPCM) shall oversee and enforce proper spill prevention and control measures.

Cleanup and Storage Procedures

- Minor Spills
  - Minor spills typically involve small quantities of oil, gasoline, paint, etc., which can be controlled by the first responder at the discovery of the spill.
  - Use absorbent materials on small spills rather than hosing down or burying the spill.
  - Remove the absorbent materials promptly and dispose of properly.
  - The practice commonly followed for a minor spill is:
    - Contain the spread of the spill.
    - Recover spilled materials.
    - Clean the contaminated area and/or properly dispose of contaminated materials.
- Semi-Significant Spills
  - Semi-significant spills still can be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc. This response may require the cessation of all other activities.
  - Clean up spills immediately:
    - Notify the project foreman immediately. The foreman shall notify the Resident Engineer (RE).
    - Contain spread of the spill.
    - If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (absorbent materials, cat litter and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.
    - If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.
    - If the spill occurs during rain, cover spill with tarps or other material to prevent contaminating runoff.

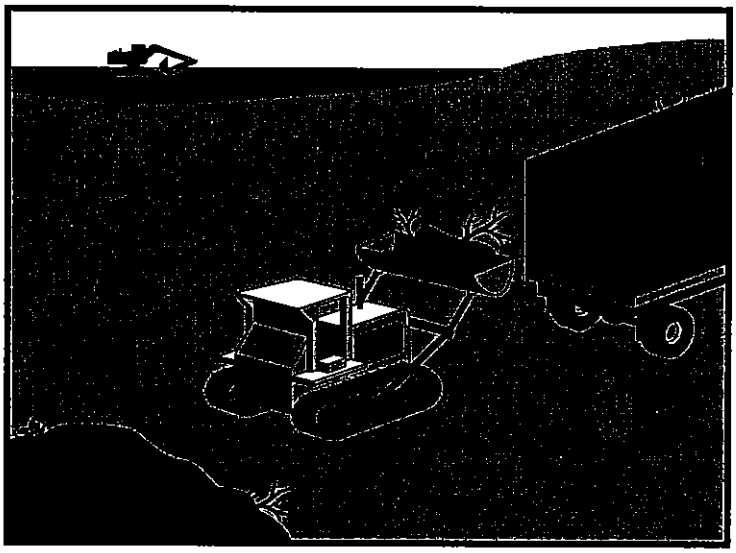
- Significant/Hazardous Spills
  - For significant or hazardous spills that cannot be controlled by personnel in the immediate vicinity, the following steps shall be taken:
    - Notify the RE immediately and follow up with a written report.
    - Notify the local emergency response by dialing 911. In addition to 911, the contractor will notify the proper county officials. It is the contractor's responsibility to have all emergency phone numbers at the construction site.
    - Notify the Governor's Office of Emergency Services Warning Center, (805) 852-7550.
    - For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110,119, and 302, the contractor shall notify the National Response Center at (800) 424-8802.
    - Notification shall first be made by telephone and followed up with a written report.
    - The services of a spills contractor or a Haz-Mat team shall be obtained immediately. Construction personnel shall not attempt to clean up the spill until the appropriate and qualified staff have arrived at the job site.
    - Other agencies which may need to be consulted include, but are not limited to, the Fire Department, the Public Works Department, the Coast Guard, the Highway Patrol, the City/County Police Department, Department of Toxic Substances, California Division of Oil and Gas, Cal/OSHA, RWQCB, etc.

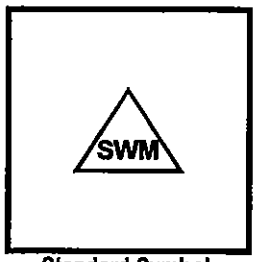
Maintenance and Inspection

- Verify weekly that spill control clean up materials are located near material storage, unloading, and use areas.
- Update spill prevention and control plans and stock appropriate clean-up materials whenever changes occur in the types of chemicals used or stored onsite.

Solid Waste Management

WM-5





Standard Symbol

BMP Objectives

- o Soil Stabilization
- o Sediment Control
- o Tracking Control
- o Wind Erosion Control
- ● Non-Storm Water Management
- ● Materials and Waste Management

Definition and Purpose

Solid waste management procedures and practices are designed to minimize or eliminate the discharge of pollutants to the drainage system or to watercourses as a result of the creation, stockpiling, or removal of construction site wastes.

Appropriate Applications

Solid waste management procedures and practices are implemented on all construction projects that generate solid wastes.

Solid wastes include but are not limited to:

- Construction wastes including brick, mortar, timber, steel and metal scraps, sawdust, pipe and electrical cuttings, non-hazardous equipment parts, styrofoam and other materials used to transport and package construction materials.
- Highway planting wastes, including vegetative material, plant containers, and packaging materials.
- Litter, including food containers, beverage cans, coffee cups, paper bags, plastic wrappers, and smoking materials, including litter generated by the public.

Limitations

- Temporary stockpiling of certain construction wastes may not necessitate stringent drainage related controls during the non-rainy season or in desert areas with low rainfall.

Standards and Specifications

Education

- The Contractor's Water Pollution Control Manager (WPCM) shall oversee and enforce proper solid waste procedures and practices.
- Instruct employees and subcontractors on identification of solid waste and hazardous waste.
- Educate employees and subcontractors on solid waste storage and disposal procedures.
- Hold regular meetings to discuss and reinforce disposal procedures (incorporate into regular safety meetings).
- Require that employees and subcontractors follow solid waste handling and storage procedures.
- Prohibit littering by employees, subcontractors, and visitors.
- Wherever possible, minimize production of solid waste materials.

Collection, Storage, and Disposal

- Dumpsters of sufficient size and number shall be provided to contain the solid waste generated by the project and properly serviced.
- Littering on the project site shall be prohibited.
- To prevent clogging of the storm drainage system litter and debris removal from drainage grates, trash racks, and ditch lines shall be a priority.
- Trash receptacles shall be provided in the Contractor's yard, field trailer areas, and at locations where workers congregate for lunch and break periods.
- Construction debris and litter from work areas within the construction limits of the project site shall be collected and placed in watertight dumpsters at least weekly regardless of whether the litter was generated by the Contractor, the public, or others. Collected litter and debris shall not be placed in or next to drain inlets, storm water drainage systems or watercourses.
- Full dumpsters shall be removed from the project site and the contents shall be disposed of outside the highway right-of-way in conformance with the provisions in the Standard Specifications Section 7-1.13.
- Litter stored in collection areas and containers shall be handled and disposed of by trash hauling contractors.
- Construction debris and waste shall be removed from the site every two weeks or as directed by the RE.

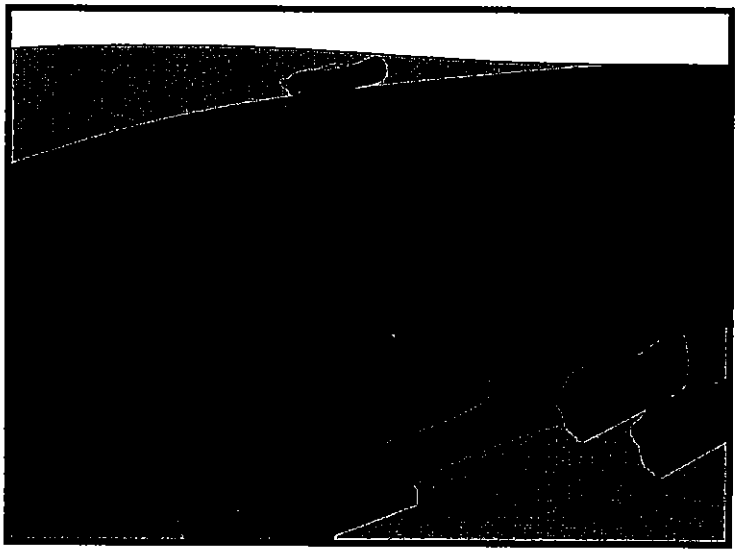
- Construction material visible to the public shall be stored or stacked in an orderly manner to the satisfaction of the RE.
- Storm water run-on shall be prevented from contacting stored solid waste through the use of berms, dikes, or other temporary diversion structures or through the use of measures to elevate waste from site surfaces.
- Solid waste storage areas shall be located at least 15 m (50 ft) from drainage facilities and watercourses and shall not be located in areas prone to flooding or ponding.
- Except during fair weather, construction and highway planting waste not stored in watertight dumpsters shall be securely covered from wind and rain by covering the waste with tarps or plastic sheeting or protected in conformance with the applicable Disturbed Soil Area protection section.
- Dumpster washout on the project site is not allowed.
- Notify trash hauling contractors that only watertight dumpsters are acceptable for use on-site.
- Plan for additional containers during the demolition phase of construction.
- Plan for more frequent pickup during the demolition phase of construction.
- Construction waste shall be stored in a designated area approved by the RE.
- Segregate potentially hazardous waste from non-hazardous construction site waste.
- Keep the site clean of litter debris.
- Make sure that toxic liquid wastes (e.g., used oils, solvents, and paints) and chemicals (e.g., acids, pesticides, additives, curing compounds) are not disposed of in dumpsters designated for construction debris.
- Dispose of non-hazardous waste in accordance with Standard Specification 7-1.13, Disposal of Material Outside the Highway Right of Way.
- For disposal of hazardous waste, see BMP WM-6, "Hazardous Waste Management." Have hazardous waste hauled to an appropriate disposal and/or recycling facility.
- Salvage or recycle useful vegetation debris, packaging and/or surplus building materials when practical. For example, trees and shrubs from land clearing can be converted into wood chips, then used as mulch on graded areas. Wood pallets, cardboard boxes, and construction scraps can also be recycled.

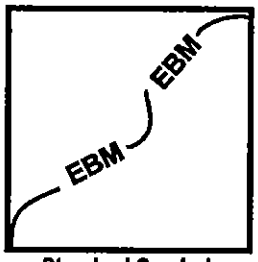
Maintenance and Inspection

- The WPCM shall monitor onsite solid waste storage and disposal procedures.
- Police site for litter and debris.

Geotextiles, Mats, Plastic Covers and Erosion Control Blankets

SS-7





Standard Symbol

BMP Objectives

- ● Soil Stabilization
- ○ Sediment Control
- ○ Tracking Control
- ● Wind Erosion Control
- ○ Non-Storm Water Management
- ○ Materials and Waste Management

Definition and Purpose

This Best Management Practice (BMP) involves the placement of geotextiles, mats, plastic covers, or erosion control blankets to stabilize disturbed soil areas and protect soils from erosion by wind or water. This is one of five temporary soil stabilization alternatives to consider.

Appropriate Applications

These measures are used when disturbed soils may be particularly difficult to stabilize, including the following situations:

- Steep slopes, generally steeper than 1:3 (V:H).
- Slopes where the erosion potential is high.
- Slopes and disturbed soils where mulch must be anchored.
- Disturbed areas where plants are slow to develop.
- Channels with flows exceeding 1.0 m/s (3.3 ft/s).
- Channels to be vegetated.
- Stockpiles.
- Slopes adjacent to water bodies of Environmentally Sensitive Areas (ESAs).

Geotextiles, Mats, Plastic Covers and Erosion Control Blankets

SS-7

Limitations

- Blankets and mats are more expensive than other erosion control measures, due to labor and material costs. This usually limits their application to areas inaccessible to hydraulic equipment, or where other measures are not applicable, such as channels.
- Blankets and mats are generally not suitable for excessively rocky sites, or areas where the final vegetation will be mowed (since staples and netting can catch in mowers).
- Blankets and mats must be removed and disposed of prior to application of permanent soil stabilization measures.
- Plastic sheeting is easily vandalized, easily torn, photodegradable, and must be disposed of at a landfill.
- Plastic results in 100% runoff, which may cause serious erosion problems in the areas receiving the increased flow.
- The use of plastic shall be limited to covering stockpiles, or very small graded areas for short periods of time (such as through one imminent storm event), until alternative measures, such as seeding and mulching, may be installed.
- Geotextiles, mats, plastic covers, and erosion control covers have maximum flow rate limitations; consult the manufacturer for proper selection.

Standards and Specifications

Material Selection

There are many types of erosion control blankets and mats, and selection of the appropriate type shall be based on the specific type of application and site conditions. Selection(s) made by the Contractor must be approved by the Resident Engineer (RE); certification of compliance shall be in accordance with Standard Specifications Section 6-1.07.

Geotextiles

- Material shall be a woven polypropylene fabric with minimum thickness of 1.5 mm (0.06 inch), minimum width of 3.7 m (12 ft) and shall have minimum tensile strength of 0.67 kN (warp) 0.36 kN (fill) in conformance with the requirements in ASTM Designation: D 4632. The permittivity of the fabric shall be approximately 0.07 sec –1 in conformance with the requirements in ASTM Designation: D4491. The fabric shall have an ultraviolet (UV) stability of 70 percent in conformance with the requirements in ASTM designation: D4355. Geotextile blankets shall be secured in place with wire staples or sandbags and by keying into tops of slopes and edges to prevent infiltration of surface waters under Geotextile. Staples shall be made of 3.05-mm (0.12-inch) steel wire and shall be U-shaped with 200-mm (8-inch) legs and 50-mm (2-inch) crown.
- Geotextiles may be reused if, in the opinion of the RE, they are suitable for the use intended.

Plastic Covers

- Plastic sheeting shall have a minimum thickness of 6 mil, and shall be keyed in at the top of slope and firmly held in place with sandbags or other weights placed no more than 3 m (10 ft) apart. Seams are typically taped or weighted down their entire length, and there shall be at least a 300 mm to 600 mm (12 to 24 inches) overlap of all seams. Edges shall be embedded a minimum of 150 mm (6 inches) in soil.

- All sheeting shall be inspected periodically after installation and after significant rainstorms to check for erosion, undermining, and anchorage failure. Any failures shall be repaired immediately. If washout or breakages occurs, the material shall be re-installed after repairing the damage to the slope.

Erosion Control Blankets/Mats

- Biodegradable rolled erosion control products (RECPs) are typically composed of jute fibers, curled wood fibers, straw, coconut fiber, or a combination of these materials. For an RECP to be considered 100% biodegradable, the netting, sewing or adhesive system that holds the biodegradable mulch fibers together must also be biodegradable.

  - **Jute** is a natural fiber that is made into a yarn, which is loosely woven into a biodegradable mesh. It is designed to be used in conjunction with vegetation and has longevity of approximately one year. The material is supplied in rolled strips, which shall be secured to the soil with U-shaped staples or stakes in accordance with manufacturers' recommendations.

  - **Excelsior (curled wood fiber)** blanket material shall consist of machine produced mats of curled wood excelsior with 80 percent of the fiber 150 mm (6 inches) or longer. The excelsior blanket shall be of consistent thickness. The wood fiber shall be evenly distributed over the entire area of the blanket. The top surface of the blanket shall be covered with a photodegradable extruded plastic mesh. The blanket shall be smolder resistant without the use of chemical additives and shall be non-toxic and non-injurious to plant and animal life. Excelsior blanket shall be furnished in rolled strips, a minimum of 1220 mm (48 inches) wide, and shall have an average weight of 0.5 kg/m^2 (12 lb/ft^2), ±10 percent, at the time of manufacture. Excelsior blankets shall be secured in place with wire staples. Staples shall be made of 3.05-mm (0.12 inch) steel wire and shall be U-shaped with 200-mm (8-inch) legs and 50-mm (2-inch) crown.

- **Straw blanket** shall be machine-produced mats of straw with a lightweight biodegradable netting top layer. The straw shall be attached to the netting with biodegradable thread or glue strips. The straw blanket shall be of consistent thickness. The straw shall be evenly distributed over the entire area of the blanket. Straw blanket shall be furnished in rolled strips a minimum of 2 m (6.5 ft) wide, a minimum of 25 m (80 ft) long and a minimum of 0.27 kg/m2 (6.4 lb/ft2). Straw blankets shall be secured in place with wire staples. Staples shall be made of 3.05-mm (0.12 inch) steel wire and shall be U-shaped with 200-mm (8-inch) legs and 50-mm (2-inch) crown.

- **Wood fiber blanket** is composed of biodegradable fiber mulch with extruded plastic netting held together with adhesives. The material is designed to enhance revegetation. The material is furnished in rolled strips, which shall be secured to the ground with U-shaped staples or stakes in accordance with manufacturers' recommendations.

- **Coconut fiber blanket** shall be machine-produced mats of 100% coconut fiber with biodegradable netting on the top and bottom. The coconut fiber shall be attached to the netting with biodegradable thread or glue strips. The coconut fiber blanket shall be of consistent thickness. The coconut fiber shall be evenly distributed over the entire area of the blanket. Coconut fiber blanket shall be furnished in rolled strips with a minimum of 2 m (6.5 ft) wide, a minimum of 25 m (80 ft) long and a minimum of 0.27-kg/m2 (6.4 lb/ft2). Coconut fiber blankets shall be secured in place with wire staples. Staples shall be made of 3.05-mm (0.12 inch) steel wire and shall be U-shaped with 200-mm (8-inch) legs and 50-mm (2-inch) crown.

- **Coconut fiber mesh** is a thin permeable membrane made from coconut or corn fiber that is spun into a yarn and woven into a biodegradable mat. It is designed to be used in conjunction with vegetation and typically has longevity of several years. The material is supplied in rolled strips, which shall be secured to the soil with U-shaped staples or stakes in accordance with manufacturers' recommendations.

- **Straw coconut fiber blanket** shall be machine-produced mats of 70% straw and 30% coconut fiber with a biodegradable netting top layer and a biodegradable bottom net. The straw and coconut fiber shall be attached to the netting with biodegradable thread or glue strips. The straw coconut fiber blanket shall be of consistent thickness. The straw and coconut fiber shall be evenly distributed over the entire area of the blanket. Straw coconut fiber blanket shall be furnished in rolled strips a minimum of 2 m (6.5 ft) wide, a minimum of 25 m (80 ft) long and a minimum of 0.27 kg/m2 (6.4 lb/ft2). Straw coconut fiber blankets shall be secured in place with wire staples. Staples shall be made of 3.05-mm (0.12-inch) steel wire and shall be U-shaped with 200-mm (8-inch) legs and 50-mm (2-inch) crown.

- Non-biodegradable RECPs are typically composed of polypropylene, polyethylene, nylon or other synthetic fibers. In some cases, a combination of biodegradable and synthetic fibers is used to construct the RECP. Netting used to hold these fibers together is typically non-biodegradable as well.

  - **Plastic netting** is a lightweight biaxially-oriented netting designed for securing loose mulches like straw to soil surfaces to establish vegetation. The netting is photodegradable. The netting is supplied in rolled strips, which shall be secured with U-shaped staples or stakes in accordance with manufacturers' recommendations.

  - **Plastic mesh** is an open-weave geotextile that is composed of an extruded synthetic fiber woven into a mesh with an opening size of less than 0.5 cm (0.2 inch). It is used with revegetation or may be used to secure loose fiber such as straw to the ground. The material is supplied in rolled strips, which shall be secured to the soil with U-shaped staples or stakes in accordance with manufacturers' recommendations.

  - **Synthetic fiber with netting** is a mat that is composed of durable synthetic fibers treated to resist chemicals and ultraviolet light. The mat is a dense, three-dimensional mesh of synthetic (typically polyolefin) fibers stitched between two polypropylene nets. The mats are designed to be revegetated and provide a permanent composite system of soil, roots, and geomatrix. The material is furnished in rolled strips, which shall be secured with U-shaped staples or stakes in accordance with manufacturers' recommendations.

  - **Bonded synthetic fibers** consist of a three-dimensional geomatrix nylon (or other synthetic) matting. Typically it has more than 90% open area, which facilitates root growth. Its tough root-reinforcing system anchors vegetation and protects against hydraulic lift and shear forces created by high volume discharges. It can be installed over prepared soil, followed by seeding into the mat. Once vegetated, it becomes an invisible composite system of soil, roots, and geomatrix. The material is furnished in rolled strips that shall be secured with U-shaped staples or stakes in accordance with manufacturers' recommendations.

  - **Combination synthetic and biodegradable RECPs** consist of biodegradable fibers, such as wood fiber or coconut fiber, with a heavy polypropylene net stitched to the top and a high-strength continuous-filament geomatrix or net stitched to the bottom. The material is designed to enhance revegetation. The material is furnished in rolled strips, which shall be secured with U-shaped staples or stakes in accordance with manufacturers' recommendations.

Site Preparation

- Proper site preparation is essential to ensure complete contact of the blanket or matting with the soil.
- Grade and shape the area of installation.
- Remove all rocks, clods, vegetation or other obstructions so that the installed blankets or mats will have complete, direct contact with the soil.
- Prepare seedbed by loosening 50 mm (2 in) to 75 mm (3 in) of topsoil.

Seeding

Seed the area before blanket installation for erosion control and revegetation. Seeding after mat installation is often specified for turf reinforcement application. When seeding prior to blanket installation, all check slots and other areas disturbed during installation must be re-seeded. Where soil filling is specified, seed the matting and the entire disturbed area after installation and prior to filling the mat with soil.

Anchoring

- U-shaped wire staples, metal geotextile stake pins or triangular wooden stakes can be used to anchor mats and blankets to the ground surface.
- Staples shall be made of 3.05 mm (0.12 inch) steel wire and shall be U-shaped with 200-mm (8-inch) legs and 50-mm (2-inch) crown.
- Metal stake pins shall be 5 mm (0.188 in) diameter steel with a 40 mm (1.5 in) steel washer at the head of the pin.
- Wire staples and metal stakes shall be driven flush to the soil surface.
- All anchors shall be 150 mm (6 in) to 450 mm (18 in) long and have sufficient ground penetration to resist pullout. Longer anchors may be required for loose soils.

Installation on Slopes

Installation shall be in accordance with the manufacturer's recommendations. In general, these will be as follows:

- Begin at the top of the slope and anchor the blanket in a 150 mm (6 in) deep by 150 mm (6 in) wide trench. Backfill trench and tamp earth firmly.
- Unroll blanket downslope in the direction of water flow.

- Overlap the edges of adjacent parallel rolls 50 mm (2 in) to 75 mm (3 in) and staple every 1 m (3 ft).
- When blankets must be spliced, place blankets end over end (shingle style) with 150 mm (6 in) overlap. Staple through overlapped area, approximately 300 mm (12 in) apart.
- Lay blankets loosely and maintain direct contact with the soil. Do not stretch.
- Staple blankets sufficiently to anchor blanket and maintain contact with the soil. Staples shall be placed down the center and staggered with the staples placed along the edges. Steep slopes, 1:1 (V:H) to 1:2 (V:H), require a minimum of 2 staples/m2 (2 staples/yd2). Moderate slopes, 1:2 (V:H) to 1:3 (V:H), require a minimum of 1½ staples/m2 (1 ½ staples/yd2), placing 1 staple/m (1 staple/yd) on centers. Gentle slopes require a minimum of 1 staple/m2 (1 staple/yd2).

Installation in Channels

Installation shall be in accordance with the manufacturer's recommendations. In general, these will be as follows:

- Dig initial anchor trench 300 mm (12 in) deep and 150 mm (6 in) wide across the channel at the lower end of the project area.
- Excavate intermittent check slots, 150 mm (6 in) deep and 150 mm (6 in) wide across the channel at 8 m to 10 m (25 ft to 30 ft) intervals along the channels.
- Cut longitudinal channel anchor slots 100 mm (4 in) deep and 100 mm (4 in) wide along each side of the installation to bury edges of matting, whenever possible extend matting 50 mm (2 in) to 75 mm (3 in) above the crest of the channel side slopes.
- Beginning at the downstream end and in the center of the channel, place the initial end of the first roll in the anchor trench and secure with fastening devices at 300 mm (12 in) intervals. Note: matting will initially be upside down in anchor trench.
- In the same manner, position adjacent rolls in anchor trench, overlapping the preceding roll a minimum of 75 mm (3 in).
- Secure these initial ends of mats with anchors at 300 mm (12 in) intervals, backfill and compact soil.
- Unroll center strip of matting upstream. Stop at next check slot or terminal anchor trench. Unroll adjacent mats upstream in similar fashion, maintaining a 75 mm (3 in) overlap.

- Fold and secure all rolls of matting snugly into all transverse check slots. Lay mat in the bottom of the slot then fold back against itself. Anchor through both layers of mat at 300 mm (12 in) intervals, then backfill and compact soil. Continue rolling all mat widths upstream to the next check slot or terminal anchor trench.
- Alternate method for non-critical installations: Place two rows of anchors on 150 mm (6 in) centers at 8 m (25 ft) to 10 m (30 ft) intervals in lieu of excavated check slots.
- Shingle-lap spliced ends by a minimum of 300 mm (12 in) apart on 300 mm (12 in) intervals.
- Place edges of outside mats in previously excavated longitudinal slots, anchor using prescribed staple pattern, backfill and compact soil.
- Anchor, fill and compact upstream end of mat in a 300 mm (12 in) by 150 mm (6 in) terminal trench.
- Secure mat to ground surface using U-shaped wire staples, geotextile pins, or wooden stakes.
- Seed and fill turf reinforcement matting with soil, if specified.

Soil Filling (if specified for turf reinforcement)

- Always consult the manufacturer's recommendations for installation.
- Do not drive tracked or heavy equipment over mat.
- Avoid any traffic over matting if loose or wet soil conditions exist.
- Use shovels, rakes or brooms for fine grading and touch up.
- Smooth out soil filling, just exposing top netting of mat.

Temporary Soil Stabilization Removal

- When no longer required for the work, temporary soil stabilization shall become the property of the Contractor. Temporary soil stabilization removed from the site of the work shall be disposed of outside the highway right-of-way in conformance with the provisions in Standard Specifications Section 7-1.13. If approved by the RE, the contractor may leave the temporary soil stabilizer in place.

Geotextiles, Mats, Plastic Covers and Erosion Control Blankets

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Maintenance and Inspection

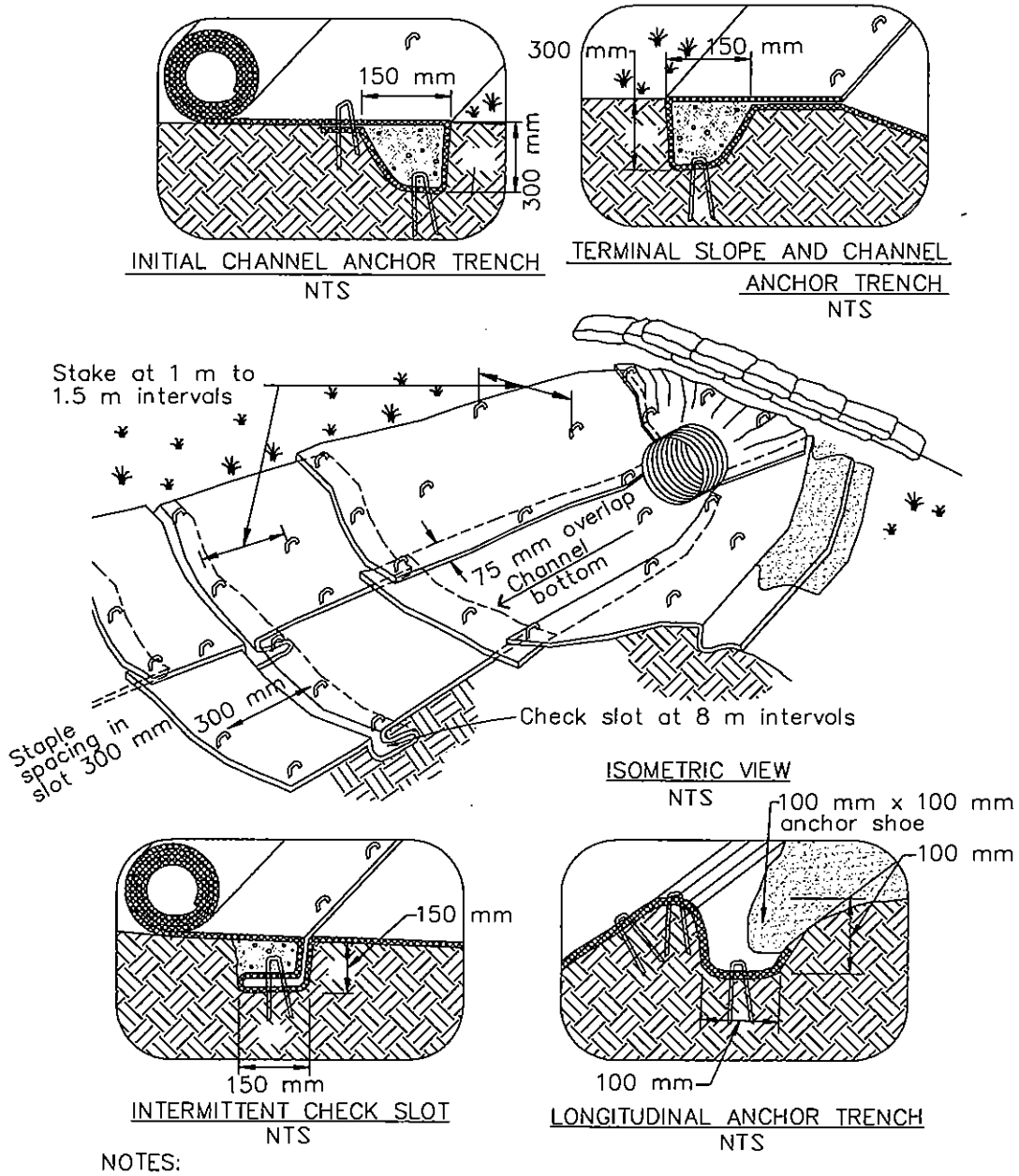
Areas treated with temporary soil stabilization shall be inspected as specified in the special provisions. Areas treated with temporary soil stabilization shall be maintained to provide adequate erosion control. Temporary soil stabilization shall be reapplied or replaced on exposed soils when area becomes exposed or exhibits visible erosion.

- All blankets and mats shall be inspected periodically after installation.
- Installation shall be inspected after significant rain storms to check for erosion and undermining. Any failures shall be repaired immediately.
- If washout or breakage occurs, re-install the material after repairing the damage to the slope or channel.

Geotextiles, Mats, Plastic Covers and Erosion Control Blankets

SS-7

Typical Installation Detail



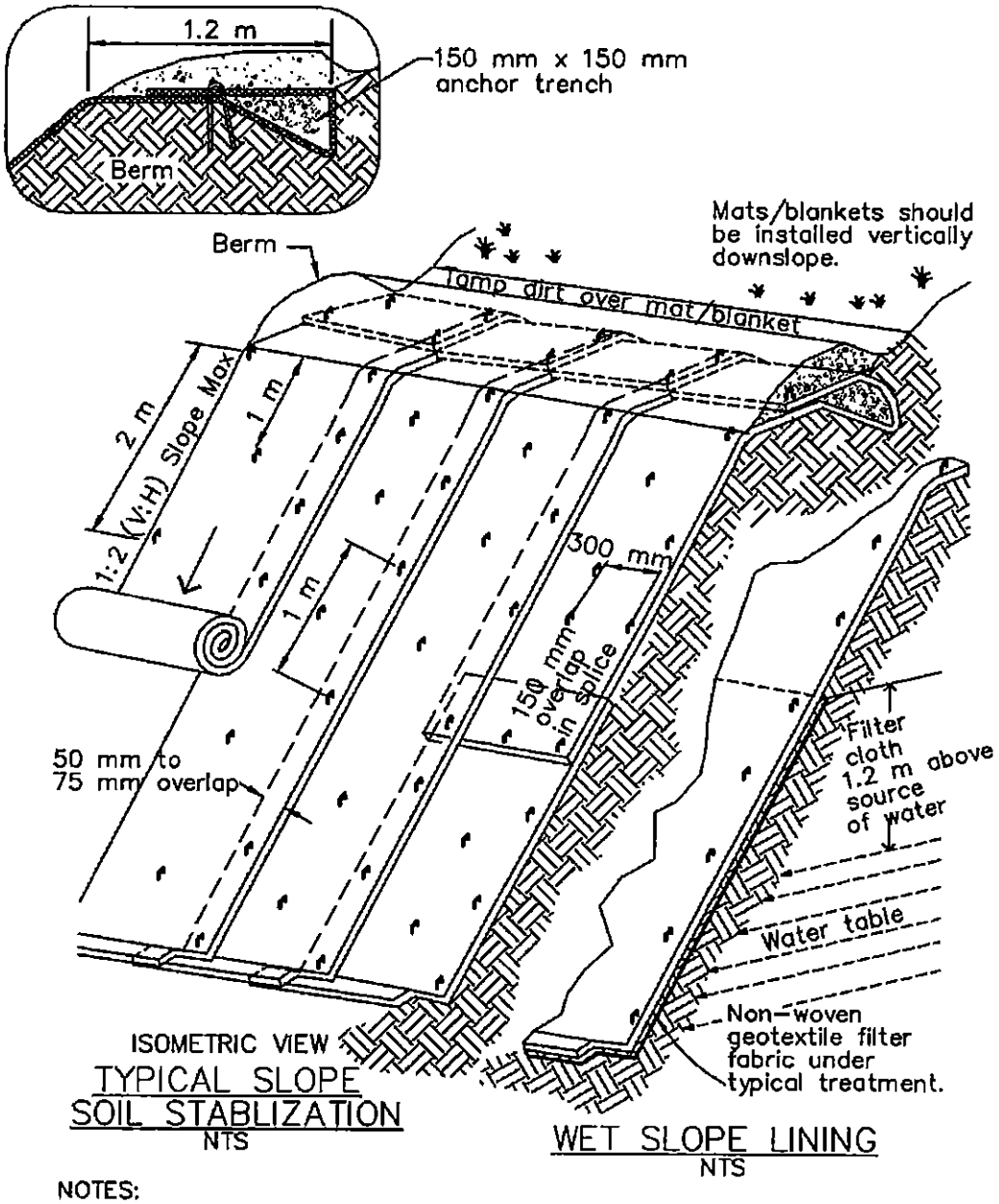
NOTES:

1. Check slots to be constructed per manufacturers specifications.
2. Staking or stopling layout per manufacturers specifications.
3. Install per manufacturer's recommendations

Geotextiles, Mats, Plastic Covers and Erosion Control Blankets

SS-7

Typical Installation Detail

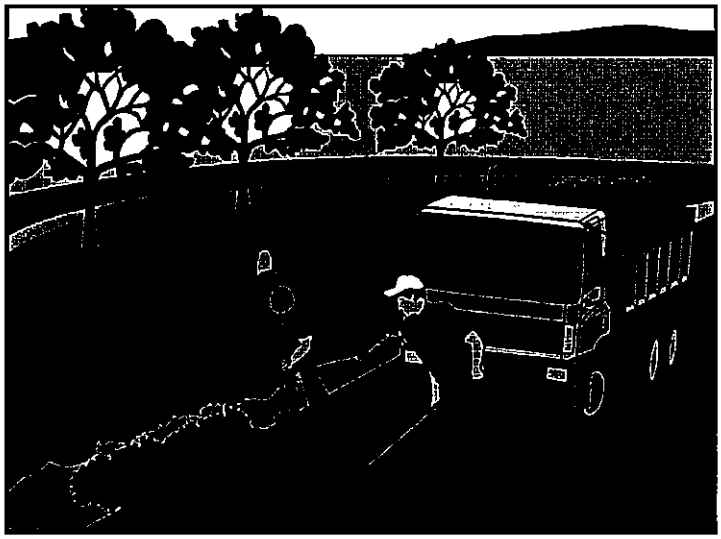


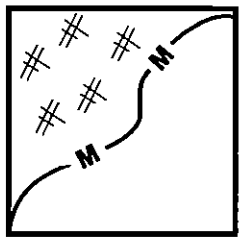
NOTES:

1. Slope surface shall be free of rocks, clods, sticks and grass. Mats/blankets shall have good soil contact.
2. Lay blankets loosely and stake or staple to maintain direct contact with the soil. Do not stretch.
3. Install per manufacturer's recommendations

Wood Mulching

SS-8





Standard Symbol

BMP Objectives

- ● Soil Stabilization
- o Sediment Control
- o Tracking Control
- ● Wind Erosion Control
- o Non-Storm Water Management
- o Materials and Waste Management

Definition and Purpose

Wood mulching consist of applying a mixture of shredded wood mulch, bark or compost. Wood mulch is mostly applicable to landscape projects.

The primary function of wood mulching is to reduce erosion by protecting bare soil from rainfall impact, increasing infiltration, and reducing runoff.

Appropriate Applications

Wood mulching is considered a temporary soil stabilization (erosion control) alternative in the following situations:

- As a stand-alone temporary surface cover on disturbed areas until soils can be prepared for revegetation and permanent vegetative cover can be established.
- As short term, non-vegetative ground cover on slopes to reduce rainfall impact, decrease the velocity of sheet flow, settle out sediment and reduce wind erosion.

Limitations

- Wood mulch may introduce unwanted species.
- Shredded wood does not withstand concentrated flows and is prone to sheet erosion.
- Green material has the potential for the presence of unwanted weeds and other plant materials. Delivery system is primarily by manual labor, although pneumatic application equipment is available.

Water Conservation Practices

NS-1





Standard Symbol

BMP Objectives

- o Soil Stabilization
- o Sediment Control
- o Tracking Control
- o Wind Erosion Control
- ● Non-Storm Water Management
- o Materials and Waste Management

Definition and Purpose

Water conservation practices are activities that use water during the construction of a project in a manner that avoids causing erosion and/or the transport of pollutants off site.

Appropriate Applications

- Water conservation practices are implemented on all construction sites and wherever water is used.
- Applies to all construction projects.

Limitations

- None identified.

Standards and Specifications

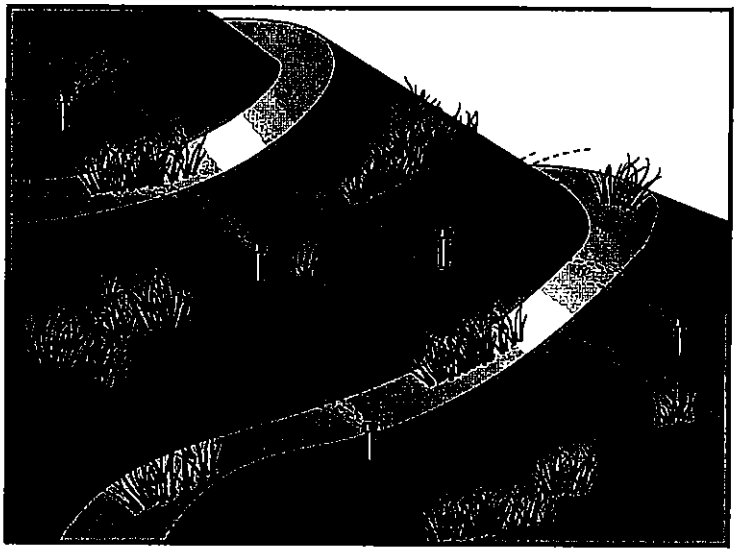
- Keep water equipment in good working condition.
- Stabilize water truck filling area.
- Repair water leaks promptly.
- Vehicles and equipment washing on the construction site is discouraged.
- Avoid using water to clean construction areas. Do not use water to clean pavement. Paved areas shall be swept and vacuumed.
- Direct construction water runoff to areas where it can infiltrate into the ground.
- Apply water for dust control in accordance with the Standard Specifications Section 10, and WE-1, "Wind Erosion Control."
- Report discharges to RE immediately.

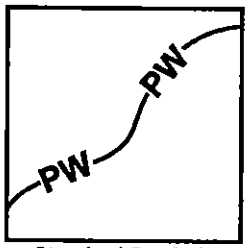
Maintenance and Inspection

- Inspect water equipment at least weekly.
- Repair water equipment as needed.

Potable Water/Irrigation

NS-7





Standard Symbol

BMP Objectives

- o Soil Stabilization
- o Sediment Control
- o Tracking Control
- o Wind Erosion Control
- ● Non-Storm Water Management
- o Materials and Waste Management

Definition and Purpose

Potable Water/Irrigation management consists of practices and procedures to manage the discharge of potential pollutants generated during discharges from irrigation water lines, landscape irrigation, lawn or garden watering, planned and unplanned discharges from potable water sources, water line flushing, and hydrant flushing.

Appropriate Applications

Implement this BMP whenever the above activities or discharges occur at or enter a construction site.

Limitations

- None identified.

Standards and Specifications

- Inspect irrigated areas within the construction limits for excess watering. Adjust watering times and schedules to ensure that the appropriate amount of water is being used and to minimize runoff. Consider factors such as soil structure, grade, time of year, and type of plant material in determining the proper amounts of water for a specific area.
- RE approval is required prior to commencing any washing activities that could discharge to the storm drain or receiving waterbody.
- Where possible, direct water from off-site sources around or through a construction site in a way that minimizes contact with the construction site.
- When possible, discharges from water line flushing shall be reused for landscaping purposes.
- Shut off the water source to broken lines, sprinklers, or valves as soon as possible to prevent excess water flow.

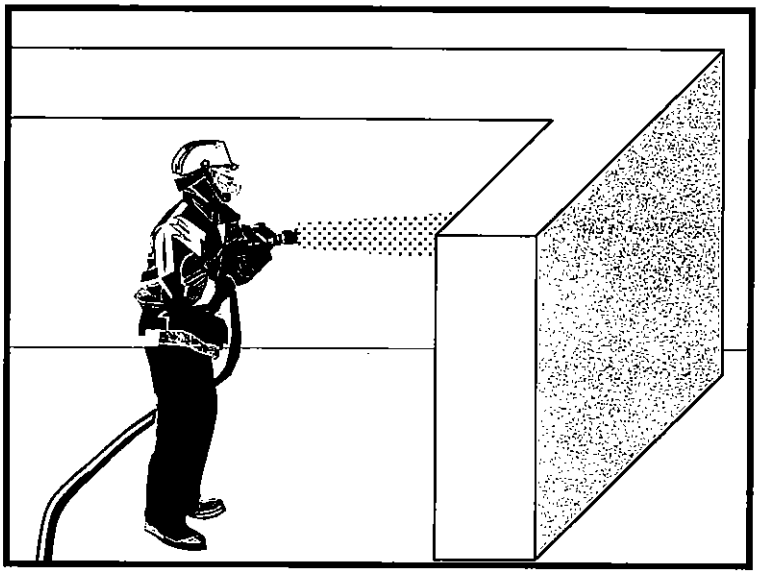
- Protect downstream storm water drainage systems and watercourses from water pumped or bailed from trenches excavated to repair water lines.

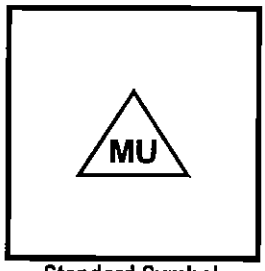
Maintenance and Inspection

- Repair broken water lines as soon as possible or as directed by the RE.
- Inspect irrigated areas regularly for signs of erosion and/or discharge.

Material Use

WM-2





Standard Symbol

BMP Objectives

- ○ Soil Stabilization
- ○ Sediment Control
- ○ Tracking Control
- ○ Wind Erosion Control
- ● Non-Storm Water Management
- ● Materials and Waste Management

Definition and Purpose

These are procedures and practices for use of construction material in a manner that minimizes or eliminates the discharge of these materials to the storm drain system or to watercourses.

Appropriate Applications

This BMP applies to all construction projects. These procedures apply when the following materials are used or prepared on site:

- Hazardous chemicals such as:

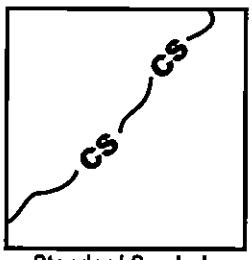
  Acids,
  lime,
  glues,
  adhesives,
  paints,
  solvents, and
  curing compounds.

- Soil stabilizers and binders.
- Fertilizers.
- Detergents.
- Plaster.
- Petroleum products such as fuel, oil, and grease.
- Asphalt and concrete components.
- Pesticides and herbicides.
- Other materials that may be detrimental if released to the environment.

Stockpile Management

WM-3





Standard Symbol

BMP Objectives

- ● Soil Stabilization
- ● Sediment Control
- ○ Tracking Control
- ○ Wind Erosion Control
- ○ Non-Storm Water Management
- ● Materials and Waste Management

Definition and Purpose

Stockpile management procedures and practices are designed to reduce or eliminate air and storm water pollution from stockpiles of soil, and paving materials such as portland cement concrete (PCC) rubble, asphalt concrete (AC), asphalt concrete rubble, aggregate base, aggregate subbase or pre-mixed aggregate, asphalt binder (so called "cold mix" asphalt) and pressure treated wood.

Appropriate Applications

Implemented in all projects that stockpile soil and other materials.

Limitations

- None identified

Standards and Specifications

- Protection of stockpiles is a year-round requirement.
- Locate stockpiles a minimum of 15 m (50 ft)away from concentrated flows of storm water, drainage courses, and inlets.
- Implement wind erosion control practices as appropriate on all stockpiled material. For specific information see BMP WE-1, "Wind Erosion Control."
- Stockpiles of contaminated soil shall be managed in accordance with BMP WM-7, "Contaminated Soil Management."
- Bagged materials should be placed on pallets and under cover.

Protection of Non-Active Stockpiles

Non-active stockpiles of the identified materials shall be protected further as follows:

- ***Soil stockpiles:***

  - During the rainy seasons, soil stockpiles shall be covered or protected with soil stabilization measures and a temporary perimeter sediment barrier at all times.

  - During the non-rainy season, soil stockpiles shall be covered and protected with a temporary perimeter sediment barrier prior to the onset of precipitation.

- ***Stockpiles of portland cement concrete rubble, asphalt concrete, asphalt concrete rubble, aggregate base, or aggregate subbase:***

  - During the rainy season, the stockpiles shall be covered or protected with a temporary perimeter sediment barrier at all times.

  - During the non-rainy season, the stockpiles shall be covered or protected with a temporary perimeter sediment barrier prior to the onset of precipitation.

- ***Stockpiles of "cold mix":***

  - During the rainy season, cold mix stockpiles shall be placed on and covered with plastic or comparable material at all times.

  - During the non-rainy season, cold mix stockpiles shall be placed on and covered with plastic or comparable material prior to the onset of precipitation.

- ***Stockpiles/Storage of pressure treated wood with copper, chromium, and arsenic or ammonical, copper, zinc, and arsenate:***

  - During the rainy season, treated wood shall be covered with plastic or comparable material at all times.

  - During the non-rainy season, treated wood shall be covered with plastic or comparable material and shall be placed on pallets prior to the onset of precipitation.

Protection of Active Stockpiles

Active stockpiles of the identified materials shall be protected further as follows:

- All stockpiles shall be covered, stabilized, or protected with a temporary linear sediment barrier prior to the onset of precipitation.

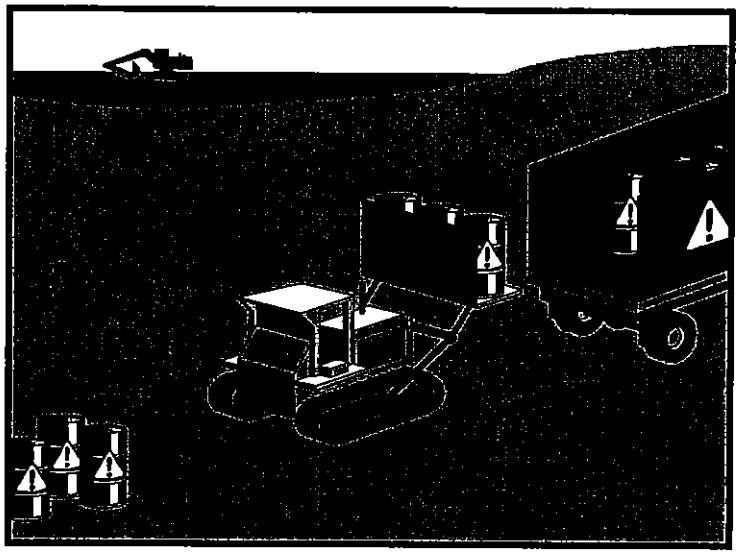
- Stockpiles of "cold mix" shall be placed on and covered with plastic or comparable material prior to the onset of precipitation.

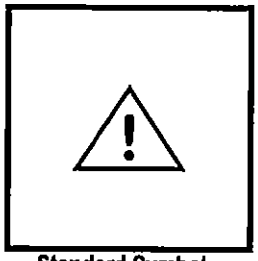
Maintenance and Inspections

- Repair and/or replace perimeter controls and covers as needed, or as directed by the RE, to keep them functioning properly. Sediment shall be removed when sediment accumulation reaches one-third (1/3) of the barrier height.

Hazardous Waste Management

WM-6





Standard Symbol

BMP Objectives

- ○ Soil Stabilization
- ○ Sediment Control
- ○ Tracking Control
- ○ Wind Erosion Control
- ● Non-Storm Water Management
- ● Materials and Waste Management

Definition and Purpose

These are procedures and practices to minimize or eliminate the discharge of pollutants from construction site hazardous waste to the storm drain systems or to watercourses.

Appropriate Applications

- This best management practice (BMP) applies to all construction projects.
- Hazardous waste management practices are implemented on construction projects that generate waste from the use of:
  - Petroleum Products,
  - Asphalt Products,
  - Concrete Curing Compounds,
  - Pesticides,
  - Acids,
  - Paints,
  - Stains,
  - Solvents,
  - Wood Preservatives,
  - Roofing Tar, or
  - Any materials deemed a hazardous waste in California, Title 22 Division 4.5, or listed in 40 CFR Parts 110, 117, 261, or 302.

Limitations

- Nothing in this BMP relieves the Contractor from responsibility for compliance with federal, state, and local laws regarding storage, handling, transportation, and disposal of hazardous wastes.
- This BMP does not cover aerially deposited lead (ADL) soils. For ADL soils refer to BMP WM-7, "Contaminated Soil Management," and the project special provisions.

Standards and Specifications

Education

- Educate employees and subcontractors on hazardous waste storage and disposal procedures.
- Educate employees and subcontractors on potential dangers to humans and the environment from hazardous wastes.
- Instruct employees and subcontractors on safety procedures for common construction site hazardous wastes.
- Instruct employees and subcontractors in identification of hazardous and solid waste.
- Hold regular meetings to discuss and reinforce hazardous waste management procedures (incorporate into regular safety meetings).
- The Contractor's Water Pollution Control Manager (WPCM) shall oversee and enforce proper hazardous waste management procedures and practices.
- Make sure that hazardous waste is collected, removed, and disposed of only at authorized disposal areas.

Storage Procedures

- Wastes shall be stored in sealed containers constructed of a suitable material and shall be labeled as required by Title 22 CCR, Division 4.5 and 49 CFR Parts 172,173, 178, and 179.
- All hazardous waste shall be stored, transported, and disposed as required in Title 22 CCR, Division 4.5 and 49 CFR 261-263.
- Waste containers shall be stored in temporary containment facilities that shall comply with the following requirements:
  - Temporary containment facility shall provide for a spill containment volume able to contain precipitation from a 24-hour, 25 year storm event, plus the greater of 10% of the aggregate volume of all containers or 100% of the capacity of the largest tank within its boundary, whichever is greater.

- Temporary containment facility shall be impervious to the materials stored there for a minimum contact time of 72 hours.
- Temporary containment facilities shall be maintained free of accumulated rainwater and spills. In the event of spills or leaks accumulated rainwater and spills shall be placed into drums after each rainfall. These liquids shall be handled as a hazardous waste unless testing determines them to be non-hazardous. Non-hazardous liquids shall be sent to an approved disposal site.
- Sufficient separation shall be provided between stored containers to allow for spill cleanup and emergency response access.
- Incompatible materials, such as chlorine and ammonia, shall not be stored in the same temporary containment facility.
- Throughout the rainy season, temporary containment facilities shall be covered during non-working days, and prior to rain events. Covered facilities may include use of plastic tarps for small facilities or constructed roofs with overhangs. A storage facility having a solid cover and sides is preferred to a temporary tarp. Storage facilities shall be equipped with adequate ventilation.

- Drums shall not be overfilled and wastes shall not be mixed.
- Unless watertight, containers of dry waste shall be stored on pallets.
- Paint brushes and equipment for water and oil based paints shall be cleaned within a contained area and shall not be allowed to contaminate site soils, watercourses or drainage systems. Waste paints, thinners, solvents, residues, and sludges that cannot be recycled or reused shall be disposed of as hazardous waste. When thoroughly dry, latex paint and paint cans, used brushes, rags, absorbent materials, and drop cloths shall be disposed of as solid waste.
- Ensure that adequate hazardous waste storage volume is available.
- Ensure that hazardous waste collection containers are conveniently located.
- Designate hazardous waste storage areas on site away from storm drains or watercourses and away from moving vehicles and equipment to prevent accidental spills.
- Minimize production or generation of hazardous materials and hazardous waste on the job site.
- Use containment berms in fueling and maintenance areas and where the potential for spills is high.

- Segregate potentially hazardous waste from non-hazardous construction site debris.
- Keep liquid or semi-liquid hazardous waste in appropriate containers (closed drums or similar) and under cover.
- Clearly label all hazardous waste containers with the waste being stored and the date of accumulation.
- Place hazardous waste containers in secondary containment.
- Do not allow potentially hazardous waste materials to accumulate on the ground.
- Do not mix wastes.

Disposal Procedures

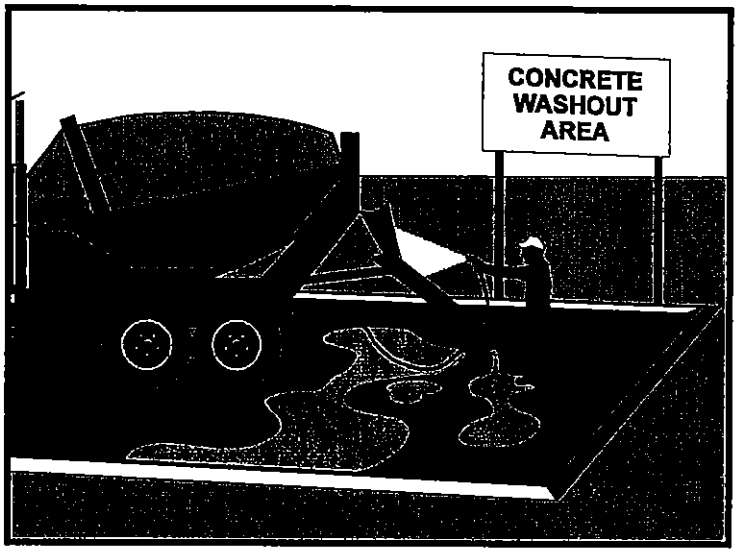
- Waste shall be disposed of outside the highway right-of-way within 90 days of being generated, or as directed by the Resident Engineer (RE). In no case shall hazardous waste storage exceed requirements in Title 22 CCR, Section 66262.34.
- Waste shall be disposed of by a licensed hazardous waste transporter at an authorized and licensed disposal facility or recycling facility utilizing properly completed Uniform Hazardous Waste Manifest forms.
- A Department of Health Services (DHS) certified laboratory shall sample waste and classify it to determine the appropriate disposal facility.
- Make sure that toxic liquid wastes (e.g., used oils, solvents, and paints) and chemicals (e.g., acids, pesticides, additives, curing compounds) are not disposed of in dumpsters designated for solid waste construction debris.
- Properly dispose of rainwater in secondary containment that may have mixed with hazardous waste.
- Recycle any useful material such as used oil or water-based paint when practical.
- Attention is directed to "Hazardous Material", "Contaminated Material", and "Aerially Deposited Lead" of the contract documents regarding the handling and disposal of hazardous materials.

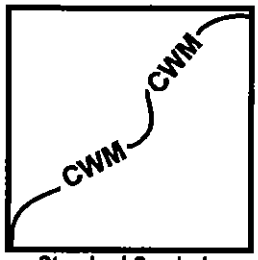
Maintenance and Inspection

- A foreman and/or construction supervisor shall monitor on-site hazardous waste storage and disposal procedures.
- Waste storage areas shall be kept clean, well organized, and equipped with ample clean-up supplies as appropriate for the materials being stored.
- Storage areas shall be inspected in conformance with the provisions in the contract documents.
- Perimeter controls, containment structures, covers, and liners shall be repaired or replaced as needed to maintain proper function.
- Hazardous spills shall be cleaned up and reported in conformance with the applicable Material Safety Data Sheet (MSDS) and the instructions posted at the project site.
- The National Response Center, at (800) 424-8802, shall be notified of spills of Federal reportable quantities in conformance with the requirements in 40 CFR parts 110, 117, and 302.
- Copy of the hazardous waste manifests shall be provided to the RE.

Concrete Waste Management

WM-8





Standard Symbol

BMP Objectives

- ○ Soil Stabilization
- ○ Sediment Control
- ○ Tracking Control
- ○ Wind Erosion Control
- ● Non-Storm Water Management
- ● Materials and Waste Management

Definition and Purpose

These are procedures and practices that are designed to minimize or eliminate the discharge of concrete waste materials to the storm drain systems or watercourses.

Appropriate Applications

- Concrete waste management procedures and practices are implemented on construction projects where concrete is used as a construction material or where concrete dust and debris result from demolition activities.
- Where slurries containing portland cement concrete (PCC) or asphalt concrete (AC) are generated, such as from sawcutting, coring, grinding, grooving, and hydro-concrete demolition.
- Where concrete trucks and other concrete-coated equipment are washed on site, when approved by the Resident Engineer (RE). See also NS-8, "Vehicle and Equipment Cleaning."
- Where mortar-mixing stations exist.

Limitations

- None identified.

Standards and Specifications

Education

- Educate employees, subcontractors, and suppliers on the concrete waste management techniques described herein.
- The Contractor's Water Pollution Control Manager (WPCM) shall oversee and enforce concrete waste management procedures.

Concrete Slurry Wastes

- PCC and AC waste shall not be allowed to enter storm drains or watercourses.

- PCC and AC waste shall be collected and properly disposed of outside the highway right-of-way in conformance with Standard Specifications Section 7-1.13 or placed in a temporary concrete washout facility as shown in the figures on Pages 5 and 6.
- Disposal of hardened PCC and AC waste shall be in conformance with Standard Specifications Section 15-3.02.
- A sign shall be installed adjacent to each temporary concrete washout facility to inform concrete equipment operators to utilize the proper facilities as shown on Page 6.
- A foreman and/or construction supervisor shall monitor onsite concrete working tasks, such as saw cutting, coring, grinding and grooving to ensure proper methods are implemented.
- Do not allow saw-cut PCC slurry to enter storm drains or watercourses. See also BMP NS-3, "Paving and Grinding Operations;" and BMP WM-10, "Liquid Waste Management." Residue from grinding operations shall be picked up by means of a vacuum attachment to the grinding machine. Saw cutting residue shall not be allowed to flow across the pavement, and shall not be left on the surface of the pavement.
- Vacuum slurry residue and dispose in a temporary facility (as described in Onsite Temporary Concrete Washout Facility, Concrete Transit Truck Washout Procedures, below) and allow slurry to dry. Dispose of dry slurry residue in accordance with BMP WM-5, "Solid Waste Management", or, for on-site disposal, in accordance with Standard Specification 15-3.02, Removal Methods.
- Collect and dispose of residue from grooving and grinding operations in accordance with Standard Specifications Section 42-1.02 and 42-2.02.

Onsite Temporary Concrete Washout Facility, Concrete Transit Truck Washout Procedures

- Temporary concrete washout facilities shall be located a minimum of 15 m (50 ft) from storm drain inlets, open drainage facilities, and watercourses, unless determined infeasible by the RE. Each facility shall be located away from construction traffic or access areas to prevent disturbance or tracking.
- A sign shall be installed adjacent to each washout facility to inform concrete equipment operators to utilize the proper facilities. The sign shall be installed as shown on the plans and in conformance with the provisions in Standard Specifications Section 56-2, Roadside Signs.

- Temporary concrete washout facilities shall be constructed above grade or below grade at the option of the Contractor. Temporary concrete washout facilities shall be constructed and maintained in sufficient quantity and size to contain all liquid and concrete waste generated by washout operations.
- Temporary washout facilities shall have a temporary pit or bermed areas of sufficient volume to completely contain all liquid and waste concrete materials generated during washout procedures.
- Perform washout of concrete mixer trucks in designated areas only.
- Wash concrete only from mixer truck chutes into approved concrete washout facility. Washout may be collected in an impermeable bag for disposal.
- Pump excess concrete in concrete pump bin back into concrete mixer truck.
- Concrete washout from concrete pumper bins can be washed into concrete pumper trucks and discharged into designated washout area or properly disposed offsite.
- Once concrete wastes are washed into the designated area and allowed to harden, the concrete shall be broken up, removed, and disposed of per BMP WM-5, "Solid Waste Management", and in conformance with the provisions in Standard Specifications Section 15-3.02, "Removal Methods."

Temporary Concrete Washout Facility Type "Above Grade"

- Temporary concrete washout facility Type "Above Grade" shall be constructed as shown on Page 5 or 6, with a recommended minimum length and minimum width of 3 m (10 ft), but with sufficient quantity and volume to contain all liquid and concrete waste generated by washout operations. The length and width of a facility may be increased, at the Contractor's expense, upon approval from the RE.
- Straw bales, wood stakes, and sandbag materials shall conform to the provisions in BMP SC-9, "Straw Bale Barrier."
- Plastic lining material shall be a minimum of 10-mil polyethylene sheeting and shall be free of holes, tears or other defects that compromise the impermeability of the material.
- Portable delineators shall conform to the provisions in Standard Specifications Section 12-3.04, "Portable Delineators.". The delineator bases shall be cemented to the pavement in the same manner as provided for cementing pavement markers to pavement in Standard Specifications Section 85-1.06, "Placement." Portable delineators shall be applied only to a clean, dry surface.

Temporary Concrete Washout Facility (Type Below Grade)

- Temporary concrete washout facility Type "Below Grade" shall be constructed as shown on page 6, with a recommended minimum length and minimum width of 3m (10 ft). The quantity and volume shall be sufficient to contain all liquid and concrete waste generated by washout operations. The length and width of a facility may be increased, at the Contractor's expense, upon approval of the RE. Lath and flagging shall be commercial type.

- Plastic lining material shall be a minimum of 10-mil polyethylene sheeting and shall be free of holes, tears or other defects that compromise the impermeability of the material.

- The soil base shall be prepared free of rocks or other debris that may cause tears or holes in the plastic lining material.

Removal of Temporary Concrete Washout Facilities

- When temporary concrete washout facilities are no longer required for the work, as determined by the RE, the hardened concrete shall be removed and disposed of in conformance with the provisions in Standard Specifications Section 15-3.02. Disposal of PCC slurries or liquid waste shall be disposed of outside the highway right-of-way in conformance with provisions of Standard Specifications Section 7-1-13. Materials used to construct temporary concrete washout facilities shall become the property of the Contractor, shall be removed from the site of the work, and shall be disposed of outside the highway right-of-way in conformance with the provisions of the Standard Specifications, Section 7-1.13.

- Holes, depressions or other ground disturbance caused by the removal of the temporary concrete washout facilities shall be backfilled and repaired in conformance with the provisions in Standard Specifications Section 15-1.02, "Preservation of Property."

Maintenance and Inspection

- The Contractor's Water Pollution Control Manager (WPCM) shall monitor on site concrete waste storage and disposal procedures at least weekly or as directed by the RE.

- The WPCM shall monitor concrete working tasks, such as saw cutting, coring, grinding and grooving daily to ensure proper methods are employed or as directed by the RE.

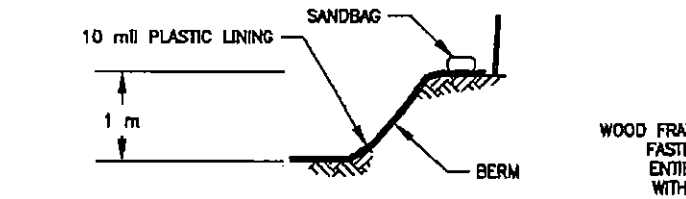
- Temporary concrete washout facilities shall be maintained to provide adequate holding capacity with a minimum freeboard of 100 mm (4 inches) for above grade facilities and 300 mm (12 inches) for below grade facilities. Maintaining temporary concrete washout facilities shall include removing and disposing of hardened concrete and returning the facilities to a functional condition. Hardened concrete materials shall be removed and disposed of in conformance with the provisions in Standard Specifications Section 15-3.02, "Removal Methods."

- Existing facilities must be cleaned, or new facilities must be constructed and ready for use once the washout is 75% full.

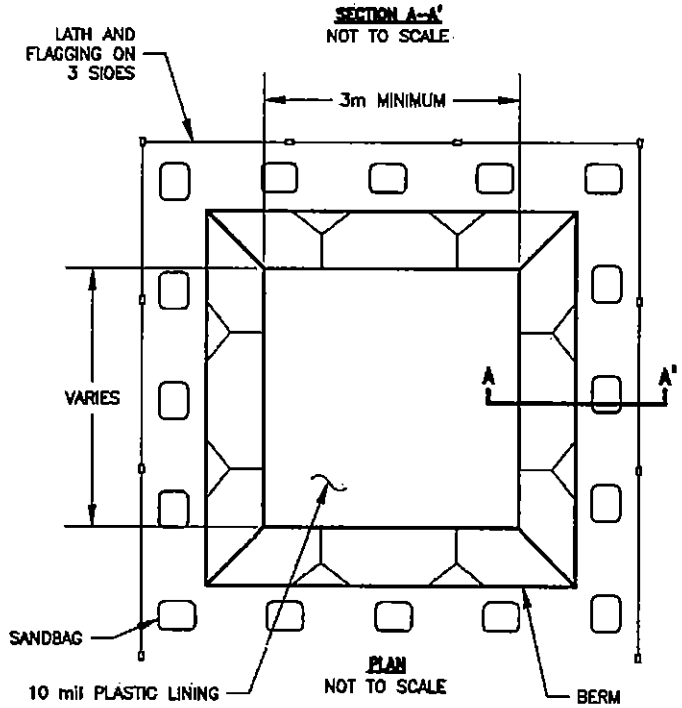
- Temporary concrete washout facilities shall be inspected for damage (i.e. tears in PVC liner, missing sand bags, etc.). Damaged facilities shall be repaired.

Concrete Waste Management

WM-8

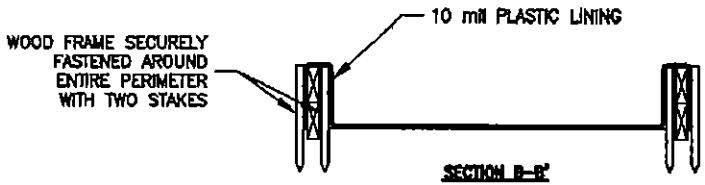


SECTION A-A'
NOT TO SCALE

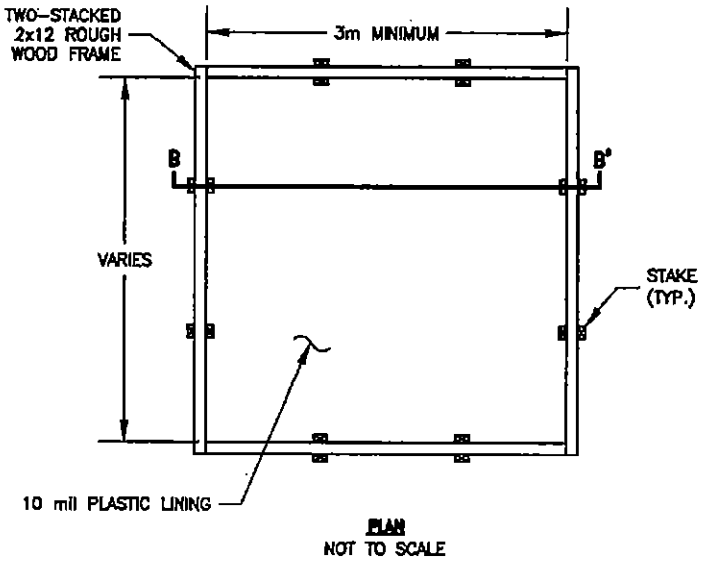


PLAN
NOT TO SCALE

TYPE "BELOW GRADE"



SECTION B-B'
NOT TO SCALE



PLAN
NOT TO SCALE

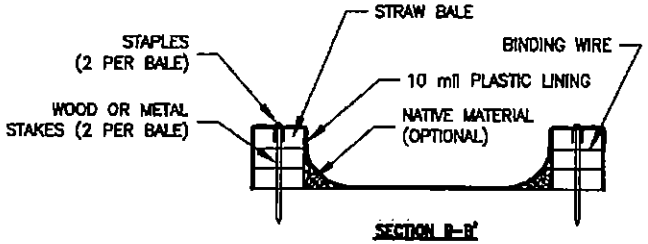
TYPE "ABOVE GRADE" WITH WOOD PLANKS

NOTES:

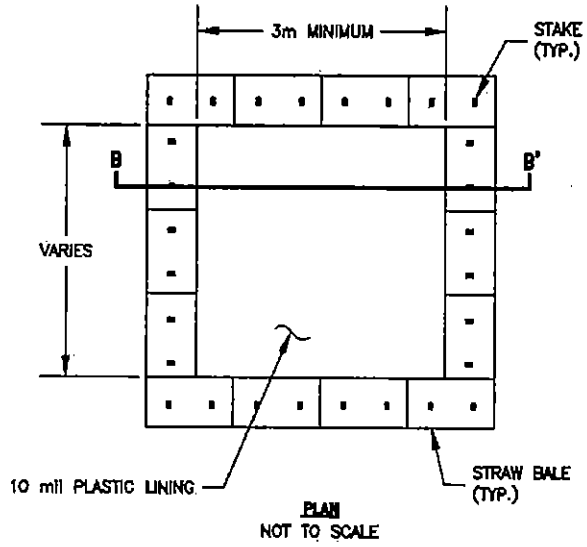
1. ACTUAL LAYOUT DETERMINED IN THE FIELD.
2. THE CONCRETE WASHOUT SIGN (SEE PAGE 6) SHALL BE INSTALLED WITHIN 10 m OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

Concrete Waste Management

WM-8

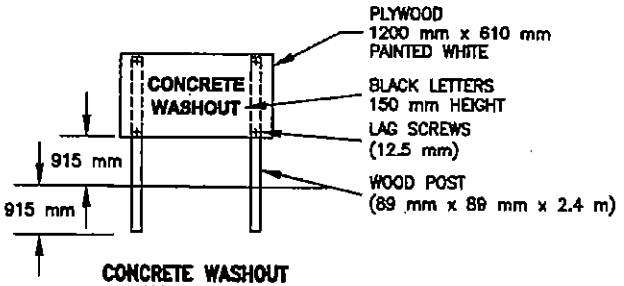


SECTION B–B'
NOT TO SCALE

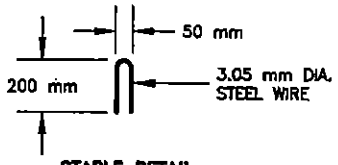


PLAN
NOT TO SCALE

**TYPE "ABOVE GRADE"
WITH STRAW BALES**



**CONCRETE WASHOUT
SIGN DETAIL
(OR EQUIVALENT)**



STAPLE DETAIL

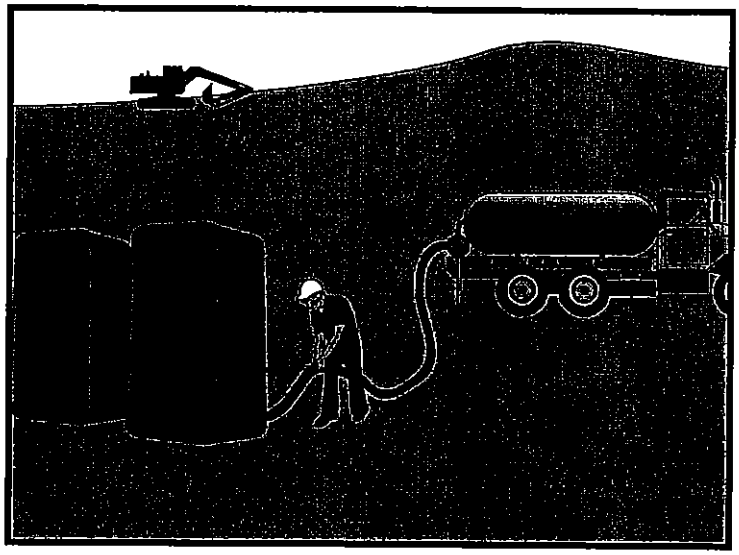
NOTES:

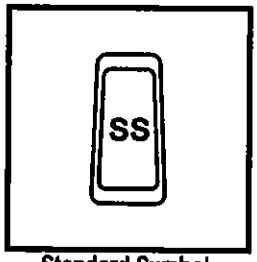
1. ACTUAL LAYOUT DETERMINED IN THE FIELD.
2. THE CONCRETE WASHOUT SIGN (SEE FIG. 4–15) SHALL BE INSTALLED WITHIN 10 m OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

CALTRANS/FIG4–14.DWG SAC 8–14–02

Sanitary/Septic Waste Management

WM-9





Standard Symbol

BMP Objectives

- ○ Soil Stabilization
- ○ Sediment Control
- ○ Tracking Control
- ○ Wind Erosion Control
- ● Non-Storm Water Management
- ● Materials and Waste Management

Definition and Purpose

Procedures and practices to minimize or eliminate the discharge of construction site sanitary/septic waste materials to the storm drain system or to watercourses.

Appropriate Applications

Sanitary/septic waste management practices are implemented on all construction sites that use temporary or portable sanitary/septic waste systems.

Limitations

- None identified.

Standards and Specifications

Education

- Educate employees, subcontractors, and suppliers on sanitary/septic waste storage and disposal procedures.
- Educate employees, subcontractors, and suppliers of potential dangers to humans and the environment from sanitary/septic wastes.
- Instruct employees, subcontractors, and suppliers in identification of sanitary/septic waste.
- Hold regular meetings to discuss and reinforce disposal procedures (incorporate into regular safety meetings).
- Establish a continuing education program to indoctrinate new employees.

Storage and Disposal Procedures

- Temporary sanitary facilities shall be located away from drainage facilities, watercourses, and from traffic circulation. When subjected to high winds or risk.

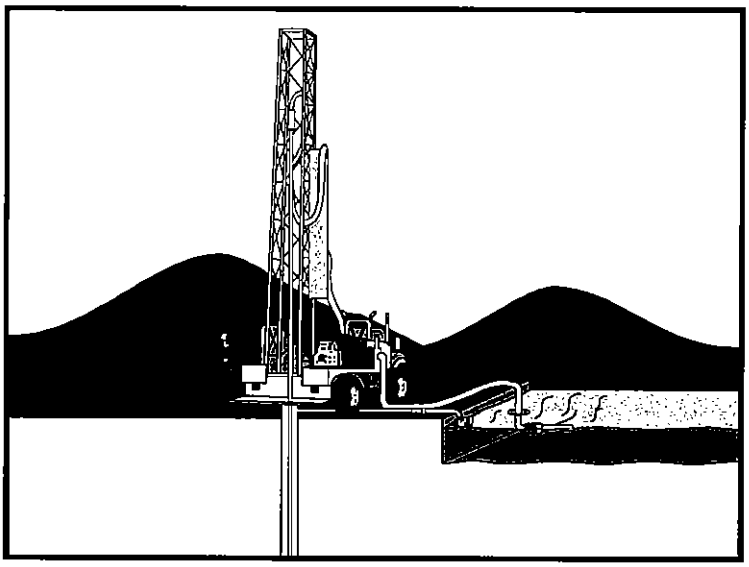
- Wastewater shall not be discharged or buried within the highway right-of-way.
- Sanitary and septic systems that discharge directly into sanitary sewer systems, where permissible, shall comply with the local health agency, city, county, and sewer district requirements.
- If using an on site disposal system, such as a septic system, comply with local health agency requirements.
- Properly connect temporary sanitary facilities that discharge to the sanitary sewer system to avoid illicit discharges.
- Ensure that sanitary/septic facilities are maintained in good working order by a licensed service.
- Use only reputable, licensed sanitary/septic waste haulers.

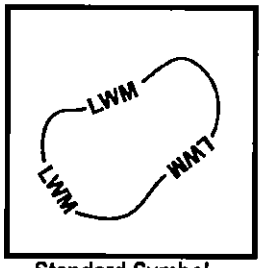
Maintenance and Inspection

- The Contractor's Water Pollution Control Manager (WPCM) shall monitor onsite sanitary/septic waste storage and disposal procedures at least weekly.

Liquid Waste Management

WM-10





Standard Symbol

BMP Objectives

- ○ Soil Stabilization
- ○ Sediment Control
- ○ Tracking Control
- ○ Wind Erosion Control
- ● Non-Storm Water Management
- ● Materials and Waste Management

Definition and Purpose

Procedures and practices to prevent discharge of pollutants to the storm drain system or to watercourses as a result of the creation, collection, and disposal of non-hazardous liquid wastes.

Appropriate Applications

Liquid waste management is applicable to construction projects that generate any of the following non-hazardous byproducts, residuals, or wastes:

- Drilling slurries and drilling fluids.
- Grease-free and oil-free wastewater and rinse water.
- Dredgings.
- Other non-storm water liquid discharges not permitted by separate permits.

Limitations

- Disposal of some liquid wastes may be subject to specific laws and regulations, or to requirements of other permits secured for the construction project (e.g., National Pollutant Discharge Elimination System [NPDES] permits, Army Corps permits, Coastal Commission permits, etc.).
- Does not apply to dewatering operations (see BMP NS-2, "Dewatering Operations"), solid waste management (see BMP WM-5, "Solid Waste Management"), hazardous wastes (see BMP WM-6, "Hazardous Waste Management"), or concrete slurry residue (see BMP WM-8, "Concrete Waste Management").
- Does not apply to non-stormwater discharges permitted by any NPDES permit held by the pertinent Caltrans District, unless the discharge is determined by Caltrans to be a source of pollutants. Typical permitted non-stormwater discharges can include: water line flushing; landscape irrigation; diverted stream flows; rising ground waters; uncontaminated pumped ground

water; discharges from potable water sources; foundation drains; irrigation water; springs; water from crawl space pumps; footing drains; lawn watering; flows from riparian habitats and wetlands; and, discharges or flows from emergency fire fighting activities.

Standards and Specifications

General Practices

- The Contractor's Water Pollution Control Manager (WPCM) shall oversee and enforce proper liquid waste management procedures and practices.
- Instruct employees and subcontractors how to safely differentiate between non-hazardous liquid waste and potential or known hazardous liquid waste.
- Instruct employees, subcontractors, and suppliers that it is unacceptable for any liquid waste to enter any storm drainage structure, waterway, or receiving water.
- Educate employees and subcontractors on liquid waste generating activities, and liquid waste storage and disposal procedures.
- Hold regular meetings to discuss and reinforce disposal procedures (incorporate into regular safety meetings).
- Verify which non-stormwater discharges are permitted by the Caltrans Statewide NPDES permit; different regions might have different requirements not outlined in this permit. Some listed discharges may be prohibited if Caltrans determines the discharge to be a source of pollutants.
- Apply the NS-8, "Vehicle and Equipment Cleaning" BMP for managing wash water and rinse water from vehicle and equipment cleaning operations.

Containing Liquid Wastes

- Drilling residue and drilling fluids shall not be allowed to enter storm drains and watercourses and shall be disposed of outside the highway right-of-way in conformance with the provisions in Standard Specifications Section 7-1.13.
- If an appropriate location is available, as determined by the Resident Engineer (RE), drilling residue and drilling fluids that are exempt under California Code of Regulations (CCR) Title 23 §2511(g) may be dried by infiltration and evaporation in a containment facility constructed in conformance with the provisions concerning the Temporary Concrete Washout Facilities detailed in BMP WM-08, "Concrete Waste Management."
- Liquid wastes generated as part of an operational procedure, such as water-laden dredged material and drilling mud, shall be contained and not allowed to flow into drainage channels or receiving waters prior to treatment.

- Contain liquid wastes in a controlled area, such as a holding pit, sediment basin, roll-off bin, or portable tank.
- Containment devices must be structurally sound and leak free.
- Containment devices must be of sufficient quantity or volume to completely contain the liquid wastes generated.
- Take precautions to avoid spills or accidental releases of contained liquid wastes. Apply the education measures and spill response procedures outlined in BMP WM-4, "Spill Prevention and Control."
- Do not locate containment areas or devices where accidental release of the contained liquid can threaten health or safety, or discharge to water bodies, channels, or storm drains.

Capturing Liquid Wastes

- Capture all liquid wastes running off a surface, which has the potential to affect the storm drainage system, such as wash water and rinse water from cleaning walls or pavement.
- Do not allow liquid wastes to flow or discharge uncontrolled. Use temporary dikes or berms to intercept flows and direct them to a containment area or device for capture.
- If the liquid waste is sediment laden, use a sediment trap (see BMP SC-3, "Sediment Trap") for capturing and treating the liquid waste stream, or capture in a containment device and allow sediment to settle.

Disposing of Liquid Wastes

- Typical method is to dewater the contained liquid waste, using procedures such as described in BMP NS-2, "Dewatering Operations", and BMP SC-2, "Sediment/Desilting Basin"; and dispose of resulting solids per BMP WM-5, "Solid Waste Management", or per Standard Specifications Section 7-1.13, "Disposal of Material Outside the Highway Right of Way", for off-site disposal.
- Method of disposal for some liquid wastes may be prescribed in Water Quality Reports, NPDES permits, Environmental Impact Reports, 401 Water Quality Certifications or 404 permits, local agency discharge permits, etc., and may be defined elsewhere in the special provisions.
- Liquid wastes, such as from dredged material, may require testing and certification whether it is hazardous or not before a disposal method can be determined.

- For disposal of hazardous waste, see BMP WM-6, "Hazardous Waste Management."
- If necessary, further treat liquid wastes prior to disposal. Treatment may include, though is not limited to, sedimentation, filtration, and chemical neutralization.

Maintenance and Inspection

- Spot check employees and subcontractors at least monthly throughout the job to ensure appropriate practices are being employed.
- Remove deposited solids in containment areas and capturing devices as needed, and at the completion of the task. Dispose of any solids as described in BMP WM-5, "Solid Waste Management."
- Inspect containment areas and capturing devices frequently for damage, and repair as needed.

Attachment B-3
Record of Tailgate Meetings that Discuss SWPPP Topics

Attachment B-4
Record of Annual Compliance Certification

Attachment B-5
Blank Inspection and Monitoring Checklist Forms

CONSTRUCTION SITE SELF-INSPECTION CHECKLIST

Inspected By: _____

Project: _____

Contractor: _____

Date: _____

Check "Yes" or "No" or "N/A" if not applicable.

YES	NO	N/A	
_____	_____	_____	1. Has there been an absence of rain since the last inspection?
_____	_____	_____	2. Are all sediment barriers (e.g., sandbags, straw bales, and silt fences) in place in accordance with the Local SWPPP or WWECP and are they functioning properly?
_____	_____	_____	3. If present, are all exposed slopes protected from erosion through the implementation of acceptable soil stabilization practices?
_____	_____	_____	4. If present, are all sediment traps/basins installed and functioning properly (if applicable)?
_____	_____	_____	5. Are all material handling and storage areas reasonably clean and free of spills, leaks, or other deleterious materials?
_____	_____	_____	6. Are all equipment storage and maintenance areas reasonably clean and free of spills, leaks, or any other deleterious materials?
_____	_____	_____	7. Are all materials and equipment properly covered?

YES	NO	N/A	
_____	_____	_____	8. Are all external discharge points (i.e., outfalls) reasonably free of any noticeable pollutant discharges?
_____	_____	_____	9. Are all internal discharge points (i.e., storm drain inlets) provided with inlet protection?
_____	_____	_____	10. Are all external discharge points reasonably free of any significant erosion or sediment transport?
_____	_____	_____	11. Are all BMPs identified on the Plan installed in the proper location and according to the specifications for the plan?
_____	_____	_____	12. Are all structural control practices in good repair and maintained in functional order?
_____	_____	_____	13. Are all on-site traffic routes, parking, and storage of equipment and supplies restricted to areas designated in the Plan for those uses?
_____	_____	_____	14. Are all locations of temporary soil stockpiles or construction materials in approved areas?
_____	_____	_____	15. Are all seeded or landscaped areas properly maintained?
_____	_____	_____	16. Are sediment treatment controls in place at discharge points from the site?
_____	_____	_____	17. Are slopes free of significant erosion?
_____	_____	_____	18. Are all points of ingress and egress from the site provided with stabilized construction entrances?
_____	_____	_____	19. Is sediment, debris, or mud being cleaned from public roads at intersections with site access roads?

YES	NO	N/A	
_____	_____	_____	20. Does the Plan reflect current site conditions?

If you answered "no" to any of the questions on the previous page except Number 1, describe any corrective action(s) that must be taken to remedy the problem and when the corrective action is to be completed:

Attachment B-6
Record of Completed Inspection and Monitoring Checklists

Appendix C
ASTM E-1903-97: Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process

Designation: E 1903 – 97

Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process[1]

This standard is issued under the fixed designation E 1903; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This guide[2] covers a framework for employing good commercial and customary practices in conducting a Phase II environmental site assessment (ESA) of a parcel of commercial property with respect to the potential presence of a range of contaminants which are within the scope of CERCLA as well as petroleum products.

1.1.1 This guide is intended to provide practical procedural guidance for the continuation of an assessment conducted in accordance with the most recent edition of Practice E 1527 or E 1528, or both. Practice E 1527 is the practice for conducting Phase I ESAs for a parcel of commercial property and Practice E 1528 is the transaction screen practice. Both practices define a process that is intended to constitute "all appropriate inquiry into the previous ownership and uses of a property" to determine whether hazardous substances or petroleum products have been disposed or released there in order to satisfy one element of the innocent purchaser defense to CERCLA liability.

1.1.2 Because this guide for conducting Phase II ESAs describes a process for further evaluating a parcel of commercial property with recognized environmental conditions, as defined in Practices E 1527 and E 1528, users of this guide should understand the requirements and limitations of those practices. It is strongly recommended that the user refer to and apply the guide in concert with Practices E 1527 and E 1528.

1.1.3 This guide has multiple purposes. It is intended to provide assistance to users in satisfying the appropriate inquiry element of CERCLA's innocent purchaser defense, as defined in 42 U.S.C. § 9601(35)(B), where a previous assessment satisfying that element identified recognized environmental conditions. This guide also is intended to assist a user in gathering reliable information about a property's environmental conditions to guide the user's business decisions. However, this guide does not purport to include the level of specificity required of technical standards that govern full characterization of a site's environmental conditions.

1.2 *Objectives*—The primary objectives of conducting a Phase II ESA are to evaluate the recognized environmental conditions identified in the Phase I ESA or transaction screen process for the purpose of providing sufficient information regarding the nature and extent of contamination to assist in making informed business decisions about the property; and where applicable, providing the level of knowledge necessary to satisfy the innocent purchaser defense under CERCLA.

1.2.1 To achieve these objectives, it may be appropriate to perform more than a single iteration of assessment. The guide fosters an iterative approach to Phase II assessments and allows the user to terminate the Phase II ESA at the point where sufficient data have been generated to meet the user's objectives.

1.2.2 At the completion of a Phase II ESA, the environmental professional should be able to conclude, at a minimum, that either *(a)* the ESA has provided sufficient information to render a professional opinion that there is no reasonable basis to suspect the presence of hazardous substances or petroleum products at the property associated with the recognized environmental conditions under assessment, or *(b)* the ESA has confirmed the presence of hazardous substances or petroleum products at the property under conditions that indicate disposal or release. If the information developed in the ESA is insufficient for the environmental professional to reach either of these conclusions, the environmental professional may recommend additional iterations of assessment if warranted to meet the objectives of the user. If the environmental professional reasonably suspects that unconfirmed hazardous substance or petroleum releases remain but concludes that further reasonable assessment is not expected to provide additional information of significant value, he may recommend that further assessment is not warranted. In such circumstances, the recommendation for no further assessment should be accompanied by an explanation why a reasonable suspicion of releases remains and why further reasonable assessment is not warranted. Depending upon the work scope, the environmental professional may also be able to provide guidance on the nature and extent of contamination in order to assist the user in making business decisions regarding the property.

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[1] This guide is under the jurisdiction of ASTM Committee E-50 on Environmental Assessment and is the direct responsibility of Subcommittee E50.02 on Commercial Real Estate Transactions.

Current edition approved Dec. 10, 1997. Published February 1998.

[2] As used herein, a "Standard" is a document that has been developed and established within the consensus principles of the Society and that meets the approval requirements of ASTM procedures and regulations. A "Guide" is a compendium of information or a series of options that does not recommend a specific course of action. A guide increases the awareness of information and approaches in a given subject area. A "Practice," in contrast, is a definitive set of instructions for performing one or more specific operations that does not produce a test result. See Form and Style for ASTM Standards, 10th ed., 1996.

1.2.3 This guide is intended to provide guidance for assessing recognized environmental conditions and developing technically sound data. It is not intended to satisfy the level of inquiry that may be necessary to support remedial solutions for a site. For further discussion of the use of this guide, refer to Section 4 on Significance and Use.

1.3 *Needs of the User*—Establishing the innocent purchaser defense may not be a realistic objective in some instances. Accordingly, the extent of assessment is based on the business objectives of the user as well as the degree of uncertainty acceptable to the user. In either case, the primary purpose of a Phase II ESA conducted in accordance with this guide is to assess and evaluate the recognized environmental conditions identified in the Phase I ESA or Transaction Screen Process.

1.3.1 The mere confirmation of contamination or the preliminary indication of the extent and magnitude of contamination may be sufficient for the purposes of many users. If a user desires a more complete characterization of the environmental condition of the property, further assessment may be undertaken. However, this guide should not be construed to require multiple iterations of assessments in all cases, either to establish the innocent purchaser defense or to meet other objectives. Many Phase II ESAs may in fact be restricted to only a single round of assessment, whatever the extent of contamination, if any, that might be revealed.

1.4 *Limitations*—The use of this guide is related to the scope as set forth in Section 1. For information purposes, Section 12 of this guide contains a non-exhaustive list of certain environmental conditions that are beyond the scope of this guide but that may warrant consideration by parties to a commercial property transaction. This guide provides an approach that may be employed to assess the environmental conditions listed in Section 12. Reference also should be made to 4.1.

1.5 *Organization of This Guide*—This guide has twelve sections and one appendix. Section 1 is the Scope section. Section 2 is Referenced Documents. Section 3, Terminology, contains definitions of terms and acronyms used in this guide. Section 4 is Significance and Use of this guide. Section 5 is Contracting Considerations. Sections 6-11 constitute the main body of the Phase II Environmental Site Assessment guide and include objectives (see Section 6), developing the scope of work (see Section 7), assessment activities (see Section 8), evaluation of data (see Section 9), interpretation of results (see Section 10) and recommended report preparation (see Section 11). Section 12 provides additional information regarding non-scope considerations. Appendix X1 provides a sample table of contents and report format for a written Phase II Environmental Site Assessment Report.

2. Referenced Documents

2.1 The references in this Section are for informational purposes. Although Phase II ESAs should utilize government- and industry-accepted practices and methods, this guide does not recommend the use of specific practices in the implementation of a Phase II ESA.

2.2 *ASTM Standards:*

D 5730 Guide to Site Characteristics for Environmental Purposes With Emphasis on Soil, Rock, The Vadose Zone and Ground Water[3,4]

D 653 Terminology Relating to Soil, Rock and Cont. Fluids[3]

D 4750 Test Method for Determining Subsurface Liquid Levels in a Borehole or Monitoring Well. (Observation Well)[3]

E 1527 Practice for Environmental Site Assessments: Phase I[5]

E 1528 Practice for Environmental Site Assessments: Transaction Screen Process[3]

3. Terminology

3.1 *Definitions:*

3.1.1 *aquifer*—as defined in Terminology D 653, a geologic formation that is capable of providing a significant quantity of water.

3.1.2 *ARARs*—an acronym for "applicable or relevant and appropriate requirements," a term used in CERCLA and interpreted by EPA regulations. Applicable requirements mean "those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance found at a CERCLA site", 40 C.F.R. § 300. Relevant and appropriate requirements means "those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal, environmental or state environmental or facility siting l... th... while not 'applicable' to a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA site, address problems or situations sufficiently similar to those encountered at the CERCLA site that their use is well suited to the particular site" 40 C.F.R. § 300.5.

3.1.3 *business decision*—a decision based on various business risk management considerations relating to a specific property, such as a transfer of title or change in financing. Such considerations may also include the potential financial exposure associated with environmental risks, the value of the property compared with the cost of environmental assessment and the participation and motivations of specific parties to the transaction (that is, owner, seller, buyer, lender, etc.).

3.1.4 *CERCLA*—the acronym for the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C.§ 9601, *et seq.*, the primary federal statute that governs the imposition of liability for environmental cleanups.

3.1.5 *C.F.R.*—Code of Federal Regulations.

3.1.6 *chain of custody*—a written or printed form which is used to document sample possession, condition and responsibility. This custody can include the time from sample conta... acquisition through transportation, sample collection and la... ratory analysis.

3.1.7 *chemical phases*—the physical state of the chemi... (that is; solid, liquid, vapor/gaseous). A chemical'... hys...

[3] *Annual Book of ASTM Standards*, Vol 04.08.

[4] Guide D 5730 covers the selection of the various ASTM Standards th... available for the investigation of soil, rock, the vadose zone, ground water, and media where investigations have an environmental purpose.

[5] *Annual Book of ASTM Standards*, Vol 11.04.

state can change from the one phase to another based on its physical environment.

3.1.8 *common law*—as distinguished from law created by the enactment of legislatures, the common law comprises the body of those principles and rules of action, relating to the government and security of persons and property, which derive their authority solely from usages and customs of immemorial antiquity, or from the judgments and decrees of the courts recognizing, affirming and enforcing such usages and customs; and, in this sense, particularly the ancient unwritten law of England.[6]

3.1.9 *cuttings*—soil, rock chips, fragments or other material that is brought to the surface by drilling or sampling, or both.

3.1.10 *disposal*—as defined by CERCLA and interpreted by EPA regulations, the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground waters. By judicial construction, the term also may include hazardous substances in repose in the environment, with the result that hazardous substances that have migrated to a site from an off-site source may nonetheless be considered to have been disposed at the site. See, for example, *United States v. Waste Industries*, 734 F.2d 159 (4th Cir. 1984). This construction is not universally accepted. See, for example, *United States v. Petersen Sand and Gravel, Inc.*, 806 F. Supp. 1346 (D.Ill. 1992).

3.1.11 *downgradient*—with respect to a given reference point, it is all points through which ground water originating at the reference point flows until reaching a surface discharge point or a distance or depth that ceases to be a matter of potential environmental concern; the direction of decreasing hydrostatic head.

3.1.12 *environmental media*—soil, rock, water, air, sediment.

3.1.13 *environmental professional*—a person or group of persons possessing sufficient training and experience necessary to prepare and implement a Phase II environmental site assessment in accordance with this guide, and from the information generated by such activities, having the ability to develop sound opinions and conclusions regarding recognized environmental conditions in connection with the property in question. An individual's status as an environmental professional may be limited to the type of assessment to be performed or to specific segments of the assessment for which the professional is responsible. The person may be an independent contractor or an employee of the user.

3.1.13.1 *Discussion*—Some jurisdictions may have licensing requirements for individuals who perform certain activities included in a Phase II ESA.

3.1.14 *EPA*—the United States Environmental Protection Agency.

3.1.15 *ESA*—environmental site assessment.

3.1.16 *fate and transport characteristics*—natural consequences that can be predicted based on the distinguishing characteristics of a substance and the media which carry the substance.

3.1.17 *ground water*—as defined by Terminology D 653, the part of the subsurface that is in the saturated zone. Loosely, all subsurface water as distinct from surface water.

3.1.18 *ground water flow*—as defined by Terminology D 653, the movement of water in the zone of saturation.

3.1.19 *ground water flow direction*—the compass bearing of the movement of water in the zone of saturation (vertical and horizontal components of ground water flow).

3.1.20 *hazardous substance*—a substance defined as a hazardous substance pursuant to CERCLA, 42 U.S.C. § 9601(14), as interpreted by EPA regulations and the courts. The term includes any substance designated pursuant to section 311(b)(2)(A) of the Clean Water Act, 33 U.S.C.§ 1321(b)(2)(A); any element, compound, mixture, solution or substance designated pursuant to section 102 of CERCLA, 42 U.S.C. § 9602; any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act, 42 U.S.C. § 6921, (but not including any waste the regulation of which under the Solid Waste Disposal Act, 42 U.S.C.§ 6901 *et seq.*, has been suspended by Act of Congress); any toxic pollutant listed under section 307(a) of the Clean Water Act, 33 U.S.C. § 1317(a); any hazardous air pollutant listed under section 112 of the Clean Air Act, 42 U.S.C. § 7412; and any imminently hazardous chemical substance or mixture with respect to which the EPA administrator has taken action pursuant to section 7 of the Toxic Substances Control Act, 15 U.S.C. § 2606. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance by EPA and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas). Hazardous substances designated by EPA are listed in 40 C.F.R. § 302.4.

3.1.21 *petroleum products*—those substances included within the petroleum exclusion to CERCLA, 42 U.S.C. § 9601(14), as interpreted by the courts and EPA; that is, petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under Subparagraphs (A) through (F) of 42 U.S.C. § 9601(14), natural gas, natural gas liquids, liquefied natural gas, and synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas). (The word fraction refers to certain distillates of crude oil, including gasoline, kerosene, diesel oil, jet fuels, and fuel oil, pursuant to Standard Definitions of Petroleum Statistics).[7]

3.1.22 *Phase I environmental site assessments (ESAs)*—the process described in Practice E 1527.

3.1.23 *Phase II environmental site assessments (ESAs)*—the process described in this guide.

3.1.24 *property*—the property that is the subject of the ESA described in this guide. The term includes buildings and other fixtures and improvements located on the property and affixed to the land.

[6] *Black's Law Dictionary 250-251*, 5th ed., 1979.

[7] *Standard Definitions of Petroleum Statistics*, American Petroleum Institute, Fourth Edition 1988.

3.1.25 *purged ground water*—water that is removed from a monitoring well prior to collecting a representative sample of the aquifer, including water generated during well installation and well development.

3.1.26 *quality assurance/quality control (QA/QC)*—the use of standards and procedures to provide reasonable assurance that samples collected and data generated are reliable, reproducible and verifiable.

3.1.27 *recognized environmental condition (REC)*—the presence or likely presence of any hazardous substances or petroleum products on property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

3.1.28 *release*—as defined by § 101(22) of CERCLA, 42 U.S.C. § 9601(22), "any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance or pollutant or contaminant), but exclud[ing] (A) any release which results in exposure to persons solely within a workplace, with respect to a claim which such persons may assert against the employer of such persons, (B) emissions from the engine exhaust of a motor vehicle, rolling stock, aircraft, vessel, or pipeline pumping station engine, (C) release of source, byproduct, or special nuclear material from a nuclear incident, as those terms are defined in the Atomic Energy Act of 1954 [42 U.S.C. § 2011 *et seq.*], if such release is subject to requirements with respect to financial protection established by the Nuclear Regulatory Commission under section 170 of such Act [42 U.S.C. § 2210], or, for the purposes of section 104 of CERCLA or any other response action, any release of source, byproduct, or special nuclear material from any processing site designated under section 102(a)(1) or 302(a) of the Uranium Mill Tailings Radiation Control Act of 1978; [42 U.S.C. § 7912(a)(1) or 7942(a)], and (D) the normal application of fertilizer."

3.1.29 *sample medium*—the particular matrix that is sampled for laboratory analysis. Examples of commonly encountered matrices include: soil, rock, sludge, sediment, air, wastes, pure or mixtures of chemicals, ground water, drinking water, surface water, etc.

3.1.30 *self-evaluation privilege*—a privilege invoked to protect from disclosure confidential information resulting from a critical self-analysis undertaken by the party seeking to invoke the privilege.

3.1.31 *Superfund*—the common name for the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. § 9601, *et seq.*, as amended by the Superfund Amendments and Reauthorization Act of 1986 ("SARA"), the primary federal statute that governs the imposition of liability for environmental cleanups.

3.1.32 *surface water*—water above the surface of the ground, including but not limited to lakes, ponds, reservoirs, artificial impoundments, streams, rivers, springs, seeps and wetlands.

3.1.33 *target analyte*—a chemical substance or class of chemicals that is selected for laboratory analysis or field analysis.

3.1.34 *Transaction Screen Process*—the process described in Practice E 1528.

3.1.35 *U.S.C.*—United States Code.

3.1.36 *user*—the party seeking to use this guide to guide performance of an ESA of the property. A user may include, without limitation, a purchaser of property, a potential tenant of property, an owner of property, a lender, or a property manager.

3.1.37 *water table*—as defined in Test Method D 4750, the surface of a ground water body at which the water pressure equals atmospheric pressure. Earth material below the ground water table is saturated with water.

4. Significance and Use

4.1 *Uses:*

4.1.1 This guide is intended for use on a voluntary basis by parties who wish to assess the recognized environmental conditions ("RECs") identified in a Phase I ESA or transa[illegible] screen process for the purpose of establishing the inno[illegible] purchaser defense, where applicable, or to support business decisions about the property. The level of assessment can, and most likely will, vary depending on the needs of the user and the business situation driving the assessment, as described in 1.3. No implication is intended that a person must use this guide in order to be deemed to have conducted inquiry in a commercially prudent or reasonable manner in any particular transaction. Nevertheless, this guide is intended to reflect good commercial and customary practice for appropriate inquiry sufficient to satisfy the innocent purchaser defense.

4.1.1.1 CERCLA provides that a purchaser of real property qualifies for the innocent purchaser defense if the purchaser acquires a contaminated site after the disposal or placement of hazardous substances at the site, and the purchaser neither knew nor had reason to know that any hazardous substance which is the subject of the release was disposed at the site. 42 U.S.C. § 9601(35)(A)(i). To establish that a purchaser had no reason to know of the disposal or release of any hazardous substance at the site, CERCLA requires the purchaser to show that at the time of acquisition the purchaser undertook all appropriate inquiry into the previous ownership and uses of a property consistent with "good commercial or customary practice". 42 U.S.C.§ 9601(35)(B). To determine whether a purchaser made "all appropriate inquiry", the courts are directed by statute to consider any specialized knowled[illegible] experience on the part of the purchaser, the relationship o[illegible] purchase price to the value of the property, if uncontaminated, commonly known or ascertainable information about the property, the obviousness of the presence or likely presence of contamination at the property, and the ability to detect such contamination by appropriate inspection.

4.1.1.2 This guide is intended to meet the business community's need for a written, practical reference describing procedures that constitute" all appropriate inquiry" once recognized environmental conditions are identified. This guide is intended to be a practical reference document which can be used to assess whether good commercial or customary practice (that is, appropriate procedure) has been followed in a particular environmental assessment.

4.1.1.3 This guide does not address the business judgments that follow from the interpretation of data collected through the Phase II process. Assessment of the business risks reflected by such data is dependent upon numerous site- and transaction-specific variables which cannot be adequately anticipated in this guide. Proper analysis of the legal, business and environmental risks associated with a particular site and business transaction is best conducted on a case-by-case basis by legal, business and environmental professionals assessing the known data relating to the particular site and transaction.

4.1.1.4 Likewise, this guide does not assess the legal risks associated with a transaction involving property where hazardous substances or petroleum products are present at levels above those occurring naturally but below those generally considered to be of regulatory concern, that is, *de minimis* levels. What constitutes a *de minimis* level of contamination is an evolving regulatory concept which may vary from jurisdiction to jurisdiction and may turn on site-specific factors.

4.1.1.5 If a Phase II ESA conducted in accordance with this guide provides sufficient information from which the environmental professional can render a professional opinion that there is no reasonable basis for suspecting the disposal or release of hazardous substances at the site, then further assessment is not warranted to establish the innocent purchaser defense. If the Phase II ESA confirms the presence of *de minimis* quantities of hazardous substances on the site under circumstances that suggest these hazardous substances have been released or disposed, the availability of the innocent purchaser defense is not assured as a matter of law. A review of reported case law as of January 1996 revealed no judicial decision concerning the availability of the innocent purchaser defense when *de minimis* quantities of hazardous substances are present on a site. This guide, therefore, does not address the availability of the innocent purchaser defense in those circumstances. Because petroleum products are excluded from the hazardous substances subject to CERCLA, the innocent purchaser defense is inapplicable to petroleum product releases.

4.1.2 *Use Not Limited to CERCLA*—This guide is designed to assist a user in developing information about the environmental condition of the property and has utility for a wide range of users including those who may have no actual or potential CERCLA concerns.

4.1.2.1 Where fewer than all recognized environmental conditions identified in a Phase I ESA or transaction screen are assessed in the Phase II ESA, the conclusion that no further inquiry is warranted applies only to the recognized environmental conditions assessed. However, this guide should not be construed to require Phase II assessment of all recognized environmental conditions identified in a Phase I ESA or a transaction screen. Where the user's objectives may be otherwise satisfied (for example, establishing the innocent purchaser defense is not the user's objective), a recognized environmental condition identified in a Phase I ESA or transaction screen may be eliminated from further assessment in the Phase II ESA.

4.1.3 *Site- and Transaction-Specific*—A Phase II ESA is site-specific in that it relates to assessing recognized environmental conditions as identified in a Phase I ESA or transaction screen. A Phase II ESA is also transaction-specific. This guide is intended to set forth a level of diligence that will satisfy the innocent purchaser defense where it is sought. The level of diligence set forth in this guide is also intended to generate information of sufficient quality to satisfy different or additional objectives of the user.

4.1.4 *Use by Other Parties*—Transaction-specific assumptions and limitations, based on the user's objectives, will be built into the implementation of this guide for any specific site to the extent the user's objectives go beyond establishing the innocent purchaser defense. Any person who seeks to rely on a Phase II ESA conducted for someone else is cautioned to understand these assumptions and objectives prior to review and use of the findings of the Phase II ESA.

4.2 *Principles*—The following principles are an integral part of this guide and are intended to be referred to in resolving any ambiguity or exercising such discretion as is accorded the user or environmental professional.

4.2.1 *Elimination of Uncertainty*—No ESA can eliminate all uncertainty. Furthermore, any sample, either surface or subsurface, taken for chemical analysis may or may not be representative of a larger population. Professional judgment and interpretation are inherent in the process and uncertainty is inevitable. Additional assessment may be able to reduce the uncertainty.

4.2.1.1 *Failure to Detect*—Even when Phase II work is executed with an appropriate site-specific standard of care certain conditions present especially difficult detection problems. Such conditions may include, but are not limited to complex geological settings, the fate and transport characteristics of certain hazardous substances and petroleum products the distribution of existing contamination, physical limitations imposed by the location of utilities and other man-made objects, and the limitations of assessment technologies.

4.2.1.2 *Inadequate Phase I ESA or Transaction Screen*—If Phase II work is based on an inadequate Phase I ESA or an inadequate transaction screen (for example, one that fails to identify all recognized environmental conditions) there will be an increased risk that the disposal or release of hazardous substances or petroleum products on the property may go undetected and jeopardize the availability of the innocent purchaser defense and the quality of data on which judgments are made. A Phase I ESA or transaction screen, or both conducted in accordance with the latest edition of Practice E 1527 and Practice E 1528 should provide an adequate basis for a Phase II ESA.

4.2.1.3 *Chemical Analysis Error*—Chemical testing methods have inherent uncertainties and limitations. The environmental professional should build quality control and quality assurance tests into the work description, as outlined in 7.

The environmental professional should require the laboratory to report any potential or actual problems experienced, or non-routine events which may have occurred during the testing, so that such problems can be considered in evaluating the data. The environmental professional should subsequently identify such problems in any requested reports or documentation provided to the user.

4.2.2 *Level of Assessment*—Phase II ESAs do not generally require an exhaustive assessment of environmental conditions on property. There is a point at which the cost of information obtained and the time required to obtain it outweigh the usefulness of the information and, in fact, may be a material detriment to the orderly completion of transactions. If hazardous substance or petroleum releases are confirmed on a parcel of property, the extent of further assessment is related to the degree of uncertainty that is acceptable to the user with respect to the real estate transaction.

4.2.3 *Comparison With Subsequent Inquiry*—For purposes of the innocent purchaser defense, Phase II ESAs should be evaluated based on the reasonableness of judgments made at the time and under the circumstances in which they were made.

4.2.4 *Data Usability*—Measurements and sampling data only represent the site conditions at the time of data collection. Therefore, the usability of data collected as part of a Phase II ESA may have a finite lifetime depending on the application and use being made of the data. An environmental professional should evaluate whether previously generated data are appropriate for any subsequent use beyond the original purpose for which it was collected.

5. Contracting Considerations

5.1 *Contracts*—The content and form of the contractual relationship between an environmental professional and user are outside the scope of this guide. The outcome of a Phase II ESA may be adversely affected if the environmental professional and the user do not adequately define their relationship. This guide identifies some of the issues that should be resolved prior to initiation of a Phase II ESA. This guide does not purport to identify all issues that may arise in the course of implementing a Phase II ESA. Nor does it specify how these issues should be resolved. Where the user utilizes the services of an in-house environmental professional, contracting considerations may or may not arise.

5.1.1 *Reporting Obligations*—A requirement to report observations from a Phase II ESA to a governmental entity or third party may be imposed by various authorities, including statutes, regulations, common law, and professional standards. In most cases, statutory, regulatory and common law requirements impose reporting obligations only on the owner, operator, or person in charge or control of the facility or property being assessed. In some circumstances, however, reporting obligations may be legally or voluntarily imposed upon a broader group, including the environmental professional. To avoid disagreement, misunderstanding, or unexpected reporting, the contract between the user and the environmental professional should clearly define the obligations of and protocol for both the user and environmental professional to report to governmental entities or third parties.

5.1.2 *Production of Written Reports and Documentation*—The production of written documentation reflecting the findings of a Phase II ESA raises issues of concern to the user and the environmental professional. The user may be concerned, for example, about the potential for disclosure of sensitive information to the government or third parties and the conflicting interest of ensuring documentation to support an innocent landowner claim. The environmental professional may be concerned that the assessment is well documented to minimize misinterpretation, document uncertainty, and clearly present findings to the user. As a result, the agreement between the user and environmental professional should address the type and scope of written documentation that will be developed to reflect the findings of the Phase II ESA. In this regard, consideration should be given to issues such as the attorney-client, work product and self-evaluation privileges, whether recommendations should be provided separately from the Phase II report, whether the report should be written or oral, and the extent to which the user wants to review a report prior to its becoming "final". An example format is attached in Appendix X1.

5.1.3 *Confidentiality*—Agreements for confidential treatment of the Phase II ESA, if any, should be included in the contract. This agreement should include any subcontractors used in performance of the assessment.

5.1.4 *Work Performed by Others*—During the implementation of the Phase II assessment, the environmental professional may employ others (for example, drillers, laboratories) to carry out portions of the work. The contract between the environmental professional and the user may specify whether the environmental professional or the user is to be responsible for selecting subcontractors. The contract also may specify that only qualified subcontractors with current and appropriate certifications and licenses may be employed. The contract also may specify the qualifications required of subcontractors.

5.1.5 *Limitation on Scope of Work, Data, Information, or Time*—Any limitations on the information, data collected or the work to be performed during the Phase II ESA, including time allowed for completing the work, and their effect on the results of the assessment, should be clearly understood by the environmental professional and user. Such limitations may be made part of the contract.

5.1.6 *Third Party Reliance On Reports and Other Documentation*—Responsibility for the use of Phase II ESAs by third parties may be governed by the contractual relationship between the user and environmental professional.

5.1.7 *Generation of Waste*—Wastes may be generatsd during the assessment implemented as part of the Phase II ESA (for example, drill cuttings and purged ground water). The contract between the environmental professional and the user should clearly address the manner in which such wastes are to be handled and disposed. Techniques that minimize the generation of waste should be utilized to the extent feasible, consistent with the information and data quality objectives of the planned assessment and applicable regulatory requirements.

5.1.8 *Damages Caused by Explorations*—Exploration activities risk damaging structures such as utility lines and underground storage tanks when such are present. Intrusive

explorations may also create additional pathways for pollutant migration. Responsibility for identification of subsurface structures may be governed by the contractual relationship between the user and environmental professional. Where the user is not the owner of the property, the owner should be consulted about the location of such structures.

5.1.9 Many states have statutory obligations for contacting utilities through "one-call" programs. Coordination with utility companies or locator services should also be addressed in the contract documents.

5.2 *Responsibility of User*—The following list of responsibilities of the user is not intended to be exhaustive:

5.2.1 The user should provide access to appropriate areas of the site for the environmental professional. The user should provide the environmental professional a site contact name and phone number.

5.2.2 The user should provide to the environmental professional all pertinent documentation and information regarding the site that is reasonably and practicably available, including but not limited to: previously prepared ESAs, other environmental studies, reports, or permits; property appraisals; site plans that identify site features, including buildings and other above ground structures, property boundaries, and underground structures and buried utilities (for example, sanitary and storm sewers, water, gas, telephone, and electric systems, underground storage tanks, oil/water separators, sumps and drywells); site specific health and safety information; and known or suspected environmental conditions.

5.3 *Responsibility of Environmental Professional*—The following list of responsibilities of the environmental professional is not intended to be exhaustive.

5.3.1 The environmental professional should conform to the precepts of this guide and accepted industry practice. The environmental professional should document and explain significant deviations.

5.3.2 The environmental professional should provide the user prompt notice of environmental conditions observed.

5.3.3 The environmental professional should communicate to the user limitations resulting from any time and cost constraints imposed by the user.

5.3.4 The environmental professional should verify with the user, prior to implementation, any substantive deviations from the original scope of work.

5.3.5 The environmental professional should ascertain and observe all site health and safety considerations and regulations applicable to the activities of the environmental professional.

5.3.6 The environmental professional should provide the user a written statement of qualifications, including the qualifications of the individual environmental professional(s) responsible for the Phase II ESA on request.

5.3.7 The environmental professional should not undertake any activity that he or she is not qualified or licensed (where applicable) to perform.

6. Phase II ESA

6.1 *Objective and Purpose*—The objective of conducting a Phase II ESA is to evaluate the recognized environmental conditions identified in the Phase I ESA or transaction screen process. The purpose of conducting a Phase II ESA depends on the objective(s) of the user. Typically, the purposes of a Phase II ESA are to:

6.1.1 Develop sufficient information from which the environmental professional reasonably can render a professional opinion that, with respect to the recognized environmental conditions assessed, hazardous substances have not been disposed or released at the property, thereby satisfying the innocent purchaser defense under CERCLA as to those recognized environmental conditions; or

6.1.2 Develop sufficient information about the presence of a recognized environmental condition at a site to meet the business objectives of the user and to provide sufficient data to assist the user in making informed business decisions, or both.

6.1.3 The Phase II work scope may consist of several iterations and may be terminated at any point, once the objectives of the user have been satisfied.

6.2 *Components*—The components of a Phase II ESA are as follows:

6.2.1 Developing the scope of work,

6.2.2 Assessment activities,

6.2.3 Evaluation and presentation of data, and

6.2.4 Presentation of findings and conclusions.

7. Developing the Scope of Work

7.1 A description of the work to be performed should be developed by the environmental professional to establish the methods and work tasks that achieve the user's Phase II objectives. The description should provide the rationale for planned sampling locations and testing parameters along with identification of selected methodologies and appropriate QA/QC measures. The description may provide for minor field modifications where appropriate. The description should be organized to facilitate the orderly, objective-focused implementation of the plan in the field. A formal written description may not be required or appropriate in all circumstances and may be substituted by another document that contains the same elements, such as proposal or scope of work. Likewise, the sampling, health and safety and chemical testing programs need not be formal, stand-alone documents. In general, there are seven main tasks in developing a description of the work, as described in 7.2 through 7.8

7.2 *Site Limitations*—The environmental professional is responsible for anticipating foreseeable physical and logistical impediments which interfere with, or limit the ability to conduct explorations, analyses and sampling, for example, low ceilings, narrow alleyways, soft ground, steep slopes, known subsurface structures, such as utilities, etc.

7.3 *Review Existing Information*—Readily available existing information should be reviewed to identify or establish those characteristics of the site and its vicinity which:

7.3.1 Constitute the recognized environmental condition(s) being assessed in the Phase II;

7.3.2 Affect the potential distribution and mobility of hazardous substances or petroleum products in structures, on the ground, in ground water, in soils, or in surface water and environs at the site; and

7.3.3 Affect the manner in which the presence of hazardous substances or petroleum products may be assessed.

7.3.4 The review of readily available existing information

should serve as the basis for evaluating the likely distribution of hazardous substances or petroleum products at the site, identifying appropriate sampling locations, and selecting appropriate sampling and analytical methodologies. Readily available information may be gained in review of Phase I ESAs conducted in accordance with Practice E 1527 and transaction screens conducted in accordance with Practice E 1528. Other ESAs or reports may be used where the information, in the judgment of the environmental professional, can be reasonably relied upon.

7.3.5 The environmental professional may review additional sources of information as is appropriate to the property, or as required by the judgment of the environmental professional. Information developed at this stage of the assessment may eliminate recognized environmental conditions identified in a Phase I ESA or transaction screen from further Phase II assessment where, in the judgment of the environmental professional, the additional information adequately demonstrates that hazardous substances or petroleum products associated with a previously identified recognized environmental condition are unlikely to be present at the property. See 10.1.

7.4 *Potential Distributions of Contaminants*—The environmental professional should consider the likely distribution of potential contaminants. This requires that the environmental professional consider the properties, behaviors, and fate and transport characteristics of the contaminant in a setting like that being assessed.

7.5 *Sampling*—A sampling program should be designed to provide collection of potentially contaminated environmental media, if they occur, at locations and depths where the highest concentrations are likely to occur, as determined pursuant to the provisions of this section.

7.6 *Health and Safety*—The work description should include personnel health and safety precautions to be followed in accordance with applicable federal law or state or local equivalents and any requirements imposed by the owner or occupant of the property or by the user.

7.7 *Chemical Testing*—The chemical testing program should be designed to detect the contaminants suspected to be present in the samples collected in implementing 7.5 above. The chemical tests should be appropriate for detecting the indicator constituents of the hazardous substances and petroleum products identified in the review performed under 7.3 above (for example, target analytes), consistent with 7.4 above. The chemical testing program should include tests which provide quality assurance (QA) and techniques that provide quality control (QC) over the chemical analyses. QA/QC, including detection limits of the chemical testing plan, should be consistent with the intended use of the data. The chemical testing program may include both field analytical and laboratory analytical techniques.

7.7.1 The environmental professional should specify in advance the analytical methods to be used as well as the requirements for data deliverables (for example, tabulated results, individual analysis sheets, chromatograms, spike recoveries, instrument calibration data, etc.) and quality control information (that is, project-specific or only laboratory batch-specific QC sample analysis).

7.7.2 An extensive body of methods is available for the analysis of environmental samples gathered in the course of a Phase II ESA. Several distinct compilations of methods for the analysis of environmental samples have been developed, principally by EPA and ASTM, for different purposes, primarily for hazardous waste management, industrial and municipal wastewater monitoring, assessment and cleanup of potential Superfund sites, and monitoring of the public water supply. An example is the compilation titled *Test Methods for Evaluating Solid Waste* (SW-846) prepared by EPA.

7.7.3 For each specific medium and target analyte, a variety of methods may be appropriate, depending upon the particular circumstances. The environmental professional should select methods for the analysis of samples giving consideration to the intended end-use of the resulting data, the user's data quality objectives, the statutory, regulatory, or policy framework applicable to the sample in question, and any limitations or allowances associated with the level of effort as understood by the environmental professional and user. The selected analytical method should be appropriate for the sample medium, target analyte, and detection limits. The choice of analytical methods will influence conclusions regarding recognized environmental conditions.

7.8 *Quality Assurance/Quality Control Procedures*:

7.8.1 Appropriate quality assurance/quality control (QA/QC) procedures should be included in the Phase II ESA to allow for assessment of the quality of the data collected. The QA/QC measures may include, for example, written field sampling protocol, decontamination procedures, instrument calibration, the preparation and analysis of trip blanks, equipment blanks, duplicate samples, and holding times for sample analysis. The data quality objectives of the user will influence the decision whether to include QA/QC samples and the selection of particular QA/QC procedures.

7.8.2 Any analytical laboratory used in the course of the Phase II ESA should have an established QA/QC program sufficient to allow assessment of the precision and accuracy of the data it generates. The environmental professional should verify the certification or licensing of the analytical laboratory where applicable, or otherwise evaluate the appropriateness of the QA/QC program of the analytical laboratory prior to engaging its services. Environmental professionals should use laboratories that hold appropriate licenses and certifications for the analyses to be performed.

8. Assessment Activities

8.1 The assessment activities to be conducted under the Phase II ESA may range from field screening methods to intrusive multi-media sampling and laboratory analysis. This section references an overview of recognized intrusive and non-intrusive site assessment methodologies and common field screening activities and analytical protocols. The selection of one or a combination of these methods will be based on the stated objectives of the user and the judgment of the environmental professional. Appropriate QA/QC measures should be implemented according to the work plan.

8.2 *Field Screening and Field Analytical Techniques*:

8.2.1 Field methods may be used for the purpose of characterizing certain physical attributes of a site and for the

assessment of the presence and distribution of a specific chemical or chemical classes at a sampling location. Field screening and field analytical techniques include methods of data gathering which may result in real-time acquisition of data. Field screening and field analytical techniques generally allow rapid, multiple measurements at relatively low cost. Because the accuracy and reliability of data produced by field instruments varies, the selection of particular field instruments and methods is influenced by the data quality objectives of the assessment. The quality of the data generated should be consistent with the intent of the assessment.

8.2.1.1 Some common field screening instruments, such as portable flame and photoionization detectors, have higher detection limits and lower precision and accuracy compared to field or laboratory analytical instruments and are most suited to general qualitative analyses and health and safety monitoring.

8.2.1.2 Field analytical methods include all chemical analysis methods capable of providing chemical-specific quantitative data in the field or non-laboratory setting. More reliable data than obtained through field screening may be obtained in the field or laboratory through the use of portable gas chromatographs or mobile field laboratories. The highest degree of data accuracy can generally be obtained by use of EPA and ASTM analytical methods.

8.2.2 Field screening and field analytical techniques may be used in Phase II ESAs for: qualitative and quantitative confirmation of the presence of contaminants constituting a recognized environmental condition, preliminary mapping of the areal and vertical distribution of contaminants, guiding the collection of samples for more rigorous analysis, and guiding the placement of monitoring wells. The environmental professional should establish standard procedures and protocols prior to the implementation of field screening and field analytical efforts.

8.2.3 Common field methods may assess soil, soil gas, surface water and ground water. Field screening and field analytical methods include use of ion-selective electrodes, detection of volatile compounds using field gas chromatographs, and detection of inorganic constituents and semi-volatile organic chemicals using colorimetric wet chemistry methods, including enzyme immunoassay tests. Section 5.1.5 and Section 12 in Guide D 5730, further address the use of field screening and field analytical methods (see 2.1).

8.3 *Environmental Media Sampling*:

8.3.1 Phase II ESAs generally require environmental sampling and field or laboratory analysis, or both, to determine whether hazardous substances or petroleum products are present on a property. The selection of sampling locations and analytical parameters should be consistent with the work description developed at the onset of the project. Deviations from the description of work to be performed should be noted and justified in the final report. Sampling locations should be documented to allow the sampling event to be reproduced later. The need for surveyed locations is subject to the agreement between the user and the environmental professional.

8.3.2 The Phase II sampling activities should be conducted to avoid the introduction of contaminants into the sample from the sampling equipment, and from environmental factors and to avoid, if feasible, and minimize the spread of contaminants in the environment.

8.3.3 Sampling methods should be selected based on requirements of the local jurisdiction, where applicable. Sampling methods that may be employed during a Phase II site assessment are among the standards identified in Guide D 5730. See 2.1. New technologies are frequently introduced.

8.4 *Sampling Handling*:

8.4.1 Sample handling includes sample collection and containerization, filtration, and preservation. Sample handling procedures should be selected based on requirements of local jurisdictions, where applicable. Sample containerization and preservation techniques are among the standards identified in Guide D 5730. See 2.1. Sample handling methods approved or recommended in the applicable analytical protocol should be used.

8.4.2 A completed chain of custody record should accompany each shipment of samples to the analytical laboratory, and should be included in the written report of the assessment. Chain of custody records provide written documentation regarding sample collection and handling and identify the persons involved in the chain of sample possession. Chain of custody records also provide a written record of requested analytical parameters.

8.4.3 The environmental professional should take appropriate measures to deliver the samples such that the analysis can be completed within the appropriate sample holding times.

9. Evaluation of Data

9.1 The implementation of the work that was planned under Section 7 will generate information and data on environmental conditions at the property that must be evaluated. To complete the Phase II ESA, this information and data must be analyzed to qualify the adequacy of the work performed, and evaluate whether a release or disposal of hazardous substances or petroleum products has occurred.

9.2 *Verification of Assumptions*[8]—The first step in analysis of data is to consider whether the assumptions upon which the work description was based were valid. That is, one asks whether samples were collected of the appropriate media (for example, soil, ground water) at the right location and depth (that is, where the highest concentrations of contaminant should be, if the potential release had actually occurred).

9.2.1 A work description is typically based upon assumptions as to subsurface physical conditions, for example, relative soil or aquifer permeabilities, depth to the water table, ground water flow direction and characteristics of potential contaminants. Actual information on these conditions is usually gained through the explorations, sampling, and observations completed under the work description (at least for those studies where subsurface conditions are of concern). The environmental professional should evaluate whether the assumptions were valid, in light of the actual conditions encountered. If an assumption was not valid, then the work performed may not

[8] In some jurisdictions, the evaluation and analysis of the subsurface conditions may require a licensed individual (for example, registered geologist, professional engineer).

have verified the recognized environmental conditions and additional iterations may be appropriate.

9.2.2 For example, the work description may have called for the installation of a number of observation wells, some of which were intended to be downgradient of areas where releases may have occurred. However, the water levels measured in the wells might have indicated that ground water flowed in a different direction than that inferred for development of the description of work to be performed. Hence the wells were not downgradient of the potential release areas and their purpose was not met. This would indicate that additional site work would have to be done to successfully complete the Phase II ESA. On the other hand, water levels may have confirmed that the wells were downgradient, as intended. They are then qualified as meeting their purpose, and the analysis and interpretation of data relating to them can proceed.

9.3 *Verification of Data*—The second step is to evaluate whether any target analytes detected in the samples are in fact attributable to the site. This requires the environmental professional to determine whether the analytical results should be questioned based on the QA/QC procedures described in 7.8. When data quality is determined to be acceptable, test results should be interpreted.

10. Interpretation of Results

10.1 The results of the Phase II explorations, sampling and testing should be interpreted to determine the significance of the data as they relate to the user's objectives. The data should also be evaluated to determine if other sources of contamination or more highly contaminated media may exist at the site but were not assessed in accordance with this guide. If chemicals that occur in nature are detected, the data must be interpreted to determine whether they are naturally occurring or are present as a result of human activity. For example, lead occurs naturally in soils and waters, at a range of concentrations. Mere detection of lead does not necessarily reflect lead disposal or release. The environmental professional must judge the likelihood that the lead level detected exceeded the naturally occurring lead level in the site vicinity and must evaluate potential sources (for example, fill materials present on the property in an area where use of mine tailings as fill was prevalent) to determine whether disposal or a release has occurred.

10.2 *Elimination of Recognized Environmental Conditions*—If hazardous substances or petroleum products were not detected, and the Phase II ESA information and data has been evaluated and found by the environmental professional to provide sufficient information from which the environmental professional can render a professional opinion that there is no reasonable basis for suspecting the disposal or release of hazardous substances at the site, then no further work is necessary to satisfy the "all appropriate inquiry" element of the innocent purchaser provision of CERCLA with respect to the recognized environmental conditions assessed.

10.2.1 Where fewer than all recognized environmental conditions identified in a Phase I ESA or transaction screen are assessed in the Phase II ESA, the conclusion that no further inquiry is warranted applies only to the recognized environmental conditions assessed. However, this guide should not be construed to require Phase II assessment of all recognized environmental conditions identified in a Phase I ESA or transaction screen. Where the user's objectives may be otherwise satisfied (for example, establishing the innocent purchaser defense is not the user's objective), a recognized environmental condition identified in a Phase I ESA or Transaction Screen may be eliminated from further assessment in the Phase II ESA.

10.2.2 A recognized environmental condition identified in a Phase I ESA or transaction screen may also be eliminated from the full scope of Phase II ESA procedures by developing further information not included in the Phase I or transaction screen. For example, the user may obtain a tank closure report not included in the Phase I report that confirms there were no releases from the tank that was identified as a recognized environmental condition in the Phase I or transaction screen. This new information may eliminate the need for additional Phase II tasks with respect to that recognized environmental condition. Similarly, a recognized environmental condition identified in the Phase I or transaction screen due to off-site conditions (for example, a nearby CERCLIS or LUST site) may be eliminated from a Phase II ESA if the records associated with such sites confirm that hazardous substances or petroleum products have not migrated or are not likely to migrate onto the property.

10.3 *Confirmation of Recognized Environmental Conditions*—If the Phase II ESA was conducted in accordance with this guide and the presence of hazardous substances or petroleum products at the property is confirmed under conditions that indicate disposal or a release, then the innocent purchaser defense may not be supportable with respect to these confirmed substances. See 4.1.1. If hazardous substances or petroleum products were detected, and if requested by the user, the Phase II information and data may be interpreted to determine what further work is required or desirable to assess the nature and extent of the release. This guide should not be construed to require additional assessment.

10.3.1 Additional assessment may be requested by the user if further information is desired. The objectives of the user will determine the scope of additional assessment, if any.

10.3.2 In order to guide the decision whether to conduct an additional assessment and to form the objectives of that assessment, data which confirms the presence of hazardous substances or petroleum products may be compared to applicable or relevant and appropriate requirements ("ARARs") to determine whether such standards are exceeded. The identification and interpretation of ARARs may be assisted by consultation with legal counsel having environmental expertise and other environmental professionals.[9]

10.3.3 This guide does not address the multitude of factors, in addition to environmental data, that may be considered by a user in determining whether additional assessment is warranted where the presence of hazardous substances or petroleum products under conditions that indicate disposal or relea

[9] *ASTM Book Reference No. DS 64* is a compilation of cleanup criteria for contaminated soil and ground water in the fifty states and in selected countries outside the United States. Because such criteria continue to evolve, care should be taken to determine the current status of such criteria.

been confirmed. This guide should not be construed to elevate the consideration of environmental data above economic or other business considerations in business decisions. Such considerations and their impact on transactional decisions are properly within the purview of the parties to the transaction and are beyond the scope of this guide.

11. Phase II ESA Report Preparation

11.1 *Purpose*—The purpose of a written report, when one is prepared, is to describe the work performed and provide documentation of the data and evaluation that *(a)* constitutes the factual findings, *(b)* supports the conclusions of the environmental professional, *(c)* facilitates decisions about the transaction, and *(d)* documents the basis for the decision whether further assessment is warranted. Although generally prepared, a written report is not required of all Phase II ESAs and is subject to the agreement between the user and the environmental professional (see 5.1.2).

11.2 *Characteristics*—A written Phase II ESA report generally has three characteristics: the components of a scientific report, good technical writing, and clear and accurate presentation of the results and conclusions, and, if requested, recommendations to the user. Scientific reports generally contain the following sections: an introduction, a summary of background information, a description of site conditions, a description of work performed and methods used, data presentation and evaluation, and findings and conclusions. The report is typically supported by appropriate tables, figures and appendices. Good technical writing is consistent, accurate, concise, clear and complete. The whole report needs to stand on its own.

11.3 *Format of Report*—An example report format for a written Phase II ESA report is presented in Appendix X1.

11.4 *Content of Report*:

11.4.1 *Introductory Components*—The introductory components of a Phase II ESA usually include a transmittal letter, executive summary, cover page, and table of contents.

11.4.1.1 *Signatures*—The environmental professional(s) responsible for the Phase II ESA should sign the report. Signatures, along with typed names and titles may appear in the transmittal letter, on the cover page, or on a signature page at the end of the main text of the report. Where required by the local jurisdiction, professional seals, license type and license number, as applicable, should be affixed.

11.4.1.2 *Transmittal Letter*—A transmittal letter documents the date of a report's delivery and identifies the intended recipients of the report. It also may contain other important information including a description of the report as draft or final and a designation that the report is confidential or subject to attorney-client privilege, or both. The transmittal letter also may identify the staff responsible for the work.

11.4.1.3 *Cover Page*—The cover or title page identifies the following items: the subject property name and address, the preparer of the report, the person for whom the report was prepared and the date of the report. It may also include a statement of confidentiality. If appropriate, it also may include a statement identifying the document as subject to certain legal privileges, such as attorney-work product and attorney/client privileges.

11.4.1.4 *Table of Contents*—The table of contents refers the reader to the location of the major sections of the report and to the figures, tables and appendices. All section, figure, table and appendix titles should match those of the text. See Appendix X1 for a sample table of contents.

11.4.1.5 *Executive Summary*—An executive summary provides a concise overview of the findings of the ESA and is considered optional. As a summary, it should generally be brief and should not discuss material not included in the text of the report.

11.5 *Main Text*—The main text of the report generally contains an introduction, a discussion of background information, a description of work performed during the Phase II ESA and methods used, data presentation and evaluation, and a discussion of findings and conclusions.

11.5.1 *Introduction*—The introduction should generally include: the purpose and scope of the Phase II ESA; any special terms, conditions, or limitations; the date of authorization of the project and any changes. The introduction also should identify items not included within the scope of the Phase II ESA that might have been expected to be included, for example, recognized environmental conditions not included and the reasons for eliminating them.

11.5.1.1 The introduction also references the guiding standards including contracts/service agreements, regulatory requirements, and the description of work to be performed. The introduction generally identifies the specific tasks comprising the work performed in the order in which they will be described later.

11.5.2 *Background Information*—This section should include a description of the site and its features, a description of the physical site setting, a brief discussion of the site's history and use and the use of adjacent properties, and a summary of previous environmental site assessments. Reference to existing ESA reports may convey this information.

11.5.2.1 This section should identify the data and conclusions that led to the performance of the Phase II ESA. If the Phase II ESA is based on earlier environmental site assessments, the earlier ESAs should be precisely identified (for example, by reference to report title, project number, author and date of any report). Where appropriate, prior ESAs may be included in an appendix. If recommendations for further work were included in a referenced prior ESA but were not followed in the Phase II ESA, an explanation in this section is appropriate.

11.5.3 *Phase II ESA Activities*—This section should summarize the work conducted. This section should describe what was done, identify the methods that were used, identify the location of the Phase II ESA activities and pertinent site conditions. This section also should explain the rationale for the work performed, including the review of supplemental records and the selection of sampling locations, analytical parameters and methodologies. Deviations from the work description and deviations from standard methodologies also should be explained.

11.5.3.1 Methods used should be identified by reference to a specific published standard or method such as ASTM, state protocols, or EPA methodologies. Other methods used (for

example, standard operating procedures for a particular company) should be described in detail. Where appropriate, the details of methods and procedures used can be included in an appendix.

11.5.4 *Evaluation and Presentation of Results*—Results of the Phase II ESA should be presented in a logical order and should be summarized to allow the reader to more readily follow the discussion of findings and conclusions which appears in the next section of the report. Results may be presented in text, in tables, and/or in figures. Reference to the location of data in the appendices is appropriate. Results should be presented consistently and accurately.

11.5.4.1 *Evaluation*—Evaluation of data involves verifying assumptions underlying the scope of work as they relate to meeting objectives and determining whether chemical constituents detected in samples were attributable to site conditions or to QA/QC failures. See Section 9 for a detailed discussion of data evaluation.

11.5.4.2 *Presentation*—The presentation of results should be organized to assist the reader's understanding of the interpretation of the chemical analysis data that follows in the next section of the report. Organizational divisions may be by media (for example, soil data presented separately from ground water data), contaminant type (for example, organic vs. inorganic contaminants), source (for example, contamination from leaking underground storage tank versus contamination from drum storage area), or other factors.

11.5.4.3 The specific information presented will depend on the activities performed. Although Phase II ESAs can involve the full range of environmental media, they most typically involve sampling and chemical analysis or screening of soil, vapors and/or ground water.

11.5.5 For purposes of illustration, the following information should generally be presented for the referenced activities:

11.5.5.1 *Soil Sampling*—The locations of sampling points in relation to potential sources; the depths of sampling; the depth to pertinent horizons, such as the water table and the fill/natural soil contact; the sampling and analytical methods used; and the results of chemical analyses.

11.5.5.2 *Soil Gas Sampling*—The locations of sampling points in relation to potential sources; the depths of sampling; the depth to pertinent horizons, such as the water table and the fill/natural soil contact; the sampling and analytical methods used; and the results of chemical analyses.

11.5.5.3 *Ground Water Sampling*—The locations of sampling points in relation to potential sources; water level data (for example, depth to water or water table elevation, screened interval elevation, filtered interval elevation); the sampling and analytical methods used; and the results of chemical analyses.

11.5.6 *Discussion of Findings and Conclusions*—Where a written report of a Phase II ESA is prepared, it should have a findings and conclusions section that includes:

11.5.6.1 A statement that the Phase II ESA was conducted in substantive accordance with the guidance contained in this guide and in accordance with the description of work to be performed, and a description of any deviations from the assessment activities that were planned;

11.5.6.2 A summary description of: the nature of the recognized environmental conditions identified in previous work, the assessments performed to evaluate the identified recognized environmental conditions, the data generated from the assessments, the geologic and hydrogeologic conditions encountered, and any limitations of the data produced and their impact on conclusions;

11.5.6.3 The environmental professional's interpretation of the significance of the data as they relate to the user's objectives. Appropriate citations and references to standards, guidelines and sources for background concentrations should be included. See Section 10 for a detailed discussion of interpretation of results;

11.5.6.4 A statement whether, in the judgment of the environmental professional, the data provides sufficient information to support a professional opinion that there is no reasonable basis for suspecting the disposal or release of hazardous substances or petroleum products at the site with respect to the recognized environmental conditions assessed, and that no further assessment is necessary; or that with respect to the recognized environmental conditions assessed, hazardous substances or petroleum products have been released or disposed at the property; and

11.5.6.5 Where applicable, a specific explanation of data insufficiencies that prevent a conclusion that hazardous substances or petroleum products were or were not released or disposed at the property.

11.5.7 *Recommendations*—Recommendations for further work may be included at the option of the user.

11.5.8 *Concluding Components*—The report should contain tables, figures and appendices as necessary or appropriate to explain and support the main text of the report.

11.5.8.1 *Tables and Figures*—Tables and figures may be used as a summary presentation of data. Guidelines for data presentation in 11.5.4 apply to tables and figures as well as to text.

11.5.8.2 Figures that show potential sources of contamination, sampling points, locations of other activities and surface and subsurface structures can significantly aid the understanding of the reader. Figures should be dated and should include a north arrow, a scale as appropriate to the level of accuracy of the drawing (or notation that the figure is not to scale), a legend, a title, and other appropriate identification. If figures are based on the work of others, the source and its date should be referenced.

11.5.8.3 *Appendices*—The following is a non-exhaustive list of materials that may be appropriate for inclusion in appendices to a Phase II ESA report: photographs, subsurface exploration logs, laboratory reports, with quality control information, chain of custody forms, identification of specific methods, and reports of previous environmental site assessments.

11.6 *Additional Services*—Any additional services including a broader scope of assessment, more detailed conclusions liability/risk evaluations, recommendations for additional Phase II assessment, remediation techniques, etc., are beyond the scope of this guide, and should only be included in the report if so agreed by the user and the environmental professional.

12. Non-Scope Considerations

12.1 *General*:

12.1.1 *Additional Issues*—There may be environmental issues or conditions at a property that parties may wish to assess in connection with commercial property transactions that are outside the scope of this guide (the non-scope considerations). As noted by the legal analysis in Appendix X1 of Practices E 1527 and E 1528, some substances may be present on property in quantities and under conditions that may lead to contamination of the property or of nearby properties but are not included in CERCLA's definition of hazardous substances (42 U.S.C. § 9601(14)) or do not otherwise present potential CERCLA liability. In any case, they are beyond the scope of this guide.

12.1.2 *Outside Standard Guide*—Whether or not a user elects to inquire into non-scope considerations in connection with an ESA implemented in accordance with this guide or any other ESA, no assessment of such non-scope considerations is required for appropriate inquiry as described by this guide.

12.1.3 *Other Standards*—There may be standards or protocols for assessment of potential hazards and conditions associated with non-scope conditions developed by governmental entities, professional organizations, or other private entities, including ASTM.

12.1.4 *List of Additional Issues*—Several considerations that may be important in property transactions but that are outside the scope of this guide include asbestos-containing materials, radon, lead-based paint, lead in drinking water, and wetlands. No implication is intended as to the relative importance of such considerations, nor is this list intended to be all-inclusive.

APPENDIX

(Nonmandatory Information)

X1. EXAMPLE TABLE OF CONTENTS AND REPORT FORMAT

Where a written report is desired by the user, a Phase II ESA report that includes the sections described below, is suggested:

Transmittal Letter
Cover Page
Table of Contents

X1.1 Executive Summary

X1.2 Introduction
- X1.2.1 Purpose
- X1.2.2 Special Terms and Conditions
- X1.2.3 Limitations and Exceptions of Assessment
- X1.2.4 Limiting Conditions and Methodology Used

X1.3 Background (may be by reference to prior environmental reports):
- X1.3.1 Site Description and Features
- X1.3.2 Physical Setting
- X1.3.3 Site History and Land Use
- X1.3.4 Adjacent Property Land Use
- X1.3.5 Summary of Previous Assessments

X1.4 Phase II Activities
- X1.4.1 Scope of Assessment:
  - X1.4.1.1 Supplemental Record Review
  - X1.4.1.2 Conceptual Site Model and Sampling Plan
  - X1.4.1.3 Chemical Testing Plan
  - X1.4.1.4 Deviations from the Work Plan
- X1.4.2 Field Explorations and Methods
  - X1.4.2.1 Test Pits
  - X1.4.2.2 Test Borings
  - X1.4.2.3 Monitoring Well Installations
    - 1) Ground water elevation measurement
    - 2) Ground water flow direction
  - X1.4.2.4 Other
- X1.4.3 Sampling and Chemical Analyses and Methods
  - X1.4.3.1 Soil
  - X1.4.3.2 Ground water
  - X1.4.3.3 Other

X1.5 Evaluation and Presentation of Results
- X1.5.1 Subsurface Conditions
  - X1.5.1.1 Geologic Setting

X1.5.1.2 Hydrogeologic Conditions
X1.5.1.3 Verification of Conceptual Site Model
X1.5.2 Analytical Data
X1.5.2.1 Soil
X1.5.2.2 Ground water
X1.5.2.3 Other

X1.6 Discussion of Findings and Conclusions
X1.6.1 Recognized Environmental Conditions
X1.6.2 Affected Media
X1.6.3 Evaluation of Media Quality
X1.6.4 Other Concerns (for example, adequacy of assessment)

X1.7 Recommendations (if desired by user)

References and Sources of Information

List of Tables

Table 1 Location, Depth, and Type of Soil Samples Collected
Table 2 Summary of Analytical Results by Media
Table 3 Other Data Requiring Summarization

List of Figures

Figure 1 Site Location
Figure 2 Site Plan and Exploration Location Plan
Figure 3 Other Figures as Necessary to Depict Site Conditions (that is, geologic cross section location plan, geologic cross sections, ground water contour plan, etc.)

List of Appendixes

Appendix X1 Subsurface Exploration Logs and Monitoring Well Construction Details
Appendix X2 Laboratory Report With Quality Control Information
Appendix X3 Other Appendixes Necessary to Support the Report

The American Society for Testing and Materials takes no position respecting the validity of any patent rights asserted in connection with any item mentioned in this standard. Users of this standard are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, are entirely their own responsibility.

This standard is subject to revision at any time by the responsible technical committee and must be reviewed every five years and if not revised, either reapproved or withdrawn. Your comments are invited either for revision of this standard or for additional standards and should be addressed to ASTM Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend. If you feel that your comments have not received a fair hearing you should make your views known to the ASTM Committee on Standards, 100 Barr Harbor Drive, West Conshohocken, PA 19428.

Appendix D
ASTM Standard D4700-91:
Guide for Soil Sampling from the Vadose Zone

Designation: D 4700 – 91

Standard Guide for Soil Sampling from the Vadose Zone[1]

This standard is issued under the fixed designation D 4700; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This guide addresses procedures that may be used for obtaining soil samples from the vadose zone (unsaturated zone). Samples can be collected for a variety of reasons including the following:

1.1.1 Stratigraphic description,
1.1.2 Hydraulic conductivity testing,
1.1.3 Moisture content measurement,
1.1.4 Moisture release curve construction,
1.1.5 Geotechnical testing,
1.1.6 Soil gas analyses,
1.1.7 Microorganism extraction, or
1.1.8 Pore liquid and soils chemical analyses.

1.2 This guide focuses on methods that provide soil samples for chemical analyses of the soil or contained liquids or contaminants. However, comments on how methods may be modified for other objectives are included.

1.3 This guide does not describe sampling methods for lithified deposits and rocks (for example, sandstone, shale, tuff, granite).

1.4 In general, it is prudent to perform all field work with at least two people present. This increases safety and facilitates efficient data collection.

1.5 The values stated in inch-pound units are to be regarded as the standard. The SI units given in parentheses are for information only.

1.6 *This standard does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*

D 420 Practice for Investigating and Sampling Soil and Rock for Engineering Purposes[2]
D 653 Terminology Relating to Soil, Rock, and Contained Fluids[2]
D 1452 Practice for Soil Investigation and Sampling by Auger Borings[2]
D 1586 Method for Penetration Test and Split-Barrel Sampling of Soils[2]
D 1587 Method for Thin-Walled Tube Sampling of Soils[2]
D 2488 Practice for Description and Identification of Soils (Visual-Manual Procedure)[2]
D 2607 Classification of Peats, Mosses, Humus, and Related Products[2]
D 3550 Method for Ring-Lined Barrel Sampling of Soils[2]
D 4083 Practice for Description of Frozen Soils (Visual-Manual Procedure)[2]
D 4220 Practice for Preserving and Transporting Soil Samples[2]

3. Terminology

3.1 *Definitions:*

3.1.1 Except where noted, all terms and symbols in this guide are in accordance with the following publications. In order of consideration they are:

3.1.1.1 Terminology D 653.

3.1.1.2 *Compilation of ASTM Standard Terminology*,[3] and

3.1.1.3 *Webster's New Collegiate Dictionary*.[4]

3.1.2 For definitions and classifications of soil related terms used, refer to Practice D 2488 and Terminology D 653. Additional terms that require clarification are defined in 3.2.

3.2 *Descriptions of Terms Specific to This Standard:*

3.2.1 *cascading water*—perched ground water that enters a well casing via cracks or uncovered perforations, trickling, or pouring down the inside of the casing.

3.2.2 *sludge*—a water charged sedimentary deposit.

3.2.2.1 *Discussion*—The water-formed sedimentary deposit may include all suspended solids carried by the water and trace elements that were in solution in the water. Sludge usually does not cohere sufficiently to retain its physical shape when mechanical means are used to remove it from the surface on which it deposits, but it may be baked in place and be adherent.

4. Summary of Guide

4.1 Sampling vadose zone soil involves inserting into the ground a device that retains and recovers a sample. Devices and systems for vadose zone sampling are divided into two general groups, namely the following: samplers used in conjunction with hand operated devices; and samplers used

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[1] This guide is under the jurisdiction of ASTM Committee D-18 on Soil and Rock and is the direct responsibility of Subcommittee D18.21 on Ground Water and Vadose Zone Investigations.

Current edition approved July 15, 1991. Published September 1991.

[2] *Annual Book of ASTM Standards*, Vol 04.08.

[3] *Compilation of ASTM Standard Terminology*, Sixth edition, ASTM, 1916 Race St., Phila., PA 19103, 1986.

[4] *Webster's New Collegiate Dictionary*, Fifth edition, _____ 1977.

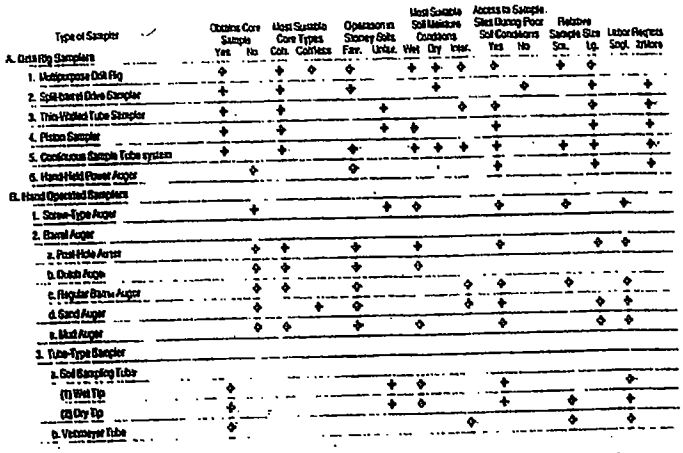


FIG. 1 Criteria for Selecting Soil Sampling Equipment

in conjunction with multipurpose or auger drill rigs. This guide discusses these groups and their associated practices.

4.2 The discussion of each device is organized into three sections, describing the device, describing sampling methods, and limitations and advantages of its use.

4.3 This guide identifies and describes a number of sampling methods and samplers. It is advisable to consult available site-specific geological and hydrological data to assist in determining the sampling method and sampler best suited for a specific project. It is also advisable to contact a local firm providing the services required as not all sampling and drilling methods described in this guide are available nationwide.

5. Significance and Use

5.1 Chemical analyses of liquids, solids, and gases from the vadose zone can provide information on the presence, possible source, migration route, and physical-chemical behavior of contaminants. Remedial or mitigating measures can be formulated based on this information. This guide describes devices and procedures that can be used to obtain vadose zone soil samples.

5.2 Soil sampling is useful for the reasons presented in Section 1. However, it should be recognized that the general method is destructive, and that resampling at an exact location is not possible. Therefore, if a long term monitoring program is being designed, other methods for obtaining samples should be considered.

6. Criteria for Selecting Soil Samplers

6.1 Important criteria to consider when selecting devices for vadose zone soil sampling include the following:

6.1.1 Type of sample: An encased core sample, an uncased core sample, a depth-specific representative sample, or a sample according to requirements of the analyses,

6.1.2 Sample size requirements,

6.1.3 Suitability for sampling various soil types,

6.1.4 Maximum sampling depth,

6.1.5 Suitability for sampling soils under various moisture conditions,

6.1.6 Ability to minimize cross contamination,

6.1.7 Accessibility to the sampling site, and

6.1.8 Personnel requirements.

6.2 The sampling devices described in this guide have been evaluated for these criteria. The results are summarized in Fig. 1.

7. Sampling with Hand Operated Devices

7.1 These devices, that have mostly been developed for agricultural purposes, include:

7.1.1 Screw-type augers,

7.1.2 Barrel augers,

7.1.3 Tube-type samplers,

7.1.4 Hand held power augers, and

7.1.5 Trench sampling with shovels in conjunction with machine excavations.

7.2 The advantages of using hand operated devices over drill rigs are the ease of equipment transport to locations with poor vehicle access, and the lower costs of setup and decontamination. However, a major disadvantage is that these devices are limited to shallower depths than drill rigs.

7.3 *Screw-Type Augers:*

7.3.1 *Description*—The screw or ship auger is essentially a small diameter (for example, 1.5 in. (3.81 cm)) wood auger from which the cutting side flanges and tip have been removed (1)[5] (see Fig. 2(*a*)). According to the Soil Survey Staff (1), the spiral part of the auger should be about 7 in. (18 cm) long, with the distances between flights about the same as the diameter (for example, 1.5 in.) of the auger. This facilitates measuring the depth of penetration of the tool. Variations on this design include the closed spiral auger and the Jamaica open spiral auger (2) (see Fig. 2(*b*) and 1(*c*)). The

[5] The boldface numbers in parentheses refer to the list of references at the end of the text.

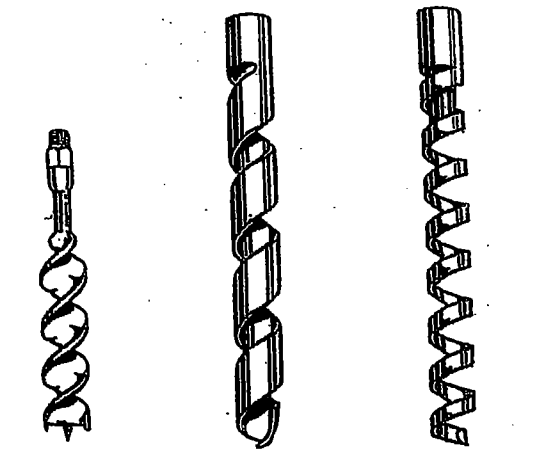


FIG. 2 Screw Type Augers

auger is welded onto a length of solid or tubular rod. The upper end of this rod is threaded, to accept a handle or extension rods. As many extensions are used as are required to reach the target sampling depth. The rod and the extensions are marked in even increments (for example, in 6-in. (15.24-cm) increments) above the base of the auger to aid in determining drilling depth. A wooden or metal handle fits into a tee-type coupling, screwed into the uppermost extension rod.

7.3.2 *Sampling Method*—For drilling, the auger is rotated manually. The operator may have to apply downward pressure to start and embed the auger; afterwards, the auger screws itself into the soil. The auger is advanced to its full length, and then pulled up and removed. Soil from the deepest interval penetrated by the auger is retained on the auger flights. A sample can be collected from the flights using a spatula. A foot pump operated hydraulic system has been developed to advance augers up to 4.5 in. (11.43 cm) in diameter. This larger diameter allows insertion of other sampling devices into the drill hole, once the auger is removed, if desired (3).[6]

7.3.3 *Comments*—Samples obtained with screw-type samplers are disturbed and are not truly core samples. Therefore, the samples are not suitable for tests requiring undisturbed samples, such as hydraulic conductivity tests. In addition, soil structures are disrupted and small scale lithologic features cannot be examined. Nevertheless, screw-type samplers are still suitable for use in collecting samples for the purpose of detecting contaminants. However, it is difficult to avoid transporting shallow soils downward when reentering a drill hole. When representative samples are desired from a discrete interval, the borehole must be made large enough to insert a sampler and extend it to the bottom of the borehole without touching the sides of the borehole. It is suggested that a larger diameter auger be used to advance and clear the borehole, then a smaller diameter auger sampler be used to obtain the sample. Screw-type augers work better in wet, cohesive soils than in dry, loose soils. Sampling in very dry (for example, powdery) soils may not be possible with these augers as soils will not be retained on the auger flights. Also, if the soil contains gravel or rock fragments larger than about one tenth of the hole diameter, drilling may not be possible (4).

7.4 *Barrel Augers:*

7.4.1 *Description*—The barrel auger consists of a bit with cutting edges welded to a short tube or barrel within which the soil sample is retained, welded in turn to shanks. The shanks are welded to a threaded rod at the other end. Extension rods are attached as required to reach the target sampling depth. Extensions are marked in increments above the base of the tool. The uppermost extension rod contains a tee-type coupling for a handle. The auger is available in carbon steel and stainless steel with hardened steel cutting edges (5, 6).

7.4.2 *Sampling Method*—The auger is rotated to advance the barrel into the ground. The operator may have to apply downward pressure to keep the auger advancing. When the barrel is filled, the unit is withdrawn from the soil cavity and a sample may be collected from the barrel.

[6] This reference is manufacturer's literature, and it has not been subjected to technical review.

7.4.3 *Comments*—Barrel augers generally provide larger samples than screw-type augers. The augers can penetrate shallow clays, silts, and fine grained sands (7).[6] The augers do not work well in gravelly soils, caliche, or semi-lithified deposits. Samples obtained with barrel augers are disturbed and are not core samples. Therefore, the samples are not suitable for tests requiring undisturbed samples, such as hydraulic conductivity tests. Nevertheless, the samplers are still suitable for use in collecting samples for the purpose of detecting contaminants. Because the sample is retained inside the barrel, there is less of a chance of mixing it with soil from a shallower interval during insertion or withdrawal of the sampler. The following are five common barrel augers:

7.4.3.1 Post-hole augers (also called Iwan-type augers),

7.4.3.2 Dutch-type augers,

7.4.3.3 Regular or general purpose barrel augers,

7.4.3.4 Sand augers, and

7.4.3.5 Mud augers.

7.4.4 *Post-Hole Augers*—The most readily available barrel auger is the post-hole auger (also called the Iwan-type auger) (8). As shown in Fig. 3, the barrel consists of two-part cylindrical leaves rather than a complete cylinder and is slightly tapered toward the cutting bit. The taper and the cupped bit help to retain soils within the barrel. The barrel is available with a 3 to 12-in. (7.62 to 30.48-cm) diameter. There are two types of drilling systems, one has a single rod and handle, and the other has two handles. In stable, cohesive soils, the auger can be advanced up to 25 ft (7.62 m) (8).

7.4.5 *Dutch-Type Augers*—The Dutch-type auger (commercially developed by Eijkelkamp) is a smaller variation of the post-hole auger design. As shown in Fig. 4, the pointed bit is continuous with two, narrow part-cylindrical barrel segments, welded onto the shanks. The barrel generally has a 3 in. (7.62 cm) outside diameter. This tool is best suited for sampling wet, clayey soils.

7.4.6 *Regular or General Purpose Barrel Augers*—A version of the barrel auger commonly used by soil scientists and county agricultural agents is depicted in Fig. 5(*a*) and (*b*). As shown, the barrel is a complete cylinder. As with the post-hole auger, the cutting blades are cupped so that soil is loosened and forced into the barrel as the unit is rotated and pushed into the ground. Each filling of the barrel corresponds to a depth of penetration of 3 to 5 in. (7.62 to 12.70 cm) (1). The most popular barrel diameter is 3.5 in. (8.89 cm), but sizes ranging from 1.5 to 7 in. (3.81 to 17.78 cm) are available (6).[6] Plastic, stainless steel, PTFE (polytetrafluoroethylene) or aluminum liners can also be used (6).[6] Extension rods are available in 4 ft (1.22 m) lengths. The rods can be made from standard black pipe, from lightweight conduit or from seamless steel tubing. The extensions have evenly spaced marks to facilitate determining sample depth. The regular barrel auger is suitable for use in loam type soils.

7.4.7 *Sand Augers*—For dry, sandy soils it may be necessary to use a variation of the regular barrel auger that includes a specially-formed bit to retain the sample in the barrel (see Fig. 5(*c*)). Sand augers with 2, 3, or 4-in. (5.08, 7.62, or 10.16-cm) diameters are available (5).[6]

7.4.8 *Mud Augers*—Another variation on the regular barrel auger design is available for sampling wet, clayey soils. As shown in Fig. 5(*d*), the barrel is designed with open sides to facilitate extraction of samples. The bits are the same as those used on the regular barrel auger (6).[6] Mud augers with 2, 3, or 4-in. (5.08, 7.62, or 10.16-cm) diameters are available (5).[6]

7.5 *Tube-Type Samplers:*

7.5.1 Tube-type samplers generally have proportionally smaller diameters and greater body lengths than those of barrel augers.

7.5.2 For sampling, these units are perched into the soil causing the tube to fill with material from the interval penetrated. The assembly is then pulled to the surface and a sample can be collected from the tube. Since the device is not

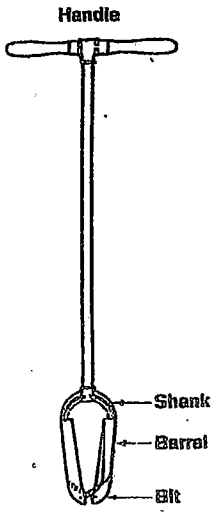


FIG. 3 Post-Hole Type Barrel Auger

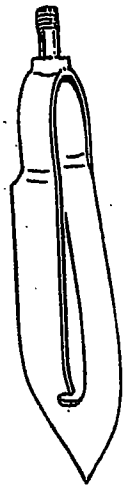
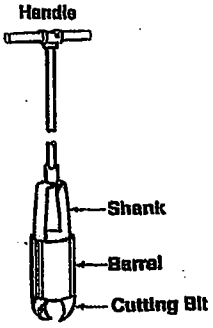
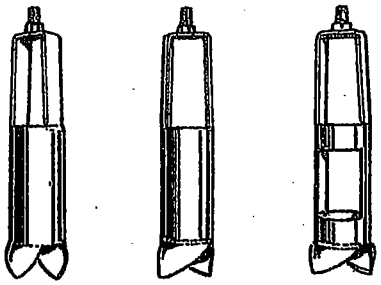


FIG. 4 Dutch Type Auger



(a) Regular Barrel Auger



(b) Regular Barrel Auger (c) Sand Auger (d) Mud Auger

FIG. 5 Barrel Auger Variations and Soil Moisture

rotated, a nearly undisturbed sample can be obtained. Commercial units are available with foot lever attachments, a hydraulic apparatus, or drop-hammers to aid in driving the sampler into the ground (5)[6]. Vibratory heads have also been developed to advance tube-type samplers (9).[6]

7.5.3 These units are not as suitable for sampling in compacted, gravelly soils as are the barrel augers. They are preferred if an undisturbed sample is required. Commonly used varieties of the tube type samplers include:

7.5.3.1 Soil sampling tubes (also called Lord samplers),

7.5.3.2 Veihmeyer tubes (also called King tubes),

7.5.3.3 Thin-walled tube samplers (also called Shelby tubes),

7.5.3.4 Ring-lined barrel samplers, and

7.5.3.5 Piston samplers.

7.5.4 *Soil Sampling Tubes:*

7.5.4.1 *Description*—As depicted in Fig. 6, the soil sampling tube consists of a hardened cutting tip, a cut-away barrel, and an uppermost threaded segment. The cut-away barrel allows textural examination and easy removal of soil samples. Generally, the tube is constructed from high strength alloy steel (10).[6] The samplers are available with 6, 12, 15, 18, and 24-in. (15.24, 30.48, 38.10, 45.72, 60.96-cm) lengths (5, 6). The tubes are available with 1.13 or 0.88-in. (2.87 or 2.22-cm) outside diameter. Two modified versions of the tip are available, for sampling in wet or dry soils. The

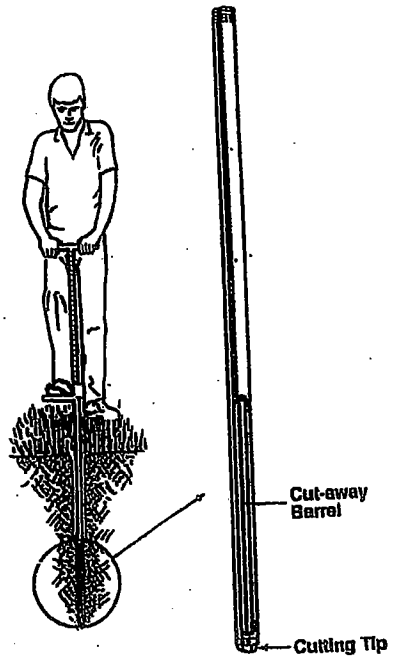


FIG. 6 Soil Sampling Tube

sampling tube is attached to extension rods to attain the target sampling depth. A cross-handle is attached to the uppermost rod. Extension rods are made of lightweight, durable metal. They are available in a variety of lengths depending on the manufacturer. Markings on the extensions and the sampler facilitate determining sample depths.

7.5.4.2 *Sampling Method*—The sampler is pushed into the ground by leaning on the unit's handle. Once the sampler has reached the bottom of the sampling interval, it is twisted to break soil continuity at the tip. Depending on the type of cutting edge, the tube sampler may obtain samples varying in diameter from 0.69 to 0.75 in. (1.75 to 1.91 cm).

7.5.4.3 *Comments*—The soil sampling tube works best in soft, clayey, cohesive soils. If the soil contains cobbles or rock fragments larger than about one-half the cutting tip diameter, satisfactory sampling may not be possible. If the soil is cohesionless, it will not be retained in the tube. With time, the cutting tip will be damaged and worn dull. Most units are designed so that this part can be replaced.

7.5.5 *Veihmeyer Tubes:*

7.5.5.1 *Description*—The Veihmeyer tube is a long, complete cylinder. As shown in Fig. 6, this unit consists of a bevelled tip, that is threaded into the lower end of the tube, and a drive head threaded onto the upper end of the tube. The sampler is constructed of hardened steel. The tube is generally marked in even increments (for example, 1 ft or 0.30 m). These samplers are available in 4 to 16-ft (1.22 to 4.88-m) lengths with a 0.75-in. (1.91-cm) inside diameter.

7.5.5.2 *Sampling Method*—The lower guide rod of the drop hammer is slipped into the upper tube, through the drive head (see Fig. 7). The hammer is used to pound the sampler into the ground. The sampler is then retrieved by pulling or jerking up on the hammer to force the sampler out of the soil cavity. Samples are extruded by forcing a rod through the tube.

7.5.5.3 *Comments*—Prior to sampling, the inside of the tube is sometimes coated with a lubricant to facilitate extrusion. However, the types of analyses to be performed on the samples should be considered to determine if the presence of lubricant will cause interference. Because the Veihmeyer sampler is a solid-walled tube and is fitted with a drop hammer, it can generally be used in more resistant soils than the soil sampling tube.

7.5.6 *Thin-Walled Tube Samplers:*

7.5.6.1 *Description*—Thin-walled tube (Shelby Tube) samplers are readily available with 2, 3, and 5-in. (5.08, 7.62, and 12.70-cm) outside diameters and are commonly 30 in. (76.20 cm) long. The 3 by 30-in. (7.62 by 76.20-cm) outside diameter long sampler is most common. The advancing end of the sampler is rolled inwardly and has a cutting edge with a smaller diameter than the tube inside diameter. The cutting edge inside diameter reduction, defined as a "clearance ratio," is usually in the range of 0.0050 to 0.0150 or 0.50 to 1.50 % (Refer to Practice D 1587). The sampler tube is usually connected with set screws to a sampler head that in turn is threaded to connect with extension rods. Plastic and PTFE sealing caps for use after sampling are readily available for the 2, 3, and 5-in. (5.08, 7.62, and 12.70-cm) diameter tubes (refer to Practice D 4220). Shelby tubes are common available in carbon steel but can be manufactured from other metal (see Fig. 8).

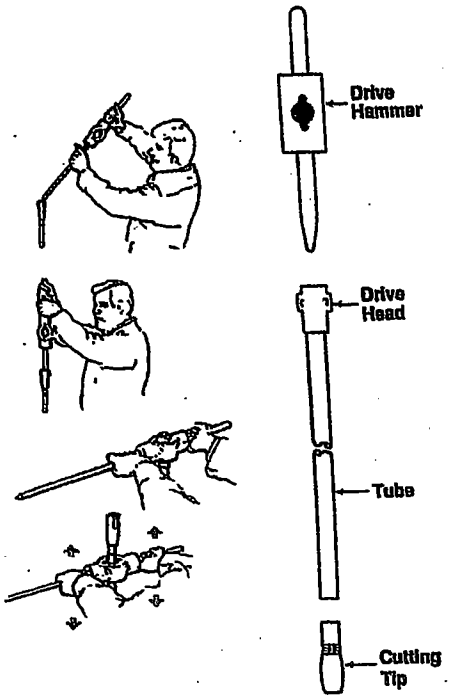


FIG. 7 Veihmeyer Tube

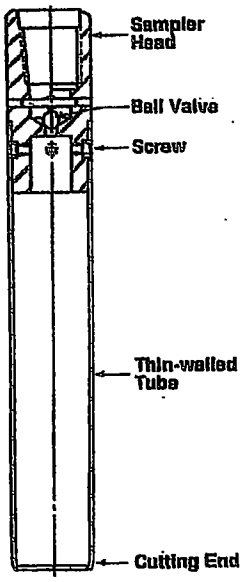


FIG. 8 Thin-Walled Tube Sampler

7.5.6.2 *Sampling Method*—The Shelby tube is pushed into soil by hand, with a jack-like system or with a hydraulic piston. The sample recovered is often less than the distance pushed, that is, the recovery ratio is less than 1.0. The recovery ratio is less than 1.0 because of soil compaction during sampling, and because friction between soil and the inner tube walls becomes greater than the shear strength of the soil in front of the tube. Consequently, soil in front of the advancing end of the tube is displaced laterally rather than entering the tube (11). In general, shorter tubes provide less-disturbed samples than longer tubes. Samples are extruded from the Shelby tube with a hydraulic ram. As with all sampling devices, the most disturbed portion of the sample in contact with the tube is considered unrepresentative. Wilson et al. (12) developed a paring device to remove this outer layer of the core during extrusion.

7.5.6.3 *Comments*—Shelby tubes are best used in clays, silts, and fine-grained sands. If the soils are cohesionless, they may not be retained in the tube. If firm to very hard soils are encountered, driving (hammering) the sampler may be required. However, this should be avoided as the tube may buckle under the drive stress.

7.5.7 *Ring-Lined Barrel Samplers:*

7.5.7.1 *Description*—As described in Practice D 3550, the ring-lined barrel sampler consists of a one piece barrel or two split barrel halves, a drive shoe, rings, and a sampler head (see Fig. 9). The rings, that are usually brass, fit snugly inside the barrel and are designed to be directly inserted into geotechnical testing apparatuses when removed from the barrel. Most samplers are designed to hold at least two rings. The barrel is commonly 3.5 in. (8.89 cm) inside diameter and 3.94 to 5.91 in. (10 to 15 cm) long (5).[6] With these lengths, the barrel can be fitted with a variety of liners ranging in length from 1 to 2.36 in. (2.54 to 6 cm).

7.5.7.2 *Sampling Method*—The ring-lined barrel sampler can be driven or pushed into soil. Once retrieved, the sampler is disassembled, and the sample-filled rings are removed. The rings are usually removed as one unit and placed into a capped container. Alternately, the individual soil-filled rings can be capped with plastic or PTFE and then sealed with wax or adhesive tape (refer to Practice D 4220).

7.5.7.3 *Comments*—Because barrel samplers are more rigid than thin-walled tubes, they can be driven into hard soils and soils containing sands and gravels that might damage thin-walled tubes. The sampler provides samples in rings which can be handled without further disturbance of the soil. Because of this, these devices are most often used when geotechnical or chemical analyses are to be performed.

7.5.8 *Piston Samplers:*

7.5.8.1 *Description*—Locally saturated (for example, by perched ground water), or cohesionless soils, and very soft soils or sludges may not be retained in most samplers, even when fitted with retainer baskets or flap valves. Piston samplers can be used in these situations. The sampler consists of a sampling tube, extension pipe attached to the tube, an internal piston, and rods connected to the piston and running through the extension pipe (see Fig. 10). These samplers are often built, as needed, out of common PVC (for use in sludge) or steel pipe fittings. The sampling tube commonly has a 0.75 to 3-in. (1.91 to 7.62-cm) inside diameter and is 8 in. to 9 ft (20.32 cm to 2.74 m) long (13). A variation designed for sampling peat has a cone shaped piston (8).

7.5.8.2 *Sampling Method*—The sampler can be pushed into the ground with the handle or driven into the ground with a drop hammer (13). As the tube is advanced, the piston is held stationary or pulled upward with the attached rods. Once the tube has been advanced through the sampling interval, it is rotated to break suction that might have developed between the soil and the outside wall of the tube. The sampler is then pulled to the surface keeping the piston rod fixed with respect to the extension pipe. The sample is retained because of suction that develops between the piston and the sample. Upon retrieval, the sample is extruded by

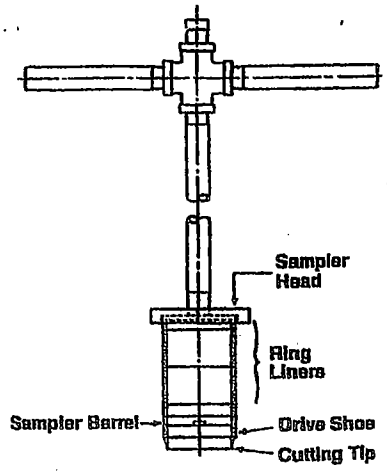


FIG. 9 Hand Operated Ring-Lined Barrel Sampler

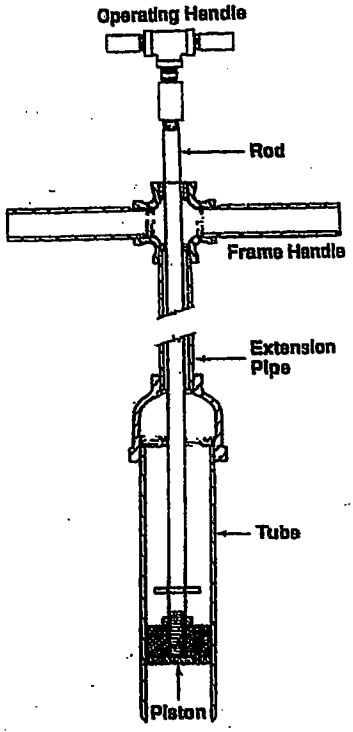


FIG. 10 Hand Operated Piston Sampler

using the piston to force the sample out of the tube. Sharma and De Dalta (14) described a cylindrical sampler for use in puddled soils that would flow back out of most samplers. The design includes a basal shutter that retains the sample while the sampler is withdrawn from the soil.

7.5.8.3 *Comments*—Because the sampler depends on development of suction between the sample and the piston, it may not work in unsaturated, coarse-grained sands and gravels. This is due to the high air permeability of such material that prevents the creation of high suction.

7.6 *Hand Held Power Augers:*

7.6.1 *Description*—A very simple, commercially available auger consists of a solid flight auger attached to and driven by a small air-cooled engine (see Fig. 11). Two handles on the head assembly allow two operators to guide the auger into the soil. Throttle and clutch controls are integrated into grips on the handles. Augers are available with diameters ranging from 2 to 16 in. (5.08 to 40.64 cm). The auger sections are commonly 3 ft (0.91 m) long.

7.6.2 *Sampling Method*—As the auger rotates into soil, cuttings advance up the flights and are discharged at the surface. Soil samples can be collected from the surface discharge, or from the auger flights after pulling the auger out of the ground. Alternatively, samples can be collected with other samplers (for example, a thin-walled tube) after auger removal.

7.6.3 *Comments*—As discussed in 7.3, if samples are collected from surface discharge or from the flights, they are disturbed and are not suitable for some uses. In addition, if samples are collected from surface discharge, it is difficult to

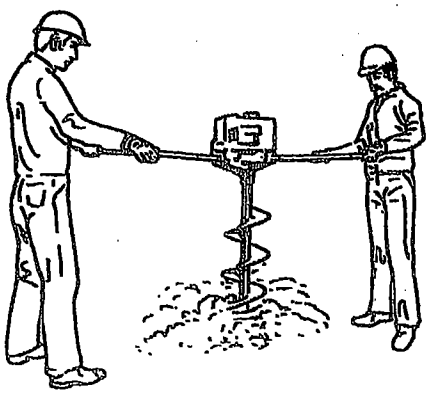


FIG. 11 Hand Held Power Auger

determine the depth from which the soil came and uncontrolled mixing of soil from different depth intervals can occur. The auger operates well in most soils. However, if the soil is cohesionless, it may not be retained on the flights and sampling in that fashion may not be possible. If the soil contains cobbles or boulders, drilling may not be possible. If the auger "hangs up" on an obstruction, the machine will start to rotate at the surface. Otherwise, the operator should not attempt to stop rotation of the machine by grabbing the handles. An alternate design that transfers the torque to a separate engine prevents this problem (15).[6] As previously stated, it is prudent to perform the field work with at least two people present.

7.7 *Trench Sampling:*

7.7.1 *Description*—Soils may be sampled from a trench or pit excavated for that purpose. Excavation is usually performed by a backhoe, and samples are collected with knives, trowels, or shovels. Occasionally, samples are collected from the sides or the bottom of the trench or pit with hand augers or tube-type samplers.

7.7.2 *Sampling Method*—Excavation is performed under the guidance of the sampling technician. Sampling is performed only after the backhoe has moved away from the trench or pit. When the trench or pit is in unstable material or is more than a few feet deep, the sampling technician should only enter the trench or pit after it has been shored up or the sidewalls have been cut back to within the angle of repose (see Occupational Safety and Health Administration regulations). Otherwise, samples are more commonly collected at the surface from the bucket of the backhoe as excavation occurs.

7.7.3 *Comments*—The maximum sampling depth for the trench or pit method is dictated by the reach of the backhoe, the soil type and the moisture content of the soil. Maximum depths of up to 20 ft (6.10 m) can be obtained in moist clays. Maximum depths of less than 10 ft (3.05 m) are common in dry sands. Samples collected from the backhoe bucket should be taken from the center of the material to prevent collecting soil contaminated by the bucket surface, and to prevent inclusion of materials that may have fallen from above the desired sampling interval. However, when this is done, it is difficult to accurately estimate the depth from which the sample was obtained. Trenches are useful for obtaining lithologic information since cross sections of the vadose zone can be studied and photographed. Trench or pit sampling is often used in areas with difficult access since backhoes are designed to travel on rough terrain. However, because the process involves excavating a much larger hole than drilling methods, chances of encountering underground utilities are increased, and proper backfilling and compaction of the trench is often very difficult.

8. Multipurpose and Auger Drill Rigs

8.1 Vadose zone samplers used in conjunction with drill rigs are identical to those used to sample below the water table. However, commonly used drill rigs such as cable tool and rotary units are not recommended as they generally require the introduction of drilling fluids to the soils to be sampled. Air rotary drilling is also undesirable for obtaining samples for pore liquid or gas extraction. In most cases, hollow-stem augers with some type of cylindrical sampler provide the greatest level of assurance that soil sampled within the vadose zone was not carried downward by the drilling or sampling process. For some situations, such as sampling firm to very hard ground, using multipurpose auger-core-rotary drill rigs will be necessary. For some geologic circumstances the use of solid stem augers will provide an adequate drilling method.

8.2 *Multipurpose Auger-Core-Rotary Drill Rigs:*

8.2.1 Multipurpose auger-core-rotary drill rigs are generally equipped with rotary power and vertical feed control to advance both hollow-stem augers and continuous flight (solid stem) augers to depths greater than 100 ft (30.48 m). These same drills have secondary capability for rotary and core drilling. The larger of these drills are typically mounted on 20 000 to 30 000-lb (9070 to 13605-kg) GVW trucks. The same multipurpose drill rigs are available on both rubber tired and track-driven all-terrain carriers. The smaller of the multipurpose drills are typically mounted on trailers or one-ton, 4 by 4 trucks.

8.2.2 When equipped with augers, the sampling process is identical to that for auger drill rigs. When multipurpose auger-core-rotary drill rigs or auger drill rigs are used, the speed of drilling and sampling is much greater than with hand operated equipment. Therefore it is useful to have a larger crew to efficiently handle, log, identify, and preserve the samples.

8.3 *Auger Drill Rigs*—Auger drill rigs are similar to multipurpose auger-core-rotary drill rigs. They are manufactured specifically for efficient auger drilling but do not have the pumps and hoists that are required for efficient core or rotary drilling. The rigs can be equipped with either solid stem or hollow stem augers. There are relatively few auger drills available in comparison to multipurpose auger-core-rotary drills.

9. Auger Drilling and Sampling

9.1 *Solid Stem Auger Drilling and Sampling:*

9.1.1 *Description*—The tools used for solid-stem auger drilling include: auger sections, the drive cap, and the cutter head (see Fig. 12). Auger sections are typically 5 ft (1.52 m) long and are interchangeable for assembly in an articulated but continuously flighted column. Augers are available in diameters up to 24 in. (60.96 cm). The cutter head is attached to the lowermost or leading flight of the auger column. It is about 0.5 in. (1.25 cm) larger in diameter than the flights. Head types include fish tail or drag bits for use in

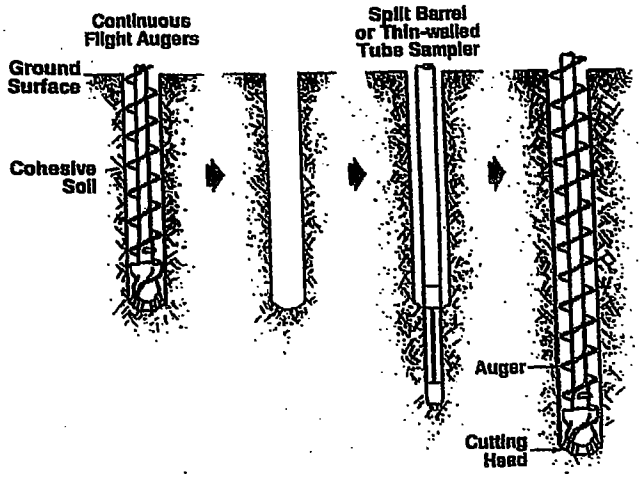


FIG. 12 Solid Stem Auger Sampling

cohesionless materials, and clay or stinger bits for use in more consolidated material (16).

9.1.2 *Sampling Method*—As the auger column is rotated into soil, cuttings are retained on the flights. The augers are then removed from the hole and samples are taken from the retained soil. Samples obtained with solid stem augers are disturbed and are not core samples. Therefore, the samples are not suitable for analyses requiring undisturbed samples, such as hydraulic conductivity tests. This sampling method can provide an adequately clean borehole in some clayey and silty soils. However, when using the method in caving or squeezing ground, the quality and the origin of the recovered samples are questionable because soils from different intervals may have mixed. Therefore, when representative samples from discrete depths are desired, the borehole should be made large enough to insert a smaller diameter auger or another sampler (for example, a thin-walled tube) to the bottom of the borehole, without touching the sides of the borehole (see Fig. 11), to collect a discrete sample from the interval ahead.

9.1.3 *Comments*—Typical drilling depths with solid stem augers range from 50 to 120 ft (15.24 to 36.58 m). The greater drilling depths are attained in firm, silty and clayey soils. However, the depth to which the hole will remain open for sampling once the auger column has been removed is usually less than the maximum drilling depth. If cascading water or cohesionless soils are encountered, it can be expected that the hole will cave at that depth. The sample depth measurement, as taken from its location on an auger, is not precise. This is because soil may move up the flights in an uneven fashion as the auger column is advanced. As with hollow-stem augers, solid stem augers are often painted by the driller or manufacturer. It is prudent to remove this paint before drilling. The majority of the paint can be removed by drilling through sandy soils or by sand blasting. As with all sampling devices, decontamination (for example, steam cleaning) should be performed between holes when chemical analyses are to be performed on the samples. This is especially important with the solid stem auger as it doubles as the drilling and sampling tool.

9.2 *Bucket Auger Drilling and Sampling:*

9.2.1 *Description*—The bucket auger is a large diameter cylindrical bucket with auger-type cutting blades on the bottom. The bucket can have a diameter ranging from 12 in. (30.48 cm) up to 6 ft (1.83 m) with lengths varying from 24 to 48 in. (60.96 to 121.92 cm) (17). The bottom is hinged to allow cuttings to be emptied out (see Fig. 13).

9.2.2 *Sampling Method*—The bucket is rotated to depth in the vadose zone until the bucket is full. Therefore, depending on the bucket length, sampling intervals can range from 24 to 48 in. (60.96 to 121.92 cm). Sampling consists of extracting small diameter core samples from the interior of the bucket after lowering the full bucket to the ground (see Section 7). This approach minimizes problems with undiscrete mixing of discrete portions to be sampled.

9.2.3 *Comments*—The bucket auger is best suited for sampling from relatively stable clays as the caving problems discussed in 9.1.3 are amplified by the larger hole diameter. Boulders can impede drilling and may have to be individually removed from the hole before sampling can continue (15)[6]. Generally, boulders up to one-third or one-fourth the bucket diameter can be picked up by the bucket. Common sampling depths are less than 50 ft (15.24 m) but holes up to 250 ft (76.20 m) deep have been drilled (16, 17).

9.3 *Hollow Stem Auger Drilling and Sampling:*

9.3.1 *Description*—Outer components of the hollow stem auger system include: hollow auger sections, the hollow auger head, and the drive cap. Inner components include: the pilot assembly, the center rod column, and the rod-to-cap adaptor (see Fig. 14). The auger head contains replaceable carbide teeth that pulverize the formation during flight

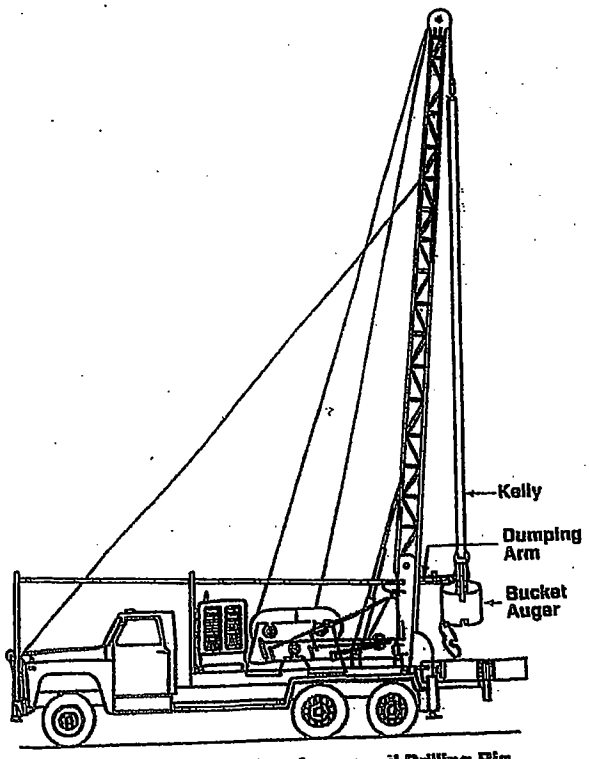


FIG. 13 Bucket Auger and Drilling Rig

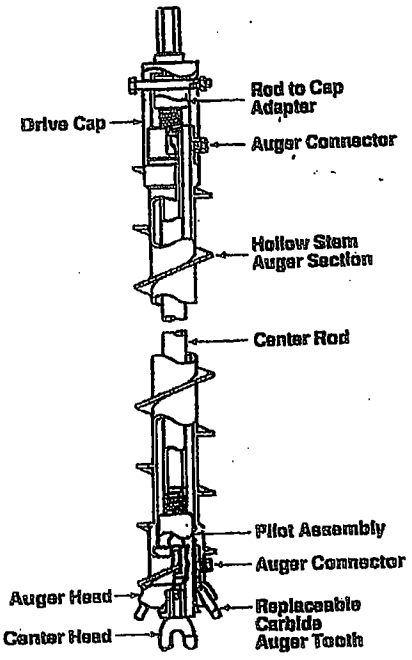


FIG. 14 Hollow-Stem Auger Components

column rotation. The cutting diameter is somewhat greater than the flighting diameter because of the protruding teeth. Auger sections are typically 5 ft (1.52 m) long and are interchangeable for assembly in an articulated but continuously flighted column. Drilling progresses in 5 ft (1.52 m) or shorter increments and sampling can be accomplished at any depth within that increment. Upon advancement of a 5 ft (1.52 m) increment, another 5 ft (1.52 m) section hollow-stem auger and center rod is added. Hollow-stem augers are readily available with 2.25, 2.75, 3.25, 3.75, 4.25, 6.25, and 8.25-in. (5.72, 6.99, 8.26, 9.53, 10.80, 15.88, and 20.96-cm) inside diameters.

9.3.2 *Sampling Method*—The auger column and pilot assembly are advanced to the top of the desired sampling interval. Sampling is accomplished by removing the pilot assembly and center rod, if they are used, and inserting the sampler through the hollow stem of the auger column (see Fig. 15). The sampler may be lowered to the sampling depth by attaching it to center rods or by using a wireline assembly (12). When the sampler is attached to center rods, a sample is collected by pushing or driving the sampler into undisturbed soil with the rig hydraulic system or with a drop hammer. When a wireline is used, the sampler is locked into place ahead of the lower-most auger and advanced into the sampling interval by rotating the auger column (18).[6] Hollow stem augers with a 6.25-in. (15.88-cm) inside diameter allow the use of 5-in. (12.70-cm) outside diameter Shelby tubes and 4.5-in. (11.43-cm) outside diameter split barrel samplers (see 9.4).

9.3.3 *Comments*—The purpose of the center head (pilot) assembly is to prevent soils from entering the auger column as it is advanced (19). Driscoll (17) suggests that the assembly may be omitted when drilling through hard, silty and clayey soils as these materials will usually form a 2 to 4 in. (5.08 to 10.16 cm) long plug at the auger opening. However, Hackett (19) recommends that the pilot assembly be used when detailed samples are required. When perched water is encountered, "heaving sands" that move up into the auger column upon pilot assembly removal during sampling, may be a concern. Various one-way plugs that allow sampling, but that prevent sand from moving into the auger column, are described in Hackett (19). The important capability of being able to obtain samples that do not contain mixed material from shallow sources in the hole is enhanced by using the hollow-stem auger method. However, because the sections are hollow, decontamination of the auger interiors between holes to prevent cross contamination is difficult. High pressure steam cleaners are usually necessary to remove caked-on soils and contaminants. Hollow stem augers may advance rapidly through unconsolidated materials.

9.4 *Sampling Devices:*

9.4.1 Sampling devices used in conjunction with hollow stem augers and occasionally in holes advanced by solid stem augers include:

9.4.1.1 Thin-walled tube samplers (also called Shelby tubes),

9.4.1.2 Split-barrel drive samplers (also called Split spoons),

9.4.1.3 Ring-lined barrel samplers,

9.4.1.4 Continuous sample tube systems, and

9.4.1.5 Piston samplers.

9.4.2 These samplers are either pushed or driven in sequence with an increment of drilling or advanced simultaneously with the advance of a hollow stem auger column.

9.4.3 *Thin-Walled Tube Samplers:*

9.4.3.1 *Description*—The thin-walled tube sampler consists of a tube connected to a head with screws. The head is threaded to connect with standard drill rods. The head contains a ball check valve. Thin-walled tube (Shelby tube) samplers are readily available with 2, 3, and 5-in. (5.08, 7.62, and 12.70-cm) outside diameter and are commonly 30 in. (76.20 cm) long. The 3 by 30 in. (7.62 by 76.20 cm) outside diameter long sampler is most common. The advancing end of the sampler is constructed with an inward lip, machined to a cutting edge, that has a smaller diameter than the tube inside diameter. The cutting edge inside diameter reduction, defined as a "clearance ratio," is usually in the range of 0.0050 to 0.0150 or 0.50 to 1.50 % (refer to Practice D 1587). PTFE or plastic sealing caps and other sealing devices for use after sampling are readily available for the 2, 3, and 5-in. (5.08, 7.62 and 12.70-cm) diameter tubes (refer to Practice D 4220). Shelby tubes are commonly available in carbon steel but can be manufactured from other metal (see Fig. 8).

9.4.3.2 *Sampling Methods*—When a Shelby tube is pushed into soil, the length of the sample recovered is often less than the distance pushed, that is, the recovery ratio is less than 1.0 (see 7.5.6.2). In addition, a portion of the sample frequently remains in the borehole after retrieval of the sampler. This is due to suction that develops at the sampler-soil interface. This suction may be broken by twisting the

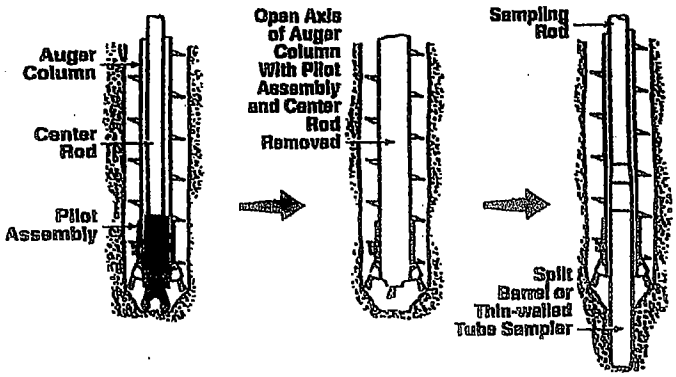


FIG. 15 Hollow-Stem Auger Sampling

sampler prior to retrieval or by advancing the auger column below the base of the sampler before retrieval (20). Samples are extruded from the Shelby tube with a hydraulic ram. As with all sampling devices, the portion of the sample in contact with the tube is considered disturbed and unrepresentative. Wilson et al. (12) developed a paring device to remove this outer layer of the core during extrusion.

9.4.3.3 *Comments*—The ball check valve was originally intended to provide a vent for drilling fluids when pushing the tube into soil, and also to prevent the column of fluid within the drill stem from forcing the sample out of the tube during retrieval. Since drilling fluids are not used when sampling in the vadose zone, these considerations are not important. However, the valve does provide a vent for air displaced as the sampler is pushed into soil. Shelby tubes are best used in clays, silts, and fine grained sands. They can be pushed with the hydraulic system of most drill rigs in fine grained sands that are loose to moderately consolidated or in clays and silts that are soft to firm. If the soils are cohesionless, they may not be retained in the tube. If consolidated or hard soils are encountered, driving the sampler may be required. However, some tubes may buckle under the drive stress. A spring-loaded barrel has been developed to protect the Shelby tube from buckling when sampling these soils (21).[6]

9.4.4 *Split-Barrel Drive Samplers:*

9.4.4.1 *Description*—The split-barrel drive sampler consists of two split-barrel halves, a drive shoe, and a sampler head containing a ball check valve, all of which are threaded together (see Fig. 15). The most common size has a 2-in. (5.08-cm) outside diameter and a 1.5-in. (3.81-cm) inside diameter split barrel with a 1.375-in. (3.49-cm) inside diameter drive shoe. This sampler is used extensively in geotechnical exploration (Refer to Method D 1586). When fitted with a 16 gage liner for encased cores, the sampler has a 1.375-in. (3.49-cm) inside diameter throughout. A 3-in. (7.62-cm) outside diameter by 2.5-in. (6.35-cm) inside diameter split-barrel sampler with a 2.375-in. (6.03-cm) inside diameter drive shoe is also available (22).[6] Other split-barrel samplers in the size range of 2.5-in. (6.35-cm) to 4.5-in. (11.43-cm) outside diameter are manufactured but are less common. A plastic or metal retainer basket, or a flap valve is often fitted into the drive shoe to prevent samples from falling out during retrieval.

9.4.4.2 *Sampling Method*—As described in Method D 1586 the sampler is threaded onto drilling rods and is lowered to the bottom of the boring. The sampler is then driven into the soil with blows from a drop hammer attached to the drill rig. The hammer usually weighs 140 lb [illegible]s operated by the driller. The sampler is extracted from t[illegible]oil in a manner that will ensure maximum sample recovery. A

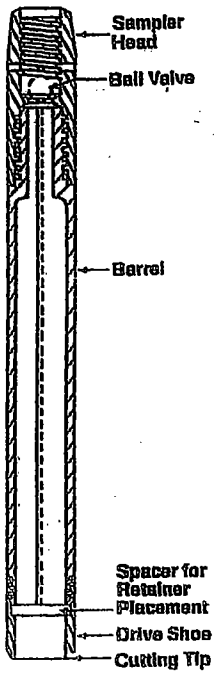


FIG. 16 Split-Barrel Drive Sampler

sample is obtained by disassembling the drive shoe and head, and splitting the barrel to expose the core of soil. Material disturbed by contact with the barrel can be scraped away, or a less disturbed interior portion collected with a spatula.

9.4.4.3 *Comments*—Split barrel drive samplers can be used in all soil types if the larger grain sizes can enter through the opening of the drive shoe. Because the sampler can be fitted with a retainer basket, it is typically used in place of thin-walled tubes when cohesionless soils are to be sampled.

9.4.5 *Ring-Lined Barrel Samplers:*

9.4.5.1 *Description*—As described in Practice D 3550, the ring-lined barrel sampler consists of a one piece barrel or two split-barrel halves, a drive shoe, rings, a waste barrel and a sampler head containing a ball check valve (see Fig. 17). The rings fit snugly inside the barrel and are designed to be directly inserted into geotechnical testing apparatus when removed from the barrel. Most samplers are designed to hold at least six rings. The waste barrel provides a space above the rings into which disturbed soil, originally at the bottom of the hole, can move. The samplers are commonly available with 2, 3, and 4-in. (5.08, 7.62, and 10.16-cm) outside diameter.

9.4.5.2 *Sampling Method*—The ring-lined barrel sampler can be driven or pushed into soil. It is important to insert the sampler deep enough to allow all disturbed soil to move through the rings and into the waste barrel. Once retrieved, the sampler is disassembled, and the sample filled rings are carefully removed. The rings are usually removed as one unit and placed into a capped container. Alternately, the individual soil filled rings can be capped with plastic or PTFE and even sealed with wax or adhesive tape (refer to Practice D 4220).

9.4.5.3 *Comments*—Because ring-lined barrel samplers are more rigid than thin-walled tubes, they can be driven into soils containing sands and gravels that might damage thin-walled tubes. The sampler provides samples in rings that can be handled without further disturbance of the soil. Because of this, these devices are most often used when geotechnical or chemical analyses are to be performed.

9.4.6 *Continuous Sample Tube System:*

9.4.6.1 *Description*—Continuous sample tube systems that fit within a hollow-stem auger column are readily available in North America. The barrel is typically 5 ft (1.52 m) long, and fits within the lead auger of the hollow auger column. The sampler is prevented from rotating as the auger column is turned (20). For many conditions the sampler provides continuous, 5-ft (1.52-m) samples (see Fig. 18). The assembly can be split- or solid-barrel and can be used with or without liners of various metallic and nonmetallic materials (20). Two clear, plastic, 30 in. (76.20 cm) long liners are often used. The sampler may also be fitted with a plastic or metal retainer basket, or a falp valve to prevent cohesionless soils from falling out of the sampler during retrieval (20).

9.4.6.2 *Sampling Method*—The sampler is locked in place inside the auger column with its open end protruding a short distance beyond the end of the column. While advancing the column, soil enters the non-rotating sampling barrel. After a 5-ft (1.52-m) advance, the sampler is withdrawn, and the liner (if used) is removed and capped.

9.4.6.3 *Comments*—The continuous sample tube system replaces the pilot head assembly in the hollow-stem auger column. Because of this, sampling speed is greatly increased since the pilot assembly does not have to be removed before taking a sample. The continuous sample tube system is best used in clays, silts, and in fine grained sands. It can be used to sample soils that are much more consolidated or harder than can be sampled with Shelby tubes.

9.4.7 *Piston Samplers:*

9.4.7.1 *Description*—Locally saturated (for example, perched ground water), or cohesionless soils, and very soft soils or sludges may not be retained in most samplers, even when they have been fitted with retainer baskets or flap valves. Piston samplers are often used under these conditions. The sampler consists of a sampling tube, an internal piston, and a drive head. The piston fits snugly inside the tube. The piston is attached to a rod assembly or a cable that leads to the surface. Tubes made of steel are available in 5.5 and 30-in. (13.97 and 76.20-cm) and 5-ft (1.5-m) lengths with 0.75, 2, 3, 4, and 5-in. (1.91, 5.08, 7.62, 10.16, and 12.70-cm) inside diameter (22, 23). When equipped with a hardened steel drive shoe, the tube can be fitted with a liner made of aluminum clear PVC, or another material (see Fig. 19) (24). A version of the sampler designed for peat sampling has a cone shaped piston (8).

9.4.7.2 *Sampling Method*—Prior to sampling, the piston is placed at the base (advancing end) of the tube. The sampler is then attached to drill rods and lowered down the borehole or hollow-stem auger column to the bottom of the hole (top of the sampling interval). The sampler is then pushed or driven into the sampling interval. As the tube

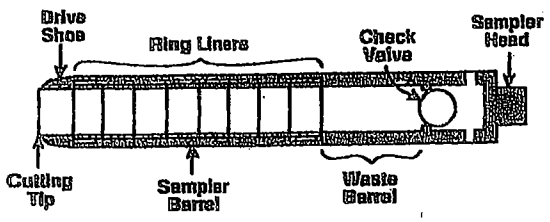


FIG. 17 Ring-Lined Barrel Sampler

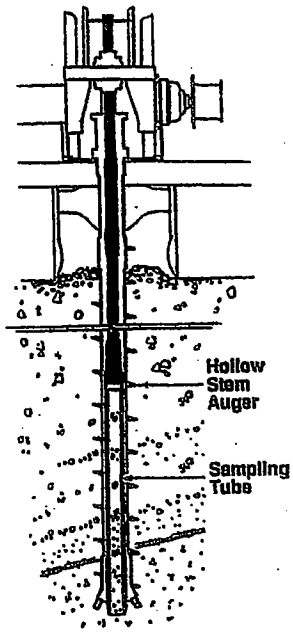


FIG. 18 Continuous Sample Tube System

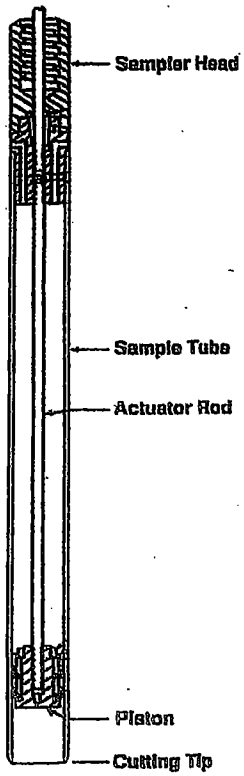


FIG. 19 Piston Sampler

moves downward, the piston remains stationary and in contact with the top of the soil sample. When the sampler is withdrawn, soil is retained because of suction that develops between the piston and the soil core within the sampler. This suction is stronger than the suction at the bottom of the sampler that would tend to extract soil from the sampler. Even so, it is often useful to twist the sampler with the drill and ensure that the sample will not be pulled out of the sampler.

9.4.7.3 *Comments*—Average recovery ratios greater than 0.9 can be attained with this sampling tool (24, 25). However, because the sampler depends on development of suction between the sample and the piston, it may not work in unsaturated, coarse grained sands and gravels. This is due

creation of suction with the sampler. Samples collected with piston samplers are relatively undisturbed. Zapico et al. (24) described techniques for extracting fluid samples directly from liners, and for converting liners into permeameters.

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Appendix E
Aurora Industrial Hygiene Scope of Work and Air Monitoring Plan

AURORA INDUSTRIAL HYGIENE, INC. SCOPE OF WORK

1.0 OBJECTIVE

The objective of this scope of work is to provide practices and procedures that ensure the following:

- A minimization of community exposures to potential hazards from site activities and/or releases that may migrate off site.
- Asbestos abatement oversight

All monitoring system design and frequency shall be approved by Pittsburg River Park LLC.

2.0 RESPONSIBILITIES

2.1 CIH RESPONSIBILITIES

- The CIH shall evaluate the potential chemical constituents of concern that may migrate off the site based on previous and current environmental assessment information and previous site usage.

- The CIH is responsible for designing both the periodic and continuous air monitoring plan for all analytes. This shall include frequency and type of air monitoring, sampling techniques and instrumentation, and calibration methods. Action limits for perimeter monitoring will be determined and measures that will be taken to reduce airborne concentrations to below the action levels in the event that an action limit is exceeded will be included. Table 1 provides a minimum air monitoring sampling schedule for each phase of work. The actual number of samples taken will depend upon site conditions, work activities and weather, and OSHA and BAAQMD regulations.

- The air monitoring plan shall include samples taken during asbestos abatement and site perimeter monitoring during all phases of work, including background, asbestos abatement, demolition, and soil excavation.

- The CIH shall be certified by the American Board of Industrial Hygiene for Comprehensive Practice, and shall also be certified by the State of California as a Certified Asbestos Consultant and a Department of Health Services Lead Inspector/Risk Assessor and Lead Monitor with a minimum of 15 years

experience in Health and Safety. CIH responsibilities will not be passed to subcontractors.

2.2 PM RESPONSIBILITIES

- The Aurora Industrial Hygiene project manager (PM) is responsible for recognizing potential hazards that may be encountered at the site and acting as the liaison for all team members.
- The PM shall hold the designations Certified Asbestos Consultant, Certified Lead Monitor and Certified Lead Inspector/Risk Assessor.
- The PM shall have a minimum of 10 years experience as an Industrial Hygienist.

2.3 PROJECT FIELD STAFF RESPONSIBILITIES

- The Aurora project field staff is responsible for ensuring that all data acquisition is performed in accordance with the work plan, and that deviations from the plans are based upon field conditions encountered and are well documented in the field notes.

- All Aurora project field staff will have completed 40 hours of comprehensive health and safety training and have current medical surveillance that meets the requirements of Title 29 Code of Federal Regulations Part 1910.120 (29 CFR 1910.120).

- Field Staff shall hold the designation Certified Site Surveillance Technician (CSST), and be DHS Lead Certified.

- Field staff shall have the authority to monitor and correct health and safety problems as they arise on Site.

- All contractors not hired by Aurora Industrial Hygiene are responsible for the health and safety of their own onsite personnel. Aurora does not accept responsibility for the health and safety of contractors, but if Field Staff note items of concern they will report concerns to the client.

2.4 CONTRACTOR RESPONSIBILITIES

All Site contractor and subcontractor employers are responsible for their own health and safety program and the health and safety of their own employees. This requirement is based on Occupational Safety and Health Administration (OSHA) regulations that recognize the employer-to-employee responsibility for health and safety.

3.0 AIR MONITORING PLAN (AMP)

This section describes the general concepts of an air monitoring program and specifies the activities that will take place during the Johns Manville Demolition Project.

The purpose of air monitoring is to identify and quantify airborne contaminants in order to verify and determine the level of worker protection and evaluate potential community exposures. Two principal approaches are available for identifying and/or quantifying airborne contaminants to include the use of on-site direct-reading chemical monitoring instruments and laboratory analysis of air samples obtained on collection media.

It is the responsibility of each contractor to determine the personnel exposure for their employees. Each contractor is expected to perform initial monitoring of their employees who are or may reasonably be expected to be exposed to airborne concentrations at or above the action levels. After the initial determinations have been made, sampling shall be of such frequency and pattern as to represent with reasonable accuracy the levels of exposure of their employees. Personal monitoring for contractors not hired by Aurora is NOT within Aurora Industrial Hygiene's scope of work.

Table 1: Sample Collection Estimates

Baseline (1 week)			
Type	Estimated Number	Location	Time Line
Asbestos	12-24	Upwind and downwind along site perimeter	Minimum 3 days of sampling, prior to construction start, during daytime (0700-1600)
Lead – Air	12-24		
Particulates	12-24		
Asbestos Abatement (5 weeks)			
Type	Estimated Number	Location	Time Line
Asbestos (TEM)	80-100 (10/week)	Upwind, downwind, South and West perimeter	Daily
Asbestos (PCM)	50-100/week	3 samples, minimum outside each containment work area	Daily
Demolition (14 weeks)			
Type	Estimated Number	Location	Time Line
Asbestos	280 (15-20/week)	Upwind, downwind, south and west along site perimeter.	Daily
Lead (GF)	280(15-20/week)	Upwind, downwind south and west along site perimeter,	Daily
Lead (AA)	280 (15-20/week)	Active work site samples as needed.	Daily

Particulates	280 (15-20/week)	Active work site samples as needed	Daily
Soil Remediation (10 weeks)			
Asbestos (TEM)	200 (15-20/week)	Upwind, downwind, south and west along site perimeter.	Daily
Asbestos (PCM)	50-100/week	Active work site samples as needed	Daily
Particulates	200(15-20/week)	Active work site samples as needed	Daily

3.1 BASELINE

Baseline (background) monitoring will be accomplished by Aurora by conducting both downwind and upwind sampling, and collecting site perimeter measurements/samples. Perimeter locations will include upwind and downwind locations. If the downwind direction cannot be determined, or if the wind varies throughout the day, as least two sample collection locations shall be established. These shall be along the south and west perimeters of the project site. All instrument results will be documented. A summary sheet will be provided on a weekly basis or as requested by the client. The following are minimum numbers; additional sampling may be added depending upon site conditions:

3.1.1 AIRBORNE ASBESTOS

- TEM, EPA Level II samples will be collected upwind, downwind, and along the south and west perimeter of the site. Samples will be collected for a minimum of three days during work hours. Depending upon wind and weather conditions, additional samples may be collected to ensure adequate comparison data. Baseline asbestos TEM samples will be archived for analysis if needed to compare with samples taken during subsequent phases.
- Phase Contrast Microscopy samples will be collected within buildings where asbestos work is scheduled, prior to the start of work in each area. The number of background samples will be dependent upon the parameters of each work area, and the type of asbestos which will be removed.

3.1.2 PARTICULATE (PM10)

- A minimum of three particulate monitors will be set up along the perimeter of the site, two along the south and west perimeters. Readings will be taken every 10-15 minutes/for a minimum of 3-5 days. Readings will be recorded on a 24 hour basis and a permanent record generated. A handheld unit may also be used as needed along specific building perimeters.

3.1.3 WIND DIRECTION/WIND SPEED/TEMPERATURE

- Readings will be taken using a solar powered Davis Instrument Weather station. The weather station will be on site for the duration of the project. All readings will be recorded on a 24hr basis and a permanent record generated.

- Readings from the onsite weather station will be correlated with local weather information from the nearest airport meteorological station.

3.1.4 AIRBORNE LEAD (FLAME ATOMIC ABSORPTION AND GRAPHITE FURNACE).

- A minimum of three days of lead air samples shall be collected during work hours for comparison with both EPA and OSHA standards and with samples collected during subsequent phases. Samples will be archived for analysis if needed to compare with samples taken during subsequent phases.

3.2 MONITORING DURING ACTIVE WORK

3.2.1 PHASES

3.2.1.1 During Asbestos Abatement

- Aurora's Field Staff will conduct site surveillance during all asbestos removal. A minimum of 3 air samples will be collected outside each work area to provide the client with information regarding the integrity of each containment area. Oversight services, including documentation of contractor submittals, checklists, and daily notes will be provided along with a final report for each area. Clearance samples will be taken within each work area upon completion of the remediation.
- Continuous monitoring for particulates, wind speed/direction and perimeter monitoring for asbestos will be conducted simultaneously.

3.2.1.2 During Demolition

- Continuous monitoring for particulates, wind speed/direction and daily perimeter monitoring for lead and asbestos will be conducted by Aurora's on site representative.
- It will be the responsibility of Aurora's CIH along with the field staff on site to determine, based upon construction activities, the location, number of, and type of samples which will be taken.

3.2.1.3 Soil Excavation

- During activities which may involve handling of soil contaminated with asbestos debris, area monitoring for asbestos will be conducted along with continued perimeter monitoring for particulates.
- Aurora will provide asbestos abatement oversite during transite pipe removal.
- Monitoring for wind speed and direction will be continued.

3.2.2 ACTIONS LEVELS/RESPONSES

3.2.2.1 Active Work Areas

During all phases of active work, real time monitoring and indirect monitoring will be performed by Aurora under the direction of the CIH and PM in each active work area as deemed necessary. Any concentration above the action levels will be reported to the Site safety and health officer and action taken. As a minimum real time measurements will be taken every 30 minutes, or when task or exposure conditions change (whichever frequency is less). All indirect sampling media will be analyzed by an AIHA (American Industrial Hygiene Association) accredited laboratory.

Table 2 — Active Work Area Air Monitoring

Test Method/ Equipment	Exposure Limits*		Action Level	Action Plan
	OSHA PEL	ACGIH TLV		
Inorganic Lead Compounds				
NIOSH Method 7300; with air monitoring pumps and filters	0.05 mg/m3	0.05 mg/m3	a. <0.03 mg/m3 b. 0.03 < and > 0.3 mg/m3 c. > 0.3 mg/m3	a. Continue Work and Monitoring b. Upgrade to Level C and continue to monitor c. Suspend work; evaluate source and mitigation measures.
Nuisance Dust				
a. Direct-reading b. NIOSH Method 500; with air monitoring pumps and filters	Total 10 mg/m3 Respirable 5.0 mg/m3	Inhalable 10 mg/m3 Respirable 3.0 mg/m3	a. <1.0 mg/m3 b. >1.0 mg/m3	a. Continue Work and Monitoring b. Suspend work; evaluate source and mitigation measures.
Asbestos				
b. NIOSH Method 7400; with air monitoring pumps and filters	0.1 fb/cc (1910.1001) 0.1 fb/cc	0.1 fb/cc	a. <0.01 fb/cc b. >0.1 fb/cc	a. Continue Work and Monitoring b. evaluate source and mitigation measures.

Exposure limits established by the Occupational Safety and Health Administration (OSHA) and Threshold Limit Values published by the American Conference of Governmental Industrial Hygienist.

3.2.2.2 Perimeter Monitoring

During all Site activities, the perimeter of the work zone will be monitored by Aurora according to the following list of initial and/or ongoing monitoring for community

exposure assessment. At a minimum, three site perimeter locations will be monitored as part of the perimeter monitoring program. Perimeter locations will include upwind and downwind locations. If the downwind direction cannot be determined, or if the wind varies throughout the day, as least two sample collection locations shall be established. These shall be along the south and west perimeters of the project site. See Diagram 1 for perimeter sampling locations.

DIAGRAM 1



Table 3 — Perimeter Air Monitoring

Test Method/Equipment	Action Level	Action Plan
	Inorganic Lead Compounds	
NIOSH Method 7082; with air monitoring pumps and filters	a. At or below background b. Above background	a. Continue Work and Monitoring b. Suspend work; evaluate source and mitigation measures.
	Nuisance Dust	
a. Direct-reading b. NIOSH Method 500; with air monitoring pumps and filters	a. <0.15 mg/m3 above background b.> 0.15 mg/m3 above background	a. Continue Work and Monitoring b. Suspend work; evaluate source and mitigation measures
	Asbestos	
b. NIOSH Method 7400; with air monitoring pumps and filters	a. <0.01 fb/cc or background b. >0.01 fb/cc	a. Continue Work and Monitoring b. Reanalyze for TEM, if results indicate asbestos is present, Suspend work; evaluate source and mitigation measures.
	Wind Speed	
Davis Weather Station III with solar panel	a. <20 mph b. >20 mph	a. Continue Work and Monitoring b. Inform contractors of high winds condition. Monitor dust levels

4.0 CALIBRATION OF MONITORING EQUIPMENT

It is essential that each piece of site monitoring equipment be calibrated on a routine basis. This assures that a given monitoring instrument is both working and working with a reasonable degree of accuracy. This procedure outlines required calibration frequencies and techniques. The manufacturers' instruction manual should always be available for specific calibration procedures and other information. It is the responsibility of Aurora's on site staff to complete calibration in accordance with manufacturer's instructions.

4.1 FREQUENCY OF CALIBRATION

The following instruments must be calibrated before each use:

- Air Sampling Pumps (various flow rates)
- Aerosol/Particulate Monitor

4.2 CALIBRATION TECHNIQUES

Air Sampling Pumps

The flow rate of air sampling pumps must be calibrated within a range depending upon the chemical of concern and the collection medium for the sample. Calibration is achieved by connecting the hose assembly with collection medium attached, to a calibrator (e.g., MiniBuck) and observing the flow rate. A set screw or knob is then turned until the flow rate is within the desired range.

Refer to the NIOSH Manual of Analytical Methods for the prescribed flow rates and sampling media for the targeted concern, if needed.

Aerosol/Particulate Monitors

Some particulate monitors must be factory recalibrated, however they should be zeroed daily.

Periodic Instrument Response Checks

It is important that each piece of monitoring equipment be checked occasionally during its use to determine that it is responding to contaminants.

These "response checks" are key to providing confidence to the user that the instrument is at least functioning and responding to contaminants.

5.0 ASBESTOS ABATEMENT OVERSITE

Aurora will provide specific asbestos abatement services during set-up, project duration, and containment teardowns. Project management services are provided by a CAC, oversite activities will be provided by a Certified Site Surveillance Technician (CSST) or a CAC. These services are in addition to the background and perimeter sampling schedules provided in Section 3. All oversight work shall be conducted as per regulations and requirements set forth by the Bay Area Air Quality Management District.

5.1 CERTIFIED ASBESTOS CONSULTANT SERVICES:

- Review Contractor submittals, including permits, notifications, work plans, and disposal plans, employee training, medical and respiratory fit testing prior to the start of work.

- Attend pre-construction and planning meetings to provide guidance to the client regarding regulatory compliance issues regarding asbestos.
- Monitor quality control, review daily field notes and air monitoring data to ensure continuing compliance with regulatory standards.
- Upon completion of the project a final report documenting that the areas requiring asbestos abatement have been abated in conformance with all applicable laws and regulations upon successful completion of the project including submittals, daily notes, air monitoring results will be written by a CAC who is also a Certified Industrial Hygienist (CIH).

5.2 CERTIFIED ASBESTOS SITE SURVEILLANCE TECHNICIAN SERVICES (CSST)

- Pre-abatement air monitoring to determine background concentrations of particulates.
- Inspection of the contractor's construction of containment areas prior to startup and on a regular basis at least two times daily.
- Review of asbestos air monitoring results, document submittals such as respirator fit tests, medicals, and training, pressure differential reports, etc., as required to ensure regulatory and specification compliance.
- Daily air monitoring outside the containment areas to ensure that the containment system is operating correctly and that there is no contamination of the outside environment.
- Analysis of up to 10 area samples per shift using phase contrast microscopy (PCM), in accordance with NIOSH Method 7400 per shift at no extra charge. Sample results will be provided within 24 hours. Clearance sample results will be provided ASAP.
- Clearance inspections and air sampling will be conducted in each work area prior to releasing the asbestos abatement work areas.

6.0 DOCUMENTATION

6.1 DAILY SUBMITTALS

A daily log of monitoring results will be maintained by Aurora. The log shall be provided to the Client's representative as requested or on a weekly basis. The log shall contain, minimally:

- A diagram indicating project boundaries, the areas where active work was completed, and the perimeter sample collection locations.
- Direct reading equipment used including equipment make and model, serial number, factory calibration date, and time, method, and results of daily field calibration.

- A list of sampling pumps used which indicated pump manufacturer, pump ID number calibrator type, and time and flow rate for pre- and post – daily pump calibration.
- A sample collection record for sampled sent for laboratory analysis which will include sample ID number, pump number, sample location, analytes, sample time, sample flow rate, and total sample volume.
- A table of direct reading sample results which will include collection time, collection location, and results.
- Weather observations which include time, wind direction, wind speed, and temperature.
- Any other condition or circumstances that may have influenced the readings

6.2 CLOSE-OUT DOCUMENTS

A close-out document will be provided by Aurora for each phase of the project. The close-out document shall include all daily notes as described in Section 6.1 and the following:

- All laboratory chain of custody and laboratory analysis data
- A time line and summary of contractor activities
- Contractor submittals
- Complete datalogged information from all direct readings, including particulate counts and weather station information.
- Certifications

7.0 SAMPLE HANDLING

7.1 AMERISCI LABORATORIES

Amerisci Laboratories, located at 24416 South Main Street, Suite 308, Carson, CA., is one of two laboratories which will be used for asbestos and lead analysis. The following are their protocols for sample handling.

7.1.1 SAMPLE STORAGE

Client samples are either returned or temporarily stored at the laboratory for 60 days before disposal unless other conditions are specified. Samples that are retained for storage are placed in double bags or other appropriate containers and filed by the laboratory job number. The sealed container is placed in a storage box with other similar samples. An identification code is recorded on the outside of the storage box. The sealed storage box of individually bagged jobs is then placed in a secured storage area. Different analysis types (ie., air filters, bulk samples) are stored separately, thereby minimizing any potential cross contamination.

7.1.2 SAMPLE RETURN

Samples designated for return to the client are kept in the original shipping container if appropriate. Upon completion of processing and/or analysis the samples and their container are returned to the Sample Coordinator for retention in the Return Holding Area. After the appropriate time (approximately 60 days) samples held in the Return holding area are returned to the client by a traceable shipping method. All samples leaving the laboratory are accompanied by a Chain of Custody (COC). In the event of being returned to the original owner, they will be accompanied by a copy of the original chain of custody. Portions of the samples may be retained for QA purposes.

7.1.3 SAMPLE DISPOSAL

After the appropriate time (60 days, unless otherwise requested and agreed upon in writing) samples held in temporary storage are disposed of by a licensed contractor following federal, state and local regulations. The COC copy is retained in the appropriate job file. Portions of the samples may be retained for QA purposes.

7.2 EMS LABORATORIES

Asbestos, lead and particulate samples may be sent to EMS Laboratories, located at 117 West Bellevue Drive, Pasadena, California. The following are EMS Laboratories policies regarding storage and disposal of samples.

7.2.1 STORAGE

All chemistry samples are kept for 90 – 120 days from the data of analysis or as required by the customer before they are treated as waste. Samples are returned to the client upon request or if they require special storage. It is documented with EMS' chain-of-custody. The results of the analysis are used as a guide to determine whether the sample should be considered normal or hazardous waste. All samples are sealed in individual containers compatible with their contents.

7.2.2 DISPOSAL

After 90-120 days, unless otherwise requested and agreed upon in writing) samples held in temporary storage are disposed of by a licensed contractor following federal, state and local regulations. It is documented with EMS' chain-of-custody.

7.3 AURORA INDUSTRIAL HYGIENE, INC.

Phase Contrast Microscopy samples are immediately returned to their original sampling train housing. Samples are then placed into a secondary box. Each sample is identified

by a label, listing time, location, air volume, date and unique sample identification numbers. Boxes are sealed, with project information placed on the box. All PCM samples are then stored by Aurora Industrial Hygiene, Inc. for a period of time not less than three years or returned to the client along with the chain-of-custody.

Appendix B
Treadwell & Rollo
Geotechnical Investigation
Report

GEOTECHNICAL INVESTIGATION
PROPOSED HARBOR PARK DEVELOPMENT
Pittsburg, California

Mr. Chris Nelson
c/o Pittsburg River Park

13 June 2006
Project No. 4245.02

Treadwell&Rollo
Environmental and Geotechnical Consultants

Treadwell&Rollo

13 June 2006
Project 4245.02

Mr. Chris Nelson
c/o Pittsburg River Park
55 Hawthorne Street, Suite 555
San Francisco, California 94105

Subject: Geotechnical Investigation
Harbor Park Development
Pittsburg, California

Dear Mr. Nelson:

Treadwell & Rollo, Inc. is pleased to present our updated geotechnical investigation report for the Harbor Park development. The project site encompasses about 21 acres, and is southwest of the intersection between 3rd Street and Harbor Street in Pittsburg, California.

The site was previously occupied by the Johns Manville manufacturing facility. The proposed development for Harbor Park includes the construction of 2- to 3-story, wood-framed single- and multi-family residences and live-work lofts. We do not anticipate that the site grades will change significantly as part of the proposed development.

A preliminary geotechnical investigation was performed to collect data regarding the subsurface conditions by drilling four test borings and performing 13 cone penetration tests and the results were presented in our report titled *Preliminary Geotechnical Investigation Proposed Harbor Bay development, Pittsburg California*, dated 17 October 2005. The results of the preliminary investigation indicated that the project site was underlain by various types of soil including localized potentially liquefiable soil, and highly compressible clay deposits with varying thickness and compressibility characteristics.

This geotechnical investigation was performed to better define the lateral extents and depths of the various types of soil and geotechnical constraints, to provide more detailed geotechnical recommendations for the development of the site. The results of our subsurface investigations indicate the site is covered with heterogeneous fill ranging in thicknesses from 2 to 15 feet. The thickest fill deposit is in the area of a previously filled former evaporation pond. Beneath the western portion, the fill is underlain by stiff to hard clay and dense sand and gravel. Beneath the southeastern portion of the site, the fill is underlain by soft to medium stiff compressible clay. The compressible deposit is underlain by alluvium (stiff to hard clay with varying sand and gravel content and medium dense to very dense silty and clayey sand and gravel) to the maximum depth explored (51.5 feet). Groundwater was encountered at depths of 4 to 30 feet below ground surface in the borings and CPT holes.

Liquefiable deposits were encountered throughout the site, although it appears the liquefiable deposits are relatively thin, contain a high silt content, and are discontinuous.

Based on the results of our analyses, we conclude the primary geotechnical concerns affecting the proposed development are the presence of compressible clay and liquefiable zones. We conclude the proposed buildings can be supported on reinforced concrete mats, interconnect continuous footings, post-tensioned slabs or deep foundations.

This report contains information regarding subsurface conditions, grading, and foundation design criteria. The information presented herein should be used for preliminary design and project pricing. We recommend the project team have discussions regarding cost and constructability issues related to the alternatives presented in this report before the final designs for site development are prepared.

We appreciate the opportunity to work with you on this project. If you have any questions, please call.

Sincerely yours,
TREADWELL & ROLLO, INC.

Haze Rodgers
Civil Engineer

42450201.OAK



Dean H. Iwasa
Geotechnical Engineer



GEOTECHNICAL INVESTIGATION
PROPOSED HARBOR PARK DEVELOPMENT
Pittsburg, California

Mr. Chris Nelson
c/o Pittsburg River Park

13 June 2006
Project No. 4245.02

Treadwell&Rollo
Environmental and Geotechnical Consultants

Treadwell&Rollo

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GEOTECHNICAL INVESTIGATION
PROPOSED HARBOR PARK DEVELOPMENT
Pittsburg, California

1.0 INTRODUCTION

This report presents the results of the geotechnical investigation performed by Treadwell & Rollo, Inc. (T&R) for the proposed Harbor Park residential development in Pittsburg, California. The Harbor Park development encompasses approximately 21 acres and is southwest[1] of the intersection of East 3rd and Harbor Streets as shown on the Site Location Map (Figure 1).

2.0 BACKGROUND

The project site is bound by East 3rd Street to the north, Harbor Street to the east, a park and 8th Street to the south, and a residential development to the west. The residential development to the west is atop an approximately 1.5:1 (horizontal to vertical) slope that ranges from approximately 0 to 20 feet in height. The site was previously occupied by the Johns Manville Pittsburg Manufacturing Facility. At the time of this report, the structures associated with the manufacturing facility had been demolished and the majority of the building footings had been excavated and removed. The approximate locations of the former buildings associated with the Johns Manville facility are shown on the Site Plan, Figure 2. We understand some of the building footings were encountered at depths greater that five feet below the existing ground surface (bgs). After the footings were removed, the resulting excavations were backfilled with loose soil.

Site development plans include environmental remediation of on-site soil. ERM is the environmental consultant for the project. Currently, ERM is in the process of assessing the environmental quality of the soil and groundwater at the site and evaluating disposal and/or remediation options. Environmental remediation of contaminated soil at the site had not started

[1] All direction references are based on the project north arrow presented on the Site Location Map, Figure 1 of this report.

at the time this report was completed. However, some of the environmental remediation work will have geotechnical aspects associated with them, such as excavation and refilling of a former evaporation pond at the southeastern corner of the site (see Figure 2) after contaminated soil has been removed, and constructing a large earthen embankment within the "open space" area along the eastern edge of the site (Harbor Street), as indicated on Figure 3.

3.0 PROJECT DESCRIPTION

The proposed development includes the following:

- Downtown Medium Density Residential (DMDR); this portion of the development will consist of 2- and 3-story, single-family, detached and attached homes, constructed at a density of 12 to 18 units per acre

- Downtown High Density Residential (DHDR); this portion of the development will consist of 3-story, multi-family structures and live/work lofts, constructed at a density of 18 to 30 units per acre

- Open Space (OS) area; this portion of the development will include a relatively large earthen embankment along the eastern edge of the site along Harbor Street.

A conceptual development plan for the proposed Harbor Park site is shown on Figure 3. Proposed site improvements will also include underground utilities, landscaping, and new pavements. Preliminary design loads, proposed grading, and/or new underground utility locations were not available at the time of this report was prepared.

4.0 PREVIOUS GEOTECHNICAL INVESTIGATION

T&R previously performed a preliminary geotechnical investigation of the project site and the results were presented in a report titled *Preliminary Geotechnical Investigation, Proposed Harbor Bay Development, Pittsburg, California*, dated 17 October 2005. The preliminary investigation identified several geotechnical issues that could impact the proposed development.

These issues include deposits of soft compressible clay and isolated deposits of potentially liquefiable granular soil. The results of the previous geotechnical investigation dated 17 October 2005 have been incorporated into this report, where applicable.

5.0 SCOPE OF SERVICES

Our scope of services for this geotechnical investigation was outlined in our proposal dated 9 December 2005. Our services included researching historical documents, drilling borings, performing cone penetration tests (CPTs), testing soil samples, and performing engineering analyses. Based on the results of our investigation, we prepared conclusions and recommendations regarding the following:

- soil and groundwater conditions
- geotechnical characteristics of the on-site soil, especially with respect to identifying potentially expansive, compressible, and liquefiable soils and their approximate limits within the site
- the most appropriate foundation types for the proposed buildings and dwellings
- design criteria for the recommended foundation types, including vertical and lateral capacities
- building settlement, including total and differential settlement
- site seismicity and seismic hazards, including the approximate location of known active faults and the potential for on-site soil to liquefy during a large earthquake on one of the nearby active faults
- stability of the existing slope along the property line at the western edge of the site
- site preparation and grading, including criteria for fill quality, moisture-conditioning and compaction

- utility trench backfill requirements
- surface and lot drainage
- flexible pavement design
- 2001 California Building Code soil profile type and near source factors
- construction considerations.

Although the site is not located in a seismic hazard zone as defined by the California Geologic Survey (CGS), we have addressed potential seismic conditions that could relate to proposed developments.

6.0 FIELD INVESTIGATION AND LABORATORY TESTING

The subsurface conditions at the site were explored using a combination of test borings and CPTs. Nine test borings (designated as B-5 through B-13) and 48 CPTs (designated as CPT-14 through CPT-61) were performed as part of this investigation. Subsurface conditions were previously explored during our preliminary geotechnical investigation by drilling four borings (designated as B-1 through B-4) and performing 13 CPTs (designated CPT-1 through CPT-13). The approximate locations of all of the test borings and CPTs are shown on Figure 2.

6.1 Borings

The borings were drilled by Gregg Drilling, Inc. of Martinez, California (Gregg Drilling) and Ofiaro Building Engineering and Construction of Richmond, California. On 18 and 19 August 2005, 20 and 21 December 2005, and 2 through 7 February 2006, we drilled a total of 13 test borings using:

- a truck-mounted drill rig equipped with rotary-wash equipment
- a truck-mounted drill rig equipped with hollow-stem augers

- a portable drill rig equipped with solid-stem flight augers for drilling boring B-9 at the top of the slope along the western edge of the site.

The borings were drilled to depths ranging from approximately 20 to 50 feet bgs. During drilling, our field engineer logged the soil encountered and obtained samples for visual classification and laboratory testing. Logs of the borings are presented on Figures A-1 through A-14 in Appendix A. The materials encountered during drilling were classified according to the soil classification system described on Figure A-15.

Soil samples were obtained using the following samplers:

- Standard Penetration Test (SPT) split-barrel sampler with a 2.0-inch outside diameter and a 1.5-inch inside diameter (without liners)
- Sprague and Henwood (S&H) split-barrel sampler with a 3.0-inch outside diameter and 2.5-inch inside diameter (with 2.43-inch-inside-diameter brass liners)
- Dames and Moore (D&M) sampler with a 2.5-inch-outside-diameter, thin-walled tube.

The SPT and S&H samplers were driven with a 140-pound automatic hammer falling approximately 30 inches per drop, except for boring B-9, where the samplers were driven using a tripod-mounted “rope and cathead” system. The blow counts required to drive the S&H sampler the final 12 inches of an 18-inch drive were converted to approximate SPT N-values using a conversion factor of 0.6 or 0.7 depending upon the type of hammer used, as indicated on the boring logs. The approximate SPT N-values are also shown on the boring logs. Where the SPT sampler was used, the actual blow counts are presented on the boring logs.

Upon completion of drilling, the borings were backfilled with cement grout in accordance with the requirements of the Contra Costa County Environmental Health Department. The soil cuttings and drilling fluids from the borings were placed in 55-gallon drums and stored at a central on-site location as directed by the environmental consultant, ERM. Analytical tests were subsequently performed on composite samples of the drilling fluid and soil cuttings generated

during our field investigation. The laboratory test results were provided to Renova for disposal of the drummed material. Results of the analytical tests are presented in Appendix D.

6.2 Cone Penetration Tests

Sixty-one CPTs were performed by Gregg Drilling on 19 through 22 August 2005, 15 through 21 December 2005, and 2, 10, and 24 February 2006. The CPTs were performed by hydraulically pushing a 1.4-inch-diameter, cone-tipped probe with a projected area of 15 square centimeters into the ground. The cone-tipped probe measures tip resistance, and the friction sleeve behind the cone tip measures frictional resistance. Load cells within the cone continuously measure soil parameters for the entire depth advanced. Soil data, including tip resistance and frictional resistance, were recorded while the test was conducted. Accumulated data were processed by computer to provide engineering information such as the approximate type and strength characteristics of the soil at the site. The CPTs were advanced to depths of 30 to 50 feet bgs. CPT logs, showing tip resistance and friction ratio by depth, as well as interpreted SPT N-values and soil type, are presented in Appendix B.

6.3 Laboratory Testing

Soil samples were re-examined in our office to confirm field classifications, and representative samples were selected for testing. Laboratory tests were performed on selected soil samples to measure soil gradation and fines content (percentage of particles passing the No. 200 sieve), Atterberg limits, moisture content, dry density, consolidation characteristics, shear strength, and corrosion characteristics. The geotechnical laboratory test results are presented in Appendix C. Analytical tests were performed on composite samples of the drilling fluid and soil cuttings generated during our field investigation to assist with the disposal of the drummed material. The chemical test results are presented in Appendix D.

7.0 SITE CONDITIONS

The Harbor Park site is bordered by East 3rd Street to the north, a park and East 8th Street to the south, an existing residential development to the west, and Harbor Street to the east, as shown on

Figure 2. The existing ground surface ranges in elevation from approximately 12 feet above mean sea level (MSL) near the intersection of East 3rd and Harbor Streets to approximately 32 feet MSL at the top of the existing slope at the southwest corner of the site. An ALTA Land Title survey performed by Renner Group, dated 20 May 2005, indicates that the site grades at these two locations correspond to about Elevation 100 feet[2] at the intersection of East 3rd Street and 120 at the top of the existing slope at the southwest corner of the site, which correspond to 12 and 32 feet MSL respectively.

In general, the ground surface at the site gently slopes toward the north from approximately Elevation 110 feet (22 feet MSL) along the southern edge of the site to about Elevation 100 (12 feet MSL) feet near the intersection of East 3rd and Harbor Streets, except for the existing slope along the western edge of the property, as shown on Figure 2. This slope is up to 20 feet in height and the ground surface slopes down toward the east at an inclination of approximately 1.5:1 or steeper. Existing 3- to 4-foot-high wood retaining walls were observed along the toe of the slope. A large deposit of loose sand is present at the southwest corner of the site near the top of the slope; the depth of the sand deposit is unknown at this time. An existing relatively new residential development is at the top of the slope and borders the western edge of the site. It is our understanding that the residential development is approximately 15 years old.

During our investigation, the existing structures and improvements associated with the Johns Manville manufacturing facility, including former manufacturing buildings, four rail spurs, asphalt cement pavements, fences, and underground utilities (see Figure 2), were being demolished and either removed from the site or incorporated as part of the new development. According to the documents reviewed for this project (see the References section), a former evaporation pond in the southeast corner of the project site was previously filled in; Figure 2 shows the approximate location of the former pond. Environmental boring logs previously prepared by others indicate the fill and soil in the area of the old evaporation pond contain some

[2] All elevations described in this report are based on the vertical datum as described on the ALTA Land Title survey prepared by Renner Group, dated 20 May 2005, unless otherwise noted.

debris and contaminates that are most likely associated with the previous industrial activities at the project site.

8.0 SUBSURFACE CONDITIONS

The results of our investigation indicate the ground surface at the site is underlain by about 2 to 15 feet of fill. The fill is highly variable in soil type and strength. The estimated thickness of fill at each individual boring and CPT location is shown in the "soil data boxes" presented on Figure 4. The specific soil types and engineering characteristics are presented on the boring and CPT logs and laboratory test results in Appendices A, B, and C. The fill generally consists of loose to medium dense sand and gravel with varying silt and clay content, and medium stiff to very stiff clay with varying sand and gravel content. The near-surface clayey fill encountered at the site generally has a low to moderate expansion potential.

Based on the results of the borings, CPTs, and laboratory tests, we conclude the fill at the southeastern portion of the site and at isolated areas at the northwestern portion of the site are underlain by deposits of compressible soft to medium stiff clay. The lateral extent of compressible deposits at the southeastern portion of the site is approximately shown on Figure 4. The compressible deposits vary between approximately 3 and 43 feet in thickness. The estimated thickness of compressible deposits at each individual boring and CPT is shown in the "soil data boxes" presented on Figure 4. A description of the soil, as well as, specific soil types, depths to compressible soil layers, and engineering characteristics are presented on the boring and CPTs logs and laboratory test results presented in Appendices A, B, and C. The results of our study indicate that the compressible deposits primarily consist of clay with varying amounts of silt and sand.

Beneath the fill at the western portion of the site and beneath the compressible clay deposits at the southeastern part of the site, we generally encountered medium stiff to stiff sandy silt and clay, medium dense to very dense sand with varying amounts of silt and clay, and dense to very dense gravelly sand/sandy gravel.

Groundwater was encountered at depths of 4 to 30 feet bgs in the borings and CPTs during or immediately following drilling or CPT advancement, respectively. Approximate depth to groundwater was also estimated at some CPT locations by using the results of pore pressure dissipation tests. The groundwater depths are summarized in Table 1. These depths to groundwater correspond to elevations between 92.5 and 97.5 feet (corresponding to 4.5 and 9.5 feet MSL respectively). The groundwater level has been previously measured and reported in the environmental reports by others at elevations between approximately 91 to 93 feet (corresponding to 3 and 5 feet MSL respectively). However, due to the close proximity of the project site to the Sacramento-San Joaquin River Delta (i.e., New York Slough), we conclude the groundwater elevation will likely fluctuate with changes in the water level of the slough.

TABLE 1

Depth to Groundwater Observed during the Subsurface Investigation[3]

Location	Approximate Depth to Ground Water
B-1	9 feet bgs (5 feet MSL)
B-2	13-1/2 feet bgs (6-1/2 feet MSL)
B-4	9 feet (5 feet MSL)
B-9	25 to 30 feet bgs (9 to 4 feet MSL)
B-10a	6-1/2 feet bgs (9-1/2 feet MSL)
B-12	9 feet bgs (5 feet MSL)
CPT-1	10 feet bgs (18 feet MSL)
CPT-14	8 feet bgs (8 feet MSL)
CPT-21	11-1/2 feet bgs (6-1/2 feet MSL)
CPT-22	15-1/2 feet bgs (10-1/2 feet MSL)
CPT-38	6 feet bgs (8 feet MSL)
CPT-41	7-1/2 feet (6-1/2 feet MSL)
CPT-43	4 feet bgs (10 feet MSL)

[3] Refer to the boring and CPT logs in Appendices A and B for dates in which the subsurface explorations were performed.

Location	Approximate Depth to Ground Water
CPT-45	4-1/2 feet bgs (11-1/2 feet MSL)
CPT-50	7 feet bgs (9 feet MSL)
CPT-51	6 feet bgs (10 feet MSL)
CPT-53	6 feet bgs (10 feet MSL)
CPT-54	5 feet bgs (11 feet MSL)
CPT-56	6 feet bgs (10 feet MSL)
CPT-59	8 feet bgs (6 feet MSL)
CPT-61	8 feet bgs (6 feet MSL)

9.0 REGIONAL SEISMICITY

The major active faults in the area are the Great Valley Faults, Concord/Green Valley, Greenville, Mount Diablo, and Calaveras Faults. These and other faults of the region are shown on Figure 5. For each of the active faults, the distance from the site and estimated mean Moment magnitude[4] [Working Group on California Earthquake Probabilities (WGCEP) (Cao, et al., 2003)] are summarized in Table 2.

[4] Moment magnitude is an energy-based scale and provides a physically meaningful measure of the size of a faulting event. Moment magnitude is directly related to average slip and fault rupture area.

TABLE 2

Regional Faults and Seismicity

Fault Segment	Approximate Distance from Site (km)	Direction from Site	Maximum Magnitude
Great Valley 6	7.9	East	6.70
Great Valley 5	13	East	6.50
Concord/Green Valley	15	West	6.71
Greenville	18	Southwest	6.94
Mt. Diablo	23	Southwest	6.65
Total Calaveras	27	Southwest	6.93
Great Valley 4	29	North	6.60
West Napa	34	West	6.50
North Hayward	37	West	6.49
Total Hayward	37	West	6.91
Total Hayward-Rogers Creek	37	West	7.26
South Hayward	37	Southwest	6.67
Great Valley 7	46	Southeast	6.70
Rogers Creek	48	West	6.98
Hunting Creek-Berryessa	54	Northwest	6.9
Hayward-South East Extension	64	South	6.40
San Andreas 1906 Rupture	66	West	7.90
San Andreas- Peninsula	66	West	7.15

Figure 5 also shows the earthquake epicenters for events with magnitude greater than 5.0 from January 1800 through January 1996. Since 1800, four major earthquakes have been recorded on the San Andreas Fault. In 1836, an earthquake with an estimated maximum intensity of VII on the Modified Mercalli (MM) scale (Figure 6) occurred east of Monterey Bay on the San Andreas Fault (Toppozada and Borchardt 1998). The estimated Moment magnitude, $M_{w,}$ for this earthquake is about 6-1/4. In 1838, an earthquake occurred with an estimated intensity of about VIII-IX (MM), corresponding to a M_w of about 7-1/2. The San Francisco Earthquake of 1906 caused the most significant damage in the history of the Bay Area in terms of loss of lives and

property damage. This earthquake created a surface rupture along the San Andreas Fault from Shelter Cove to San Juan Bautista approximately 430 kilometers in length. It had a maximum intensity of XI (MM), a M_w of about 7.9, and was felt 560 kilometers away in Oregon, Nevada, and Los Angeles. The most recent earthquake to affect the Bay Area was the Loma Prieta Earthquake of 17 October 1989 with a M_w of 6.9. The epicenter of the earthquake was in the Santa Cruz Mountains approximately 111 km from the site.

In 1868, an earthquake with an estimated maximum intensity of X on the MM scale occurred on the southern segment (between San Leandro and Fremont) of the Hayward Fault. The estimated M_w for the earthquake is 7.0. In 1861, an earthquake of unknown magnitude (probably a $M_{w\ of}$ about 6.5) was reported on the Calaveras Fault. The most recent significant earthquake on this fault was the 1984 Morgan Hill earthquake (M_w = 6.2).

The Coast Ranges-Central Valley Fault (Great Valley) system is characterized by a poorly-defined series of thrust faults and blind thrust faults. The fault system is defined by diffuse seismicity, distinct geomorphic expression of mountain-front faulting, and seismic reflection profiles. The thrust system trends northwest-southeast and is believed to extend 640 kilometers, forming the western boundary of the Sacramento and San Joaquin Valleys. In general, the fault system dips westward. An earthquake on the Coast Ranges-Central Valley Fault system could cause strong seismic shaking at the project site. A number of large historic earthquakes have occurred on this fault system, including the 1892 Vacaville (M_w = 6.8), 1889 Antioch (M_w = 6.3), and the 1983 Coalinga (M_w = 6.5) earthquakes. Geologists have estimated a slip rate ranging from 0.2 to 3 mm/yr. Estimated moment magnitudes of earthquakes along the thrust fault system are between 6.0 and 6.7.

The Concord-Green Valley faults, including some significant active secondary traces such as the Cordelia fault, consist of a highly complex zone with a potential for either one major event or two smaller events to the northwest and southeast of Suisun Bay. A single event model involving a rupture along the Concord and Green Valley faults is estimated to be capable of producing an M_w 6.9 event every 180 years. An alternate model involves independent Concord

and Green Valley fault ruptures that would produce a M_w 6.5 event every 110 years and a M_w 6.7 event every 150 years, respectively (USGS, 2000).

The Mount Diablo blind thrust underlying the Livermore and Sycamore Valleys is the source of major fold structures, including Mount Diablo and the Mount Diablo and Tassajara anticlines (Unruh and Sawyer, 1997). The folds, and the underlying fault, are assumed to be active because they deform late Pleistocene and early Holocene sediments. The geometry and slip rate on the thrust are inferred largely from structural modeling, although the existence of the thrust is consistent with seismic reflection data from the southeastern Tassajara Hills (Unruh, 2000). Unruh and Sawyer hypothesize that this system has formed in a left-stepping transpressional step-over between the right lateral Greenville and Concord-Green Valley faults, and propose a kinematic model in which slip on the Greenville fault is transferred via the Mount Diablo thrust to the Concord Fault. Present modeling results constrain estimates for the minimum slip rate on the Mount Diablo thrust to a range of 1.3 to 2.4 mm/yr.

In 2003, the Working Group on California Earthquake Probabilities (WGCEP 2003) at the U.S. Geologic Survey (USGS) predicted a 70 percent probability of a magnitude 6.7 or greater earthquake occurring in the San Francisco Bay Area by the year 2031. More specific estimates of the probabilities for different faults in the Bay Area are presented in Table 3.

TABLE 3

WGCEP (2003) Estimates of 30-Year Probability (2002 to 2031) of a Magnitude 6.7 or Greater Earthquake

Fault	Probability (percent)
Hayward-Rodgers Creek	27
San Andreas	21
Calaveras	11
San Gregorio	10
Concord-Green Valley	4
Greenville	3

10.0 DISCUSSIONS AND CONCLUSIONS

From a geotechnical standpoint, we conclude the site can be developed as planned, provided the recommendations presented in this report are incorporated into the project plans and specifications and implemented during construction. The primary geotechnical issues to be addressed during site development are:

- seismic hazard, including soil liquefaction and associated hazards
- consolidation-related settlement of soft to medium stiff clay deposits under the weight of new fill and building loads, including the weight of the proposed earthen embankment along the eastern edge of the site
- presence of undocumented fill associated with past site uses and current demolition activities, including fill previously placed in the former evaporation pond area
- relatively shallow groundwater beneath the site
- stability of the existing slope along the western edge of the site
- strong ground shaking due to a seismic event on one of the nearby faults
- foundation design criteria
- construction considerations.

These and other geotechnical issues as they pertain to the proposed development are discussed in following sections.

10.1 Seismic Hazards

The site is not within a state-designated seismic hazard zone. However, during a major earthquake on a segment of one of the nearby faults, strong to very strong shaking is expected to occur at the project site. Strong shaking during an earthquake can result in ground failures such

as those associated with soil liquefaction,[5] lateral spreading,[6] and cyclic densification.[7] We used the results of our field investigations to evaluate the potential of these phenomena occurring at the project site. The results of our evaluation are presented below.

10.1.1 Ground Shaking

The seismicity of the site is governed by the activity of the Great Valley Faults and the Concord/ Green Valley fault. However, strong ground shaking from future earthquakes on any of the nearby faults will be felt at the site. The intensity of earthquake ground motions at the site will depend upon the characteristics of the generating fault, distance to the earthquake epicenter, magnitude and duration of the earthquake, and specific subsurface conditions. We judge ground shaking at the site during a large earthquake on one of the nearby active faults will be strong to very strong.

10.1.2 Soil Liquefaction and Associated Hazards

When saturated, cohesionless soil liquefies, it experiences a temporary loss of shear strength due to a transient rise in excess pore pressure generated by strong ground motion. Flow failure, lateral spreading, differential settlement, loss of bearing strength, ground fissures and sand boils are evidence of excess pore pressure generation and liquefaction. We evaluated the potential for soil liquefaction at the site in accordance with the California Geologic Survey's Special Publication 117 (SP 117) (CGS, 1997), as described in the following sections.

To estimate the peak ground acceleration (PGA) for use in our liquefaction analysis, we selected a Simple Prescribed Parameter Value (SPPV), as described in SP 117. Specifically, we

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[5] Liquefaction is a transformation of soil from a solid to a liquefied state during which saturated soil temporarily loses strength resulting from the buildup of excess pore water pressure, especially during earthquake-induced cyclic loading. Soil susceptible to liquefaction includes loose to medium dense sand and gravel, low-plasticity silt, and some low-plasticity clay deposits.

[6] Lateral spreading is a phenomenon in which surficial soil displaces along a shear zone that has formed within an underlying liquefied layer. Upon reaching mobilization, the surficial blocks are transported downslope or in the direction of a free face by earthquake and gravitational forces.

[7] Cyclic densification is a phenomenon in which non-saturated, cohesionless soil is densified by earthquake vibrations, causing ground-surface settlement.

classified the site according to the procedures and soil profile types defined in Chapter 16 of the 2001 California Building Code (CBC). The site is 7.9 kilometers from the northern portion of the Great Valley 6 fault, which is a Type B fault according to the publication titled *Maps of Known Active Fault Near-Source Zones in California and Adjacent Portions of Nevada* (CDMG, 1998). The 2001 CBC near-source factors for the site are 1.0 and 1.1 for N_a and N_v, respectively. We assumed a soil profile type of S_D for our liquefaction analysis. Based on our classification of the site, we estimate the PGA will be approximately 0.44 times N_a which corresponds to 0.44 times gravity (0.44g). Also, we assumed an earthquake magnitude of 6.7, which is the estimated maximum Moment magnitude for the Green Valley 6 Fault (Table 1).

Liquefaction analyses were performed in accordance with the methodology presented in the publication titled *Liquefaction Resistance of Soils: Summary Report from the 1996 NCEER and 1998 NCFEA/NSF Workshop on Evaluation of Liquefaction Resistance on Soil* (Youd et al, 2001). The methodology is applicable to both the SPT and CPT results. This methodology consists of converting the CPT tip resistance data (q_C) to corrected $(q_{C1N})_{CS}$ values[8] or field blow count data to SPT N-values for determination of the cyclic resistance ratio (CRR), which is used to evaluate liquefaction resistance of the site under seismic loading. In general, the uncorrected field data were converted to overburden-corrected values using the correction factor C_N, where C_N is equal to the ratio $(1/\sigma_v')^n$, where σ_v' is the effective overburden pressure in tons per square foot (tsf), and "n" is an exponent that varies from 0.5 to 1.0 for the CPT analysis and is 0.5 for the test boring analysis, as recommended in the NCEER proceedings. Additional correction values, such as sampler size, hammer efficiency, and rod length, are required for the test boring analysis method.

The susceptibility of the sands to liquefy under seismic loading was evaluated in general accordance with the procedure presented by NCEER which is based on the methodology developed by Seed and Idriss (1982). The equivalent uniform cyclic stress ratio (CSR_{eq}) was estimated for each depth using a magnitude dependent stress reduction factor (r_d) formulation

[8] These values have been corrected to account for the effects of the overburden soil and fines content as recommended by the NCEER procedure.

presented in the NCEER proceedings. The equivalent uniform stress ratio required to trigger liquefaction for a magnitude 7.5 event ($CRR_{7.5}$) was determined from relationships between $CRR_{7.5}$ and $(q_{C1N})_{CS}$, as suggested by NCEER. The factor of safety against liquefaction was defined as $CRR_{7.5}/CSR_{eq}$. Liquefaction is unlikely to occur if any of the following conditions are encountered for a particular soil layer:

- $(q_{C1N})_{CS}$ is greater than 160 tsf
- the soil is determined to be too "fines rich" to liquefy
- the factor of safety against liquefaction is greater than or equal to 1.3.

The results of our investigation indicate that thin layers of medium dense silty and clayey sand and medium stiff to stiff sandy silt were encountered in many of the borings and CPTs at the site. The results of our analyses indicate that soil liquefaction will occur at most of the boring and CPT locations across the site. In general, the potentially liquefiable soil layers are typically less than three feet thick, contain a high silt content, and are laterally discontinuous. Potential hazards associated with these relatively thin, discontinuous layers include total and differential settlement, loss of bearing strength, and ground fissures and sand boils. These and other potential seismic hazards are discussed in the following sections.

10.1.2.1 Liquefaction-Induced Ground Settlement

We used the procedure outlined in the 1997 NCEER report to estimate liquefaction-induced settlement based on CPT data. We also used the method developed by Tokimatsu and Seed (1987) to estimate the amount of settlement that can occur based on the blow count data as presented on the boring logs. By using these analytical methods, we estimate that a maximum of 4 to 5 inches of total liquefaction-induced settlement may occur at the site in the vicinity of boring B-2 and CPT-18. However, the average liquefaction-induced settlement for the site is limited to about 1 to 1.5 inches of total settlement with differential settlement of about 0.5 to 0.75 inches across a 25-foot distance. Estimates of liquefaction-induced settlement at each boring and CPT location are shown in the "settlement data boxes" presented on Figure 7.

Specific areas that may experience greater than three inches of liquefaction-induced settlement during and immediately after a large earthquake on a nearby active fault are listed in Table 4 and Figure 7.

TABLE 4

Estimated Seismically-Induced Settlements Greater Than Three Inches

Location	Depth to Top of Potentially Liquefiable Layer (feet)	Estimated Total Settlement (inches)
B-2	17	4-2/3
B-7	28-1/2	3-3/4
CPT-18	17	3-3/4
CPT-28	11	3-1/4
CPT-29	14	3-2/3
CPT-34	20	3-1/4
CPT-56	8-1/2	3-1/2

10.1.2.2 Liquefaction-Induced Ground Failures

The potential for liquefaction-induced ground failures depends on the thickness of the liquefiable soil layer relative to the thickness of the overlying non-liquefiable material. Ishihara (1985) developed an empirical relationship that provides criteria that can be used to evaluate whether liquefaction-induced ground failure would be expected to occur under a given level of shaking. The behavior of low plasticity (PI less than 12) material with a high fines content (greater than 35 percent passing a standard No. 200 sieve) during dynamic loading is currently an area of ongoing professional research and discussion. Academics and professionals agree that these materials do have a potential to lose strength during dynamic loading; however, the geotechnical community is not agreed in whether these materials will be fluid and mobile resulting in liquefaction-induced ground failures, such as surface ruptures and sand boils, or whether these materials will simply soften under earthquake loading conditions. Based on the CPT and

laboratory test results, we conclude the majority of the near-surface (less than 10 feet bgs) potentially liquefiable soil layers identified by our analysis have fines contents in excess of 35 percent, and silty soil has plasticity indices ranging from 0 to 13. In addition, these near surface potentially liquefiable soil layers are relatively thin (less than 2 feet thick), and are laterally discontinuous. Specific locations where the potential for ground failure is greatest are near CPT-16, CPT-17, CPT-18, CPT-21 and CPT-28. Refer to the boring and CPT logs, and laboratory test results in Appendices A, B, and C for specific subsurface conditions. On the basis of our engineering analysis and professional experience, it is our opinion that the potential for liquefaction-induced ground rupture at the site is generally low, primarily due to the high silt content of the potentially liquefiable soil. We believe that occasional ground surface ruptures may occur near CPT-16, CPT-17, CPT-18, CPT-21 and CPT-28 during a large earthquake; however, the underlying soil has a very high silt content and will have limited mobility to manifest itself at the ground surface (e.g., sand boils). Overexcavation of the potentially liquefiable layers is not considered feasible since the potentially liquefiable soil layers are below the groundwater, generally thin, discontinuous, and extend to the maximum depths explored by our borings and CPTs, which correspond to depths of about 50 feet bgs. Consequently, the proposed buildings to be constructed within areas susceptible to liquefaction-induced ground failures should be supported on stiffened foundations that rest on a layer of well-compacted fill or a deep foundation system that gains support below the potentially liquefiable soil layers. It is our opinion that these types of foundation systems can be used to safely support the proposed residential structures within areas that are potentially susceptible to liquefaction-induced ground failures.

10.1.2.3 Lateral Spreading

Lateral spreading occurs when a continuous layer of soil liquefies at depth and the soil layers above move toward an unsupported face, such as an open slope cut or in the direction of a regional slope or gradient. We evaluated the potential for liquefaction-induced lateral spreading at the site using the method developed by Bartlett and Youd (1995). Based on the results of our analyses, we conclude the underlying layers of saturated sand and silt are sufficiently dense

and/or laterally discontinuous; therefore, we conclude the potential for lateral spreading at the site is low.

10.1.3 Cyclic Densification

Seismically induced compaction or cyclic densification of non-saturated sand (i.e., sand above the groundwater table) due to earthquake vibrations may cause differential settlement. We used the procedure recommended by Tokimatsu and Seed (1984) to estimate the magnitude of settlement associated with cyclic densification. In general, a majority of the non-saturated soil at the site contains sufficient clay content to resist cyclic densification. However, occasional layers of loose, non-saturated sand and silt that are potentially susceptible to cyclic densification were encountered at the site in isolated areas. The amount of settlement associated with cyclic densification at the individual borings and CPT locations across the site are presented in the "settlement data boxes" on Figure 7. Based on our evaluation, we conclude non-saturated soil at the site could settle up to 1/2 inch as a result of cyclic densification following a large earthquake; this amount of settlement is considered relatively low in the greater San Francisco Bay Area.

10.1.4 Fault Rupture

Historically, ground surface displacements closely follow the trace of geologically young faults. The site is not within an Earthquake Fault Zone, as defined by the Alquist-Priolo Earthquake Fault Zoning Act, and no known active or potentially active faults exist on the site. In a seismically active area, the remote possibility exists for future faulting in areas where no faults previously existed; however, we conclude the risk of surface faulting and consequent secondary ground failure is very low. We therefore conclude the risk of fault offset at the site from a known active fault is low.

10.2 Consolidation-Related Settlement

Based on the results of our subsurface investigation, we conclude the southeastern portion of the site, as well as, isolated areas at the northwestern portion of the site are underlain by deposits of compressible soft to medium stiff clay. The estimated lateral extent of compressible soil

deposits at the southeastern portion of the site is shown on Figure 4. The estimated thickness of compressible deposits at individual boring and CPT locations is shown in the "soil data boxes" presented on Figure 4. Neither the thickness nor the compressibility characteristics of the clay is uniform across the site.

Based on the results of our study, we conclude the underlying layers of soft to medium stiff clay will consolidate and settle under the weight of new fill and building loads, including the weight of the proposed earthen embankment along the eastern edge of the site. The weight of new fill and building loads will begin a new cycle of consolidation settlement in the compressible clay deposits. The amount and rate of consolidation settlement depends upon: 1) the weight of new fill and buildings, 2) the thickness of the existing fill, 3) the thickness and consolidation characteristics of the compressible soil deposits, 4) the degree of desiccation within the upper portion of the compressible deposits, and 5) the presence of sand layers within the compressible deposits. Because these factors vary significantly across the site, the amount of total and differential settlement expected beneath the proposed buildings and improvements are difficult to estimate. However, in general, our calculations indicate that for every foot of new fill placed, we anticipate total settlement of about 1/2 inch due to the consolidation of the underlying compressible deposits. Once the final grading plans and structural loads become available, we should review the plans to verify our assumptions and perform additional analyses to evaluate the settlement behavior of the buildings at the site, if necessary.

10.3 Settlement of the Proposed Earthen Embankment

As part of the environmental remediation of the site, we understand on-site soil impacted with chemical contaminants will be used as fill within the proposed earthen embankment along Harbor Street. Due to the estimated quantity of impacted soil, we understand a below-grade excavation will be created, the chemically impacted soil will be placed beneath and within the proposed earthen embankment, and the embankment will be covered by a layer of clean soil. The approximate location of the earthen embankment is shown on the conceptual development plan (Figure 3) as an elongated "open space" area. Based on our recent discussions with the environmental consultant, ERM, we understand the earthen embankment will have:

- an above-grade portion that is approximately 10 feet high and 69 feet wide at the base (between the toe of the side slopes); 3-foot-wide drainage swales are planned along the eastern and western edges of the embankment
- a below-grade portion that is approximately 10 feet deep and 75 feet wide; the lower portion of the fill will extend below the existing groundwater level during certain times of the year
- side slopes at inclinations of approximately 2.25:1.

Based on our understanding of subsurface conditions across the site, and the proposed configuration and alignment of the earthen embankment, we conclude the southern portion of the proposed earthen embankment will be underlain by variable thicknesses of compressible soil deposits. We performed settlement computations along the length of the earthen embankment; the estimated magnitudes of consolidation-related settlement are presented in Table 5. Our settlement analysis considered cross-sections at approximate boring and CPT locations along the embankment alignment. The subsurface conditions are based on our interpolation and/or extrapolation of soil and groundwater conditions in the vicinity of each cross-section. The earthen embankment fill material was assumed to be incompressible and approximately the same weight as the native soil that will be removed from the below-grade portion of the embankment excavation.

TABLE 5

Estimated Consolidation-Related Settlement of Proposed Embankment

Approximate Cross-Section Location	Estimated Consolidation Settlement Along the Length of the Embankment (inches)
CPT-11	4-1/4 to 9
B-8/CPT-21	4 to 8-1/2
CPT-12	1/2 to 1
CPT-33	<1/4
CPT-36	10-1/4 to 21-1/2
CPT-13	8-1/2 to 18
B-11	2-1/2 to 5-1/4
CPT-40/ B-12/ CPT-41	3/4 to 1-2/3

Due to the subsurface soil conditions and the relatively large footprint of the earthen embankment, we conclude the weight of the proposed earthen embankment will cause settlement of the surrounding area (away from the earthen embankment alignment). To estimate the lateral influence of the earthen embankment, we performed consolidation settlement analyses at various distances away from the earthen embankment centerline to estimate the distance in which one inch of settlement would occur due to the weight and configuration of the proposed earthen embankment. Our results are presented on Table 6 and they are based on engineering analyses, and our interpolation and/or extrapolation of subsurface soil and groundwater conditions from borings and CPTs in the vicinity of each cross-section. The results of our analyses indicate the placement of the proposed earthen embankment material can significantly influence the settlement of the ground surface at distances of more than 70 feet away from earthen embankment centerline.

TABLE 6

Estimated Distance from the Embankment Centerline for One Inch of Settlement

Approximate Cross-Section Location	Estimated Horizontal Distance from Embankment Centerline for One Inch of Settlement (feet)
CPT-11	35 to 45
B-8/CPT-21	30 to 40
CPT-12	24 to 40
CPT-33	0
CPT-36	55 to 70
B-11	24 to 40
CPT-40/ B-12/ CPT-41	0 to 25

The consolidation of soft to medium stiff clay deposits under the weight of new fill and building loads will occur slowly over time. The rate of settlement is dependant upon the permeability and consolidation characteristics of the soil, the stress history, and the water level beneath the earthen embankment. Our estimates of the time needed to achieve 50 and 90 percent of the total consolidation-related settlement are presented on Table 7. In general, we estimate that portions of the proposed earthen embankment will continue to settle for approximately 12 to 24 years after the earthen embankment is constructed. Therefore, periodic maintenance of the earthen embankment and surrounding area should be expected.

TABLE 7

Estimated Time Rate of Consolidation of the Proposed Embankment Fill

Approximate Cross-Section Location	Time Needed to Reach 50% Consolidation (Years)	Time Needed to Reach 90% Consolidation (Years)
CPT-11	1-1/2 to 3-1/2	7 to 14
B-8/CPT-21	1-1/2 to 3	6 to 12
CPT-12	< 1/2	< 1/2 to 1
CPT-33	2 to 4	8 to 16
CPT-36	2-1/2 to 5-1/2	12 to 24-1/2
CPT-13	3 to 6	11 to 22-1/2
B-11	1 to 2	4 to 8-1/2
CPT-40/ B-12/ CPT-41/B-4	< 1/2	1-1/2

10.4 Foundations and Settlement

A plan showing the proposed Harbor Park development is presented on Figure 3. We understand the proposed residential structures within the DMDR and DHDR areas will consist of 2- and 3-story, wood-framed structures, respectively. Building loads for these structures were not available at the time this report was being prepared; however, based on our experience with similar types of structures, we estimate the 2-story building will have wall and column loads of about 2 kips per linear foot (klf) and about 100 kips per column, respectively. We estimate the 3-story structure will have wall and column loads of about 3 klf and about 150 kips per column, respectively. In general, these proposed buildings are relatively light. However, the subsurface conditions at the proposed building sites are highly variable, and in their existing condition, we conclude the proposed structures can not be supported on conventional shallow foundations. Instead, we conclude the proposed buildings should be supported on either stiffened shallow foundations bearing on a layer of well-compacted fill or on deep foundations. These foundation systems are discussed in subsequent sections of this report.

To better understand the magnitudes and types of settlement that could impact the proposed residential structures, we summarized our settlement estimates on Figure 7. In general, the proposed building sites are susceptible to the following potential sources of settlement:

- liquefaction-induced settlement
- settlement associated with the cyclic densification of non-saturated granular soil
- consolidation-related settlement associated with the placement of new fill; for our settlement analyses, we assumed that site grades would remain the same and no new fill will be added to the site; therefore, settlements associated with new area fills are not included in the settlement estimates presented on Figure 7
- consolidation-related settlement associated with the weight of the proposed buildings
- consolidation-related settlement with significant lateral influences resulting from the weight and configuration of the proposed earthen embankment
- erratic ground settlement associated with the presence of undocumented fills; settlements associated with undocumented fills are not included in the settlement estimates presented on Figure 7; however, we believe that performing a comprehensive site preparation and grading program will expose areas of loose or weak fill; subsequently, the weak soil subgrade can be repaired prior to the placement of new fill and the construction of the proposed buildings.

Based on our evaluation of various foundations options, we conclude the primary geotechnical issue that affects the selection of the foundation type for each structure is the presence of compressible clay deposits in the southeastern portion of the site (Figure 4) that are subjected to new fill and building loads, including earthen embankment loads. The proposed fill and building loads will cause the compressible clay deposits to settle as indicated on Figure 7, which could potentially damage shallow foundation systems. Therefore, at locations where the proposed building sites are underlain by compressible soil deposits (Figure 4) and are subjected to new fill

and building loads, we conclude these proposed structures should be supported on deep foundations, such as driven piles or drilled cast-in-place concrete piers that gain support in competent soil below the compressible soil deposits. The approximate locations of the proposed residential units that should be supported on deep foundations are shown on Figure 8. As indicated on Figure 8, deep foundations are recommended for the southeastern portion of the DHDR development area. This area is underlain by compressible clay and subject to additional settlement from consolidation caused by the weight of the proposed earthen embankment. Because of the characteristics of the underlying deposits we estimate settlements will occur slowly over time. Although the southeastern portion of the DMDR development area is underlain by compressible clay deposits, we feel that deep foundations are not necessary in this area because the estimated amount of consolidation-related settlement is than two inches and these settlements are expected to occur in less than one year.

At all other locations, we conclude the quality and consistency of the native soil and fill at the site is variable. If new structures are designed to gain support on shallow foundations bearing on undocumented fills in their existing condition, we estimate the new buildings may experience erratic total and differential settlements of up to 6.5 inches and three inches across a horizontal distance of 25 feet, respectively. Total and differential settlements can be estimated by summing the settlement values presented on Figure 7. For example the total settlement for the area near CPT-15 is approximately 4-1/4 inches (sum of the estimated settlement due to building loads, cyclic densification, and liquefaction). The estimated differential settlement between CPT-15 and CPT-58 is approximately 2-2/3 inches over a distance of approximately 70 feet (difference of total settlements divided by the distance between points) or approximately 1-inch over a distance of 25 feet. Differential settlement can cause cracks to develop in building foundations and can potentially damage new structures. To reduce the potential for foundation settlement and subsequent building damage, we conclude the proposed buildings should be supported on stiffened shallow foundations, such as post-tensioned slabs (P-T slabs), reinforced mats, or interconnected footings that gain support on at least a 3-foot-thick layer of compacted fill. We estimate that buildings supported on stiffened shallow foundations bearing on at least a

3-foot-thick layer of compacted fill will experience less than 1-1/2 inches of differential settlement across a 25-foot distance.

Alternatively, the proposed structures may be supported on deep foundations that gain support in competent soil below the highly compressible clay deposits. Deep foundations will prevent excessive differential and total settlement of the structures, although the utilities and surrounding improvements (pavements, and landscaping) may continue settle over time. We estimate new buildings that gain support on deep foundations will experience less than 0.5 inch of differential settlement across a 25-foot distance. Deep foundations would also need to be designed to resist downdrag loads induced by the settling soil. Recommendations for the design of building foundations are provided in Section 11.

10.5 Undocumented Fill

Based on the boring and CPT data, the site appears to be blanketed by undocumented fill that ranges in thickness from approximately 3 to 10 feet thick, except in the area of the backfilled former evaporation pond and the loose sand deposit at the southwest corner of the site, which may extend deeper than 10 feet. The depths of undocumented fill encountered at each of the boring and CPT locations are shown on Figure 4. Undocumented fill associated with the existing underground utility trench backfill is also anticipated to be encountered during grading. Considerations regarding the treatment of existing underground utilities are discussed below in Section 10.11. The existing fill generally appears to be poorly to moderately compacted, and consists of various types of soil (sand, silt, and clay). It is our understanding that the existing fill in the area of the backfilled former evaporation pond will be removed and replaced with clean, engineered fill as part of the proposed improvements. Deeper deposits of undocumented fill may be encountered during grading operations. In general, undocumented fill below new foundations and other proposed settlement-sensitive structures should be removed to expose competent material and backfilled with engineered fill in accordance with the recommendations in Section 11.1.

10.6 Expansive Soil Considerations

The existing near-surface soil, specifically in the western portion of the site, consists of low to moderately expansive sand and clay. However, we anticipate the soil along the eastern portion of the site may consist of moderately to highly expansive clay. Moisture fluctuations in the expansive soil could cause the soil to expand or contract resulting in movement and potential damage to foundations, slabs, and pavements. Potential causes of moisture fluctuations include seasonal changes, drying during construction, and subsequent wetting from rain, capillary rise, and landscape irrigation. To limit the amount of differential movement of the expansive soil due to changes in moisture content, proposed slab-on-grade floors, exterior slabs, and pavements should be underlain by a layer of non-expansive, select fill or chemically treated on-site soil. Mat foundations or post-tensioned (P-T) slabs should be checked to ensure they can resist movements associated with seasonal moisture changes, but it is not necessary to place select fill beneath mats or P-T slabs.

10.7 Demolition of Existing Structures

It is our understanding that currently, all of the buildings, building foundations, and most of the other above-grade improvements associated with the Johns Manville Manufacturing Facility have been demolished and removed from the site. We did not observe the demolition of the buildings and are not familiar with the depth, locations, or lateral extent of disturbed material. However, we understand some of the footings that supported the former manufacturing buildings may have extended deeper than five feet bgs. These footing excavations may have been backfilled with loose soil; therefore, we conclude there is a potential for encountering localized areas of soft subgrade during site grading activities. Our recommendations for site preparation and grading are presented in Section 11.1.

Existing concrete from the foundations, asphalt concrete from pavement areas, and ballast rock beneath railroad spurs encountered during grading activities can be crushed and incorporated as engineered fill (including aggregate base material) and/or used as granular fill, if it meets the project specifications and is approved for re-use by the environmental consultant.

10.8 Slope Stability

The existing residential development on the western edge of the project site is on top of an approximately 1.5:1 slope. The slope is up to 20 feet in height and we believe the slope was originally cut during the development of the Johns Manville Manufacturing Facility. We performed a slope stability analysis by incorporating the subsurface data and laboratory test results from borings B-9 and B-13. In general, the slope is primarily composed of silt and clay with some sandy soil exposed on the face of the slope. Based on the results of our analysis, we conclude the existing slope has a factor of safety of at least 1.5 and 1.15 against deep rotational failure with respect to static and seismic loading conditions, respectively. However, during our field activities, we observed localized surficial erosion and shallow soil slumps. Also, we observed portions of the existing retaining walls that showed evidence of rotation due to lateral earth pressures. At the time of our field activities, most of the slope face was covered with dense vegetation and was not visible for inspection.

Based on observations, we conclude the sandy material that is exposed on the face of the 1.5:1 slope is marginally unstable and will tend to erode and/or continue to experience shallow soil slumps unless the slope is flattened to a more stable configuration. Recommendations for stabilizing and retaining the slope along the western edge of the site are presented in Sections 11.2 and 11.8, respectively.

10.9 Groundwater

As discussed in Section 8.0, groundwater was encountered during our investigation between Elevation 92.5 and 97.5 feet (4.5 and 9.5 feet MSL respectively). Groundwater levels were reported by others between about Elevation 91 and 93 feet (3 and 5 feet MSL respectively). For project design purposes, we conclude a groundwater level at Elevation 93 feet (5 feet MSL) should be used for the site. At this elevation, we believe the lower portion of the proposed earthen embankment will extend below the groundwater table; therefore, temporary dewatering of the excavation may be required.

10.10 Corrosion Potential

The corrosion potential of the on-site subsurface soil was evaluated near boring B-5 as part of this geotechnical investigation. The results of the corrosion testing are presented in Appendix C, and they indicate the near-surface soil in the vicinity of boring B-5 has a minimum resistivity of 1882 ohm-cm, a chloride concentration of 4 mg/kg, a chloride concentration less than 0.0005 percent by dry weight, and a pH of 8.8. These results indicate the near surface soil near boring B-5 has a high corrosion potential for buried metals, and low corrosion potential for concrete. We conclude that more corrosion tests should be performed on the final soil subgrade throughout the site once the grading plans become available.

10.11 Construction Considerations

Existing underground utilities at the site may require removal and/or abandonment. Some of the existing utilities may extend below the groundwater table, and removal and subsequent backfilling of the excavations may be difficult due to the presence of high groundwater. In that case, abandonment by filling with grout would be acceptable. Any loose, weak existing utility trench backfill material that may be encountered during future site grading should be removed and replaced with properly compacted fill.

We anticipate that planned excavations may extend below the existing groundwater level. Soil removed from the excavations may be wet and may require significant moisture-conditioning (drying) prior to re-use as compacted fill. Also, if site grading is performed during wet weather, the exposed soil subgrade may become wet and difficult to compact. The grading contractor should be prepared to repair the weak and wet subgrade, if required.

10.12 Temporary Slopes and Shoring for Construction of the Proposed Earthen Embankment

Construction of the proposed earthen embankment will require an approximately 10-foot-deep excavation. Our analysis indicate temporary cut slopes with inclinations no steeper than 1.5:1 may be used to temporarily support the sidewalls of the excavation. If temporary cut slopes are

not feasible for the proposed earthen embankment excavation, temporary shoring may be used. Due to the relatively shallow groundwater at the site, an active or passive dewatering system may be required. From our discussions with the design team, we understand a passive dewatering system is preferred. A sheet pile shoring system that extends through granular layers below the bottom of the excavation could be used to cut-off the lateral flow of groundwater and help reduce the amount of water that flows into the excavation. Also, the temporary shoring system can be used to reduce the potential for bottom heave in situations where the bottom of the excavation exposes weak compressible soil.

11.0 RECOMMENDATIONS

Recommendations for grading, and preliminary recommendations for foundation design, retaining walls, slabs-on-grade, and other geotechnical aspects for Harbor Park Development are presented in the following sections.

11.1 Site Preparation and Grading

Demolition in areas to be developed should include removal of existing pavement and underground obstructions, including foundations of existing structures. Any vegetation and organic topsoil should be stripped in areas to receive new site improvements. Stripped organic soil can be stockpiled for later use in landscaped areas, if approved by the owner and architect; organic topsoil should not be used as compacted fill.

Demolished asphalt and concrete at the site may be crushed to provide recycled construction materials, including sand, free-draining crushed rock, and Class 2 aggregate base (AB). Where crushed rock will be used beneath vapor retarders and in other applications where free-draining materials are required, it should have no greater than six percent of material passing the 3/8-inch sieve and meet the other requirements presented in Section 11.7. Where recycled Class 2 AB will be used beneath pavements, it should meet requirements of the Caltrans Standard Specifications. Recycled Class 2 AB that does not meet the Caltrans specifications should not be used beneath City streets, but it is acceptable for use as select fill within building pads and

beneath concrete flatwork, provided it meets the requirements for select fill as presented in a subsequent section of this report.

Existing underground utilities beneath areas to receive new improvements should be removed or abandoned in-place by filling them with grout. The procedure for in-place abandonment of utilities should be evaluated on a case-by-case basis, and will depend on location of utilities relative to new improvements. However, in general, existing utilities within four feet of final grades should be excavated and removed, and the resulting excavation should be properly backfilled.

After clearing and grubbing are completed, the proposed building areas should be excavated to accommodate at least a three-foot thick layer of compacted fill beneath the planned building foundations and slab-on-grade floors. For example, if a grid foundation system is used, the 3-foot-thick layer of compacted soil should extend beneath the bottoms of the proposed footings. If a mat or P-T slab is selected, the 3-foot-thick layer of compacted soil should extend beneath the moisture barrier system that lies below the mat or slab. The proposed excavations should extend a lateral distance of at least five feet beyond the planned building footprints. Alternatively, if a deep foundation option is selected, the proposed building sites need only be cut to the proposed final subgrade elevations.

The subgrade exposed at the bottom of the proposed building pad excavations, as well as other portions of the site that will receive new fill or site improvements, should be scarified to a depth of at least eight inches, moisture-conditioned to at least three percent above the optimum moisture content, and compacted to at least 90 percent relative compaction[9] where the exposed material consists of moderately expansive soil. Where lean clay or sandy soil are encountered during grading, the scarified surface should be moisture-conditioned to above the optimum moisture content and compacted to at least 90 percent relative compaction. An exception to this general procedure occurs within the proposed pavement areas, where the upper six inches of the

[9] Relative compaction refers to the in-place dry density of soil expressed as a percentage of the maximum dry density of the same material, as determined by the ASTM D1557-00 laboratory compaction procedure.

pavement subgrade should be compacted to at least 95 percent relative compaction. If areas of weak soil are encountered during subgrade preparation, we recommend the proposed building pads and pavement areas be repaired by using one of the subgrade repair options presented in a subsequent section of this report. The soil subgrade should be kept moist during construction to prevent desiccation cracks.

Any select fill placed during grading should meet the following criteria:

- be non-hazardous
- be free of organic matter
- contain no rocks or lumps larger than three inches in greatest dimension
- have a low expansion potential (defined by a liquid limit of less than 40 and plasticity index lower than 12)
- have a low corrosion potential[10]
- be approved by the geotechnical engineer.

All select fill should be moisture-conditioned to above optimum moisture content, placed in horizontal lifts not exceeding eight inches in loose thickness, and compacted to at least 90 percent relative compaction, except if the fill is placed within the proposed pavement areas. In this situation, the upper six inches of the soil subgrade and all AB materials should be compacted to at least 95 percent relative compaction. Where used, sand containing less than 10 percent fines (particles passing the No. 200 sieve) should be compacted to at least 95 percent relative compaction.

[10] Low corrosion potential is defined as a minimum resistivity of 2,000 ohms-cm and maximum sulfate and chloride concentrations of 250 parts per million.

Samples of on-site and proposed import fill materials should be submitted to the geotechnical engineer for approval at least three business days prior to use at the site. The grading subcontractor should also provide analytical test results or other suitable environmental documentation to ERM for approval prior to importing fill to the site.

Excavations extending below the groundwater are anticipated. For example, one area of planned excavation is at the former evaporation pond area, as shown on Figure 2. We estimate the maximum depth of excavations will be about 10 to 15 feet bgs; however, the actual depth is not certain and will need to be determined in the field. If soft subgrade and/or ponded water are encountered at the bottom of proposed excavations in areas where soil compaction is required, we recommend the following procedure:

- temporarily pumping the water from the excavation
- placing a layer of geotextile tensile fabric (Mirafi 500X or equivalent) over the sides and bottom of the excavation
- placing an 18- to 24-inch-thick layer of gravel or crushed rock (1/2- to 3/4-inch gradation) over the geotextile tensile fabric and track-rolling the granular material
- installing a temporary sump and pump within the gravel layer to facilitate the dewatering of the excavation
- place a layer of filter fabric (Mirafi 140N or equivalent) over the surface of the gravel
- place fill over the filter fabric material and compact the fill in horizontal lifts as previously discussed in this section.

If weak soft subgrade is encountered during grading (at locations other than pond areas), it should be repaired using one of the following options:

Subgrade Repair Option 1 – Moisture-Conditioning and Compaction

Scarifying the exposed subgrade to a depth of 8 to 12 inches, moisture-conditioning (wetting or drying) the soil to near the optimum moisture content, and compacting the soil to at least 90 percent relative compaction. Typically, this option is the least expensive to implement, but it requires several days to weeks of dry, warm weather to facilitate the moisture-conditioning process.

Subgrade Repair Option 2 – Lime or Cement Admixture

Thoroughly mixing a lime- or Portland-cement-based admixture into the subgrade at a concentration of 4 to 5 percent of the dry weight of the soil being treated; allowing the admixture to react with the wet soil for at least 12 hours, re-mixing and moisture-conditioning the soil to above the optimum moisture content, and compacting the lime- or cement-treated material to at least 90 percent relative compaction.

Subgrade Repair Option 3 – Overexcavation and Filling

Weak wet soil can be excavated and removed to expose firm subgrade or excavated to a depth of 18 to 24 inches bgs (or as recommended by our field engineer). A layer of geotextile tensile fabric (Mirafi 500X or equivalent) can then be placed over the sides and bottom of the excavation and the excavation backfilled with Caltrans Class 2 AB that has been compacted to at least 95 percent relative compaction. Alternatively, the excavation can be backfilled with Controlled Density Fill (CDF), sand-cement slurry, or lean cement with a 28-day unconfined compressive strength of at least 50 pounds per square inch (psi).

The most appropriate subgrade repair option will depend on the time of year site grading commences and the time available to allow drying of the soil. We will provide recommendations for subgrade stabilization on a case-by-case basis. We recommend a non-vibratory roller be used to compact weak and/or wet subgrade soil and fill placed over wet subgrades.

11.2 Permanent and Temporary Slopes and Shoring

For a permanent slope, such as along the western edge of the site, we recommend a maximum slope inclination of approximately 2:1. The slope should be graded so that surface water drains away from the top of slope, and the face of slope should be planted with appropriate deep-rooted vegetation to reduce the potential for surface erosion.

If temporary cut slopes are required to facilitate new excavations at the site, we recommend using slope inclinations no steeper than 1-1/2:1. Where sloped excavations are not feasible, then a temporary cantilever sheet pile wall may be used. Figure 9 present our recommended lateral earth pressures for design of a cantilever sheet pile wall. The lateral earth pressures of soft clay are dependant upon the length of time that the excavation will remain open. For this project, we recommend using the lateral earth pressures presented in Figure 9. If vehicular traffic will be within 10 feet horizontally from the top of the shoring an additional uniform load of 100 psf should be applied to the upper 10 feet of the shoring. Construction equipment and soil stockpiles should not be allowed within a horizontal distance of 10 feet of the shoring, unless additional loading is considered in the design of the shoring system.

For a 10-foot-deep excavation measured from the existing ground surface, we recommend that sheet piles extend a minimum of five feet below the bottom of the planned excavation. The sheet pile will help cut-off the lateral flow of water into the excavation and help prevent heaving of the bottom of the excavation. If a deeper excavation is required, T&R should be contacted to revise our recommendations, as necessary.

11.3 Temporary Dewatering

The groundwater level at the site will fluctuate due to seasonal conditions and will vary with the tide level in the nearby Sacramento-San Joaquin River Delta. Dewatering of the excavations is anticipated. We recommend the groundwater within proposed excavations be drawn down below the bottom of the excavation until sufficient fill has been placed and compacted to raise the working surface above the groundwater table.

Either active or passive dewatering systems can be used at the site. During conversations with the project design team, we understand a passive dewatering system is the preferred option. The dewatering system should be designed and implemented by an experienced dewatering contractor. We should have the opportunity to check the dewatering system design proposed by the contractor prior to installation.

11.4 Foundations

The following sections present preliminary foundation recommendations for the Harbor Park development. As discussed in Section 10.4 and shown on Figures 4 and 8, the proposed building sites that are underlain by compressible, soft to medium stiff, clay deposits and subjected to new fill and building loads, should be supported on deep foundations that gain support in competent soil below the compressible clay deposits. At all other locations, we recommend the proposed 2- to 3-story buildings be supported on stiffened shallow foundations that rest on at least a 3-foot-thick layer of compacted fill.

11.4.1 Stiffened Shallow Foundations

Stiffened shallow foundation systems should bear on at least a 3-foot-thick layer of compacted fill. A stiffened shallow foundation system may consist of either interconnected, continuous spread-type footings, a reinforced concrete mat, or a P-T slab. Foundation recommendations are presented in the following sections.

11.4.1.1 Interconnected Continuous Footings and Mats

Interconnected continuous footings and mats that bear on at least a 3-foot-thick layer of compacted fill may be designed using an allowable bearing pressure of 1,000 pounds per square foot (psf) for dead plus live loads. This value contains a factor of safety of at least 2.0 and may be increased by one-third for total loads, including wind or seismic forces. The maximum allowable bearing pressures will likely occur only in the vicinity of columns and walls. To evaluate the pressure distribution beneath the continuous footings or mat, we recommend using a modulus of vertical subgrade reaction of 10 pounds per cubic inch (pci). In addition, we

recommend the stiffened shallow foundation system be designed to span an unsupported area of 10 feet in diameter at any location within the building interior, and cantilever a distance of three feet along the edges and five feet at the corners. If continuous spread footings are used, they should be at least 18 inches wide and should extend at least 18 inches below the lowest adjacent grade. If a mat is selected, the edges of the mat should be thickened, such that the foundation edge is bottomed at least 12 inches below the adjacent exterior grade or six inches below the bottom of the capillary moisture break and vapor retarder system, whichever is lower, as indicated on Figure 10.

Lateral loads can be resisted by a combination of passive pressures on the embedded vertical faces of the footings or mat, and friction along the base of the foundation elements. Passive resistance may be computed using an equivalent fluid weight of 300 pounds per cubic foot (pcf) in the compacted fill; the upper foot of soil should be ignored unless confined by slabs or pavement. Frictional resistance should be computed using a base friction coefficient of 0.30 for footings and mats bearing on soil subgrade. A base friction value of 0.15 should be used for mats bearing on waterproofing or a vapor retarder. The passive resistance and friction values include a factor of safety of about 1.5 and may be used in combination without reduction.

The foundation subgrade should be kept in a moist condition until covered. We should observe the mat or footing excavations prior to placement of reinforcing steel. If the subgrade consists of clayey soil and is allowed to dry during construction, it will be necessary to scarify the upper 8 to 12 inches of the foundation subgrade, moisture-condition the soil to above the optimum moisture content, and compact the soil in accordance with the recommendations presented in Section 11.1. The foundation excavations should be free of standing water, debris, and disturbed materials prior to placing concrete.

11.4.1.2 Post-Tensioned (PT) Slab-on-Grade Foundations

P-T slabs can be used in lieu of a grid or mat foundation where stiffened shallow foundations are required. The edges of the mats should be thickened such that the foundation edge is bottomed at least 12 inches below the adjacent exterior grade or six inches below the bottom of the

capillary moisture break (if used) or vapor retarder, whichever is lower. A conceptual foundation edge detail showing the embedment of P-T slab is shown on Figure 10. P-T slabs should be designed using the maximum allowable bearing pressures presented previously in Section 11.4.1.1.

Also, we recommend using P-T slab design parameters based on the California Building Code Chapter 18. For general design of the P-T slabs in highly expansive soil conditions, we recommend using the parameters presented in Table 8.

TABLE 8

P-T Slab Design Parameters

Parameter	Value
Edge moisture variation distance edge lift center lift	 5.0 feet 5.5 feet
Constant soil suction	3.5 pF
Soil differential movement edge lift center lift	 1.5 inches 3.5 inches

The soil differential movement is likely controlled by the amount of differential settlement expected rather than the potential for seasonal differential movement. In addition, we recommend the P-T slab foundation system be designed to span an unsupported area of 10 feet in diameter at any location within the building interior, and cantilever a distance of three feet along the edges and five feet at the corners.

Recommendations regarding resistance to lateral loads and subgrade preparation are the same as those presented for interconnected continuous footings and mat foundations in Section 11.4.1.1.

The recommendations presented above assume the as-graded near-surface soil will be highly expansive; however, as site grading processes, we recommend that additional laboratory testing

and engineering analyses be performed to verify our assumptions and potentially revise our recommendations, if necessary.

11.4.2 Deep Foundations

Deep foundations should gain support through skin friction in competent soil below weak compressible clay deposits. For the preliminary foundation design purposes, we selected drilled piers as the most appropriate deep foundation system for the proposed project. However, there are several other acceptable foundation systems that can be used for the support of new buildings at the project site.

Drilled piers installed in a group should be spaced at least three diameters apart, center to center spacing. To compute the axial compressive and uplift capacity of drilled piers, we recommend using an allowable skin friction of 1,000 psf for dead and live loads. This skin friction value should be applied to the portion of the piers that extends below the bottom of the compressible clay deposits, as indicated on the boring and CPT logs presented in Appendices A and B, and as can be determined from Figure 4. For total loads, including wind or seismic loads, the skin friction value can be increased by one-third. Axial support from the compressible soft to medium stiff clay deposit should be ignored. If new area fills are added to the site, we recommend the deep foundations be designed for a negative skin friction load (down-drag) of 400 psf, applied to the portion of the piers that extend above the bottom of the compressible clay deposits. The drilled pier holes should be free of debris and water, and inspected by the geotechnical engineer before placing reinforcing steel and concrete.

Lateral loads can be resisted through a combination of passive pressure acting against the embedded vertical faces of pier caps and from the structural rigidity of the piers. Passive resistance against the vertical faces of pier caps may be computed using an equivalent fluid weight (triangular distribution) of 300 pcf; the upper foot of soil should be ignored unless it is confined by a slab or pavement. Lateral resistance of piers will depend on the pier diameter, pier head condition (restrained or unrestrained), allowable deflection of the pier top, and the bending moment resistance of the piers. We have performed lateral load analyses for isolated, 18- and

24-inch-diameter piers for pier head deflections of 0.5 inch. The results of our analyses are presented in Table 9.

TABLE 9

Results of Lateral Load Analyses for 0.5-inch Deflection at Pier Top

Pier Diameter (inches)	Pier Top Condition	Computed Lateral Load at 0.5-inch Deflection (kips)	Computed Maximum Bending Moment (kip-feet)	Depth to Maximum Bending Moment (feet)
18	Restrained	13.7	88	0.0
18	Unrestrained	5.5	30	9.3
24	Restrained	21.7	176	0.0
24	Unrestrained	8.8	61	12.7

The lateral resistances tabulated in Table 9 are for isolated piers or piers in a group spaced at least six pier diameters apart. If two piers are installed in a row with a center to center spacing of three diameters apart, we recommend reducing the lateral capacities by 20 percent. The design bending moments should not be reduced and should remain the same as those presented in Table 9. If larger pier groups are needed for support of the buildings, we should evaluate each group and provide reduction factors on a case by case basis.

11.5 Underground Utilities

Excavations for utility trenches can be readily made with a backhoe. Despite careful site preparation, unexpected obstructions may make some of the trenching operations difficult. All trenches should conform to the current CAL-OSHA requirements.

The thickness and type of bedding material required for utility conduits will depend on the soil conditions at the utility trench bottom. As a minimum, bedding should have a thickness of at least D/4 (with D equal to the outside pipe diameter) below the bottom of the pipe, and a minimum thickness of at least four inches. Clean sand, rod mill, or pea gravel bedding material are adequate for use as bedding materials in shallow trenches above the groundwater level.

Where the utility trenches extend below the groundwater level at Elevation 93 feet, we recommend using at least 12 inches of crushed rock bedding. Bedding should be placed in lifts not exceeding 12 inches in loose thickness and then mechanically tamped. Where utility trench excavations are bottomed in weak compressible clay soil below the water table, it may be necessary to place geotextile tensile fabric (Mirafi 500X or equivalent) across the base of the excavation and extending a few feet up the excavation sides; this determination will be made by the geotechnical engineer in the field based on the conditions encountered. If soil fill is placed above crushed rock bedding, the crushed rock should be covered by filter fabric (Mirafi 140N or equivalent) prior to placement of soil fill to reduce the potential for piping of the soil fill into voids between rock particles. Trench backfill beneath buildings, sidewalks, and courtyards should be covered with at least six inches of select fill to reduce effects of expansive soil.

Soil backfill for utility trenches should be compacted according to the recommendations presented in Section 11.1. In streets to be dedicated to the City of Pittsburg, the upper three feet of utility trench backfill (measured below the top of pavement) should be compacted to at least 95 percent relative compaction. Jetting and flooding of trench backfill should not be allowed. If sand containing less than 10 percent fines is used for backfill, it should be compacted to at least 95 percent relative compaction. Special care should be taken when backfilling utility trenches in pavement areas. Poor compaction may cause excessive settlements, resulting in damage to the pavement section.

Where utility trenches enter the building pad, an impermeable plug consisting of lean concrete at least three feet in length, should be installed where the trenches enter the building footprint. Furthermore, where sand- or gravel-backfilled trenches cross planter areas and pass below asphalt or concrete pavements, a similar plug should be placed at the edge of the pavement. The purpose of these recommendations is to reduce the potential for water to become trapped in trenches beneath the buildings or pavements. This trapped water can cause heaving of soils beneath slabs and softening of subgrade soil beneath pavements.

As previously discussed, the subsurface conditions vary significantly across the project site, and the potential for total and differential settlements (consolidation, liquefactions, and cyclic

densification) varies as well. New utilities should be design to tolerate the estimated settlements, as presented on Figure 7. At the time this report was being prepared, utility layout plans were not available for review; therefore, we were unable to estimate settlements along the proposed utility pipe alignments.

11.6 Drainage and Landscaping

Positive surface drainage should be provided around the buildings to direct surface water away from the foundations. To reduce the potential for water ponding adjacent to the buildings, we recommend the ground surface within a horizontal distance of five feet from the buildings be designed to slope down and away from the buildings with a surface gradient of at least two percent in unpaved areas and one percent in paved areas. In addition, roof downspouts should be discharged into controlled drainage facilities to keep the water away from the foundations. These preliminary gradients should be checked once final grading plans and anticipated cut/fill thicknesses are known. Areas requiring significant fill may require a steeper gradient to account for future settlement to the underlying soft clay.

The use of water-intensive landscaping around the perimeter of the buildings should be avoided to reduce the amount of water introduced to the expansive clay subgrade. In addition, irrigation of landscaping around the building should be limited to drip or bubbler-type systems. The purpose of these recommendations is to avoid large differential moisture changes adjacent to the foundations, which have been known to cause large differential movement over short horizontal distances in expansive soil, resulting in cracking of slabs and architectural damage.

To reduce the potential for irrigation water entering the pavement section, vertical curbs adjacent to landscaped areas should extend at least four inches into the underlying clay. Where heavily watered areas, such as lawns, are adjacent to vertical curbs, it may also be necessary to install a subdrain behind the curb to intercept excess irrigation water.

11.7 Concrete Floors

The soil subgrade beneath slab-on-grade floors should be prepared and covered with a select fill layer (if required) as described in Section 11.1. The concrete mats or P-T slabs should be supported on properly compacted and moisture-conditioned soil. The subgrade should not be allowed to dry during construction. If the previously compacted soil subgrade is disturbed during foundation and utility excavation, the subgrade should be scarified, moisture-conditioned, and rerolled to provide a firm, unyielding surface prior to placement of the capillary break material.

To reduce water moisture transmission through the floor slab, we recommend installing a capillary moisture break and a Class C water vapor retarder beneath the floor. A capillary moisture break consists of at least four inches of clean, free-draining gravel or crushed rock. A capillary moisture break and water vapor retarder are generally not required beneath garage slabs. We recommend garage slabs be underlain by six inches of AB compacted to at least 95 percent relative compaction if a capillary break and vapor retarder are not used below the slabs. AB is not required beneath garage parking areas located over a mat foundation.

The vapor retarder should be placed in general accordance with the requirements of ASTM E1643-98. These requirements include overlapping seams by six inches, taping seams, and sealing penetrations in the vapor retarder. The vapor retarder should be covered with two inches of sand to aid in curing the concrete and to protect the vapor retarder during slab construction. The particle size of the gravel/crushed rock and sand should meet the gradation requirements presented in Table 10.

TABLE 10

Gradation Requirements for Capillary Moisture Break

Sieve Size	Percentage Passing Sieve
Gravel or Crushed Rock	
1 inch	90-100
3/4 inch	30-100
1/2 inch	5–25
3/8 inch	0-6
Sand	
No. 4	100
No. 200	0-5

The sand overlying the membrane should be moist at the time concrete is placed; however, it should not contain free water. Excess water trapped in the sand could eventually be transmitted as vapor through the slab. If the sand becomes wet, concrete should not be placed until the sand has been dried or replaced.

The current standard-of-practice in the San Francisco Bay Area does not include placing a gravel capillary break beneath P-T slab foundations. Although we believe this practice increases the risk of unacceptable levels of water vapor transmission through the slab, it is our understanding it has been used successfully for at least 10 years. Accordingly, we recommend P-T slabs-on-grade be underlain by a vapor retarder meeting the requirements for Class B vapor retarders stated in ASTM E1745-97 (15-mil Stego Wrap or equivalent). The vapor retarder should be placed in accordance with the requirements of ASTM E1643-98. The vapor retarder should be covered with two inches of sand with less than five percent fines to protect the vapor retarder during slab construction. In some cases, it is cost effective to remove both the sand and gravel from the capillary break and vapor retarder system used beneath mats or P-T slabs. If it is desired to remove these materials from the under slab system, we recommend a Class A vapor retarder be used in lieu of a Class B or C vapor retarder. Class A vapor retarders have a lower

inherent permanence rating and are less prone to accidental puncture. An examples of Class A vapor retarders are Moiststop Ultra A polyolefin sheeting, although any equivalent system can be used.

Concrete mixes with high water/cement (w/c) ratios result in excess water in the concrete, which increases the cure time and results in excessive vapor transmission through the slab. Therefore, concrete for the floor slab should have a low w/c ratio - less than 0.50. If approved by the project structural engineer, the sand can be eliminated beneath the slabs-on-grade and the concrete can be placed directly over the vapor retarder, provided the w/c ratio of the concrete does not exceed 0.45 and water is not added in the field. If necessary, workability should be increased by adding plasticizers. In addition, the slab should be properly cured.

Before the floor covering is placed, the contractor should check that the concrete surface and the moisture emission levels (if emission testing is required) meet the manufacturer's requirements.

11.8 Retaining Walls

Cantilever (unrestrained) walls that have backdrains should be designed to resist the appropriate lateral earth pressures as presented in Table 11. The maximum applicable height for sloping and level backfill conditions is 6 and 12 feet respectively. If taller walls are planned as part of the site development, revised recommendations should be provided once more detailed development plans become available.

TABLE 11

Drained Cantilever Retaining Wall Lateral Earth Pressures

Earth Pressure Condition	Equivalent Fluid Weights	
	Level Backfill	Inclined at 2:1
Active	45 pcf	70 pcf
At-Rest	65 pcf	100 pcf

Walls that are restrained from rotation at the top should be designed using the at-rest pressures. Walls should be checked to resist active pressures plus lateral earth pressures imposed by seismic shaking. We recommend using a uniform seismic increment of 12H psf, where H is the wall height in feet. Where traffic is expected within a distance equal to the height of the walls, they should be designed to resist an additional uniform lateral pressure of 100 psf acting over the entire height of the wall or 10 feet, whichever is less. These lateral earth pressures assume that the walls will be retaining soil similar to the near-surface clayey soil that currently exists on-site. If the walls will be backfilled with highly expansive or non-plastic granular material, the lateral earth pressure values may need to be revised accordingly.

Retaining walls designed using the values presented above should be backdrained to prevent the buildup of hydrostatic pressure. One acceptable method for backdraining the wall is to place a prefabricated drainage panel (Miradrain 6000 or equivalent) against the back of the wall. The drainage panel should extend down to a four-inch-diameter perforated PVC collector pipe at the base of the walls. The pipe should be surrounded on all sides by at least four inches of Caltrans Class 2 permeable material (see Caltrans Standard Specifications Section 68-1.025) or clean drain rock wrapped in filter fabric (Mirafi 140N or equivalent). AdvanEDGE pipe (or equivalent) may be used in lieu of the PVC pipe surrounded by crushed rock. The pipe should be sloped to drain into a sump or other suitable outlet, where it can be discharged into the storm drain system. We should check the manufacturer's specifications for the proposed prefabricated drainage panel and drain pipe material to verify it is appropriate for its intended use.

Footings supporting retaining walls should be designed using the same allowable bearing pressure and lateral resistance criteria presented for stiffened shallow foundations as presented in Section 11.4.

11.9 Flexible (Asphalt Concrete) Pavement

The State of California flexible pavement design method was used to develop the recommended asphalt concrete pavement sections. We expect the final soil subgrade in asphalt-paved areas will generally consist of sandy/silty clay. Based on our professional experience with similar

projects and soil type, we selected an R-value of 15 for design. If the existing subgrade will be raised beneath the paved areas, the fill material should have the same or higher R-value than the native soil. Therefore, additional testing should be performed on the existing near-surface soil and/or the as-graded subgrade soil and proposed fill to measure its R-value. Depending on the results of the tests, the pavement design may need to be revised.

We have analyzed pavement sections required for traffic indices (TIs) of 4.5 to 6.0. We recommend TIs of 4.5 be used for automobile parking areas with occasional trucks, and 6.0 be used for interior driveways and truck-use areas. These recommended design TIs should be confirmed by the project civil engineer. Table 12 presents our recommendations for asphalt pavement sections. It may be feasible to reduce the pavement sections presented in Table 12 by utilizing a lime-treated subgrade (LTS) layer as subbase beneath the AB. However, additional laboratory testing would be required to design the LTS section, which can be performed if desired.

TABLE 12

Pavement Section Design

TI	Asphalt Concrete (inches)	Class 2 Aggregate Base R = 78 (inches)
4.5	3.0	7.0
5.0	3.0	8.0
5.5	3.5	9.0
6.0	3.5	11.0

Pavement components should conform to the current Caltrans Standard Specifications. The upper six inches of the soil subgrade and AB in pavement areas should be moisture-conditioned to above optimum moisture content, compacted to at least 95 percent relative compaction, and rolled to provide a smooth non-yielding surface. The soil subgrades should be kept moist until covered. To reduce the potential for irrigation water to enter the pavement section, curbs

adjacent to landscaped areas should extend through the AB and at least four inches into the underlying clay.

11.10 Rigid (Portland Cement) Concrete Pavement

Concrete pavement design is based on a maximum single-axle load of 20,000 pounds and a maximum tandem axle of 32,000 pounds. The recommended rigid pavement section for these axle loads is seven inches of Portland cement concrete over six inches of AB. For parking garages that will be subjected to passenger vehicle traffic, the pavement may consist of five inches of Portland cement over six inches of AB.

The modulus of rupture of the concrete should be at least 500 psi at 28 days. Contraction joints should be constructed at 15-foot spacing. Where the outer edge of a concrete pavement meets asphalt pavement, the concrete slab should be thickened by 50 percent at a taper not to exceed a slope of 1 in 10. For loading docks, we recommend the slab be reinforced with a minimum of No. 4 bars at 16-inch spacing in both directions. Recommendations for subgrade preparation and AB compaction for concrete pavement are the same as those we have described for asphalt pavement.

11.11 Exterior Concrete Slabs

Exterior concrete slabs, such as sidewalks, courtyards, and patios, should be underlain by at least six inches of select fill extending at least 12 inches beyond slabs laterally. Class 2 AB, aggregate subbase (ASB), or lime-treated existing fill may be used as select fill. The subgrade and select fill should be compacted to at least 90 percent relative compaction and provide a smooth, non-yielding surface.

City of Pittsburg sidewalks should be underlain by at least four inches of Class 2 AB and compacted to at least 90 percent relative compaction and/or in accordance with the City of Pittsburg Standard Specifications And Details.

11.12 Seismic Design

The proposed buildings should be designed to the appropriate seismic codes. Since the thickness of the compressible soft to medium stiff clay is not uniform across the site, two sets of seismic design parameters are considered appropriate. For simplicity of design, the structural engineer may determine which of the two sets of design parameters is the most conservative. For design in accordance with the 2001 California Building Code (CBC) seismic code, we recommend the following:

Areas with less than 10 feet of soft to medium stiff clay:

- Seismic Zone Factor 4
- Soil Profile S_D
- Near Source Factors N_a and N_v of 1.0 and 1.1, respectively.

Areas with 10 feet or more of soft to medium stiff clay

- Seismic Zone Factor 4
- Soil Profile S_E
- Near Source Factors N_a and N_v of 1.0 and 1.1, respectively.

It is our opinion that a Site Profile S_F is not appropriate for this site since the liquefiable layers are relatively thin and discontinuous; therefore, we conclude the potentially liquefiable layers will not have a significant effect on the site response to seismic shaking. For this reason, we recommend using the soil profiles of S_D and S_E, as described above for this site.

12.0 GEOTECHNICAL SERVICES DURING CONSTRUCTION

We should review the final plans and specifications to check that they are in general conformance with the intent of our recommendations. During construction, we should observe site preparation, abandonment of existing underground utilities, and grading. We should check footing bottoms, deep foundation installations, mat subgrades, P-T subgrades, and vapor

retarders before they are covered. We should observe placement of any fill and perform field density tests to check that adequate compaction has been achieved. These observations will allow us to compare actual with anticipated soil conditions, and to check that the contractor's work conforms with the geotechnical aspects of the plans and specifications.

13.0 LIMITATIONS

The conclusions and recommendations presented in this report result from limited engineering studies based on our interpretation of the existing geotechnical conditions and available subsurface data. Actual subsurface conditions may vary. More detailed information concerning the proposed structures and site development is required to further refine design and foundation recommendations. If any variations or unforeseen conditions are encountered during construction, or if the proposed construction will differ from that which is described in this report, Treadwell & Rollo should be notified so that supplemental recommendations can be made.

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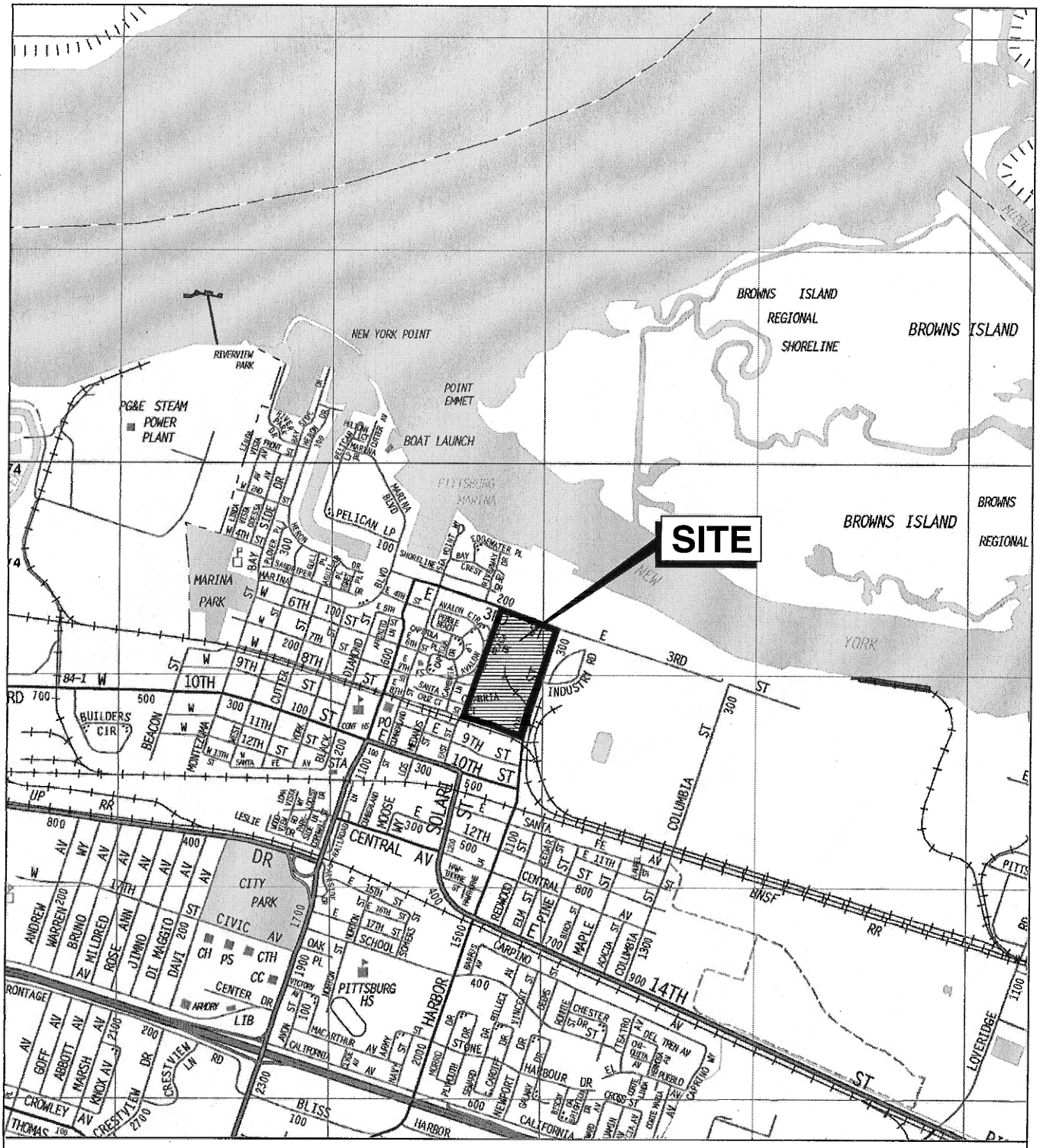
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FIGURES



Base map: The Thomas Guide
Contra Costa County
1999

0 1/4 1/2 Mile

Approximate scale

HARBOR PARK
Pittsburg, California

SITE LOCATION MAP

Treadwell&Rollo

Date 04/17/06	Project No. 4245.02	Figure 1

B-9
B-1
CPT-5
CPT-37
CPT-4
CPT-3
CPT-1
B-5
CPT-51
CPT-2
CPT-53
B-13
CPT-57
CPT-38
CPT-22
CPT-52
CPT-45
CPT-44
CPT-42
CPT-19
CPT-47
CPT-43
CPT-23
CPT-50
B-10a/10-b
CPT-46
CPT-48
CPT-14
CPT-55
CPT-49
CPT-24
B-6
CPT-7
CPT-8
B-2
CPT-29
CPT-30
CPT-31
CPT-58
CPT-28
B-3
CPT-6
CPT-34
CPT-10
CPT-54
CPT-56
CPT-27
CPT-18
CPT-17
CPT-16
CPT-15
CPT-20
CPT-9
CPT-32
CPT-35
CPT-26
CPT-25
CPT-61
CPT-60
CPT-59
B-8
CPT-21
B-7
B-4
CPT-33
CPT-36
CPT-11
CPT-12
CPT-13
B-11
CPT-39
B-12
CPT-40
CPT-41
HARBOR STREET
3rd STREET
BERM LIMIT
BERM
(N) PL

EXPLANATION

- Approximate location of boring performed by Treadwell & Rollo, Inc., in December 2005 and February 2006
- Approximate location of cone penetration test (CPT) performed by Treadwell & Rollo, Inc., in December 2005 and February 2006
- B-1 Approximate location of boring performed by Treadwell & Rollo, Inc., in August 2005
- CPT-1 Approximate location of cone penetration test (CPT) performed by Treadwell & Rollo, Inc., in August 2005
- Former building outlines
- Filled in evaporation pond

0 100 Feet
Approximate scale

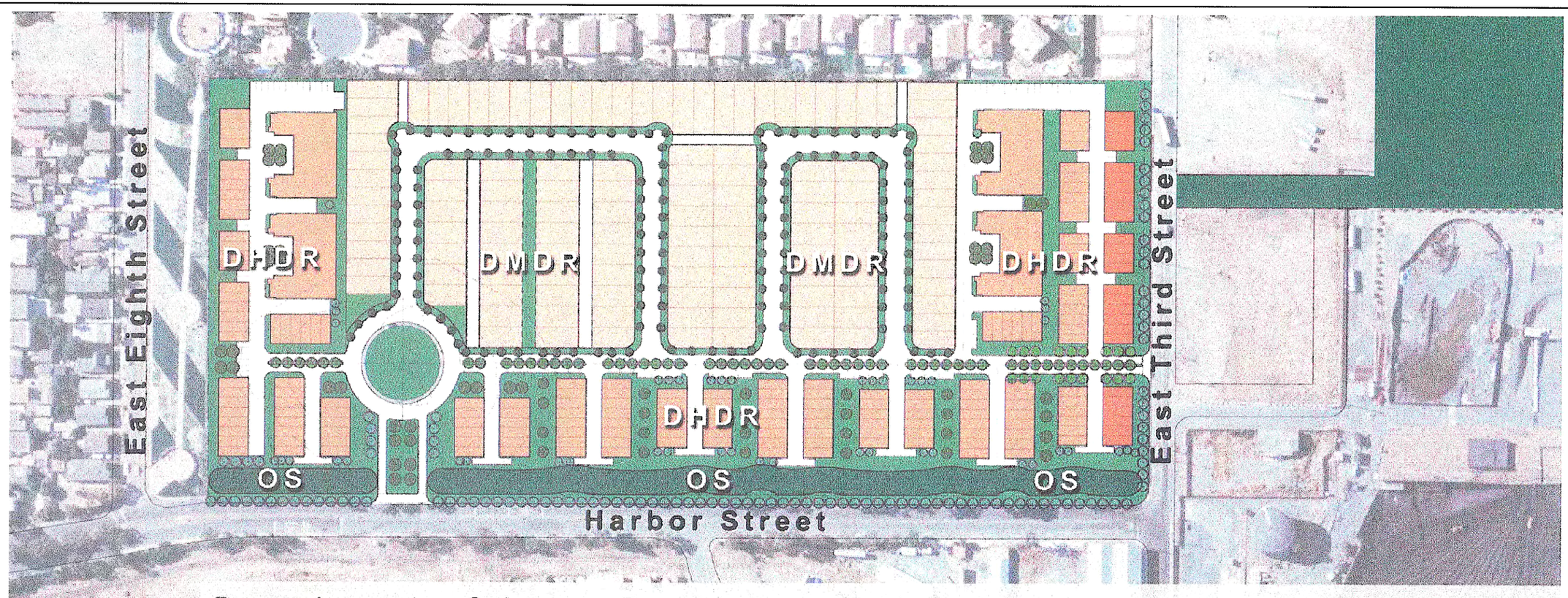
HARBOR PARK
Pittsburg, California

GEOTECHNICAL INVESTIGATION
SITE PLAN

Date 05/09/06	Project No. 4245.02	Figure 2

Treadwell&Rollo

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Project Site Data

Lot area: 21 Acres (South property)

Lot Area: 4 acres (North property)

Building Coverage 34.3% approximate, 313,840 SF total footprint area approximate

Downtown High Density Residential (DHDR)

270 units, 171,640 SF footprint area approximate

Live/Work Lofts (DHDR)

Downtown Medium Density Residential (DMDR)

105-135 dwelling units, 142,200 SF footprint area approximate

Open Space (OS)

51,415 SF area approximate

0 160 Feet

Approximate scale

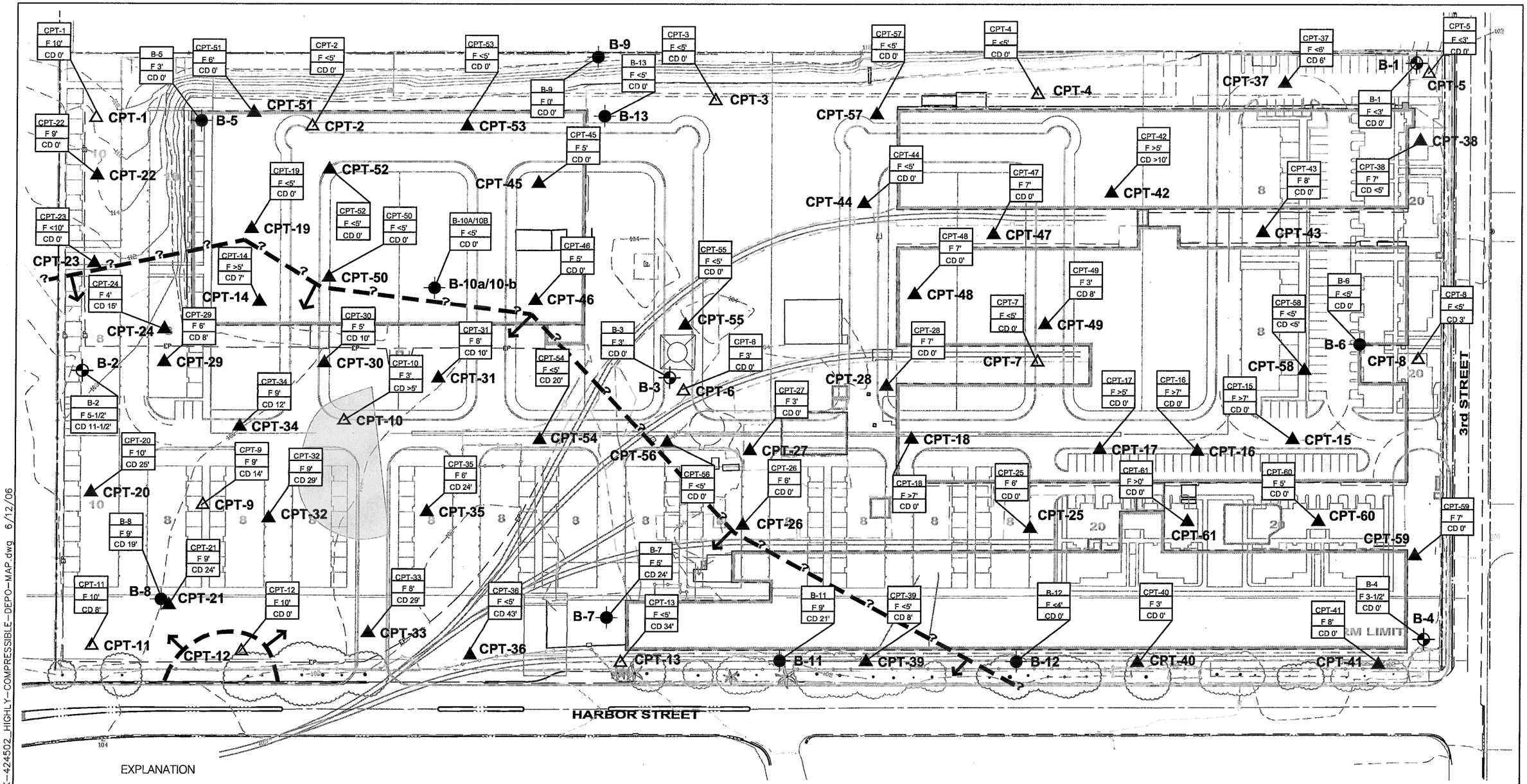
HARBOR PARK
Pittsburg, California

PROPOSED DEVELOPMENT

Date 05/10/06	Project No. 4245.02	Figure 3

Treadwell&Rollo

OAK_424501_SITEPLAN.DWG



EXPLANATION

- Approximate location of boring performed by Treadwell & Rollo, Inc., in December 2005 and February 2006
- Approximate location of cone penetration test (CPT) performed by Treadwell & Rollo, Inc., in December 2005 and February 2006
- B-1 Approximate location of boring performed by Treadwell & Rollo, Inc., in August 2005
- CPT-1 Approximate location of cone penetration test (CPT) performed by Treadwell & Rollo, Inc., in August 2005
- Approximate boundary of highly compressible deposits
- Former building outline
- Filled in evaporation pond
- F 10' / CD 10' Approximate thickness of existing fill, (feet) / Approximate thickness of highly compressible deposit, (feet)

0 100 Feet
Approximate scale

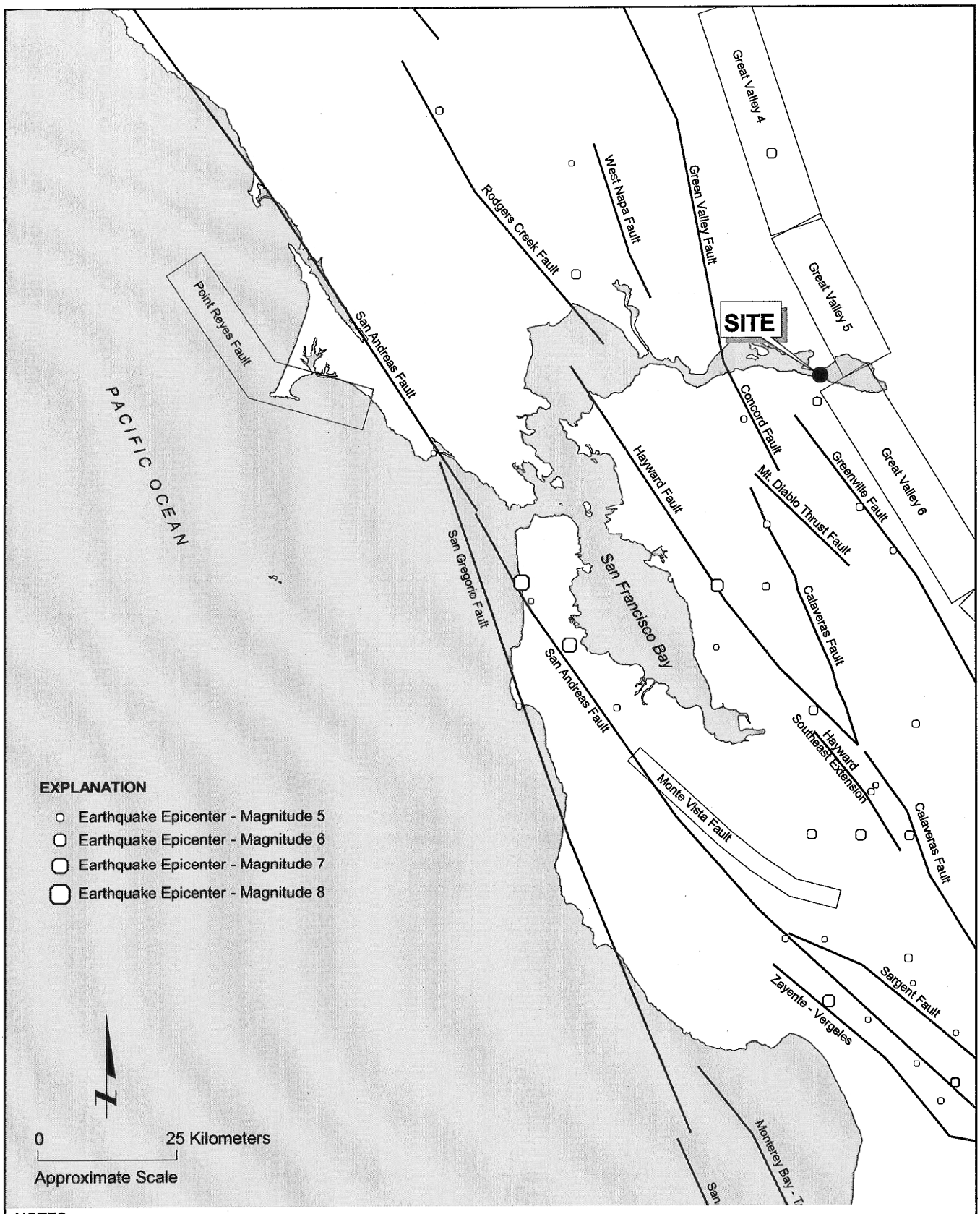
HARBOR PARK
Pittsburg, California

FILL AND COMPRESSIBLE DEPOSIT MAP

Date 06/09/06 | Project No. 4245.02 | Figure 4

Treadwell&Rollo

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NOTES:
Digitized data for fault coordinates and earthquake catalog was developed by the California Department of Conservation Division of Mines and Geology. The historic earthquake catalog includes events from January 1800 to December 2000.

HARBOR PARK
Pittsburg, California

Treadwell&Rollo

MAP OF MAJOR FAULTS AND EARTHQUAKE EPICENTERS IN THE SAN FRANCISCO BAY AREA

Date: 04/17/06	Project No. 4245.02	Figure: 5

I **Not felt by people, except under especially favorable circumstances. However, dizziness or nausea may be experienced.**
Sometimes birds and animals are uneasy or disturbed. Trees, structures, liquids, bodies of water may sway gently, and doors may swing very slowly.

II **Felt indoors by a few people, especially on upper floors of multi-story buildings, and by sensitive or nervous persons.**
As in Grade I, birds and animals are disturbed, and trees, structures, liquids and bodies of water may sway. Hanging objects swing, especially if they are delicately suspended.

III **Felt indoors by several people, usually as a rapid vibration that may not be recognized as an earthquake at first. Vibration is similar to that of a light, or lightly loaded trucks, or heavy trucks some distance away. Duration may be estimated in some cases.**
Movements may be appreciable on upper levels of tall structures. Standing motor cars may rock slightly.

IV **Felt indoors by many, outdoors by a few. Awakens a few individuals, particularly light sleepers, but frightens no one except those apprehensive from previous experience. Vibration like that due to passing of heavy, or heavily loaded trucks. Sensation like a heavy body striking building, or the falling of heavy objects inside.**
Dishes, windows and doors rattle; glassware and crockery clink and clash. Walls and house frames creak, especially if intensity is in the upper range of this grade. Hanging objects often swing. Liquids in open vessels are disturbed slightly. Stationary automobiles rock noticeably.

V **Felt indoors by practically everyone, outdoors by most people. Direction can often be estimated by those outdoors. Awakens many, or most sleepers. Frightens a few people, with slight excitement; some persons run outdoors.**
Buildings tremble throughout. Dishes and glassware break to some extent. Windows crack in some cases, but not generally. Vases and small or unstable objects overturn in many instances, and a few fall. Hanging objects and doors swing generally or considerably. Pictures knock against walls, or swing out of place. Doors and shutters open or close abruptly. Pendulum clocks stop, or run fast or slow. Small objects move, and furnishings may shift to a slight extent. Small amounts of liquids spill from well-filled open containers. Trees and bushes shake slightly.

VI **Felt by everyone, indoors and outdoors. Awakens all sleepers. Frightens many people; general excitement, and some persons run outdoors.**
Persons move unsteadily. Trees and bushes shake slightly to moderately. Liquids are set in strong motion. Small bells in churches and schools ring. Poorly built buildings may be damaged. Plaster falls in small amounts. Other plaster cracks somewhat. Many dishes and glasses, and a few windows break. Knickknacks, books and pictures fall. Furniture overturns in many instances. Heavy furnishings move.

VII **Frightens everyone. General alarm, and everyone runs outdoors.**
People find it difficult to stand. Persons driving cars notice shaking. Trees and bushes shake moderately to strongly. Waves form on ponds, lakes and streams. Water is muddied. Gravel or sand stream banks cave in. Large church bells ring. Suspended objects quiver. Damage is negligible in buildings of good design and construction; slight to moderate in well-built ordinary buildings; considerable in poorly built or badly designed buildings, adobe houses, old walls (especially where laid up without mortar), spires, etc. Plaster and some stucco fall. Many windows and some furniture break. Loosened brickwork and tiles shake down. Weak chimneys break at the roofline. Cornices fall from towers and high buildings. Bricks and stones are dislodged. Heavy furniture overturns. Concrete irrigation ditches are considerably damaged.

VIII **General fright, and alarm approaches panic.**
Persons driving cars are disturbed. Trees shake strongly, and branches and trunks break off (especially palm trees). Sand and mud erupts in small amounts. Flow of springs and wells is temporarily and sometimes permanently changed. Dry wells renew flow. Temperatures of spring and well waters varies. Damage slight in brick structures built especially to withstand earthquakes; considerable in ordinary substantial buildings, with some partial collapse; heavy in some wooden houses, with some tumbling down. Panel walls break away in frame structures. Decayed pilings break off. Walls fall. Solid stone walls crack and break seriously. Wet grounds and steep slopes crack to some extent. Chimneys, columns, monuments and factory stacks and towers twist and fall. Very heavy furniture moves conspicuously or overturns.

IX **Panic is general.**
Ground cracks conspicuously. Damage is considerable in masonry structures built especially to withstand earthquakes; great in other masonry buildings - some collapse in large part. Some wood frame houses built especially to withstand earthquakes are thrown out of plumb, others are shifted wholly off foundations. Reservoirs are seriously damaged and underground pipes sometimes break.

X **Panic is general.**
Ground, especially when loose and wet, cracks up to widths of several inches; fissures up to a yard in width run parallel to canal and stream banks. Landsliding is considerable from river banks and steep coasts. Sand and mud shifts horizontally on beaches and flat land. Water level changes in wells. Water is thrown on banks of canals, lakes, rivers, etc. Dams, dikes, embankments are seriously damaged. Well-built wooden structures and bridges are severely damaged, and some collapse. Dangerous cracks develop in excellent brick walls. Most masonry and frame structures, and their foundations are destroyed. Railroad rails bend slightly. Pipe lines buried in earth tear apart or are crushed endwise. Open cracks and broad wavy folds open in cement pavements and asphalt road surfaces.

XI **Panic is general.**
Disturbances in ground are many and widespread, varying with the ground material. Broad fissures, earth slumps, and land slips develop in soft, wet ground. Water charged with sand and mud is ejected in large amounts. Sea waves of significant magnitude may develop. Damage is severe to wood frame structures, especially near shock centers, great to dams, dikes and embankments, even at long distances. Few if any masonry structures remain standing. Supporting piers or pillars of large, well-built bridges are wrecked. Wooden bridges that "give" are less affected. Railroad rails bend greatly and some thrust endwise. Pipe lines buried in earth are put completely out of service.

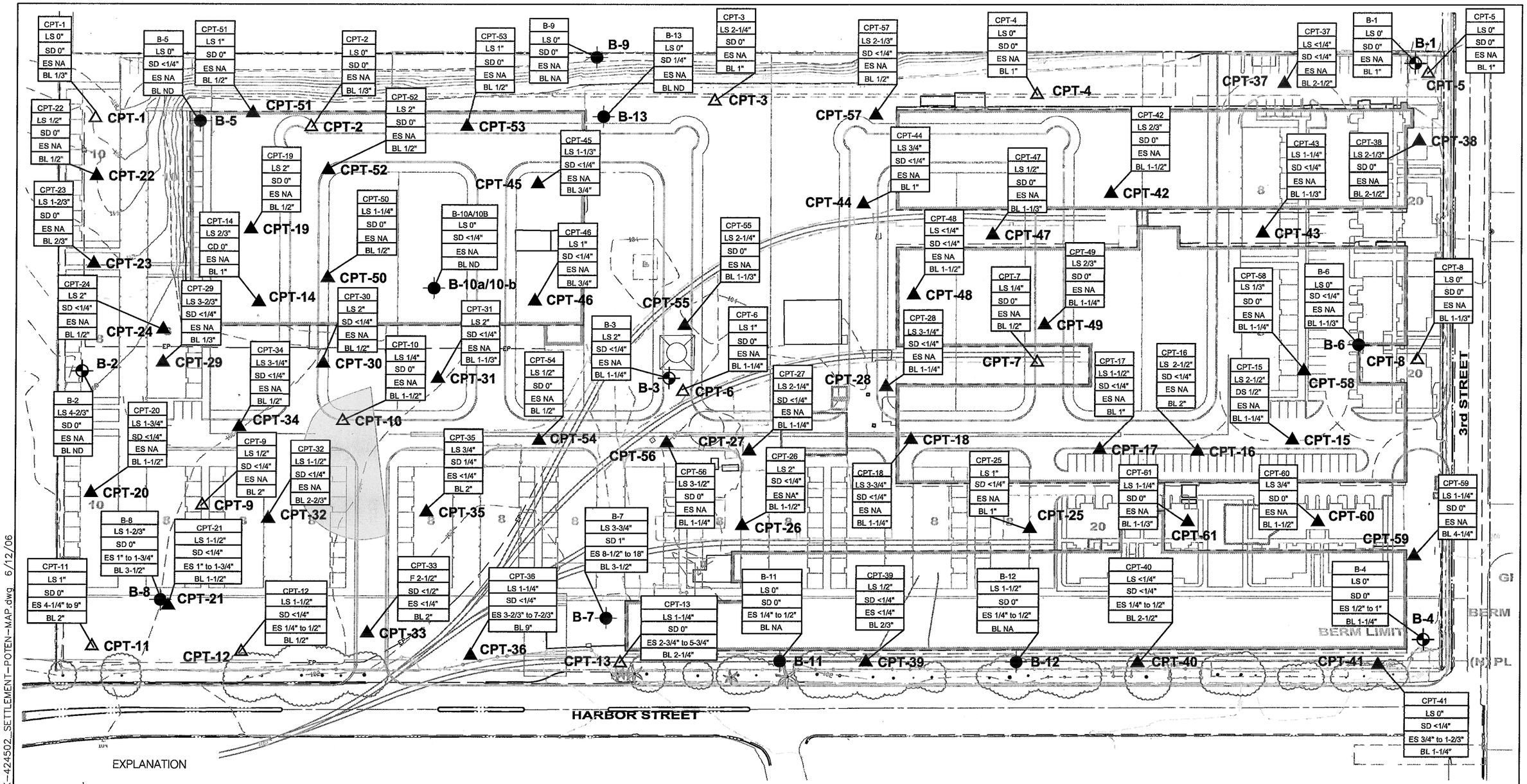
XII **Panic is general.**
Damage is total, and practically all works of construction are damaged greatly or destroyed. Disturbances in the ground are great and varied, and numerous shearing cracks develop. Landslides, rock falls, and slumps in river banks are numerous and extensive. Large rock masses are wrenched loose and torn off. Fault slips develop in firm rock, and horizontal and vertical offset displacements are notable. Water channels, both surface and underground, are disturbed and modified greatly. Lakes are dammed, new waterfalls are produced, rivers are deflected, etc. Surface waves are seen on ground surfaces. Lines of sight and level are distorted. Objects are thrown upward into the air.

HARBOR PARK
Pittsburg, California

MODIFIED MERCALLI INTENSITY SCALE

Treadwell&Rollo

Date: 04/17/06	Project No. 4245.02	Figure: 6



EXPLANATION

- Approximate location of boring performed by Treadwell & Rollo, Inc., in December 2005 and February 2006
- Approximate location of cone penetration test (CPT) performed by Treadwell & Rollo, Inc., in December 2005 and February 2006
- B-1 Approximate location of boring performed by Treadwell & Rollo, Inc., in August 2005
- CPT-1 Approximate location of cone penetration test (CPT) performed by Treadwell & Rollo, Inc., in August 2005
- Former building outlines
- Filled in evaporation pond
- LS Estimated settlement due to liquefaction (inches)
- SD Estimated settlement due to cyclic densification (inches)
- ES Estimated settlement due to proposed embankment (inches)
- BL Estimated settlement due to proposed building loads (inches)
- ND Not determined
- NA Not applicable

0 100 Feet
Approximate scale

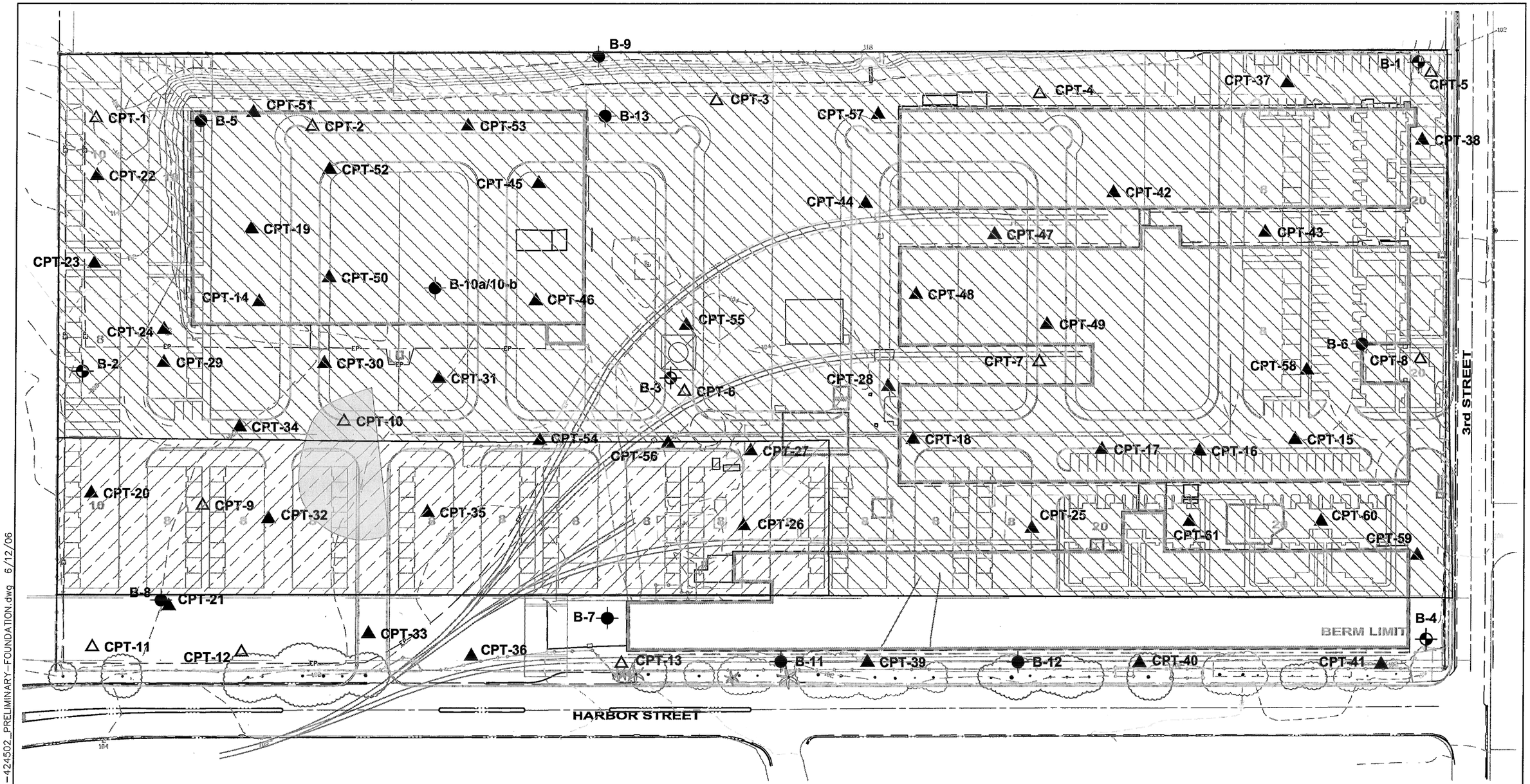
HARBOR PARK
Pittsburg, California

SETTLEMENT POTENTIAL MAP

Date 06/09/06 | Project No. 4245.02 | Figure 7

Treadwell&Rollo

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EXPLANATION

- Approximate location of boring performed by Treadwell & Rollo, Inc., in December 2005 and February 2006
- Approximate location of cone penetration test (CPT) performed by Treadwell & Rollo, Inc., in December 2005 and February 2006
- B-1 Approximate location of boring performed by Treadwell & Rollo, Inc , in August 2005
- CPT-1 Approximate location of cone penetration test (CPT) performed by Treadwell & Rollo, Inc , in August 2005
- Former building outline
- Filled in evaporation pond
- Mats or post tensioned slabs recommended
- Deep foundations recommended

0 100 Feet
Approximate scale

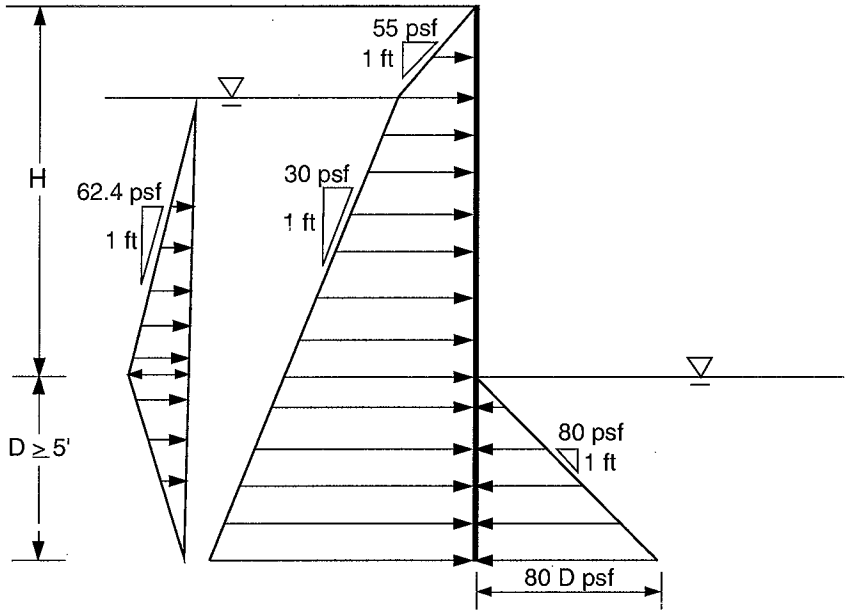
HARBOR PARK
Pittsburg, California

PRELIMINARY FOUNDATION TYPES

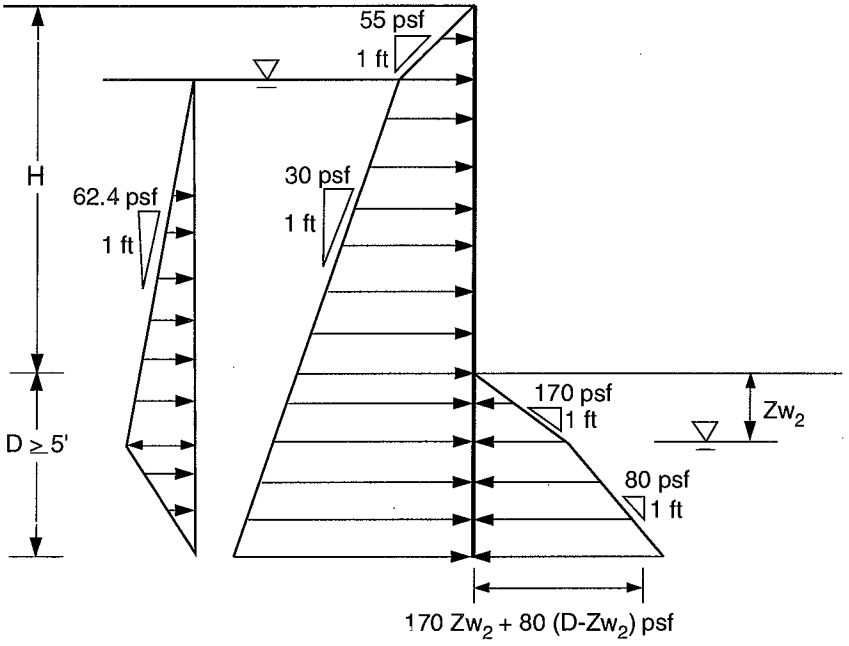
Date 05/05/06	Project No. 4245.02	Figure 8

Treadwell&Rollo

S:\Trgraphics-Oak\4200's\4245.02\OAK-424502_PRELIMINARY-FOUNDATION.dwg 6/12/06

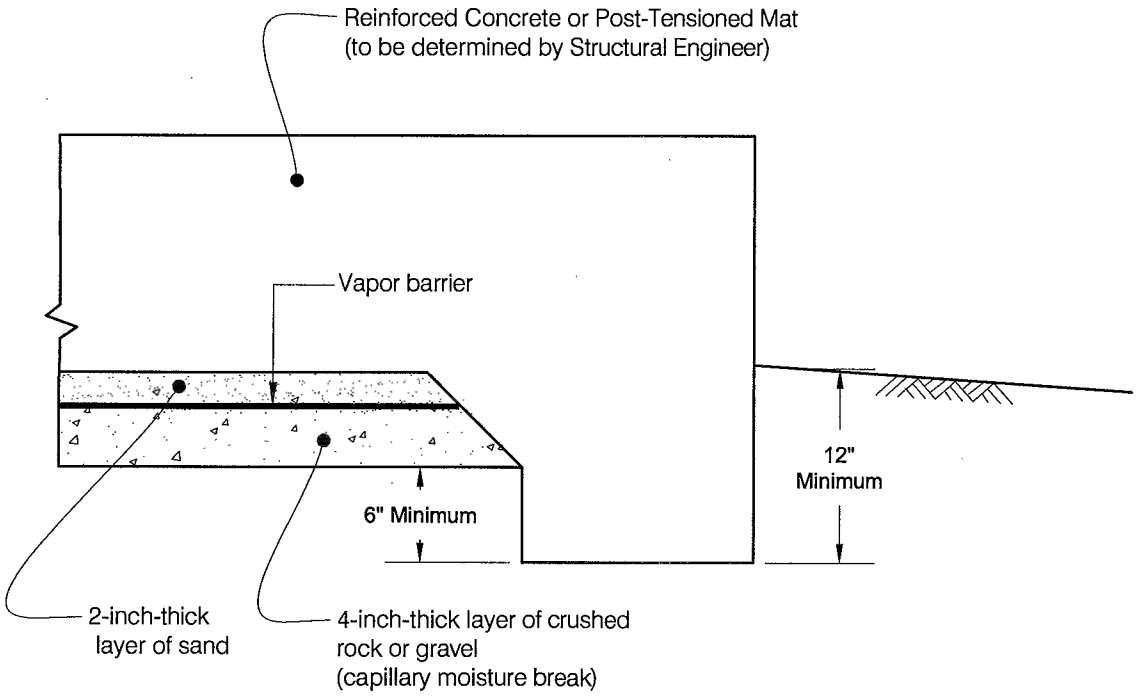


PASSIVE DEWATERING



ACTIVE DEWATERING

HARBOR PARK Pittsburg, California	**CANTILEVER SHEET PILE SHORING** **LONG TERM SHORING EXCAVATION** **OPEN FOR MORE THAN ONE WEEK**
Treadwell&Rollo	Date 05/09/06 | Project No. 4245.02 | Figure 9



0 1 Inch
Approximate scale

HARBOR PARK
Pittsburg, California

CONCEPTUAL FOUNDATION EDGE DETAIL

Treadwell&Rollo

Date 06/12/06	Project No. 4245.02	Figure 10

S:\Trgraphics-Oak\4200's\4245.02\OAK-424502_CONCRETE-FOUNDATION.dwg 6/12/06

APPENDIX A
Boring Logs

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-1

Boring location: See Site Plan, Figure 2 | Logged by: M. Zinsley

Date started: 8/18/05 | Date finished: 8/18/05

Drilling method: Rotary wash

Hammer weight/drop: 140 lbs./30 inches | Hammer type: Automatic hammer

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION (Ground Surface Elevation: 102 feet[2])	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
1	S&H		8	ML	Asphalt concrete SILT with SAND (ML) gray-brown, medium stiff to stiff, moist						
2					FILL						
3	S&H		9	CL	CLAY (CL) gray-brown, stiff, moist LL = 34, PI = 16; see Figure C-7					19.4	107
4				CL	CLAY with SAND (CL) yellow-brown, medium stiff, moist						
5					Consolidation Test, see Figure C-1						
6	S&H		8							23.6	103
7				CL	SANDY CLAY (CL) yellow-brown, stiff, moist						
8											
9					▽ (8/19/05, 7:00 AM, 12:25 PM)						
10											
11	S&H		6			TxUU	1,100	870		22.6	103
12				CL	CLAY with SAND (CL) yellow-brown, medium stiff, wet						
13											
14											
15					stiff						
16	S&H		10		Consolidation Test, see Figure C-2	TxUU	1,600	580		26.2	98
17											
18											
19				CL							
20											
21	S&H		18		very stiff					24.1	95
22											
23											
24											
25											
26	S&H		17							28.9	92
27				SC	CLAYEY SAND (SC) yellow-brown, medium dense, wet						
28											
29					SAND with SILT (SP-SM)						
30											

Treadwell&Rollo

Project No.: 4245.02 | Figure: A-1a

TEST GEOTECH LOG 424502_B-1_.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-1

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		36	SP-SM	SAND with SILT (SP-SM) (continued) olive, dense, wet, with flecks of pyrite						
32											
33				SP	SAND (SP) olive, very dense, wet, with flecks of pyrite						
34											
35											
36	S&H		52								
37											
38											
39											
40					olive-gray						
41	S&H		48								
42											
43				SC	CLAYEY SAND (SC) olive, dense, wet						
44											
45											
46	SPT		35								
47											
48											
49											
50				SP	SAND with CLAY (SP) olive, very dense, wet						
51	SPT		53								
52											
53											
54											
55											
56											
57											
58											
59											
60											

Boring terminated at a depth of 51.5 feet.
Boring backfilled with cement grout.
Groundwater encountered at a depth of 9 feet.

[1] S&H blow counts converted using a factor of 0.7.
[2] Elevation based on ALTA LAND Title Survey performed by Renner Group dated 20 May 2005

Treadwell&Rollo

Project No.. 4245.02 | Figure: A-1b

TEST GEOTECH LOG 424502_B-1_GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-2

Boring location: See Site Plan, Figure 2 | Logged by: M. Zinsley

Date started: 8/19/05 | Date finished: 8/19/05

Drilling method: Rotary wash

Hammer weight/drop: 140 lbs./30 inches | Hammer type: Automatic hammer

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION (Ground Surface Elevation: 108 feet[2])	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
0					Asphalt concrete						
1	S&H		24	CL	SANDY CLAY with GRAVEL (CL) black, very stiff, moist, with glass fragments						
2					becoming gray-brown at 2 feet						
3	S&H		19		LL = 33, PI = 12; see Figure C-7						
4				CH	CLAY with SAND (CH) olive-brown with yellow-brown mottling, very stiff, moist						
5											
6	S&H		9	CL	CLAY (CL) dark brown, stiff, moist	TxUU	550	1,940		24.6	100
7											
8											
9					CLAY (CL) yellow-brown, medium stiff, wet						
10											
11	S&H		5								
12											
13				CL	▽ (8/19/05, 12:30 PM)						
14											
15											
16	S&H		5								
17					CLAYEY SAND (SC) yellow-brown, loose, wet, interbedded fine and coarse sand						
18											
19											
20											
21	S&H		7	SC					40		
22											
23											
24											
25					SANDY CLAY (CL) brown, medium stiff to stiff, wet						
26	SPT		8	CL					50.3		
27											
28											
29											
30				SC	CLAYEY SAND (SC)						

FILL

Treadwell&Rollo

Project No. 4245.02 | Figure: A-2a

TEST GEOTECH LOG 424502_B-1_.GPJ_TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-2

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		8	SC	CLAYEY SAND (SC) yellow-brown, loose, wet, varying clay content				23.8		
32											
33											
34											
35				CL	SANDY CLAY (CL) olive, very stiff, wet						
36	S&H		17						58.1		
37											
38				SP	SAND (SP) olive, medium dense, wet, some gravel						
39											
40											
41	S&H		19	GP-GC	GRAVEL with SAND and CLAY (GP-GC) brown, medium dense, wet				15.6		
42											
43											
44				SP	SAND (SP) olive with yellow-brown mottling, dense, wet, with pyrite flecks						
45											
46	S&H		41								
47											
48											
49											
50					gravelly lens						
51	SPT		46								
52											
53											
54											
55											
56											
57											
58											
59											
60											

Boring terminated at a depth of 51.5 feet.
Boring backfilled with cement grout.
Groundwater encountered at a depth of 13.5 feet.

[1] S&H blow counts converted using a factor of 0.7.
[2] Elevation based on ALTA LAND Title Survey performed by Renner Group dated 20 May 2005

Treadwell&Rollo

Project No.: 4245.02
Figure: A-2b

TEST GEOTECH LOG 424502_B-1_.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-3

Boring location: See Site Plan, Figure 2 | Logged by: M. Zinsley

Date started: 8/19/05 | Date finished: 8/19/05

Drilling method: Rotary wash

Hammer weight/drop: 140 lbs./30 inches | Hammer type: Automatic hammer

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION (Ground Surface Elevation: 103 feet[2])	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
1	S&H		13	SC	Asphalt concrete over aggregate base						
				CL	SANDY CLAY (CL) mottled brown and yellow-brown, stiff, moist, fine sand						
2					FILL						
3	S&H		6	CL	CLAY (CL) olive-brown, medium stiff, moist LL = 31, PI = 16; see Figure C-7				88		
4					SILT with CLAY (ML) yellow-brown, very stiff, moist, trace sand						
5											
6	S&H		13	ML	increasing sand content	TxUU	600	2,750	82.6	17.3	113
7											
8											
9					SANDY CLAY (CL) yellow-brown, stiff, moist						
10											
11	S&H		12	CL							
12					decreasing sand content						
13											
14					CLAY (CL) yellow-brown, stiff to very stiff, moist						
15											
16	S&H		15								
17											
18				CL							
19											
20											
21	S&H		9		stiff						
22					increasing sand content (fine)						
23					SILTY SAND (SM) yellow-brown, medium dense, wet						
24				SM							
25											
26	S&H		13								
27				SP-SM	SAND with SILT (SP-SM) yellow-brown, medium dense, wet						
28											
29				CH	CLAY (CH) yellow-brown, stiff, wet, varying amounts of fine sand, some fine angular gravel at 31.5 feet						
30											

Treadwell&Rollo

Project No.: 4245.02 | Figure: A-3a

TEST GEOTECH LOG 424502_B-1_.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-3

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	SPT		9	CH	CLAY (CH) (continued)						
32											
33											
34					SANDY CLAY (CL) olive with black specks, stiff, wet, fine sand						
35											
36	S&H		13	CL							
37											
38											
39											
40											
41	S&H		36		CLAYEY SAND (SC) light olive interbedded with dark brown, dense, wet, with pyrite flecks						
42											
43				SC							
44											
45											
46	SPT		14		medium dense, olive-brown, fine sand						
47											
48					SAND with SILT (SP-SM) olive-brown with red-brown mottling, medium dense to dense, wet						
49				SP-SM							
50											
51	S&H		29	CL-ML	SILTY CLAY (CL-ML) yellow-brown, some sand in sampler tip						
52											
53											
54											
55											
56											
57											
58											
59											
60											

Boring terminated at a depth of 51.5 feet.
Boring backfilled with cement grout.
Drilling method obscured groundwater level. Boring grouted immediately after drilling; groundwater level not measured due to drilling fluid in borehole.

[1] S&H blow counts converted using a factor of 0.7.
[2] Elevation based on ALTA LAND Title Survey performed by Renner Group dated 20 May 2005

Treadwell&Rollo

Project No. 4245.02 | Figure: A-3b

TEST GEOTECH LOG 424502_B-1_.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-4

Boring location: See Site Plan, Figure 2 | Logged by: M. Zinsley

Date started: 8/18/05 | Date finished: 8/18/05

Drilling method: Rotary wash

Hammer weight/drop: 140 lbs./30 inches | Hammer type: Automatic hammer

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION (Ground Surface Elevation: 102 feet[2])	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
0					Asphalt concrete over concrete						
1–2	S&H		4	CL	CLAY with SAND and SILT (CL) olive-brown mottled with yellow-brown, soft, moist LL = 33, PI = 16; see Figure C-7					20.8	103
3–4				CL	CLAY (CL) yellow-brown, stiff, moist						
5	S&H		9			PP		1,500			
6–7				CH	CLAY (CH) dark gray-brown, stiff, moist, slight organic odor	PP		1,500			
8–9					SANDY CLAY (CL) ▽ olive with yellow-brown mottling, stiff, wet (8/19/05, 7:00 AM, 12:20 PM)						
10–11	S&H		6			PP		2,000			
12–14				CL							
15–16	S&H		12		yellow-brown	PP		3,000			
17–20											
21	S&H		15	CL	CLAY (CL) yellow-brown, stiff to very stiff, wet						
22–23					SANDY CLAY (CL) yellow-brown, stiff, wet, fine sand						
25–26	S&H		13	CL							
27–30											

FILL

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Project No. 4245.02 | Figure: A-4a

TEST GEOTECH LOG 424502_B-1_.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-4

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		20	CL	SANDY CLAY (CL) (continued) light olive, very stiff to hard	PP		>4000			
32											
33											
34					SAND (SP) brown, dense, wet, pyrite flecks						
35											
36	S&H		44								
37					olive						
38											
39											
40					very dense, with thin clay seams						
41	SPT		53								
42											
43				SP							
44											
45											
46	SPT		43		olive-brown, dense						
47											
48											
49											
50					very dense						
51	S&H		60								
52											
53											
54											
55											
56											
57											
58											
59											
60											

Boring terminated at a depth of 51.5 feet.
Boring backfilled with cement grout.
Groundwater encountered at a depth of 9 feet.

[1] S&H blow counts converted using a factor of 0.7.
[2] Elevation based on ALTA LAND Title Survey performed by Renner Group dated 20 May 2005

Treadwell&Rollo

Project No.: 4245.02
Figure: A-4b

TEST GEOTECH LOG 424502_B-1_.GPJ_TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-5

Boring location: See Site Plan, Figure 2 | Logged by: L. Medeiros

Date started: 12/20/05 | Date finished: 12/20/05

Drilling method: Rotary Wash

Hammer weight/drop: 140 lb./30 inches | Hammer type: Automatic

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

Ground Surface Elevation: 104 feet[2]

DEPTH (feet)	Sampler Type	Sample	SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
1–2				ML	SANDY SILT (ML) brown, stiff, moist FILL						
3	S&H		15	SP	SAND (SP) brown, medium dense, moist						
6	S&H		18						5.3	20.7	96
8–9				SM	SILTY SAND (SM) gray-brown, medium dense, wet						
10–11	S&H		18	ML	SANDY SILT (ML) yellow-brown, very stiff, wet, with pockets of red-brown coarse SAND (SP)						
13–16	S&H		32	SP	SAND (SP) olive-brown, dense, wet						
21	SPT		24	SC	CLAYEY SAND with SILT (SC) olive mottled with red-brown, medium dense, wet						
24–26	S&H		44	SP	SAND (SP) olive-brown with seams of red-brown, dense, wet						
30											

LABORATORY TEST DATA

Treadwell&Rollo

Project No. 4245.02 | Figure: A-5a

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-5

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	SPT		45	SP	SAND (SP) (continued) olive-gray with seams of red-brown, occasional seams of fine gravel						
32											
33											
34					no gravel						
35											
36	SPT		35								
37											
38											
39											
40											
41	SPT		35								
42											
43											
44				ML	SILT with SAND and CLAY (ML) yellow-brown, very stiff, wet, with occasional seams of olive-brown SAND (SP)						
45											
46	SPT		22								
47											
48											
49				CL	CLAY (CL) olive-gray with yellow-brown mottling, very stiff, wet						
50											
51	S&H		18								
52											
53											
54											
55											
56											
57											
58											
59											
60											

Boring terminated at a depth of 51.5 feet bgs.
Boring backfilled with cement grout.
Groundwater not measured due to drilling mud.

[1] S&H blow counts converted to SPT N-value using a correction factor of 0.7
[2] Elevation based on ALTA LAND Title Survey performed by Renner Group dated 20 May 2005

Treadwell&Rollo

Project No.. 4245.02 | Figure: A-5b

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-6

Boring location: See Site Plan, Figure 2 | Logged by: L. Medeiros

Date started: 12/20/05 | Date finished: 12/20/05

Drilling method: Rotary Wash

Hammer weight/drop: 140 lb./30 inches | Hammer type: Automatic

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION (Ground Surface Elevation: 102 feet[2])	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
1–5				SM	SILTY SAND (SM) yellow-brown, dense, moist Driller lost fluid in upper 3 feet casing driven to about 5 feet						
5–6	S&H		27	SM	medium dense						
6–10				SM							
8–9				ML	SANDY SILT (ML) yellow-brown, very stiff, wet						
10–11	S&H		15	ML		PP		2,750		21.1	107
11–15				CL	SANDY CLAY (CL) yellow-brown, very stiff, wet						
15–16	S&H		15	CL-SC	increased sand content grading to CLAYEY SAND (SC) yellow-brown, medium dense, wet	PP		2,500			
16–20				CL	SANDY CLAY (CL) yellow-brown, stiff to very stiff, wet						
20–21	S&H		15	CL						21.6	108
21–25				CL							
24–26				CL	CLAY (CL) yellow-brown, medium stiff, wet some thin seams of fine sand						
25–26	S&H		7	CL							
26–28				SM	SILTY SAND (SM) olive-gray with brown mottling and black inclusions, medium dense, wet, fine sand						
28–30				SM							

Treadwell&Rollo

Project No.: 4245.02 | Figure: A-6a

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-6

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		16	ML	SANDY SILT (ML) brown, stiff to very stiff, wet fine sand, non-plastic, see Figure C-23				69.2	26.9	99
35	SPT		25	ML	SILT with SAND (ML) gray interbedded with red-brown sand, very stiff, wet						
40	SPT		21	SP	olive-gray mottled with red-brown SAND (SP) red-brown, medium dense, wet						
42				ML	SILT with SAND (ML) olive-gray mottled with red-brown, very stiff, wet						
43					SAND (SP) olive-gray, dense, wet						
45	SPT		43	SP							
50	SPT		29		medium dense						
52											
60											

Boring terminated at a depth of 51.5 feet bgs.
Boring backfilled with cement grout.
Groundwater not measured due to drilling mud.

[1] S&H blow counts converted to SPT N-value using a correction factor of 0.7
[2] Elevation based on ALTA LAND Title Survey performed by Renner Group dated 20 May 2005

Treadwell&Rollo

Project No.: 4245.02 | Figure: A-6b

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-7

Boring location: See Site Plan, Figure 2 | Logged by: L. Medeiros

Date started: 12/21/05 | Date finished: 12/21/05

Drilling method: Rotary Wash

Hammer weight/drop: 140 lb./30 inches | Hammer type: Automatic

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT), Dames & Moore (D&M)

Ground Surface Elevation: 102 feet[2]

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
1					2 inches asphalt concrete over 5 inches aggregate base						
2				SP	SAND (SP) black, loose, moist, manufactured for roofing tiles driller indicated red cuttings at about 2.5 feet						
3					GRAVEL (GP) black-gray, with crushed red brick, very loose, wet, angular						
4	S&H		2	GP	FILL						
5											
6	S&H		2		CLAY with SILT (CL) dark olive-gray, soft, wet, (disturbed sample from shoe)						
7											
8											
9											
10					olive-gray	TxUU	1,000	600		43.9	77
11	S&H		2			PP		500			
12											
13											
14				CL							
15											
16	S&H		3		gray Consolidation Test, see Figure C-8	PP		500		58.1	66
17											
18											
19											
20											
21	D&M				no recovery						
22											
23					driller noted stiffer more sandy material at about 23 feet						
24					SANDY CLAY (CL) dark gray to black, soft, wet, with decomposing organics, stong odor						
25											
26	S&H		4	CL	Consolidation Test, see Figure C-9 LL = 38, PI = 18, see Figure C-23					35.7	84
27											
28											
29				SC	CLAYEY SAND (SC) gray, loose, wet, high clay content, few gravels						
30											

LABORATORY TEST DATA

Treadwell&Rollo

Project No. 4245.02 | Figure: A-7a

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-7

DEPTH (feet)	Sampler Type	Sample	SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		5	SC	CLAYEY SAND (SC) (continued) gray, disturbed sample fell out of sampler LL = 25, PI = 8, see Figure C-23				7.5	23.3	105
32											
33	S&H		4								
34				SC	CLAYEY SAND with GRAVEL (SC) gray with pockets of brown clay, medium dense, wet, max gravel diameter about 1 inch						
35											
36	S&H		15								
37											
38											
39				SP-SM	SAND with SILT (SP-SM) gray, loose, wet						
40											
41	SPT		10								
42				MH	SILT (ML) olive-gray, stiff, wet						
43											
44				CL	CLAY (CL) gray, stiff, wet						
45											
46	SPT		17	SM	SILTY SAND (SM) gray, medium dense, wet						
47				MH	SILT (MH) gray, very stiff, wet						
48											
49				SP	SAND (SP) olive-gray, medium dense, wet						
50											
51	SPT		29								
52											
53											
54											
55											
56											
57											
58											
59											
60											

Boring terminated at a depth of 51.5 feet bgs.
Boring backfilled with cement grout.
Groundwater not measured due to drilling mud.

[1] S&H blow counts converted to SPT N-value using a correction factor of 0.7
[2] Elevation based on ALTA LAND Title Survey performed by Renner Group dated 20 May 2005

Treadwell&Rollo

Project No.: 4245.02
Figure: A-7b

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-8

Boring location: See Site Plan, Figure 2 | Logged by: L. Medeiros

Date started: 12/21/05 | Date finished: 12/21/05

Drilling method: Rotary Wash

Hammer weight/drop: 140 lb./30 inches | Hammer type: Automatic

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
					Ground Surface Elevation: 106 feet[2]						
0					3 inches of asphalt						
1					GRAVEL with CLAY and SAND (GP-GC) gray, dense, wet, crushed aggregate						
2											
3											
4	S&H		39	GP-GC							
5											
6	S&H		14		no recovery, possibly wood blocking sampler						
7					wood and metal in cuttings						
8											
9					SANDY CLAY (CL) dark gray, medium stiff, wet trace organics						
10											
11	S&H		7			PP		750			
12											
13											
14											
15				CL	gray mottled with yellow-brown, stiff Consolidation Test, see Figure C-10	TxUU	1,500	1,400		22.8 24.1	104 102
16	D&M										
17											
18											
19											
20					olive-brown, medium stiff Consolidation Test, see Figure C-11	TxUU	2,000	740		26.6 26.6	99 97
21	D&M										
22											
23					CLAYEY SAND (SC) brown, loose, wet, occasional gravel						
24											
25				SC	LL = 25, PI = 7; see Figure C-23						
26	S&H		6			PP		1,000	42.5		
27											
28					SANDY CLAY (CL) yellow-brown, medium stiff, wet						
29				CL							
30											

FILL

Treadwell&Rollo

Project No.: 4245.02 | Figure: A-8a

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-8

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		7	CL	SANDY CLAY (CL) (continued)						
32											
33											
34				ML	SANDY SILT (ML) light brown mottled with yellow-brown, very stiff, wet, some seams of brown SILTY SAND (SM)						
35											
36	S&H		20								
37											
38											
39				SP	SAND with SILT (SP) brown, dense, wet						
40											
41	S&H		32								
42											
43											
44				SP	SAND (SP) olive mixed with red-brown mottling, medium dense, wet						
45											
46	SPT		28								
47											
48											
49											
50					dense						
51	SPT		38								
52											
53											
54											
55											
56											
57											
58											
59											
60											

Boring terminated at a depth of 51.5 feet bgs.
Boring backfilled with cement grout.
Groundwater not measured due to drilling mud.

[1] S&H blow counts converted to SPT N-value using a correction factor of 0.7
[2] Elevation based on ALTA LAND Title Survey performed by Renner Group dated 20 May 2005

Treadwell&Rollo

Project No.: 4245.02
Figure: A-8b

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-9

Boring location: See Site Plan, Figure 2 | Logged by: L. Medeiros

Date started: 2/2/06 | Date finished: 2/2/06

Drilling method: Solid Stem Augers

Hammer weight/drop: 140 lb./30 inches | Hammer type: Rope and Cathead

Sampler: Sprague & Henwood (S&H)

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION (Ground Surface Elevation: 122 feet[2])	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
1					CLAY with SAND (CL) brown, very stiff, moist, with roots						
2				CL							
3	S&H		28								
4					CLAY (CL) olive, very stiff, moist, pockets of white						
5											
6	S&H		28	CL							
7											
8					SILT (ML) light olive with yellow-brown mottling and dark brown inclusions, very stiff, moist						
9											
10											
11	S&H		28								
12											
13				ML							
14											
15					olive, no dark brown inclusions, some roots						
16	S&H		22			TxUU	1,600	3,100		17.7	93
17											
18											
19					CLAYEY SAND (SC) olive-brown, dense, moist						
20				SC							
21	S&H		33	CL	SANDY CLAY (CL) olive with yellow-brown, hard, moist						
22				SP	SAND (SP) light gray, dense, moist						
23											
24				SM	SILTY SAND (SM) red-brown, dense, moist						
25											
26	S&H		26		SANDY CLAY (CL) olive mottled with yellow-brown, very stiff, moist, with seams of silty sand, red-brown, moist	TxUU	2,600	2,100		22.1	102
27				CL							
28											
29											
30				SP	SAND (SP)						

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Project No.: 4245.02 | Figure: A-9a

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-9

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		30/ 4"	SP	SAND (SP) (continued) brown, very dense, wet						
32											
33											
34											
35											
36											
37											
38											
39											
40											
41											
42											
43											
44											
45											
46											
47											
48											
49											
50											
51											
52											
53											
54											
55											
56											
57											
58											
59											
60											

Boring terminated at a depth of 36.0 feet bgs.
Boring backfilled with cement grout.
Groundwater encountered between 25 and 30 feet, not measured due to caving hole.

[1] S&H blow counts converted to SPT N-value using a correction factor of 0.6
[2] Elevation based on ALTA LAND Title Survey performed by Renner Group dated 20 May 2005

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Project No. 4245.02 | Figure: A-9b

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-10a

Boring location: See Site Plan, Figure 2 | Logged by: L. Medeiros

Date started: 2/6/06 | Date finished: 2/6/06

Drilling method: Hollow Stem Auger

Hammer weight/drop: 140 lb./30 inches | Hammer type: Automatic

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION
					Ground Surface Elevation: 104 feet[2]
1				SC	CLAYEY SAND (SC) yellow-brown, loose, moist
2					SAND (SP) olive-brown, medium dense, moist
3	SPT		12		
4					yellow-brown mottled with gray, coarse sand
5	SPT		15		
6				SP	▽
7					9:00 am
8					
9					gray with trace of yellow-brown, wet
10	SPT		17		
11					
12					SAND wtih CLAY (SP-SC) olive-gray, medium dense, wet
13					
14					
15	SPT		24	SP-SC	
16					
17					flowing sands in augers
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

LABORATORY TEST DATA

Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft

Boring terminated at a depth of 19.0 feet bgs.
Boring backfilled with cement grout.
Groundwater encountered at a depth of 6.5 feet during drilling.

[1] S&H blow counts converted to SPT N-value using a correction factor of 0.7

[2] Elevation based on ALTA LAND Title Survey performed by Renner Group dated 20 May 2005

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Project No.: 4245.02 | Figure: A-10

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-10b

Boring location: See Site Plan, Figure 2
Logged by: L. Medeiros
Date started: 2/7/06 | Date finished: 2/7/06
Drilling method: Rotary Wash
Hammer weight/drop: 140 lb./30 inches | Hammer type: Automatic
Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION (Ground Surface Elevation: 104 feet[2])	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
1				SC	CLAYEY SAND (SC) yellow-brown, medium dense, moist						
2					SILTY SAND (SM) interbedded olive, gray, and yellow-brown, medium dense, moist						
3	SPT		26								
4				SM							
5					red-brown with gray, wet Non-plastic, see Figure C-23						
6	SPT		25						18.6	15.7	
7											
8					SAND (SP) gray-brown, medium dense, wet						
9											
10											
11	SPT		22								
12											
13											
14											
15					gray						
16	SPT		20						5.3		
17											
18				SP	driller noted clayey cuttings						
19											
20					olive-gray with red-brown inclusions, dense						
21	S&H		36								
22											
23											
24											
25					gray with yellow-brown seams						
26	SPT		30								
27					driller noted harder drilling clay and fine gravel in cuttings						
28					SANDY SILT (ML)						
29				ML	yellow-brown with red inclusions, very stiff, wet, varying fine sand content						
30											

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Project No.: 4245.02 | Figure: A-11a

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-10b

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		16	ML	SANDY SILT (ML) (continued) LL = 33, PI = 9; see Figure C-23						
32											
33					CLAY (CL) olive, very stiff, wet, with silt						
34											
35											
36	S&H		22	CL	olive-brown LL = 43, PI = 17; see Figure C-23					31.6	89
37											
38											
39											
40					hard, with thin lenses of silty sand						
41	S&H		31		SILTY SAND (SM) olive-brown, dense, wet, with thin seams of silt						
42											
43											
44											
45											
46	S&H		18	SM	medium dense LL = 26, PI = 2; see Figure C-23				43.3	29.2	
47											
48											
49											
50											
51	SPT		23		olive, high fines content						
52											
53											
54											
55											
56											
57											
58											
59											
60											

Boring terminated at a depth of 51.5 feet bgs.
Boring backfilled with cement grout.
Groundwater not measured due to drilling mud.

[1] S&H blow counts converted to SPT N-value using a correction factor of 0.7
[2] Elevation based on ALTA LAND Title Survey performed by Renner Group dated 20 May 2005

Treadwell&Rollo

Project No.: 4245.02

Figure: A-11b

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-11

Boring location: See Site Plan, Figure 2 | Logged by: L. Medeiros

Date started: 2/6/06 | Date finished: 2/6/06

Drilling method: Hollow Stem Auger

Hammer weight/drop: 140 lb./30 inches | Hammer type: Automatic

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT), Dames & Moore (D&M)

Ground Surface Elevation: 102 feet[2]

DEPTH (feet)	Sampler Type	Sample	SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
				GP	GRAVEL, railroad ballast						
1				CL	SANDY CLAY (CL) dark brown, medium stiff, moist						
2											
3	S&H		8		brown, medium stiff to stiff						
4					CLAY (CL) brown, medium stiff, with silt, moist						
5	S&H		7							32.4	85
6				CL							
7											
8											
9											
10	S&H		3		CLAY (CH) gray mottled with yellow-brown, soft, wet [Bay Mud]						
11											
12											
13				CH							
14					gray, medium stiff	TxUU	1,400	690		35.9	86
15	D&M				LL = 61, PI = 44, see Figure C-23 Consolidation test, see Figure C-12					38.4	82
16											
17					CLAY with SAND (CL) blue-gray, soft to medium stiff, wet						
18											
19											
20	S&H		4		sampled disturbed						
21	S&H		6		trace organics	TxUU	2,150	1,000		28.2	97
22											
23				CL							
24											
25	S&H		6		medium stiff, increased sand content						
26											
27											
28											
29											
30	S&H		23	SP	SAND (SP)						

FILL

LABORATORY TEST DATA

Treadwell&Rollo

Project No.: 4245.02 | Figure: A-12a

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-11

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		23	SP	SAND (SP) (continued) gray, medium dense, wet, some silt Non-plastic, see Figure C-24				4.1		
32											
33											
34											
35											
36											
37											
38											
39											
40											
41											
42											
43											
44											
45											
46											
47											
48											
49											
50											
51											
52											
53											
54											
55											
56											
57											
58											
59											
60											

Boring terminated at a depth of 34.0 feet bgs.
Boring backfilled with cement grout.
Groundwater not measured at time of drilling.

[1] S&H blow counts converted to SPT N-value using a correction factor of 0.7
[2] Elevation based on ALTA LAND Title Survey performed by Renner Group dated 20 May 2005

Treadwell&Rollo

Project No. 4245.02 | Figure: A-12b

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-12

Boring location: See Site Plan, Figure 2 | Logged by: L. Medeiros

Date started: 2/6/06 | Date finished: 2/6/06

Drilling method: Hollow Stem Auger

Hammer weight/drop: 140 lb./30 inches | Hammer type: Automatic

Sampler: Sprague & Henwood (S&H), Dames & Moore (D&M)

Ground Surface Elevation: 102 feet [2]

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value [1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
1					CLAY with SAND (CL) dark brown, stiff, moist						
2											
3	S&H		11	CL							
4					yellow-brown						
5	S&H		10			TxUU	500	1,450		23.0	102
6											
7											
8					SANDY CLAY (CL) yellow-brow, very stiff, wet						
9					▽ Consolidation test, see Figure C-13 3:15 pm						
10	S&H		16	CL						23.6	102
11											
12					CLAY (CL) yellow-brown, very stiff, wet, with silt						
13											
14											
15	S&H		25								
16											
17											
18											
19											
20	S&H		16	CL							
21											
22											
23											
24					stiff						
25	S&H		9							28.0	88
26											
27											
28					SILTY SAND (SM) light-olive-brown, loose, wet						
29				SM							
30	S&H		7		LL = 27, PI = 2; see Figure C-24					28.4	99

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

Treadwell&Rollo

Project No.: 4245.02 | Figure: A-13a

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-12

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		7	SM	SILTY SAND (SM) (continued)						
32											
33				SM	SILTY SAND (SM) light-gray, mottled with red-brown, medium dense, wet, high fines content Non-plastic, see Figure C-24				46.4		
34											
35	S&H		29								
36											
37											
38											
39											
40											
41											
42											
43											
44											
45											
46											
47											
48											
49											
50											
51											
52											
53											
54											
55											
56											
57											
58											
59											
60											

Boring terminated at a depth of 35.5 feet bgs.
Boring backfilled with cement grout.
Groundwater encountered at a depth of 9 feet during drilling.

[1] S&H blow counts converted to SPT N-value using a correction factor of 0.7
[2] Elevation based on ALTA LAND Title Survey performed by Renner Group dated 20 May 2005

Treadwell&Rollo

Project No.: 4245.02 | Figure: A-13b

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-13

Boring location: See Site Plan, Figure 2 | Logged by: L. Medeiros

Date started: 2/7/06 | Date finished: 2/7/06

Drilling method: Rotary Wash

Hammer weight/drop: 140 lb./30 inches | Hammer type: Automatic

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION (Ground Surface Elevation: 103 feet[2])	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
1				SC	CLAYEY SAND (SC) yellow-brown, medium dense, moist						
2				SM	SILTY SAND (SM) brown, medium dense, moist						
3	SPT		21								
4				ML	SILT with SAND (ML) olive-gray with yellow-brown mottling, very stiff, wet						
5											
6	SPT		20								
7				SM	SILTY SAND (SM) red-brown with gray mottling, medium dense, wet						
8					Non-plastic, see Figure C-24						
9				SP	SAND with SILT (SP) olive-brown, very dense, wet						
10					Non-plastic, see Figure C-24						
11	SPT		27						6.3	20.8	
12											
13				ML	SANDY SILT (ML) light brown with yellow-brown and dark brown, medium stiff and dense, wet						
14											
15											
16	S&H		22		LL = 38, PI = 13; see Figure C-17	TxUU	1,500	2,110	82.4	31.8	92
17											
18				SP	SAND (SP) gray with seams of red-brown, dense, wet, gravelly seams						
19											
20											
21	SPT		35								
22											
23					driller noted fine gravel in cuttings						
24											
25				CL	CLAY (CL) olive-gray with brown seams, very stiff, wet						
26	SPT		22								
27											
28				ML	SILT (ML) olive-gray, with red-brown inclusions, very stiff, wet						
29											
30											

Treadwell&Rollo

Project No.: 4245.02 | Figure: A-14a

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-13

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		17	ML	SILT (ML) (continued) LL = 32, PI = 5, see Figure C-24						
32											
33											
34				ML	SANDY SILT (ML) olive-brown, hard, wet						
35											
36	S&H		35								
37				SM	SILT SAND (SM) olive-brown, dense, wet						
38											
39											
40					SANDY SILT (ML) olive with brown seams, very stiff, wet						
41	SPT		21								
42											
43											
44											
45				ML	hard, varying sand content						
46	SPT		38								
47											
48											
49											
50											
51	SPT		31								
52											
53											
54											
55											
56											
57											
58											
59											
60											

Boring terminated at a depth of 51.5 feet bgs.
Boring backfilled with cement grout.
Groundwater not measured due to drilling mud.

[1] S&H blow counts converted to SPT N-value using a correction factor of 0.7
[2] Elevation based on ALTA LAND Title Survey performed by Renner Group dated 20 May 2005

Treadwell&Rollo

Project No.: 4245.02
Figure: A-14b

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

UNIFIED SOIL CLASSIFICATION SYSTEM

Major Divisions		Symbols	Typical Names
Coarse-Grained Soils (more than half of soil > no. 200 sieve size)	Gravels (More than half of coarse fraction > no. 4 sieve size)	GW	Well-graded gravels or gravel-sand mixtures, little or no fines
		GP	Poorly-graded gravels or gravel-sand mixtures, little or no fines
		GM	Silty gravels, gravel-sand-silt mixtures
		GC	Clayey gravels, gravel-sand-clay mixtures
	Sands (More than half of coarse fraction < no. 4 sieve size)	SW	Well-graded sands or gravelly sands, little or no fines
		SP	Poorly-graded sands or gravelly sands, little or no fines
		SM	Silty sands, sand-silt mixtures
		SC	Clayey sands, sand-clay mixtures
Fine -Grained Soils (more than half of soil < no. 200 sieve size)	Silts and Clays LL = < 50	ML	Inorganic silts and clayey silts of low plasticity, sandy silts, gravelly silts
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, lean clays
		OL	Organic silts and organic silt-clays of low plasticity
	Silts and Clays LL = > 50	MH	Inorganic silts of high plasticity
		CH	Inorganic clays of high plasticity, fat clays
		OH	Organic silts and clays of high plasticity
Highly Organic Soils		PT	Peat and other highly organic soils

GRAIN SIZE CHART

Classification	Range of Grain Sizes	
	U.S. Standard Sieve Size	Grain Size in Millimeters
Boulders	Above 12"	Above 305
Cobbles	12" to 3"	305 to 76.2
Gravel	3" to No. 4	76.2 to 4.76
coarse	3" to 3/4"	76.2 to 19.1
fine	3/4" to No. 4	19.1 to 4.76
Sand	No. 4 to No. 200	4.76 to 0.074
coarse	No. 4 to No. 10	4.76 to 2.00
medium	No. 10 to No. 40	2.00 to 0.420
fine	No. 40 to No. 200	0.420 to 0.074
Silt and Clay	Below No. 200	Below 0.074

Unstabilized groundwater level

Stabilized groundwater level

SAMPLE DESIGNATIONS/SYMBOLS

Sample taken with split-barrel sampler other than Standard Penetration Test sampler. Darkened area indicates soil recovered

Classification sample taken with Standard Penetration Test sampler

Undisturbed sample taken with thin-walled tube

Disturbed sample

Sampling attempted with no recovery

Core sample

Analytical laboratory sample

Sample taken with Direct Push sampler

SAMPLER TYPE

C Core barrel

CA California split-barrel sampler with 2.5-inch outside diameter and a 1.93-inch inside diameter

D&M Dames & Moore piston sampler using 2.5-inch outside diameter, thin-walled tube

O Osterberg piston sampler using 3.0-inch outside diameter, thin-walled Shelby tube

PT Pitcher tube sampler using 3.0-inch outside diameter, thin-walled Shelby tube

S&H Sprague & Henwood split-barrel sampler with a 3.0-inch outside diameter and a 2.43-inch inside diameter

SPT Standard Penetration Test (SPT) split-barrel sampler with a 2.0-inch outside diameter and a 1.5-inch inside diameter

ST Shelby Tube (3.0-inch outside diameter, thin-walled tube) advanced with hydraulic pressure

HARBOR PARK
Pittsburg, California

CLASSIFICATION CHART

Treadwell&Rollo

Date 02/03/06 | Project No. 4245.02 | Figure A-15

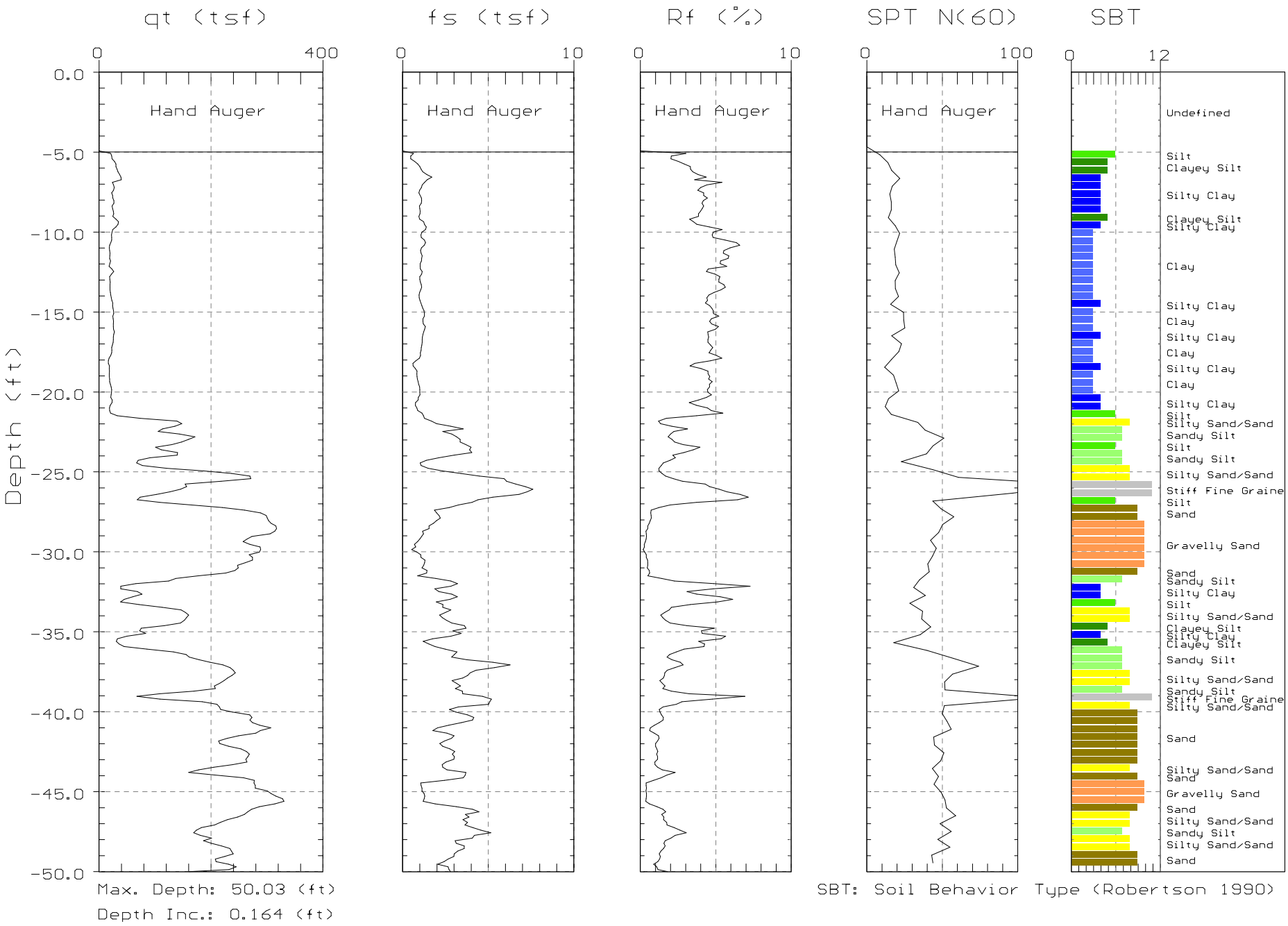
APPENDIX B
Cone Penetration Test Results
(on CD ROM)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-01

Engineer: C.HALL
Date: 08:19:05 15:19



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

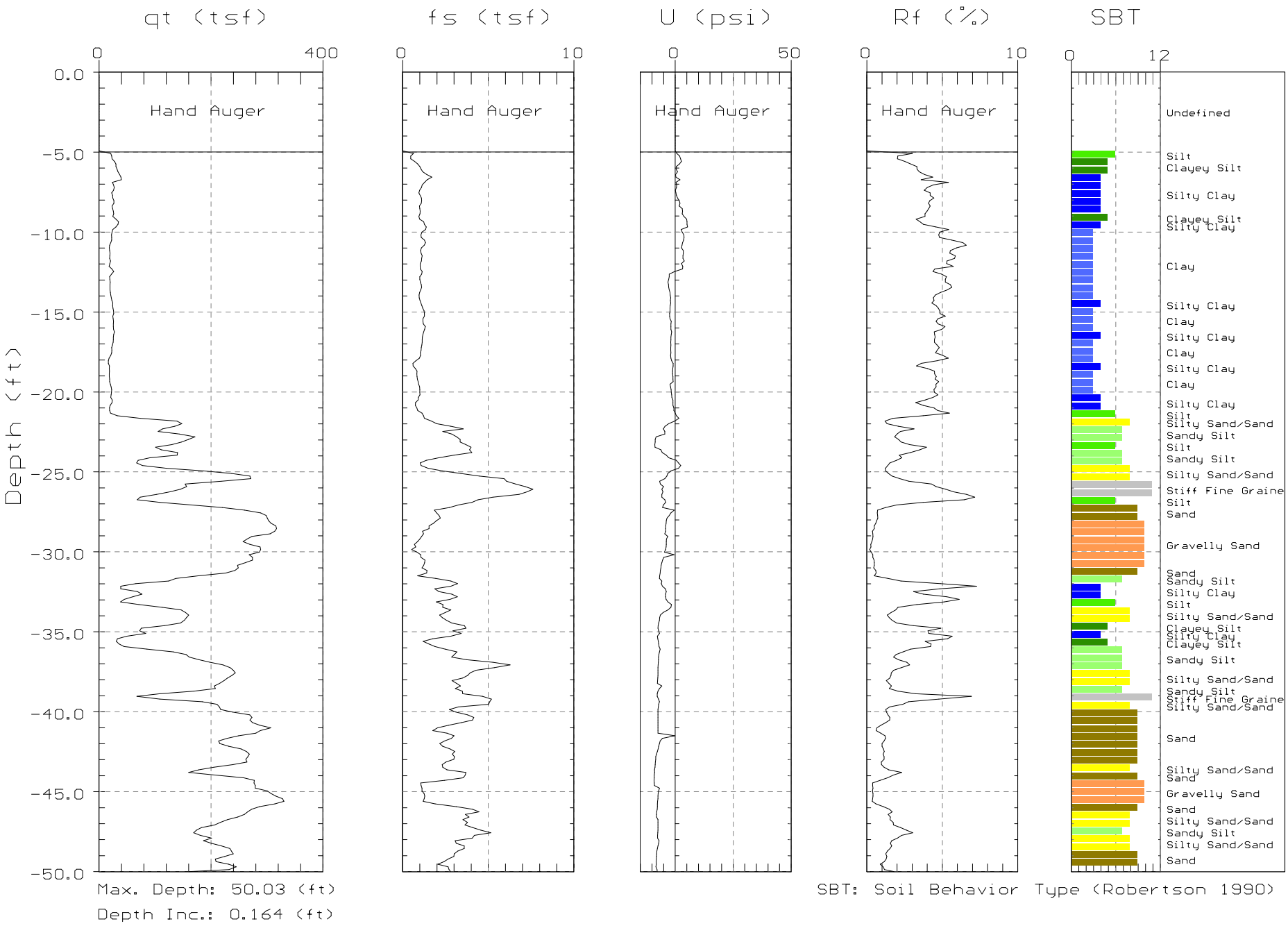
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-01

Engineer: C.HALL
Date: 08:19:05 15:19



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

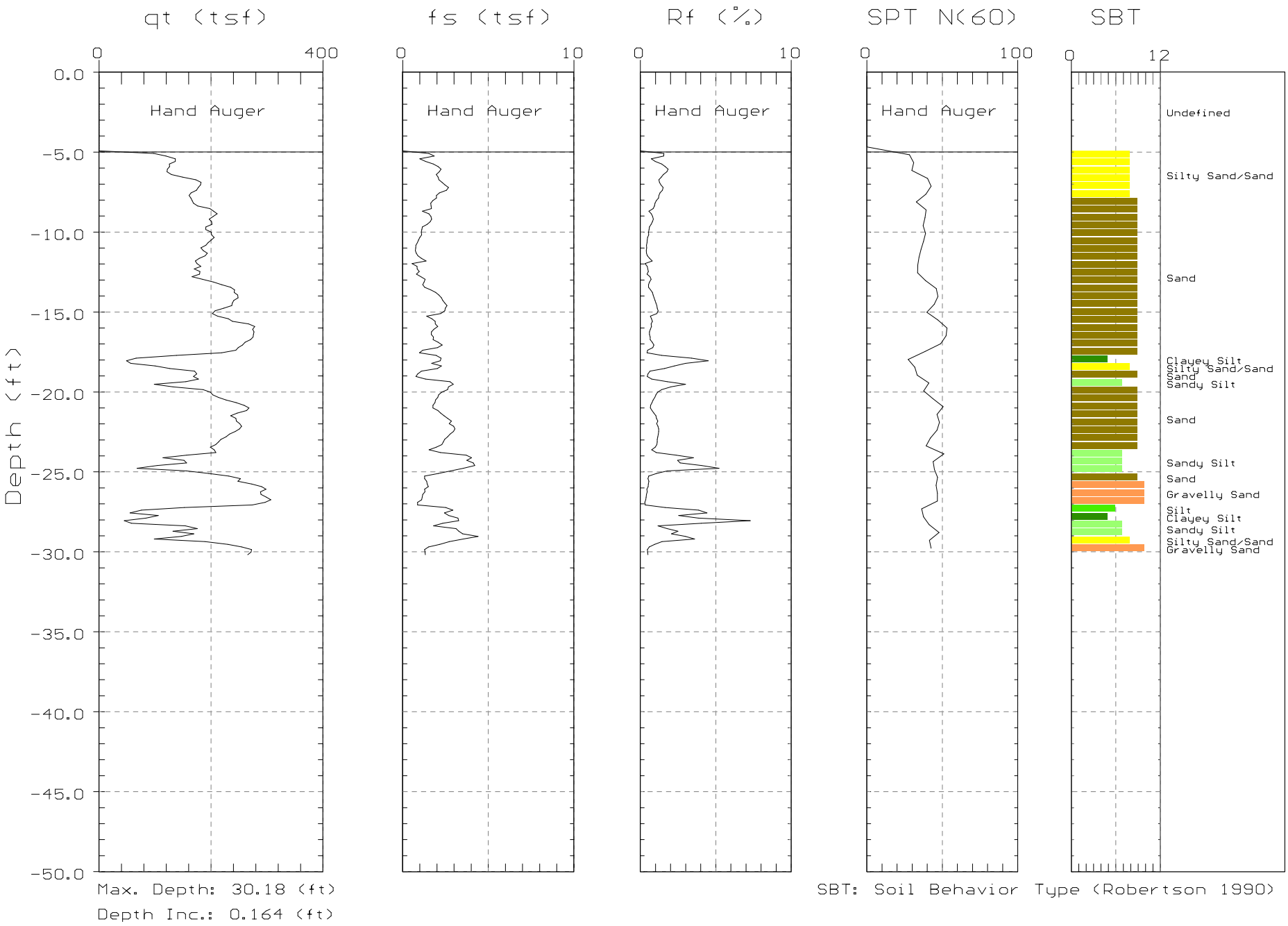
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-02

Engineer: C.HALL
Date: 08:19:05 19:42



Max. Depth: 30.18 (ft)
Depth Inc.: 0.164 (ft)

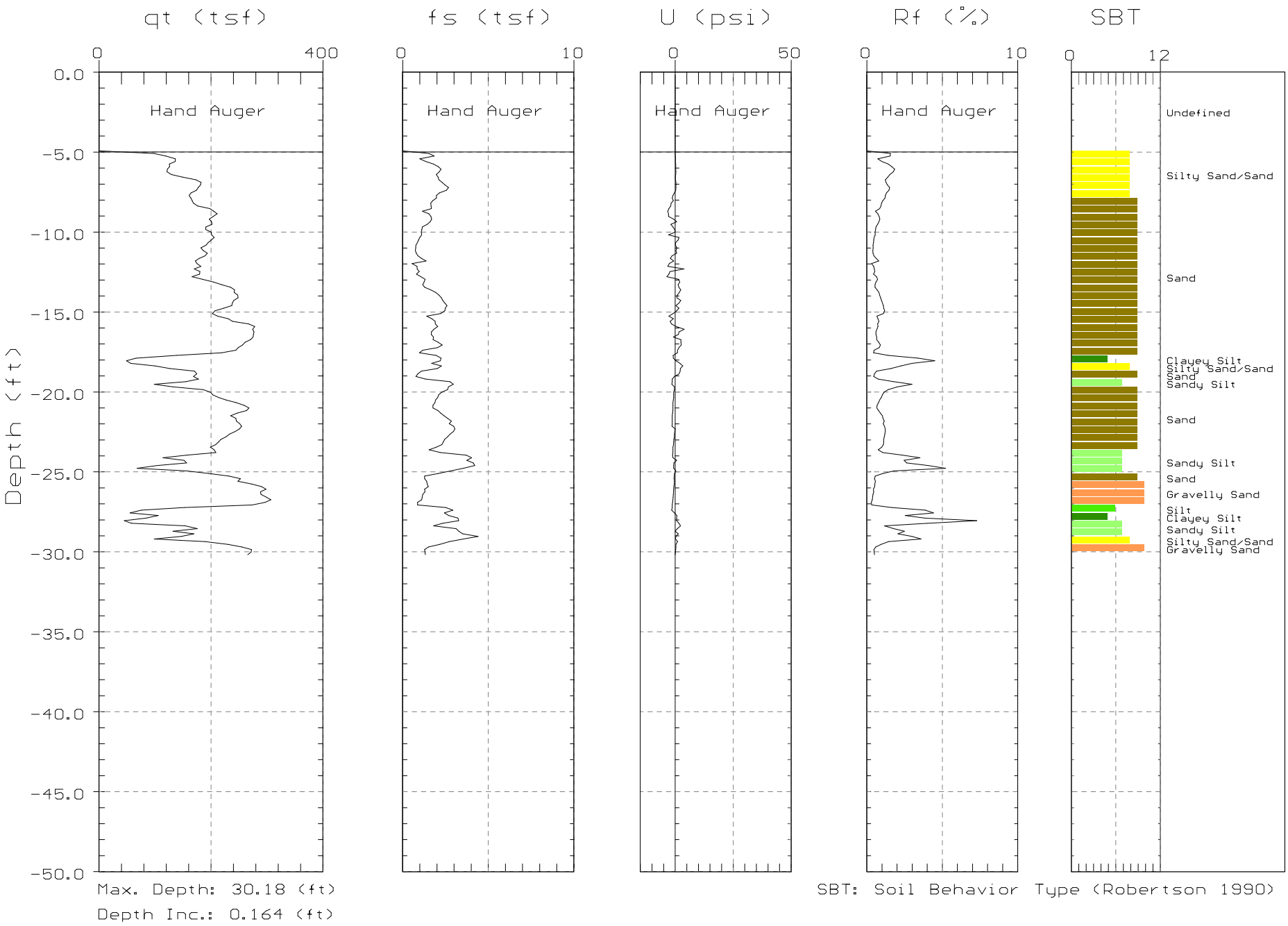
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-02

Engineer: C.HALL
Date: 08:19:05 19:42



Max. Depth: 30.18 (ft)
Depth Inc.: 0.164 (ft)

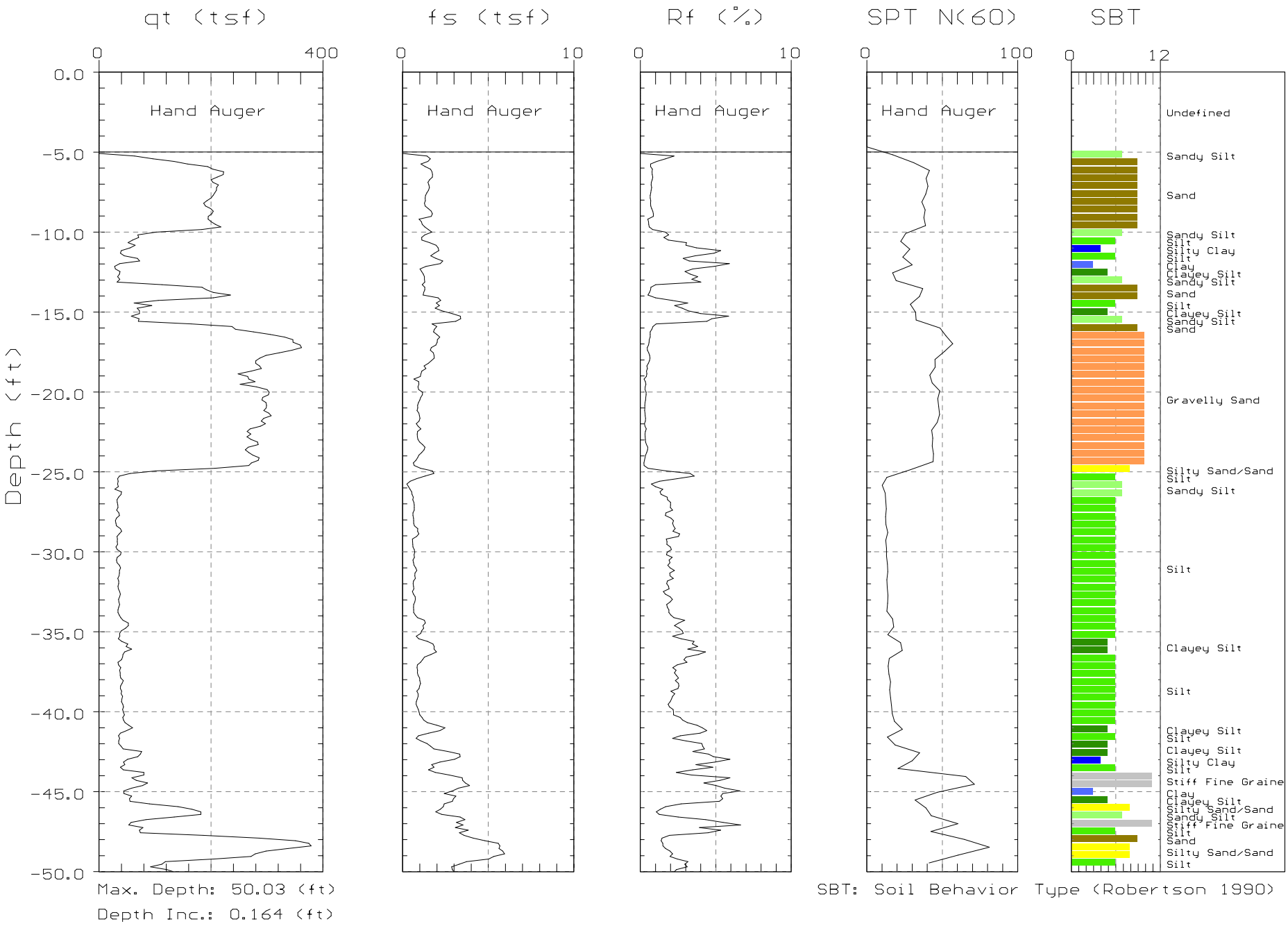
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-03

Engineer: C.HALL
Date: 08:19:05 18:54



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

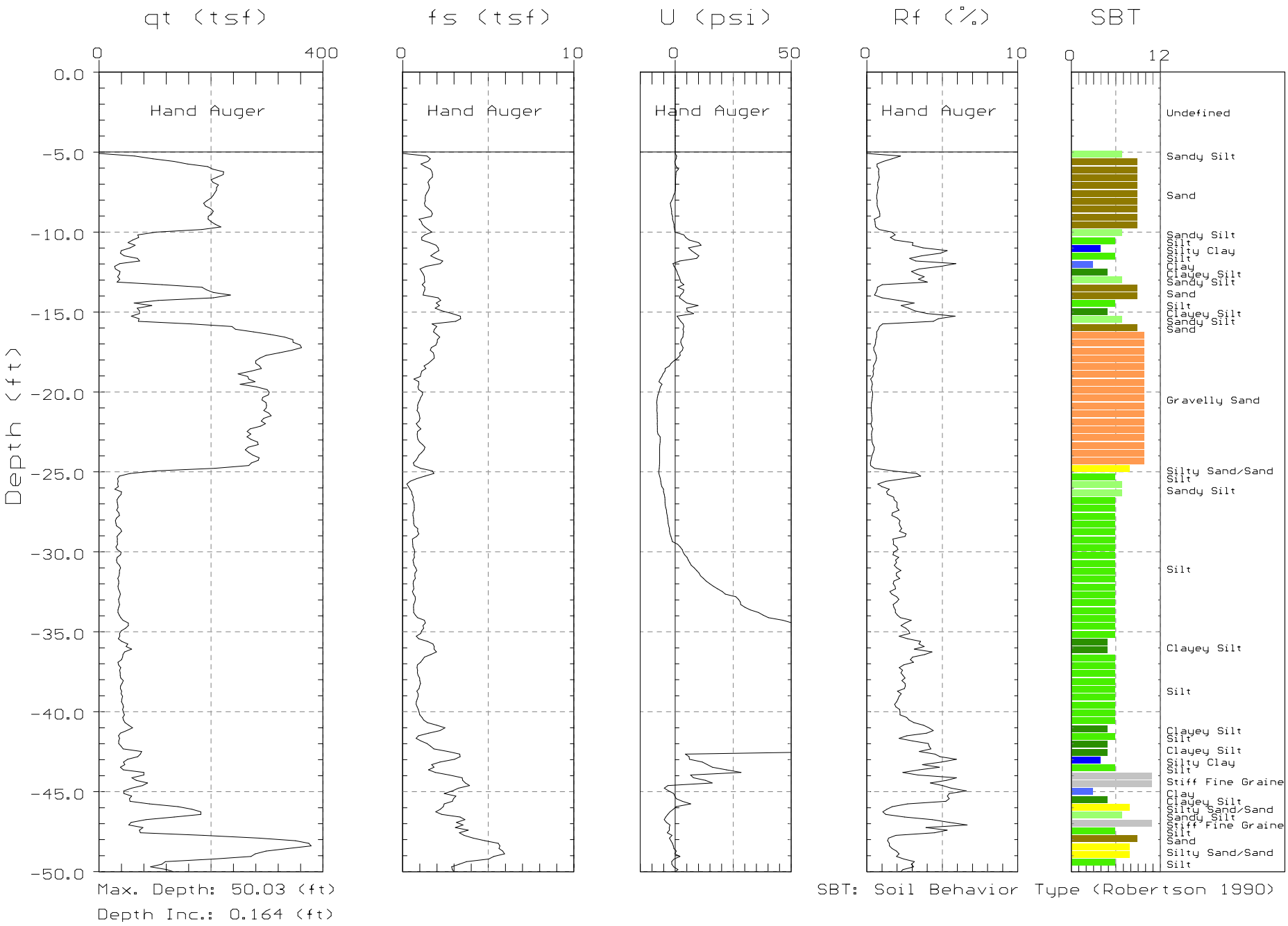
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-03

Engineer: C.HALL
Date: 08:19:05 18:54



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

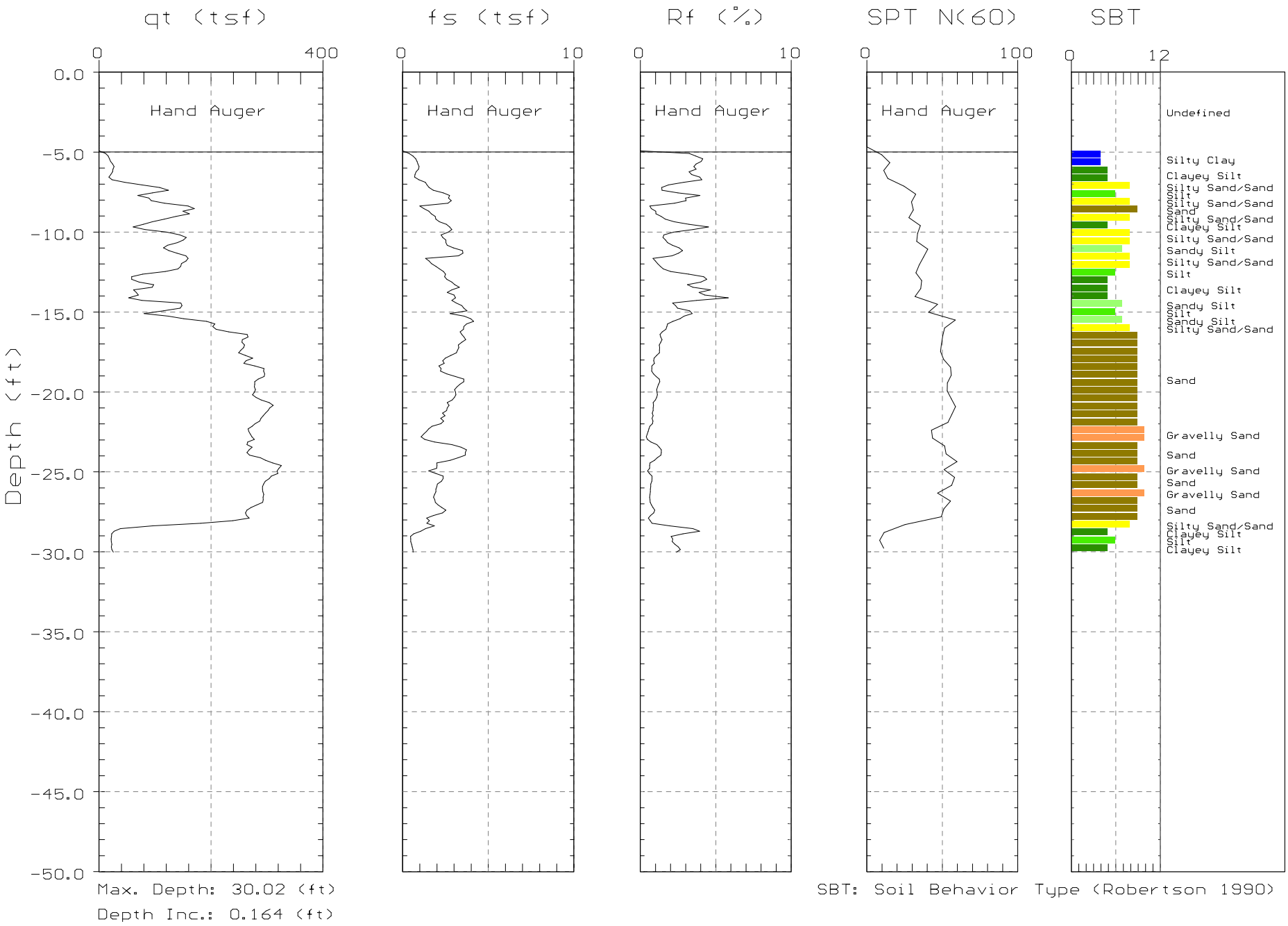
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-04

Engineer: C.HALL
Date: 08:19:05 17:54

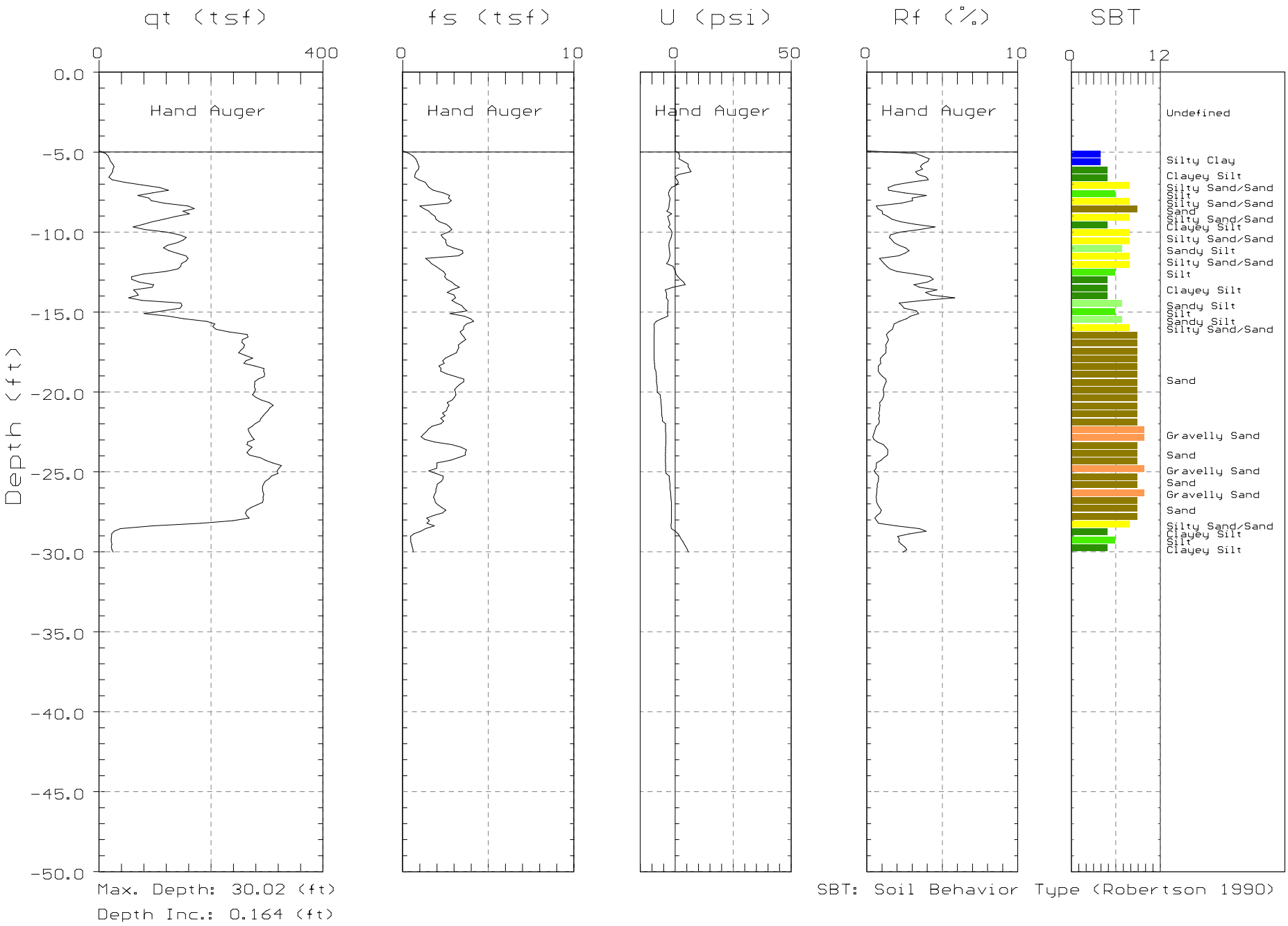


GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-04

Engineer: C.HALL
Date: 08:19:05 17:54



Max. Depth: 30.02 (ft)
Depth Inc.: 0.164 (ft)

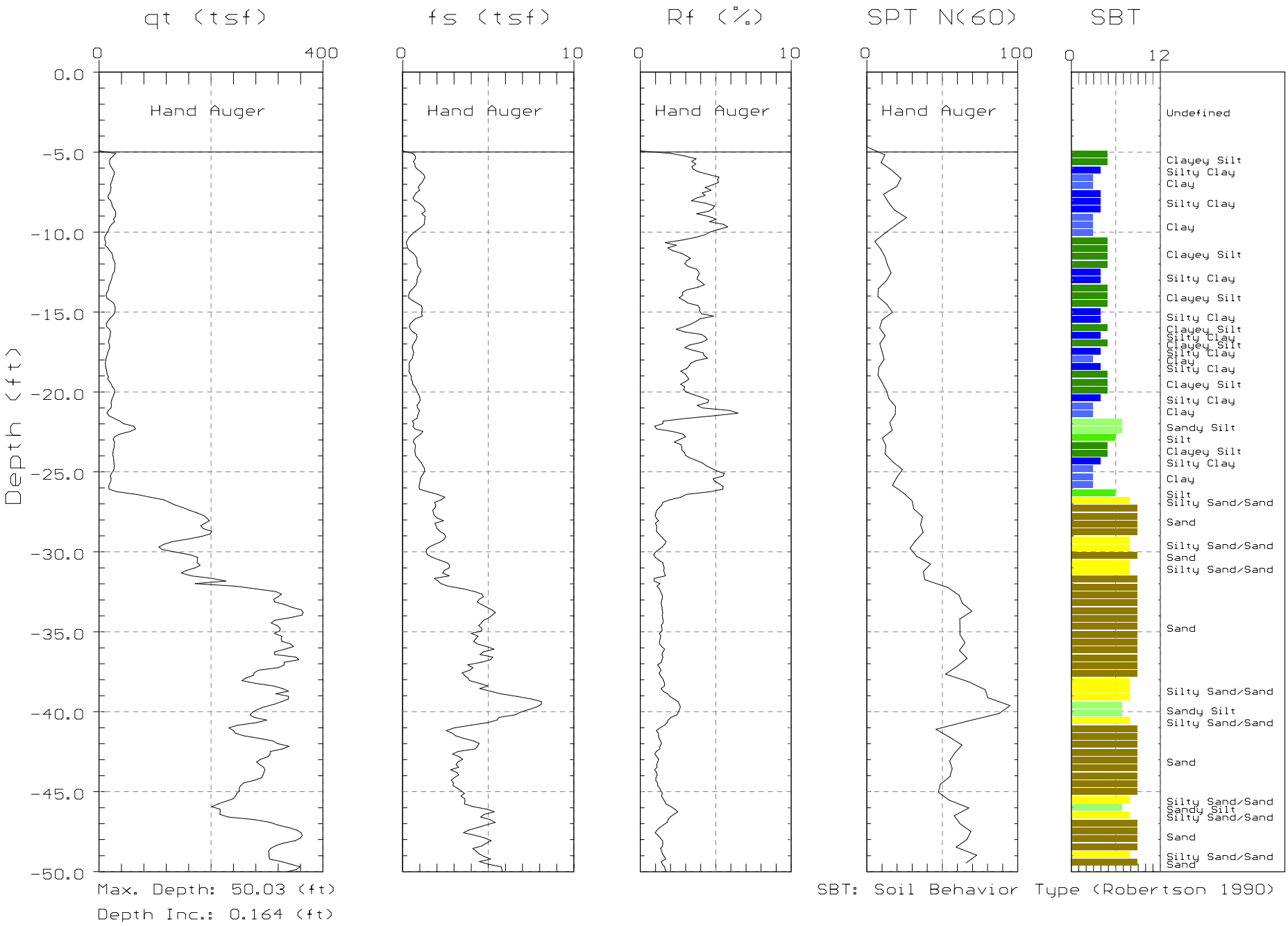
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-05

Engineer: C.HALL
Date: 08:22:05 14:18

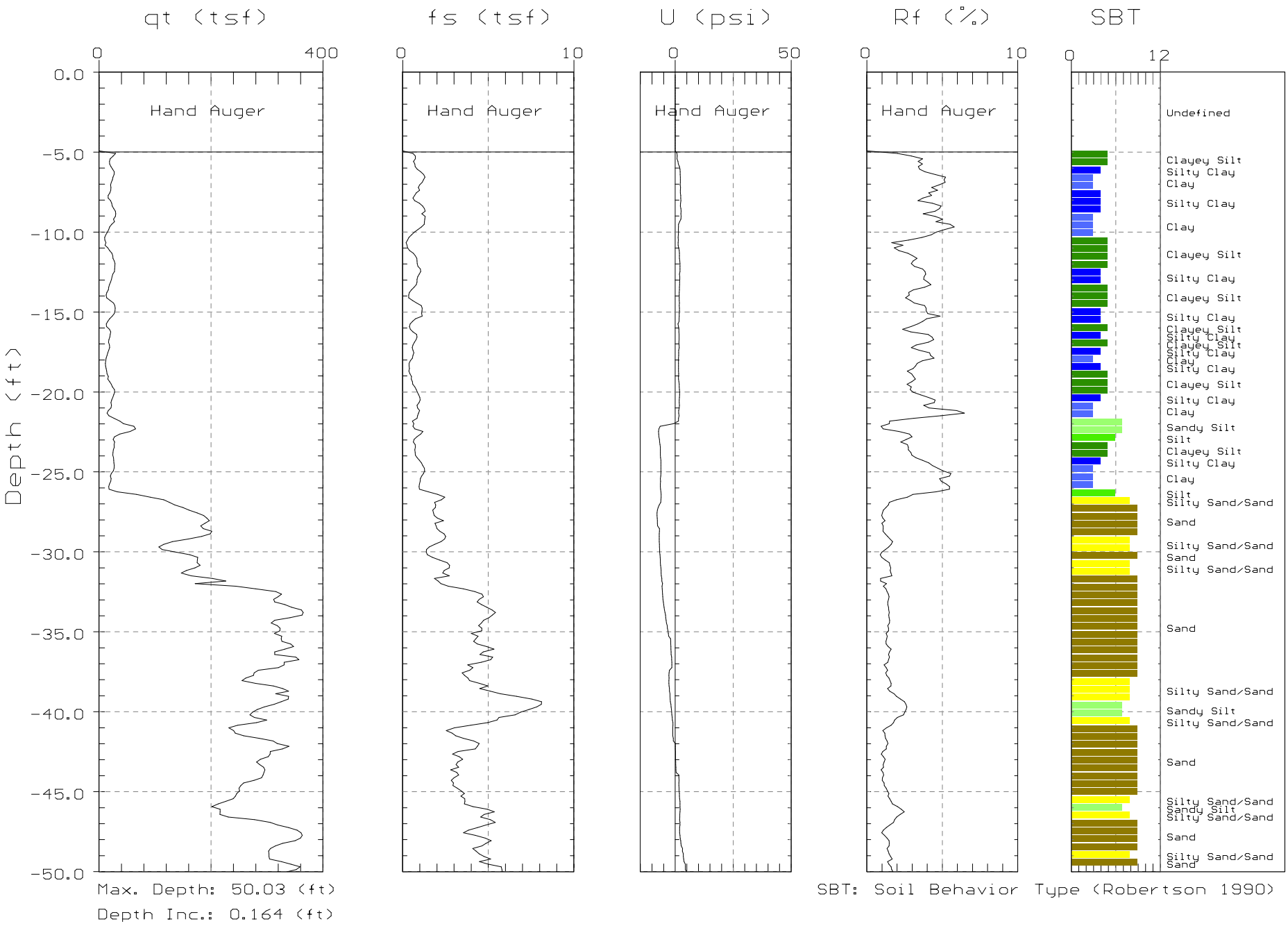


GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-05

Engineer: C.HALL
Date: 08:22:05 14:18



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

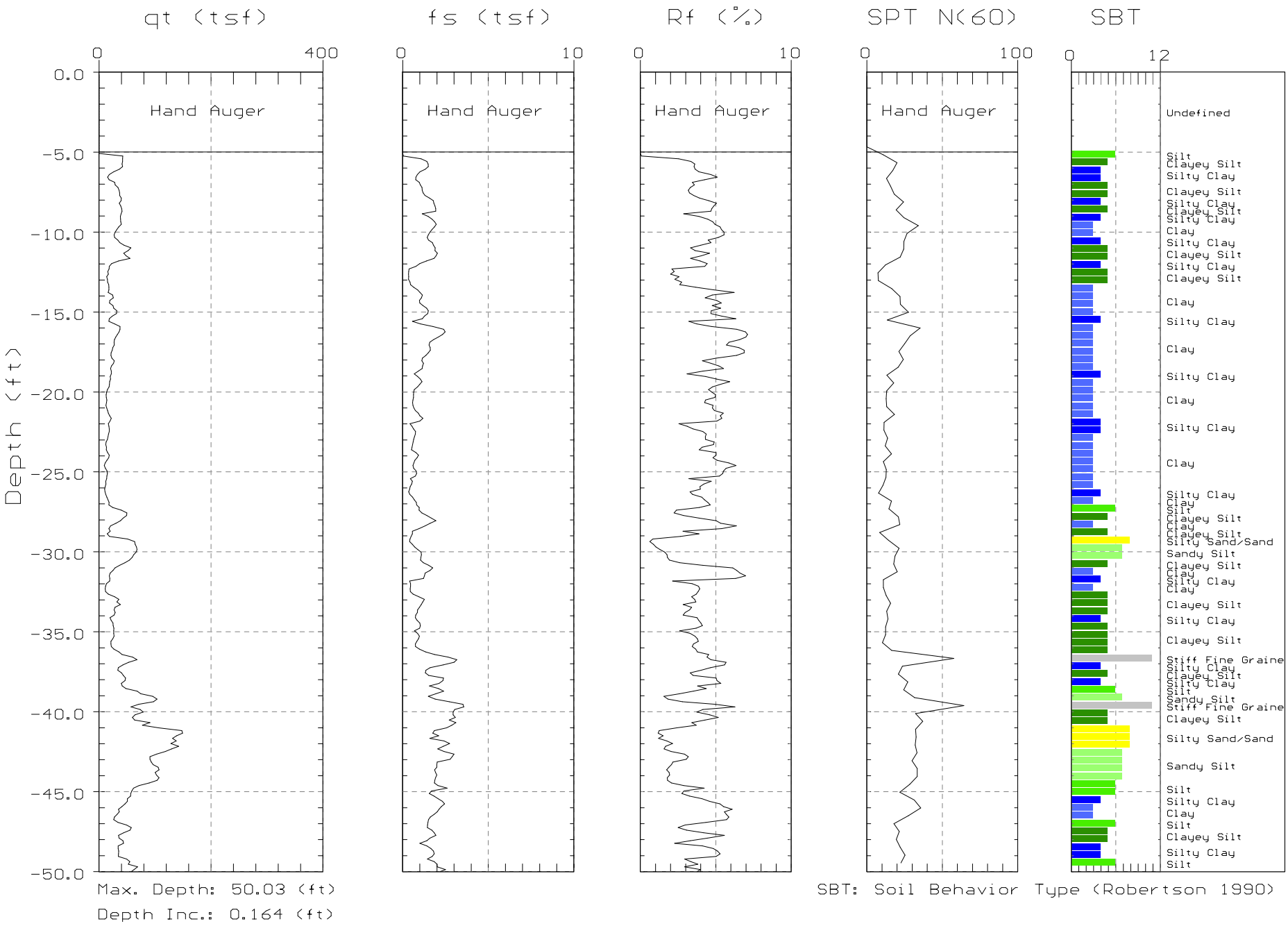
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-06

Engineer: C.HALL
Date: 08:22:05 10:59

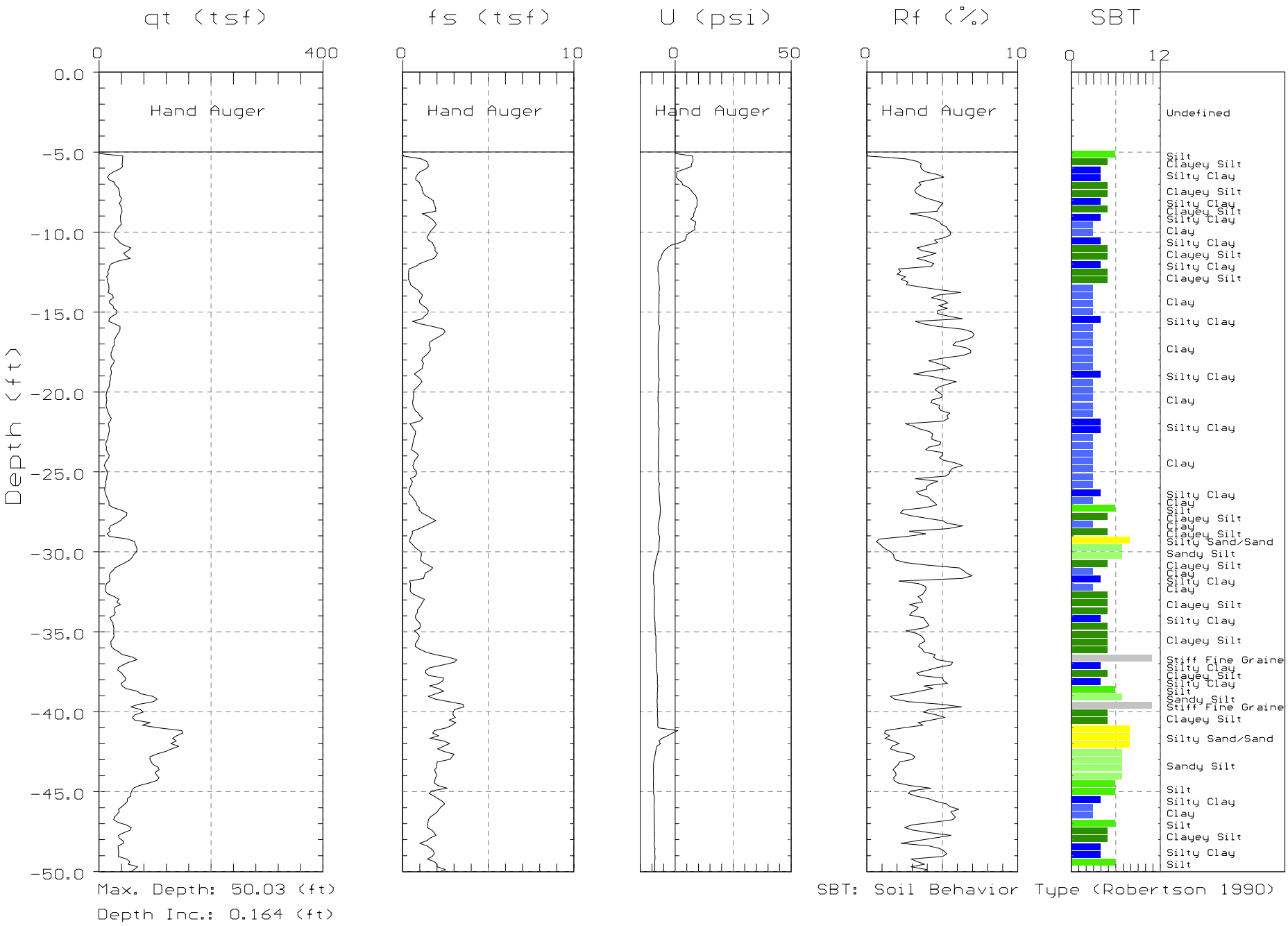


GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-06

Engineer: C.HALL
Date: 08:22:05 10:59



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

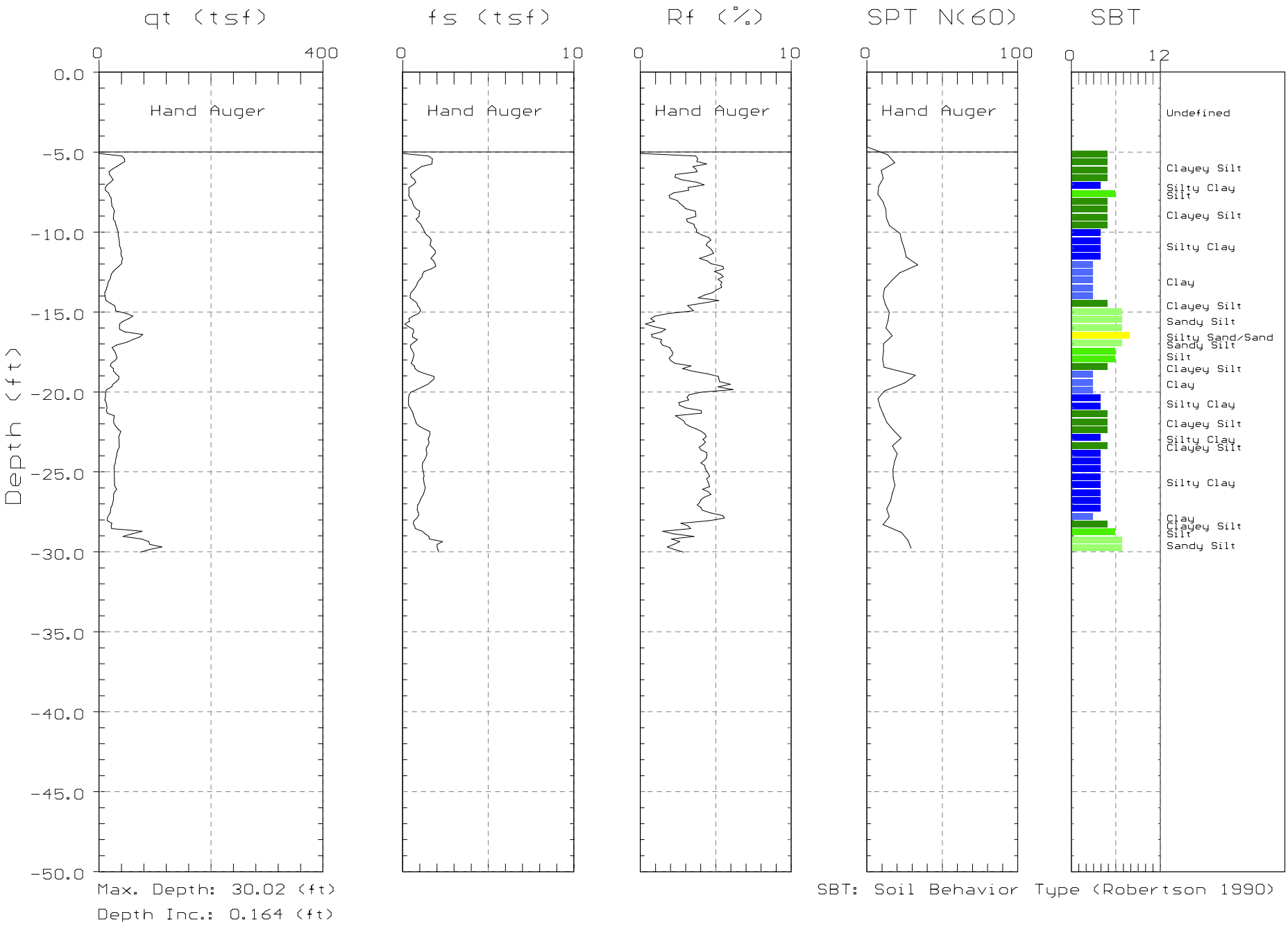
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-07

Engineer: C.HALL
Date: 08:22:05 13:15



Max. Depth: 30.02 (ft)
Depth Inc.: 0.164 (ft)

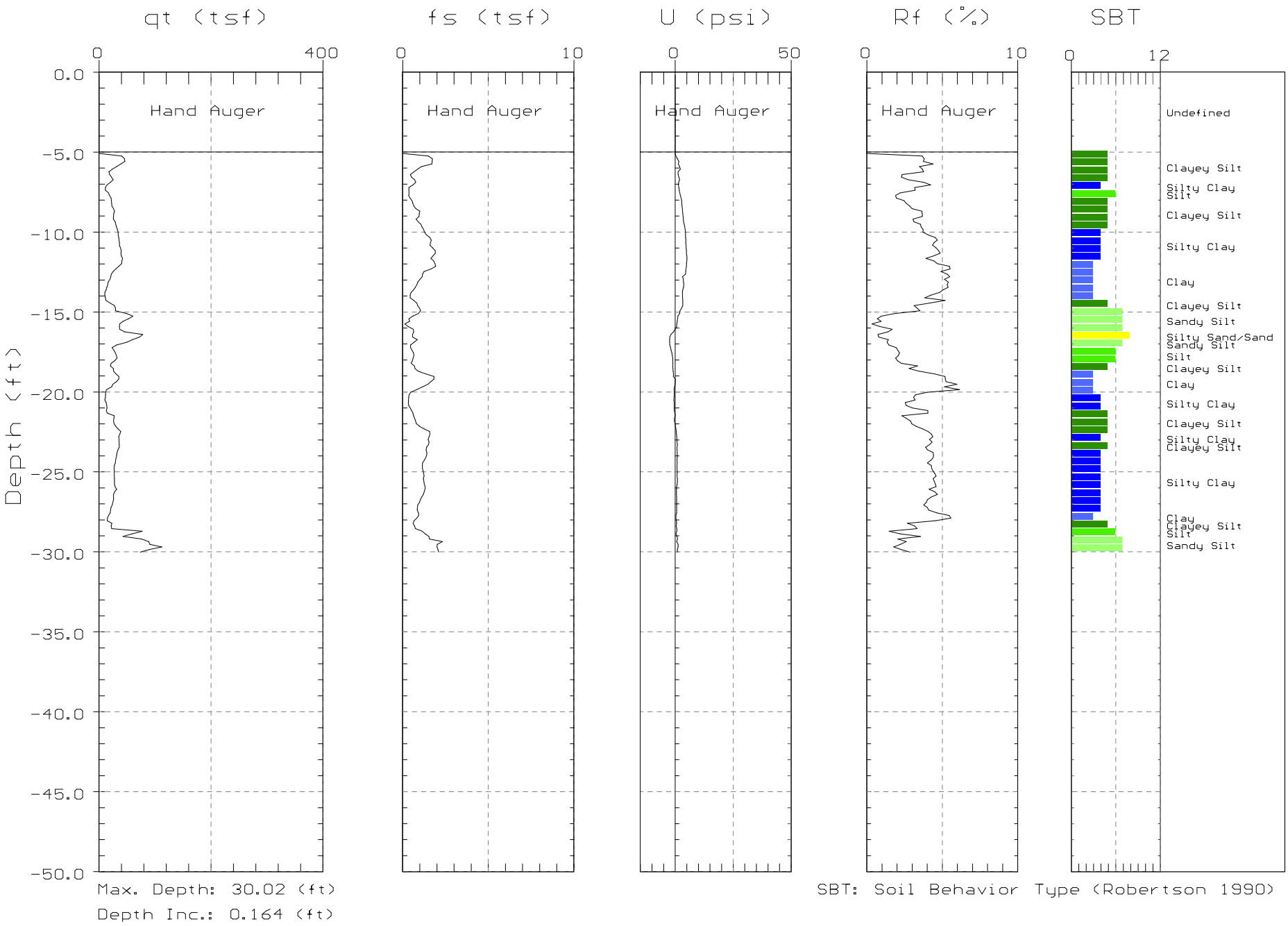
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-07

Engineer: C.HALL
Date: 08:22:05 13:15



Max. Depth: 30.02 (ft)
Depth Inc.: 0.164 (ft)

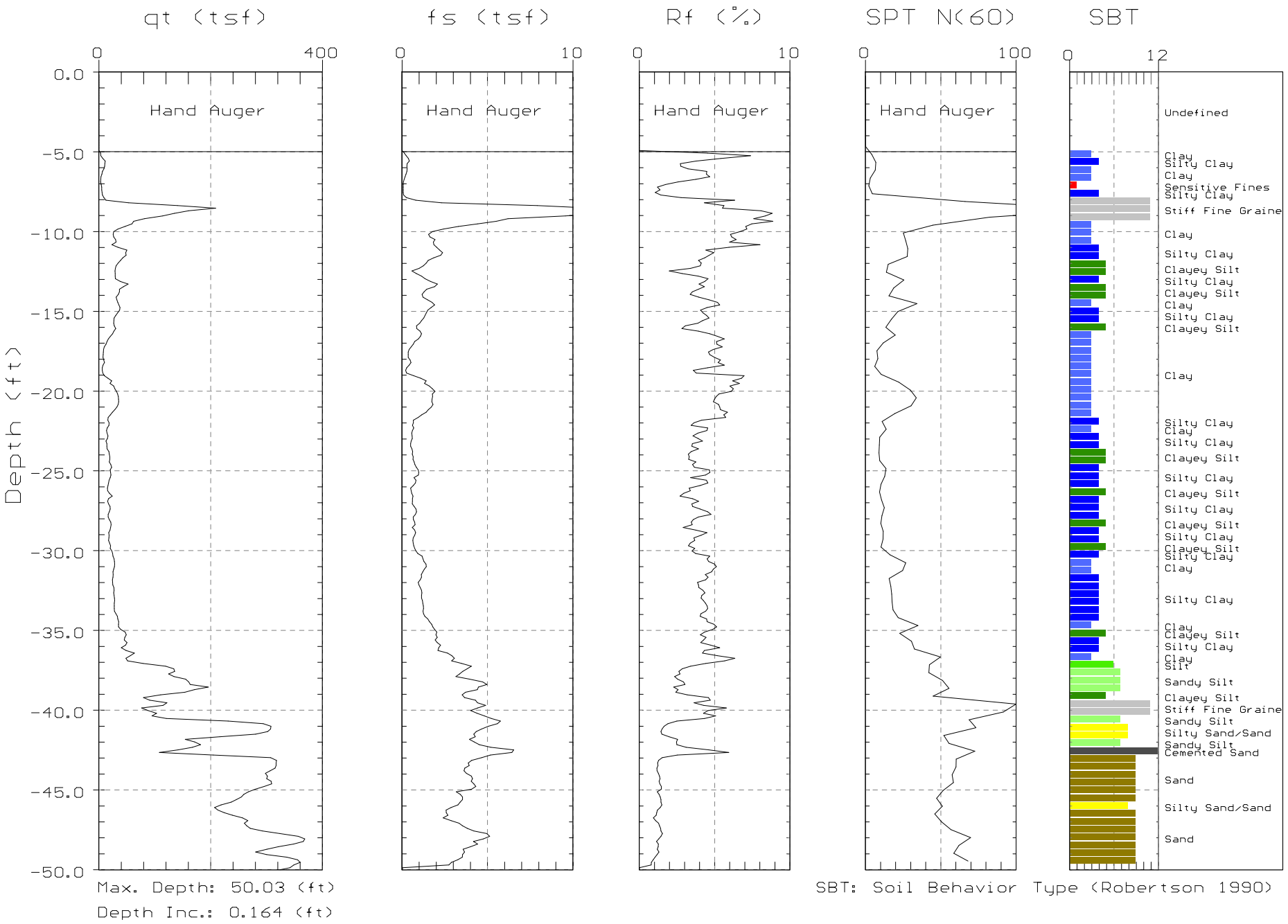
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-08

Engineer: C.HALL
Date: 08:22:05 15:10



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

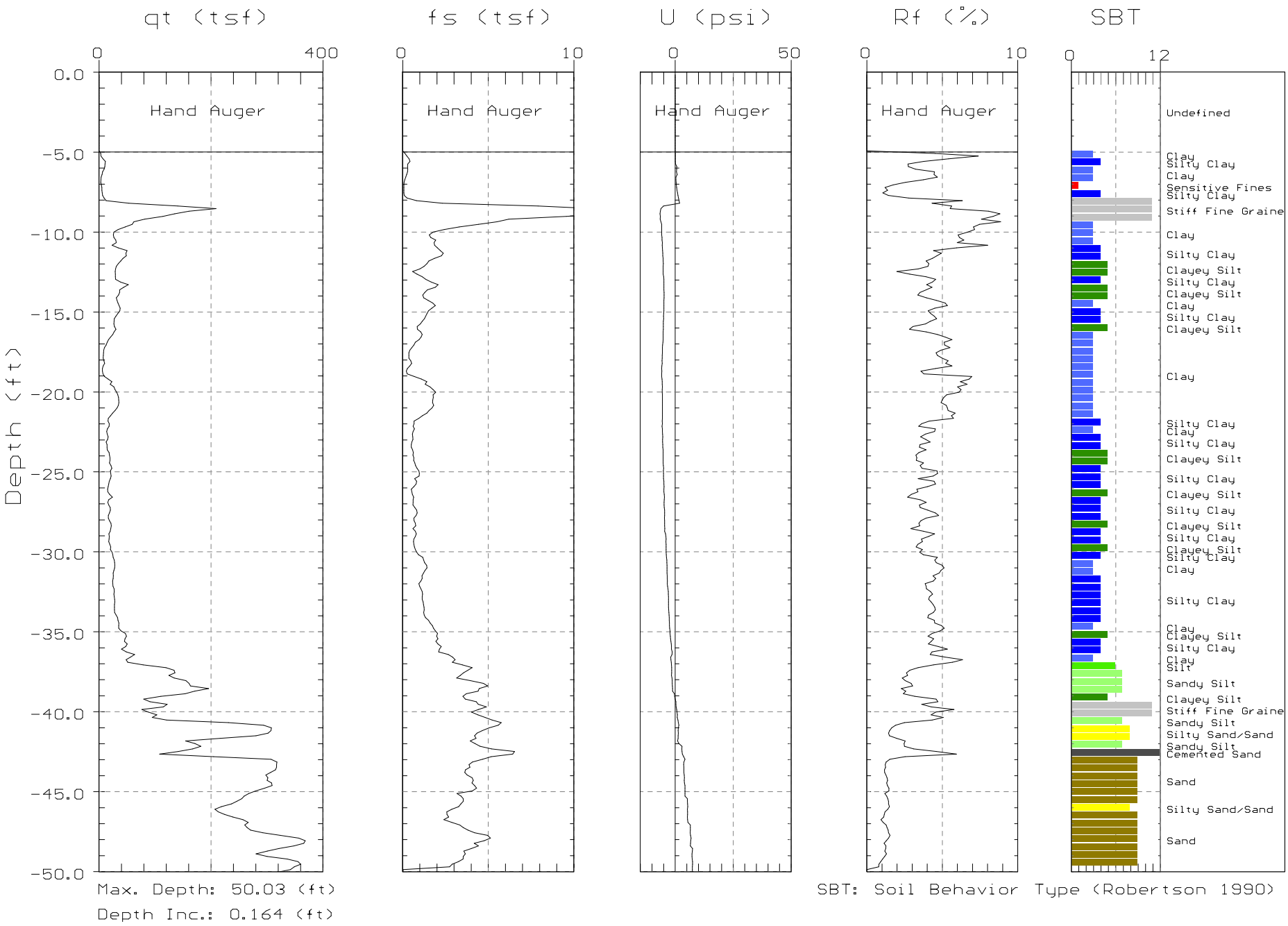
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-08

Engineer: C.HALL
Date: 08:22:05 15:10



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

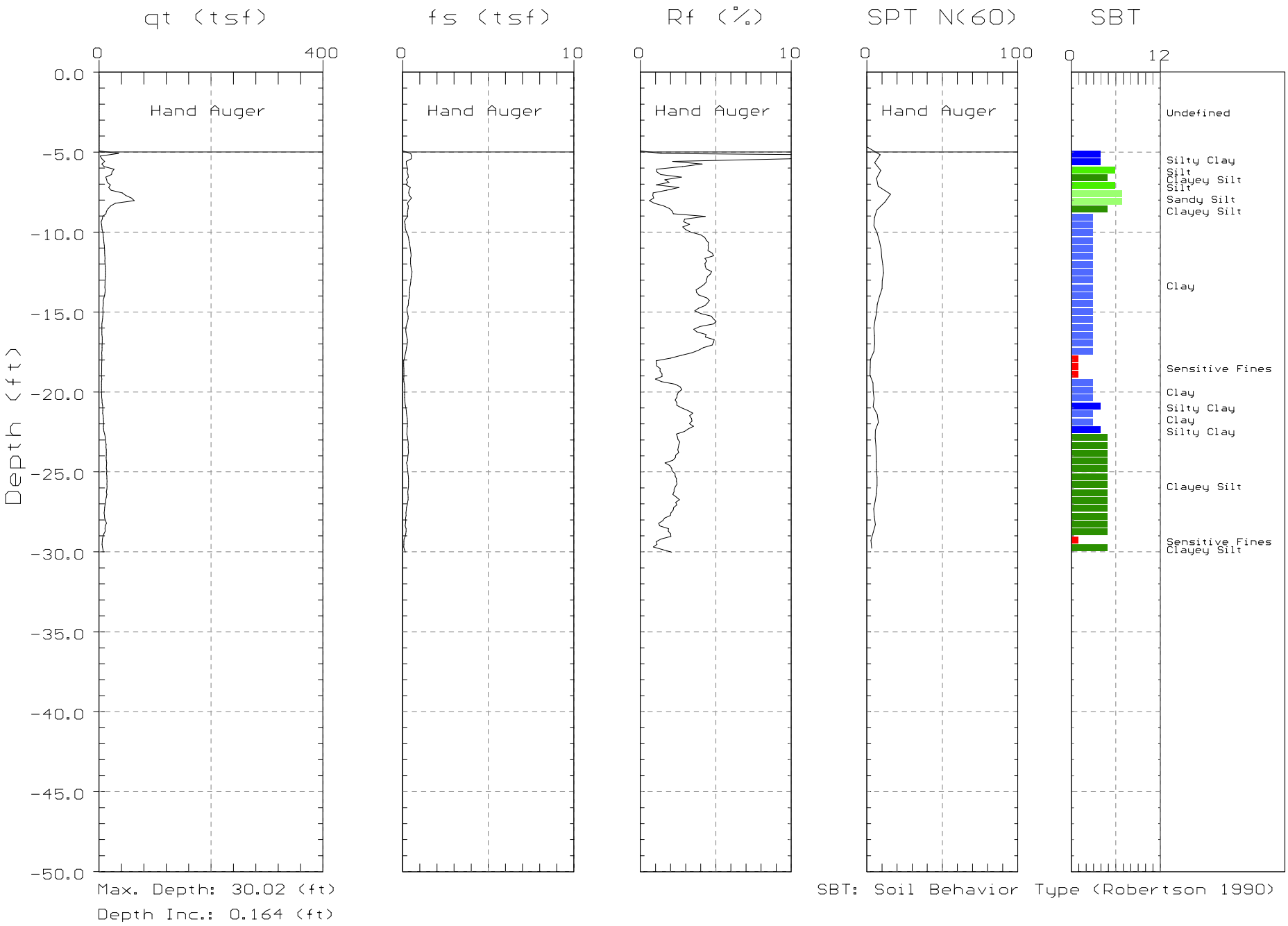
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-09

Engineer: C.HALL
Date: 08:19:05 14:16



Max. Depth: 30.02 (ft)
Depth Inc.: 0.164 (ft)

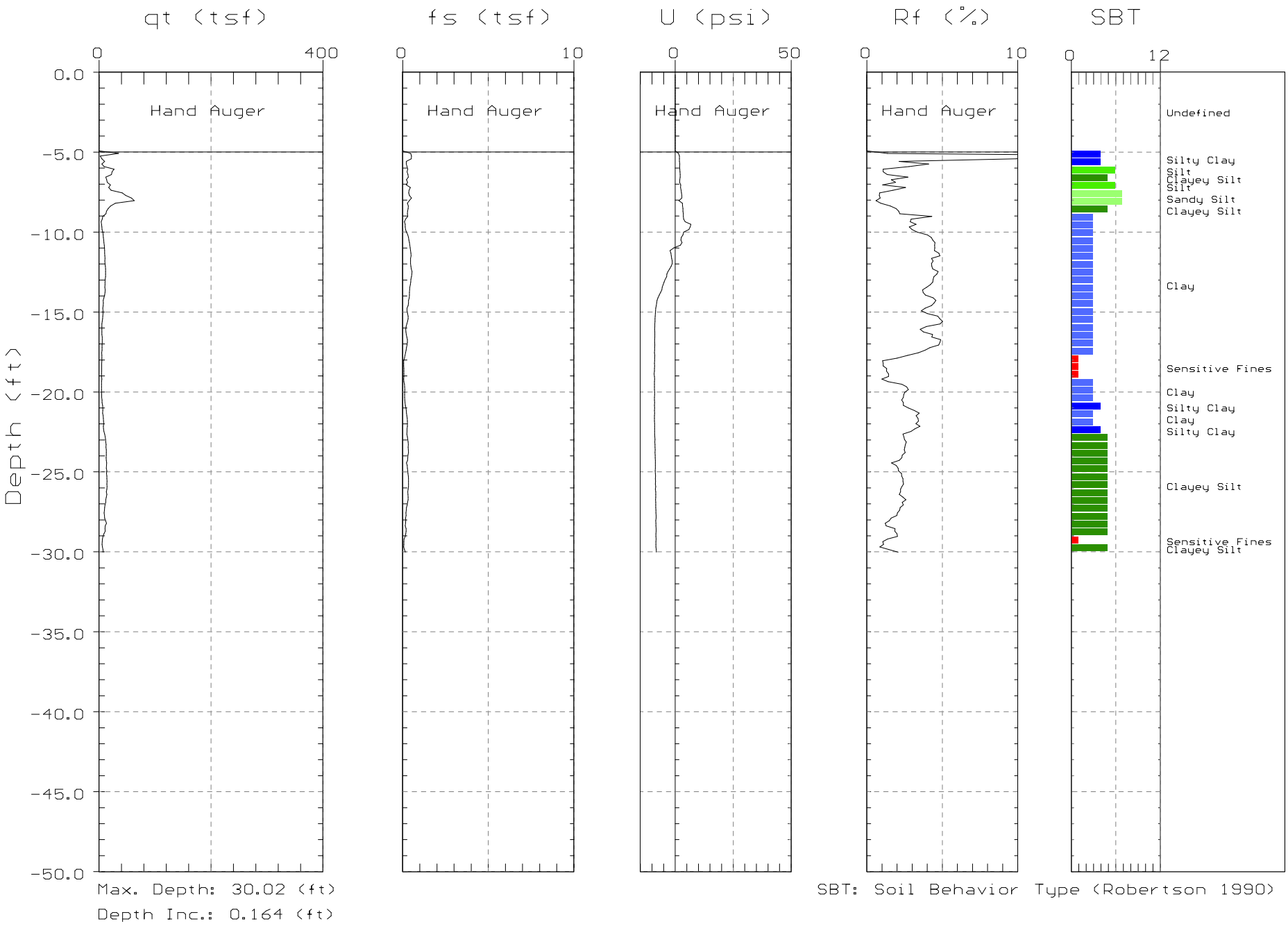
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-09

Engineer: C.HALL
Date: 08:19:05 14:16



Max. Depth: 30.02 (ft)
Depth Inc.: 0.164 (ft)

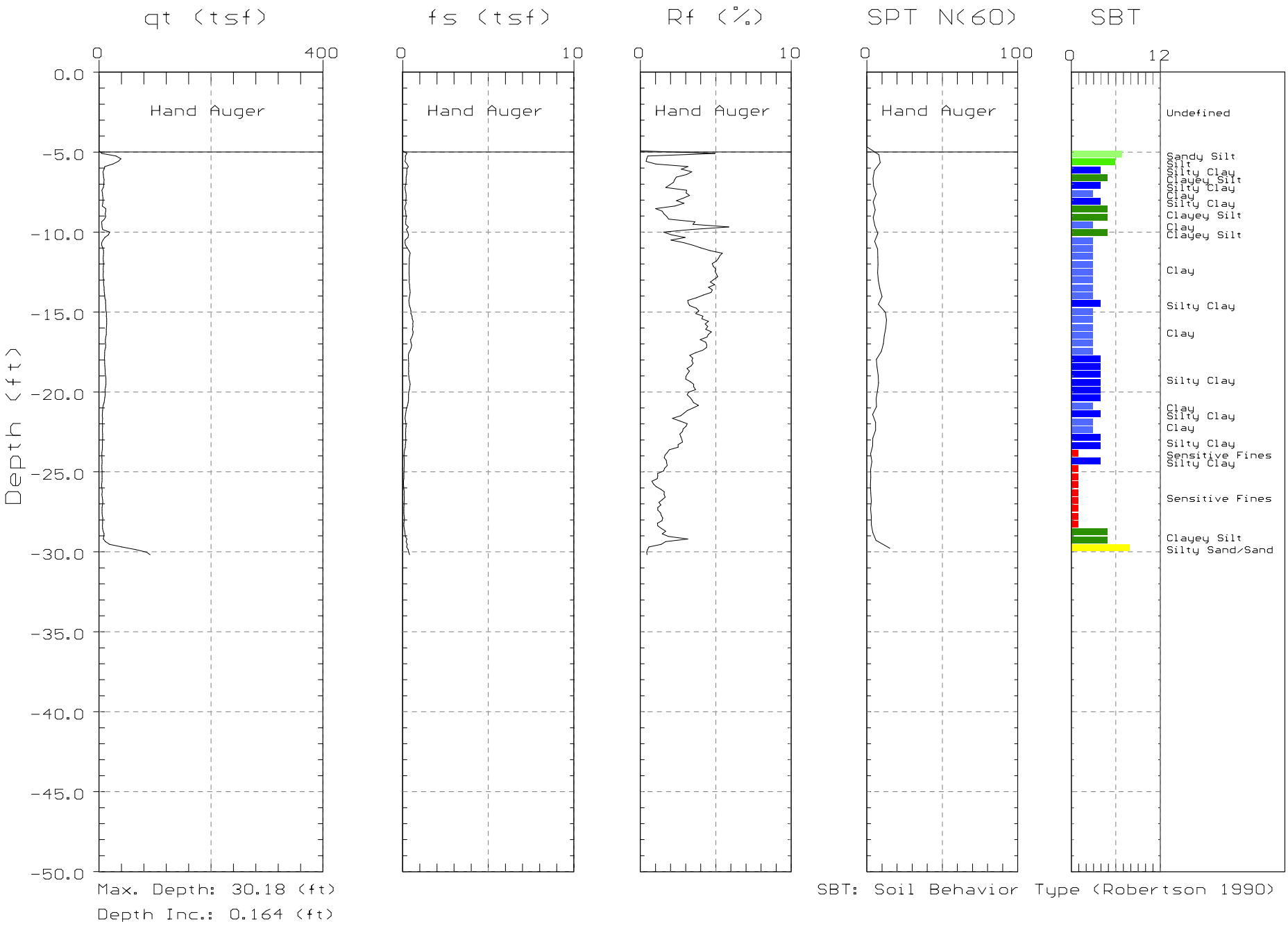
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-10

Engineer: C.HALL
Date: 08:19:05 17:10



Max. Depth: 30.18 (ft)
Depth Inc.: 0.164 (ft)

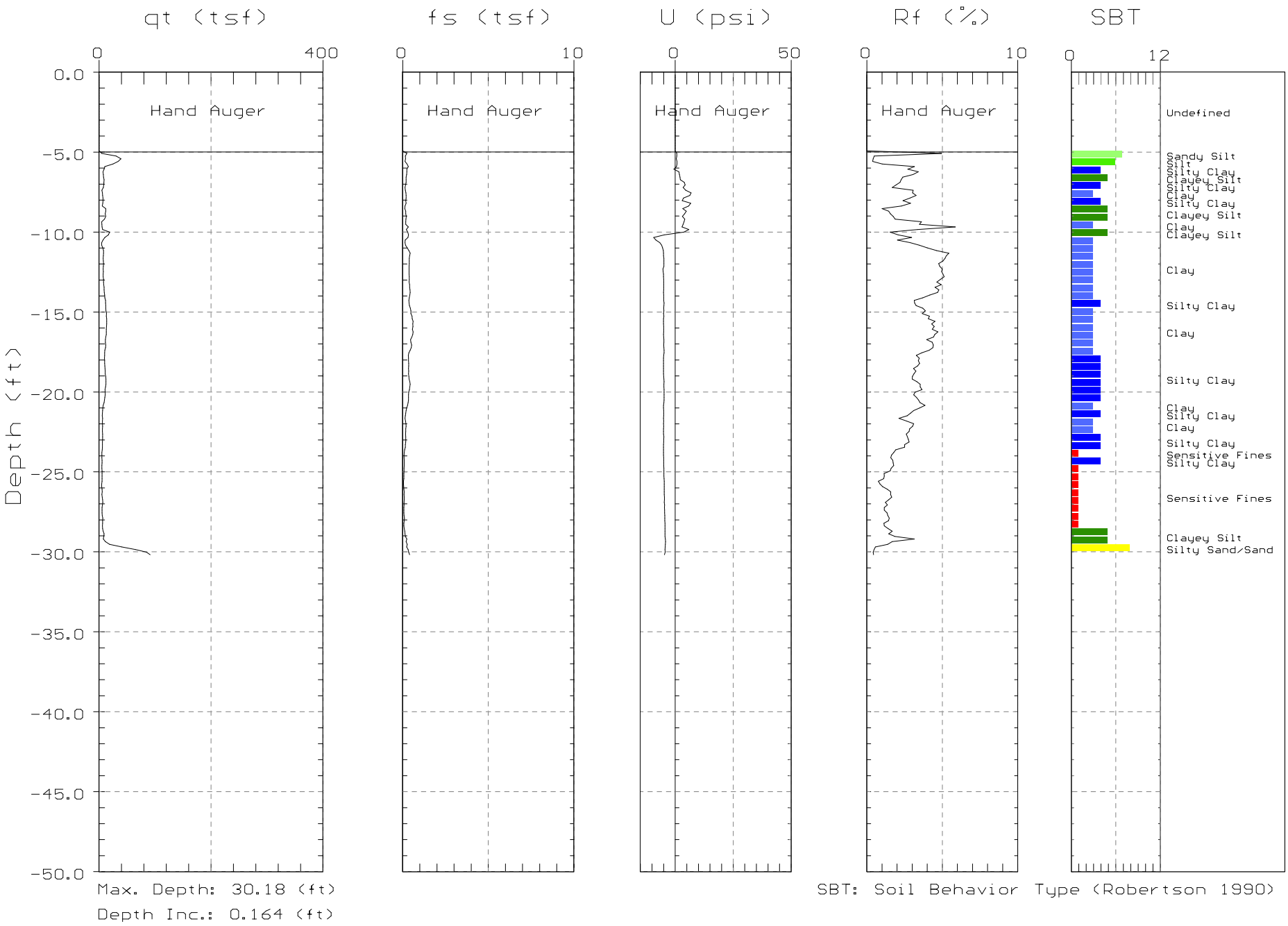
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-10

Engineer: C.HALL
Date: 08:19:05 17:10



Max. Depth: 30.18 (ft)
Depth Inc.: 0.164 (ft)

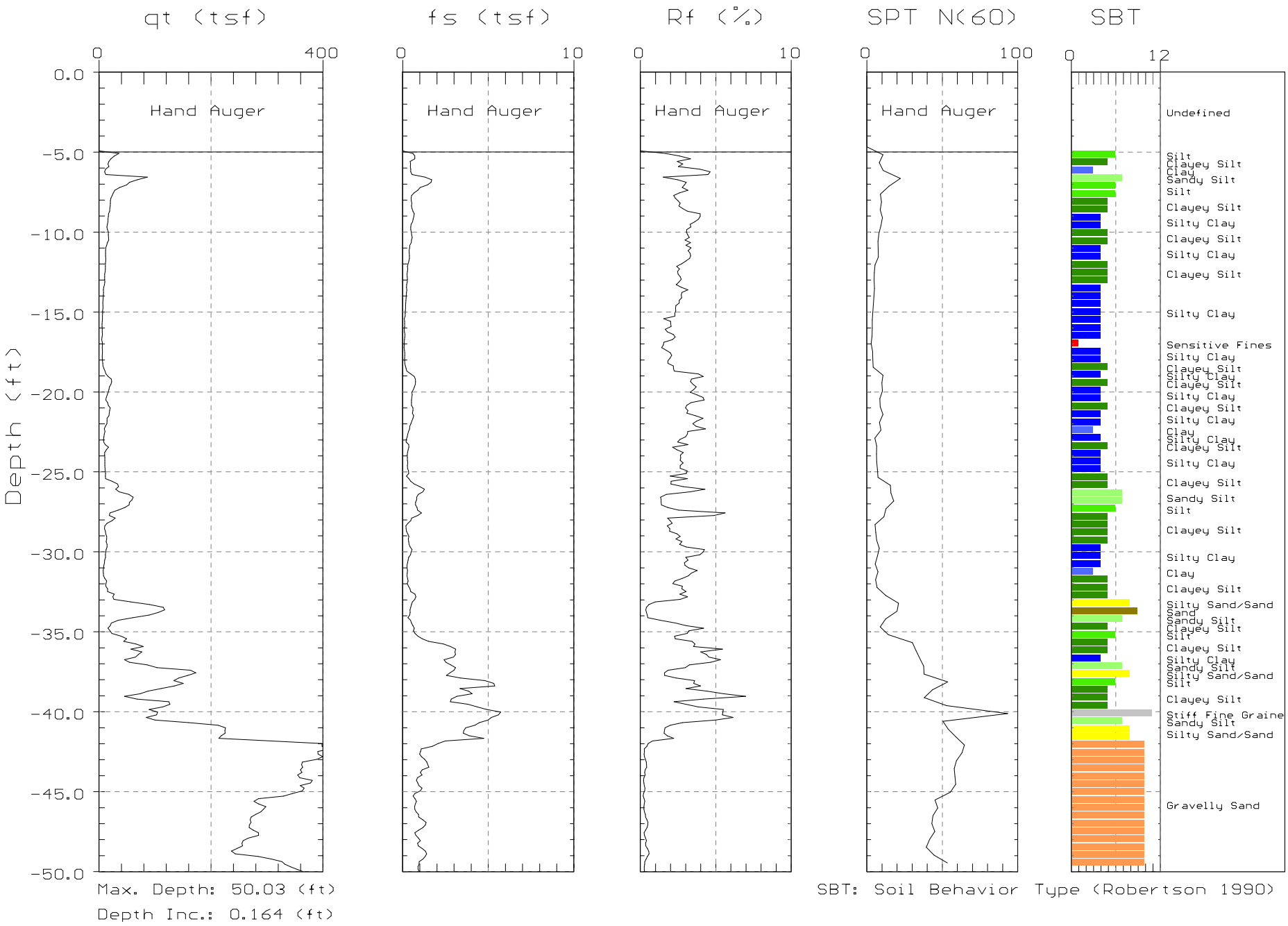
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-11

Engineer: C.HALL
Date: 08:19:05 11:56



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

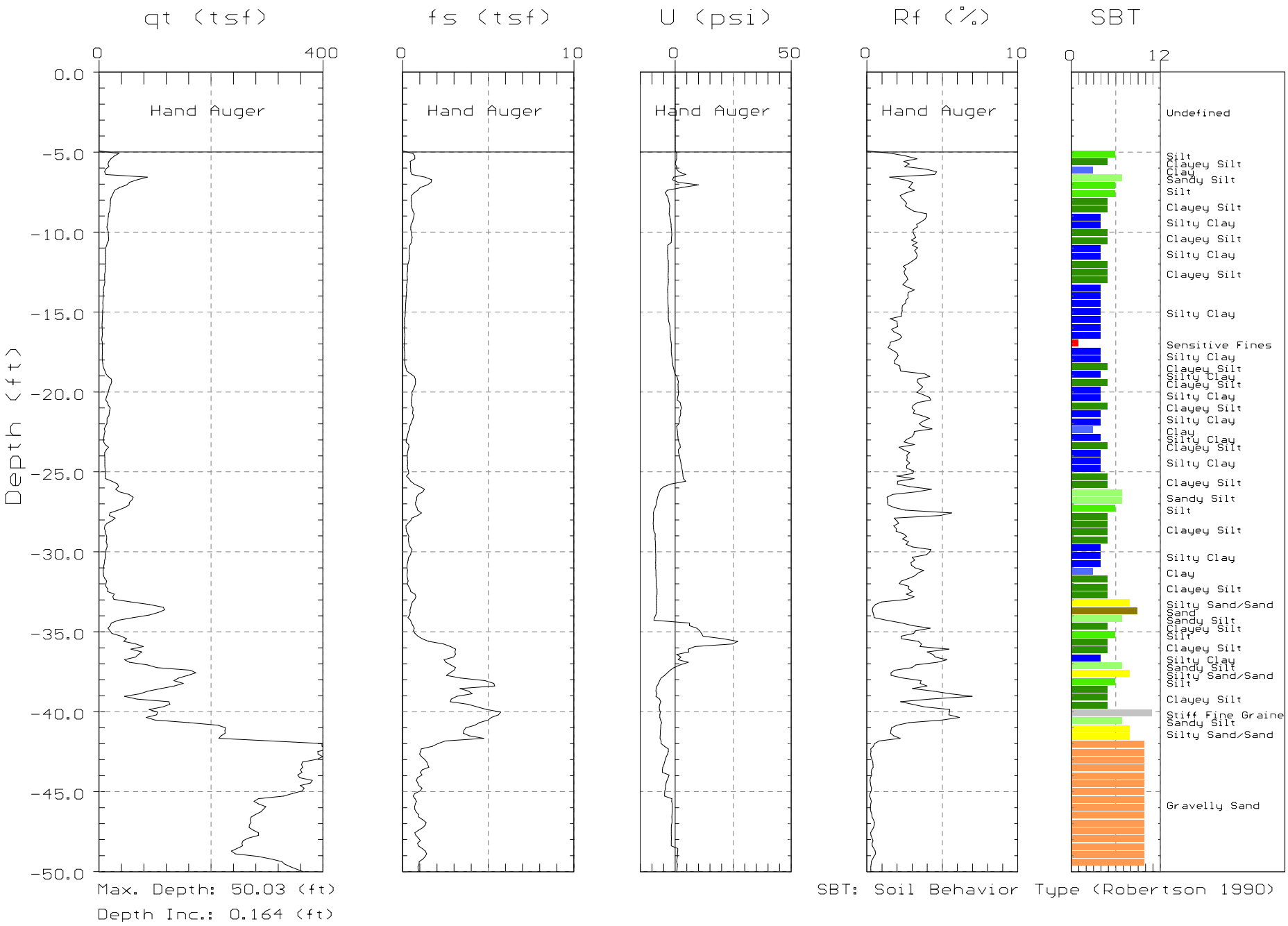
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-11

Engineer: C.HALL
Date: 08:19:05 11:56



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

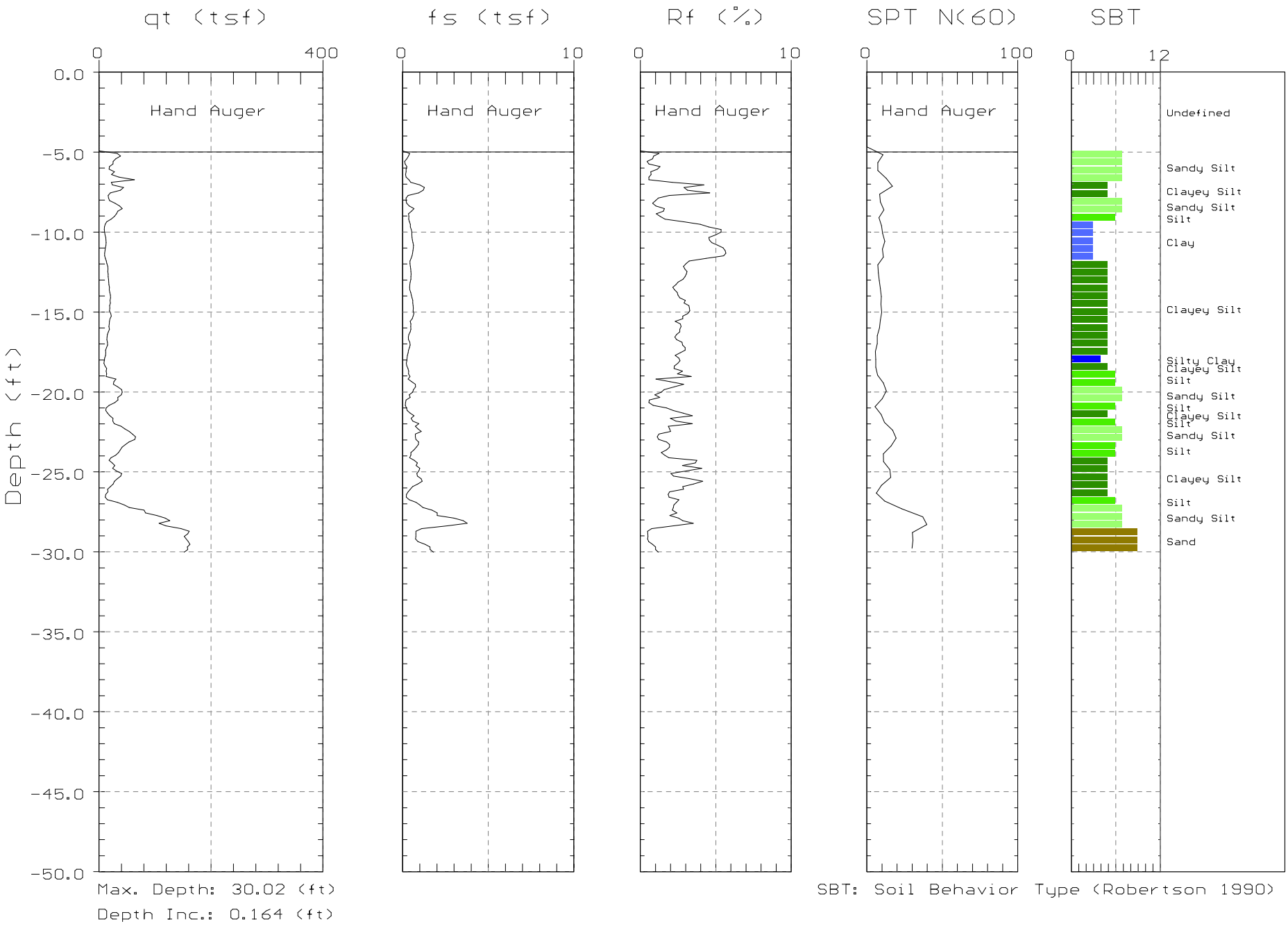
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-12

Engineer: C.HALL
Date: 08:19:05 13:12



Max. Depth: 30.02 (ft)
Depth Inc.: 0.164 (ft)

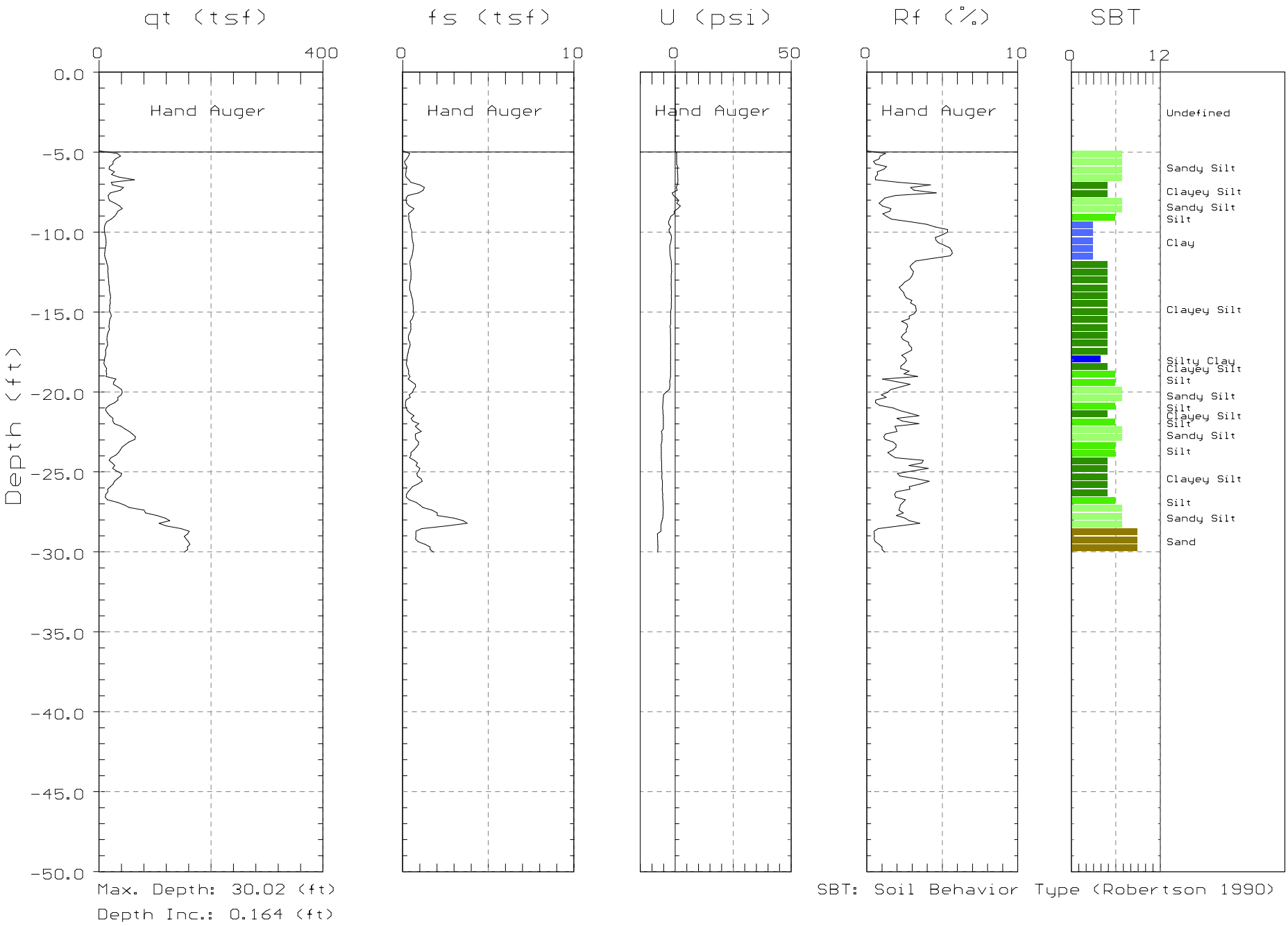
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-12

Engineer: C.HALL
Date: 08:19:05 13:12



Max. Depth: 30.02 (ft)
Depth Inc.: 0.164 (ft)

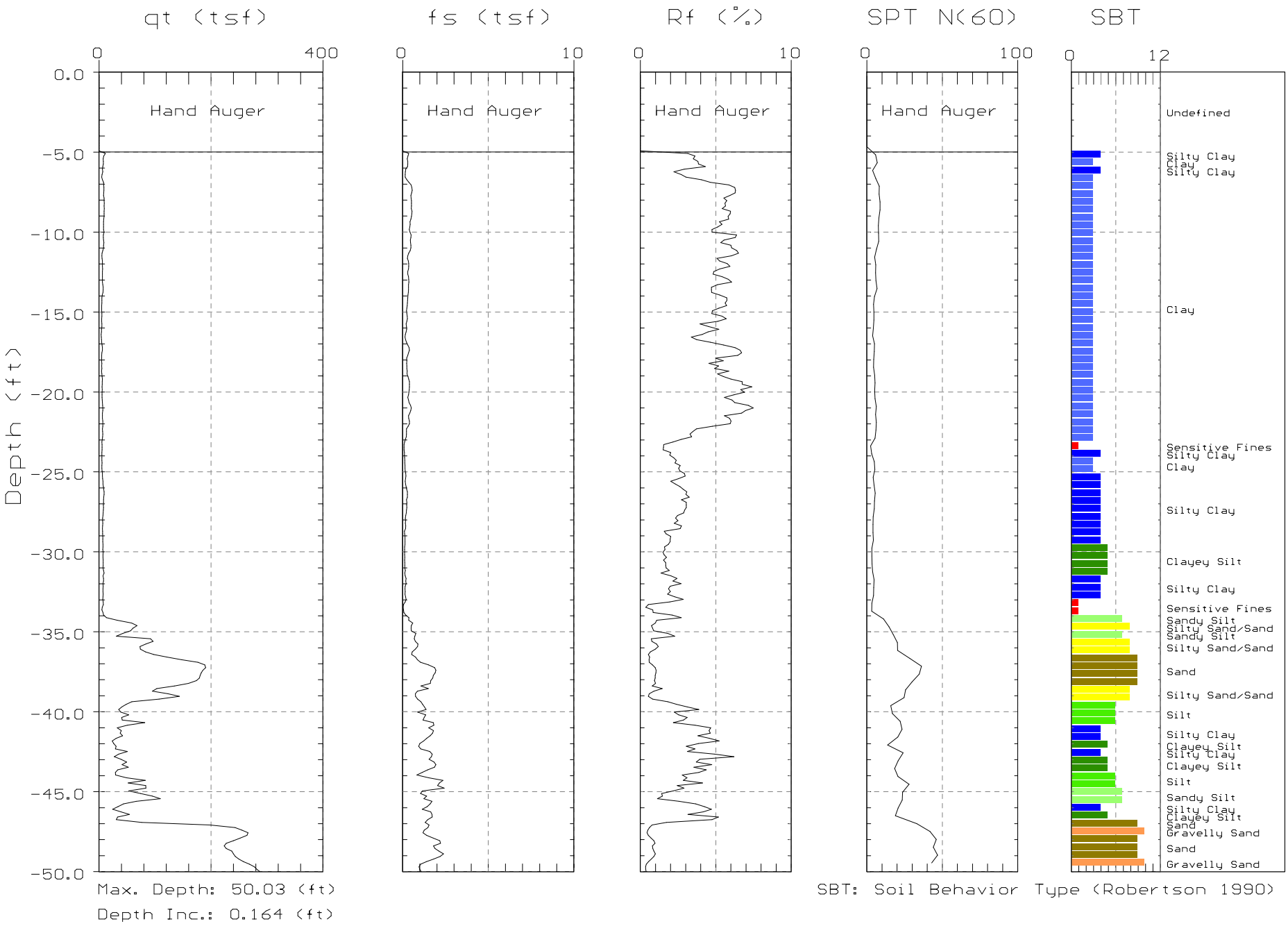
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-13

Engineer: C.HALL
Date: 08:22:05 12:12



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

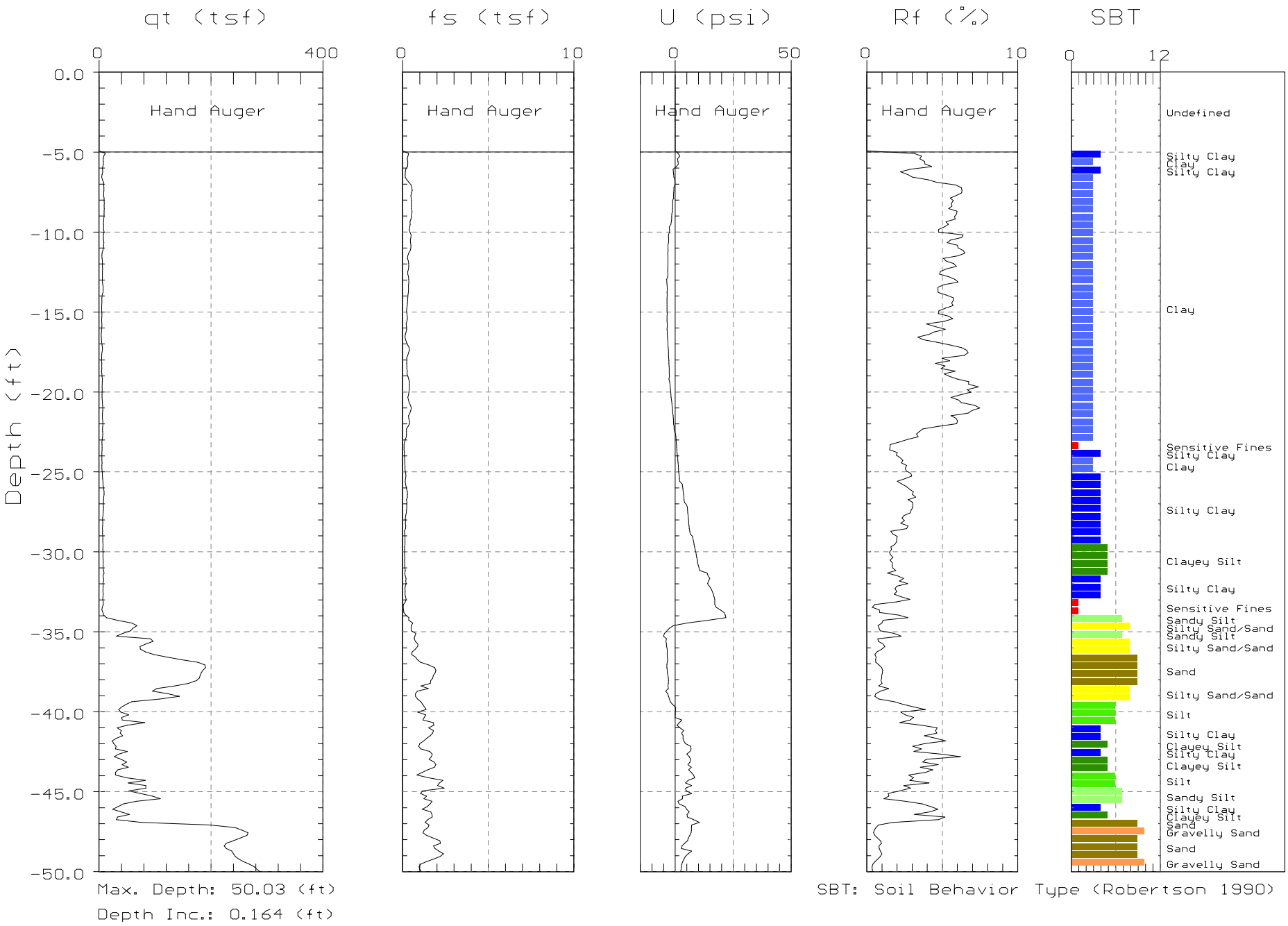
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-13

Engineer: C.HALL
Date: 08:22:05 12:12



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

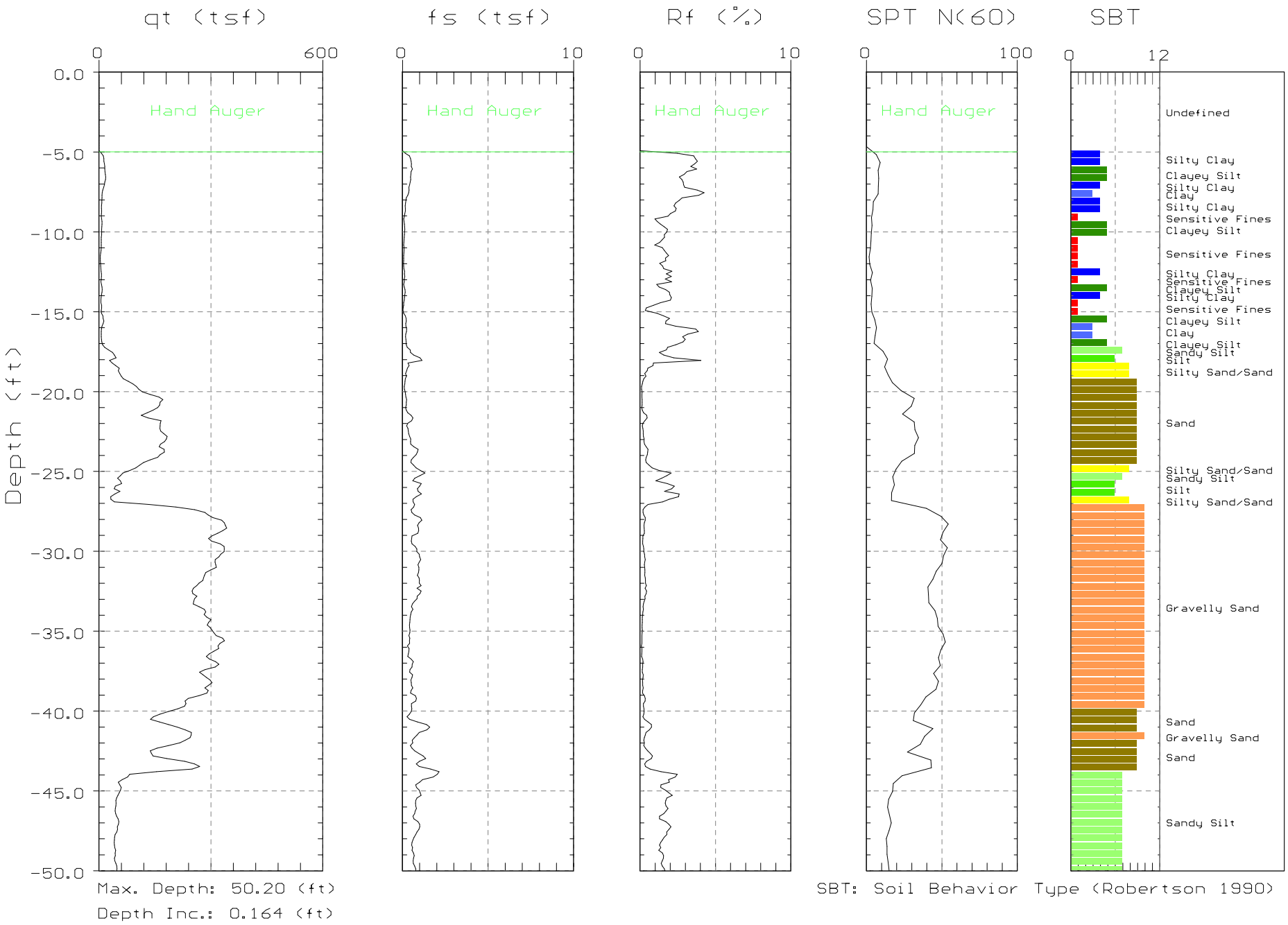
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-14

Engineer: H.RODGERS
Date: 12:15:05 12:39



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

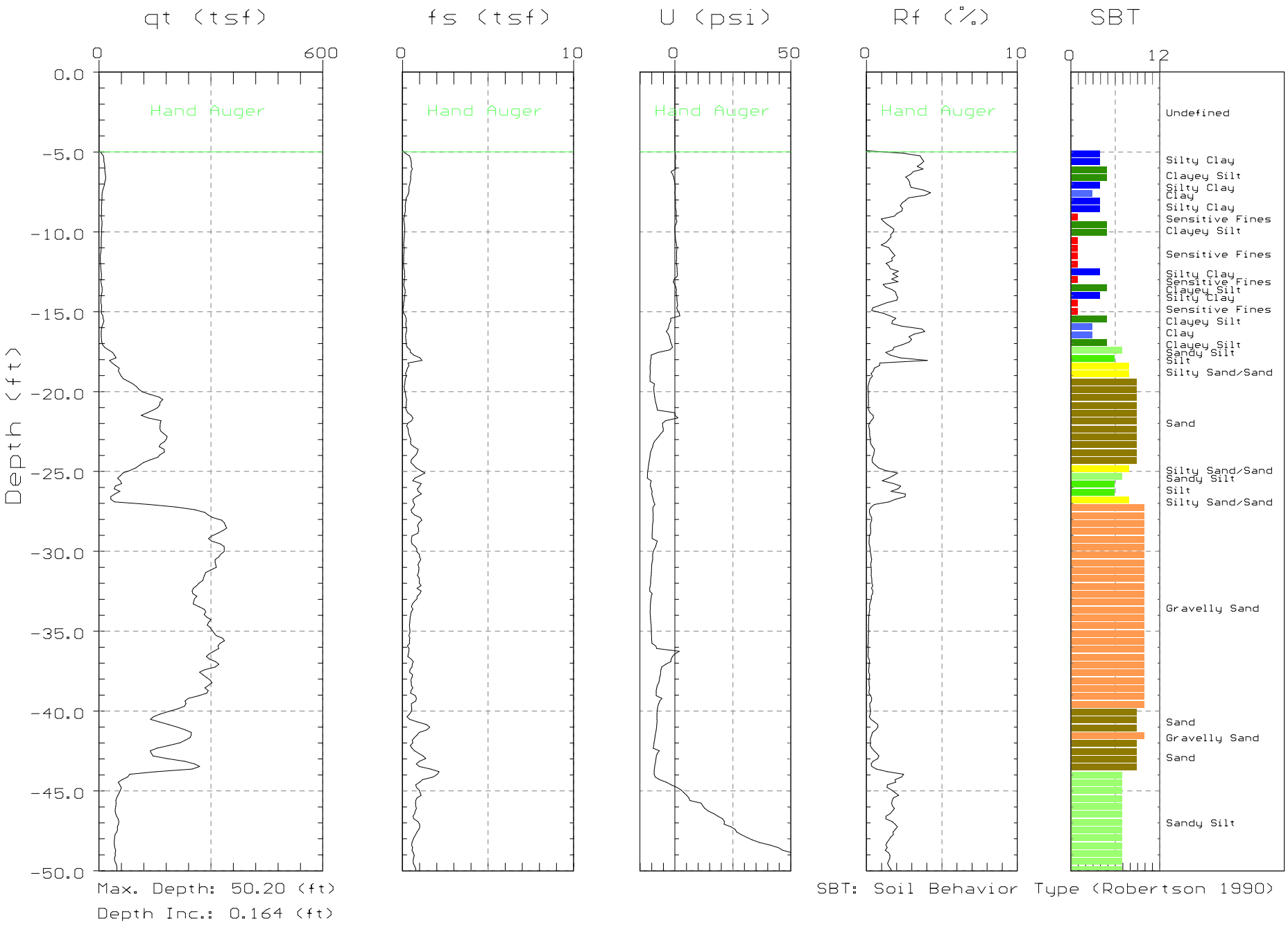
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-14

Engineer: H.RODGERS
Date: 12:15:05 12:39



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

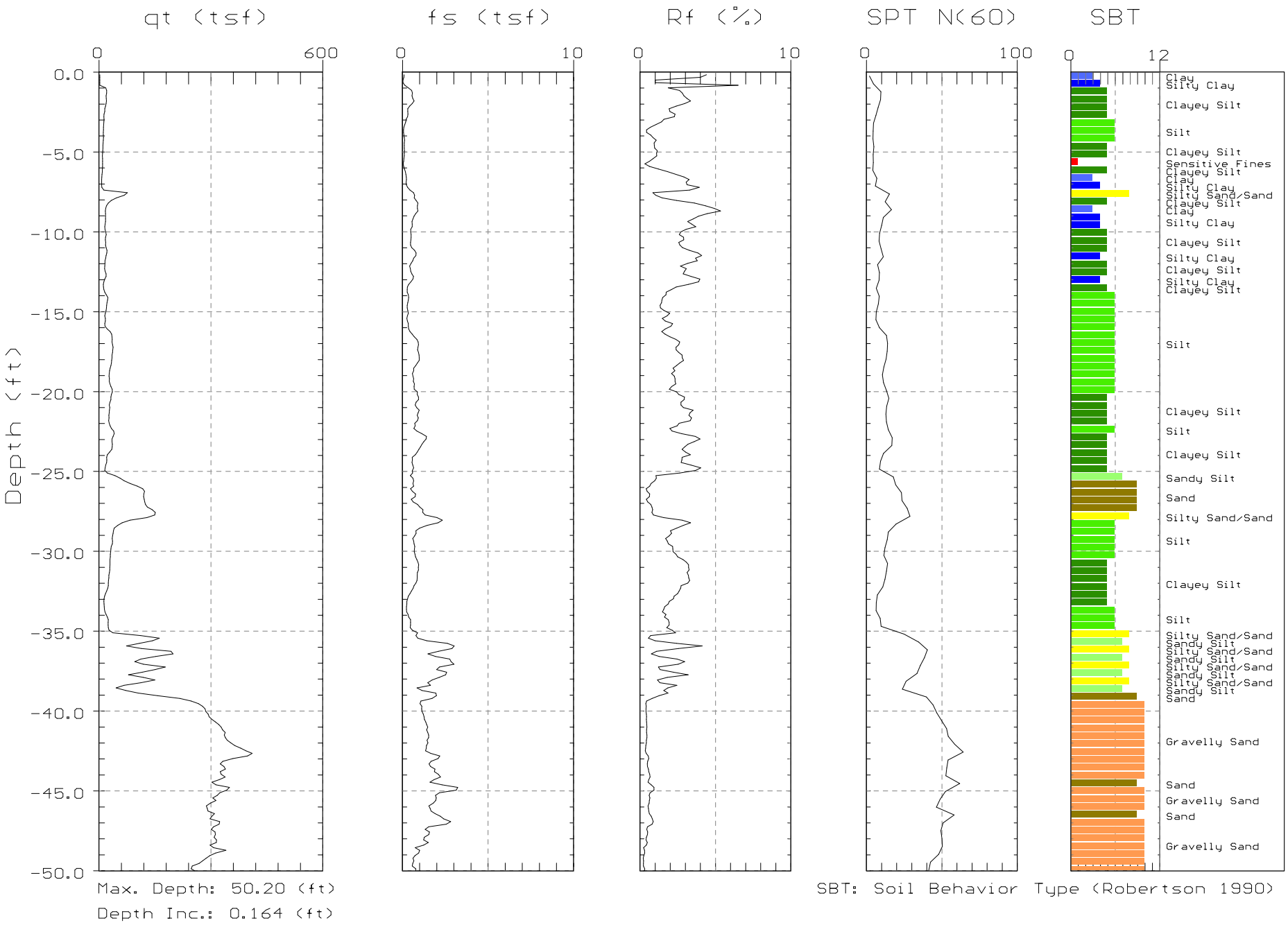
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-15

Engineer: H.RODGERS
Date: 12:15:05 14:36



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

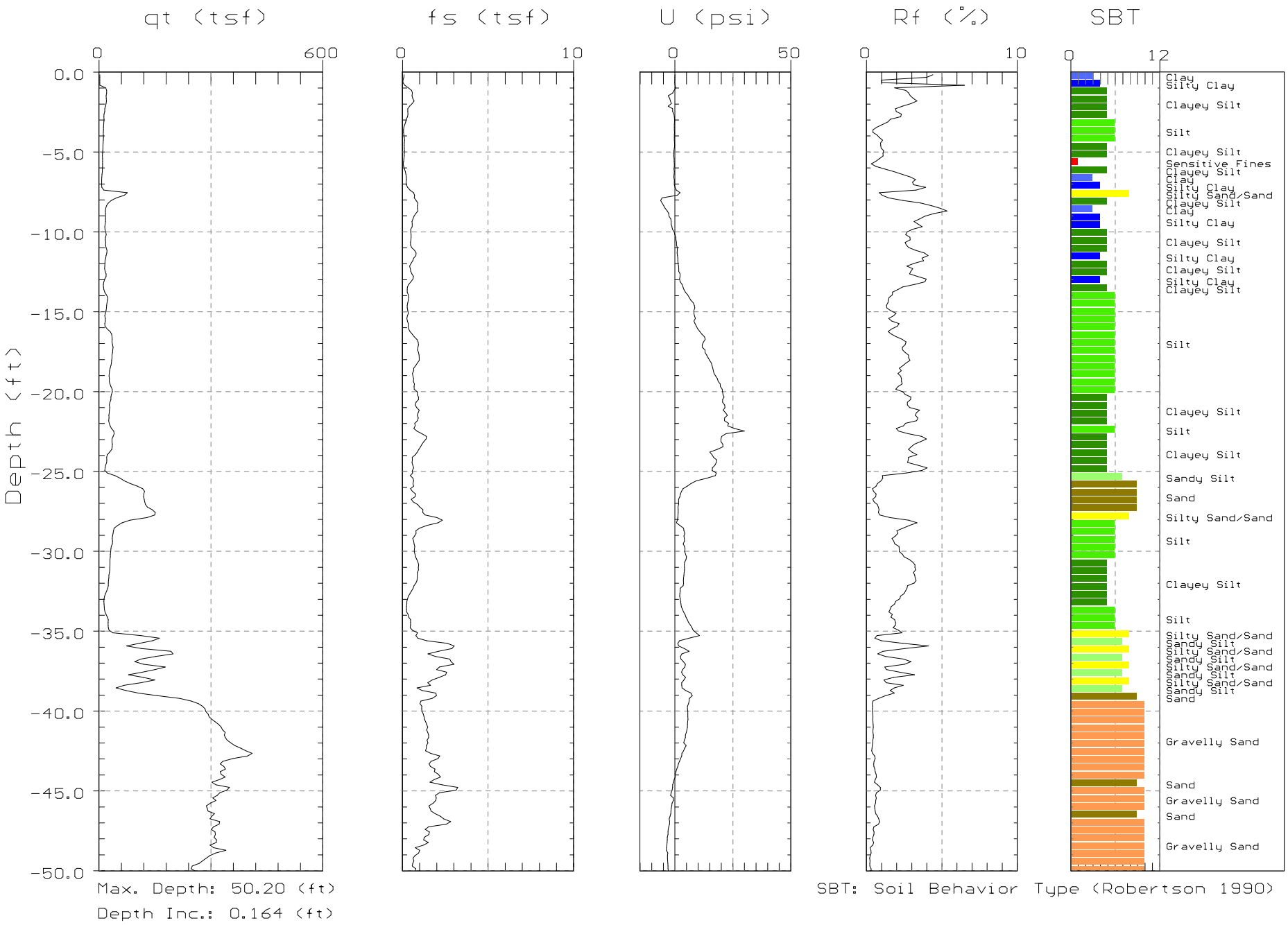
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-15

Engineer: H.RODGERS
Date: 12:15:05 14:36



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

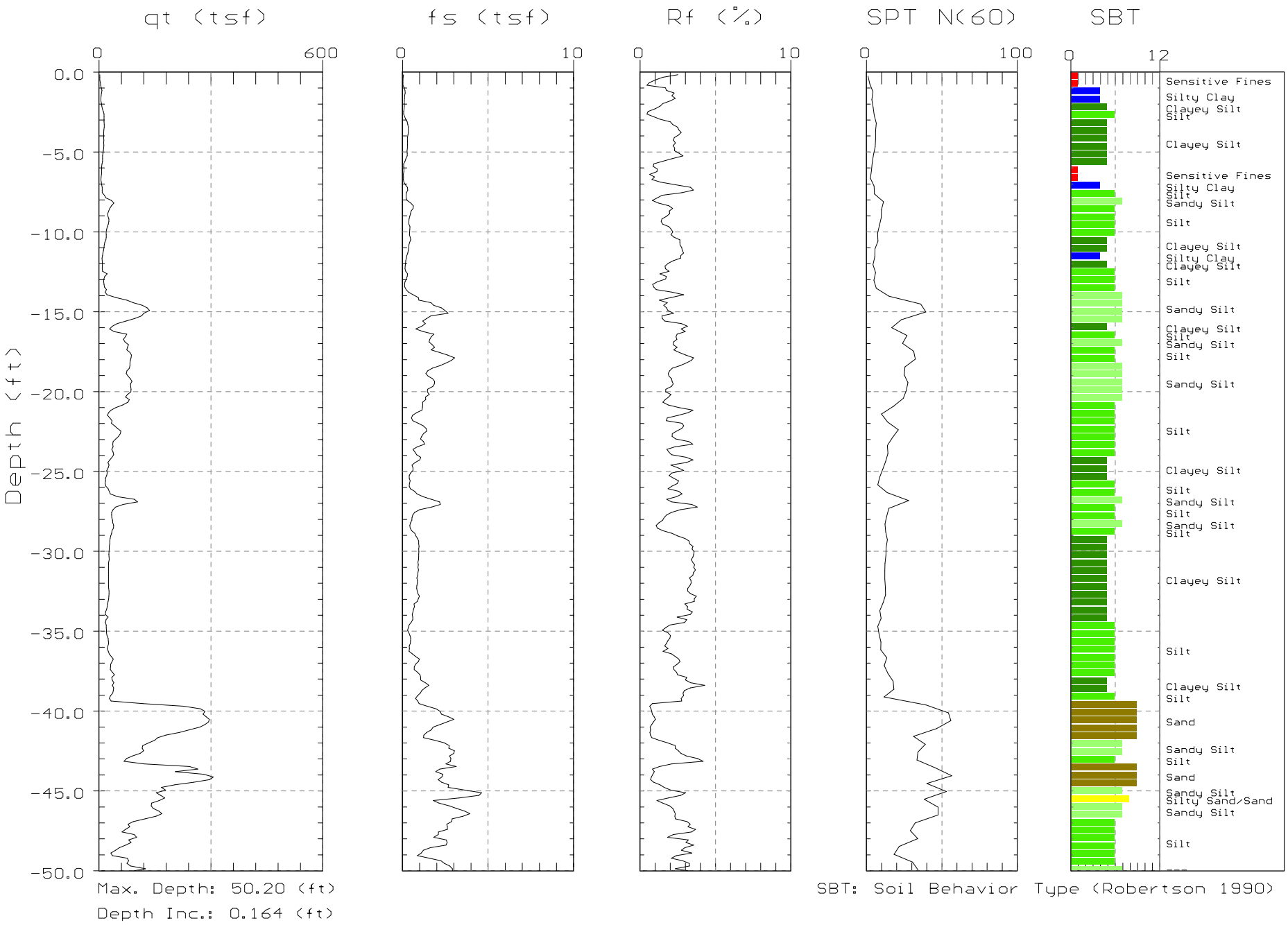
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-16

Engineer: H.RODGERS
Date: 12:15:05 15:25



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

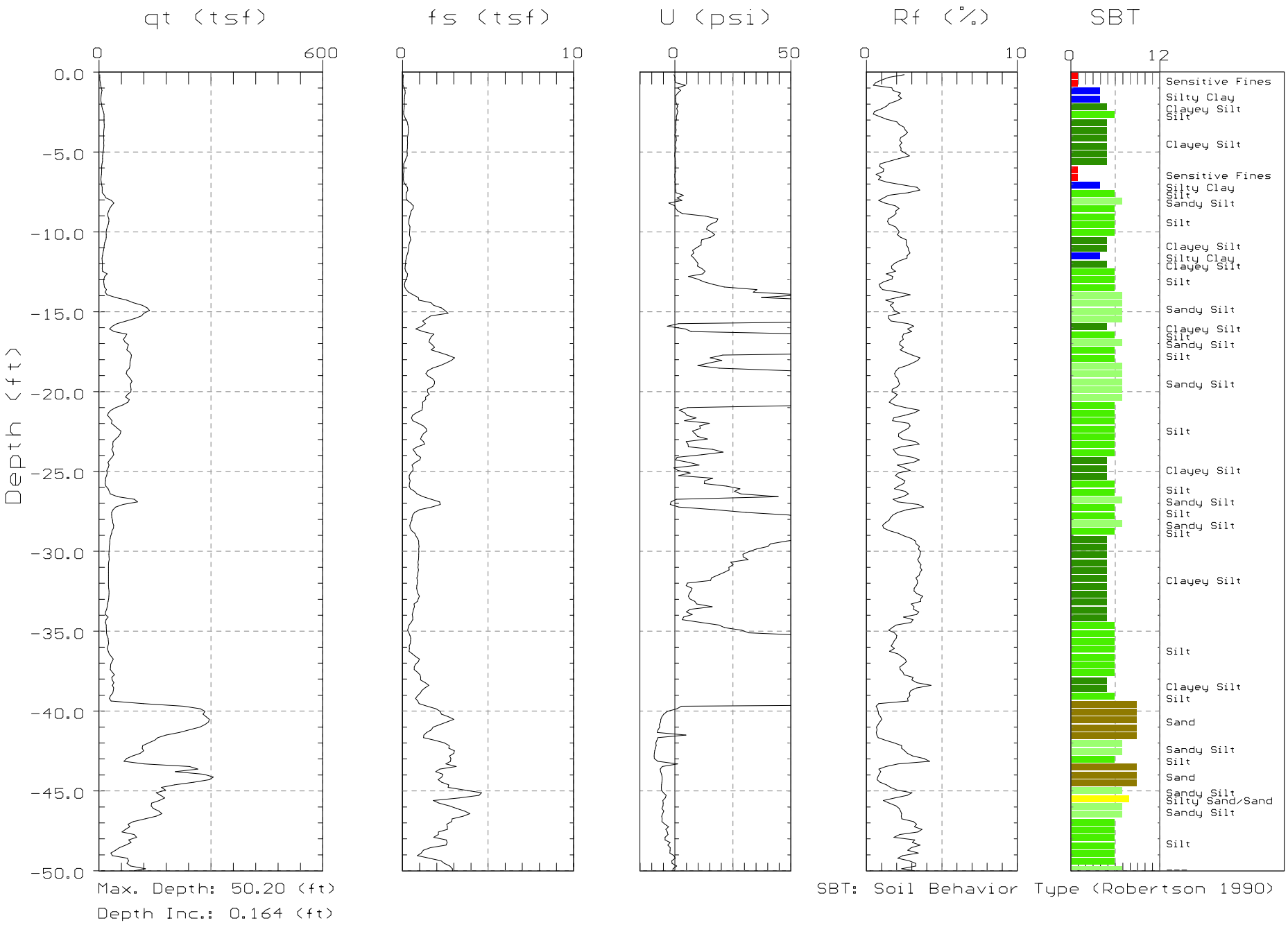
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-16

Engineer: H.RODGERS
Date: 12:15:05 15:25



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

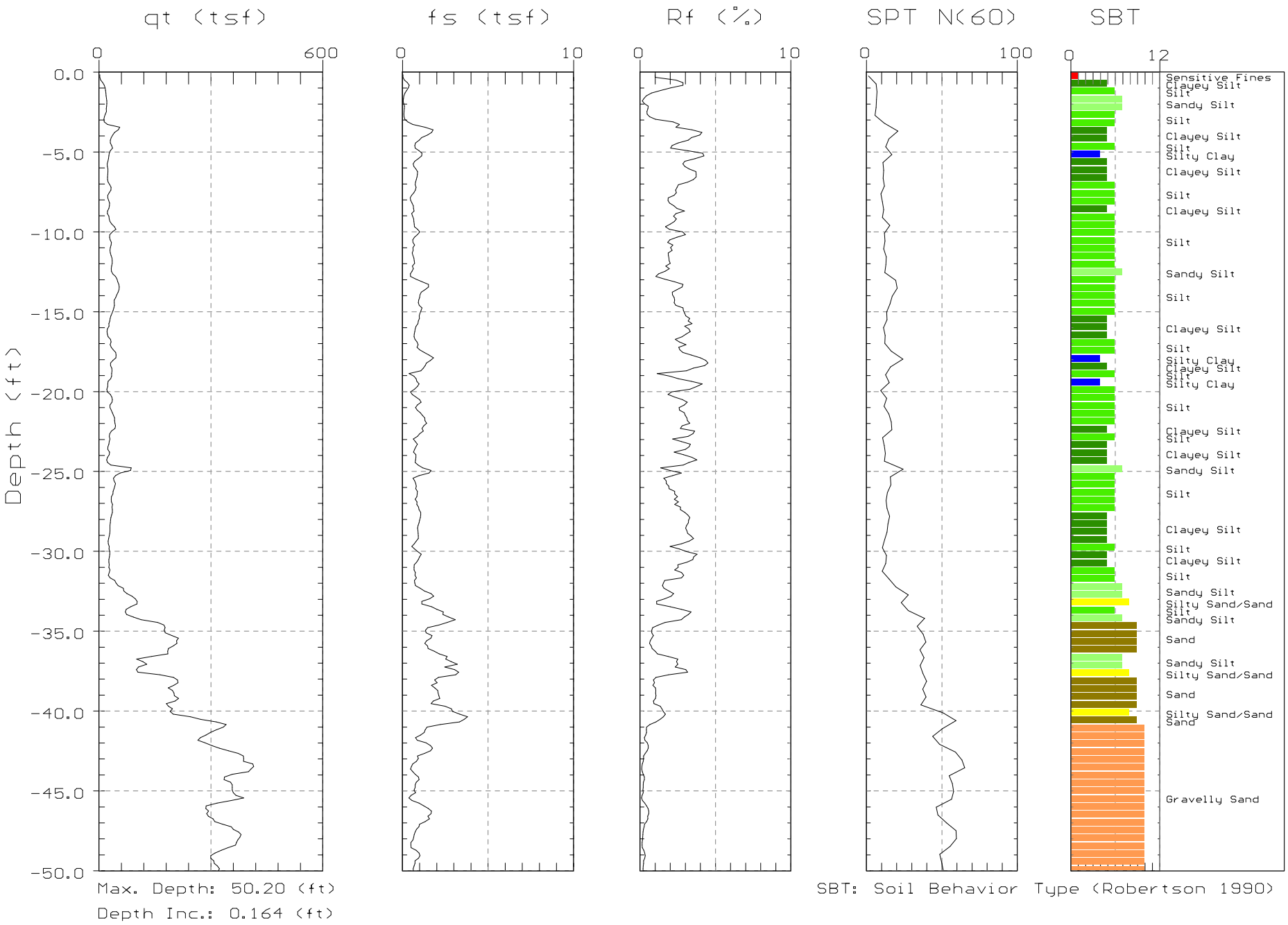
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-17

Engineer: H.RODGERS
Date: 12:15:05 17:13



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

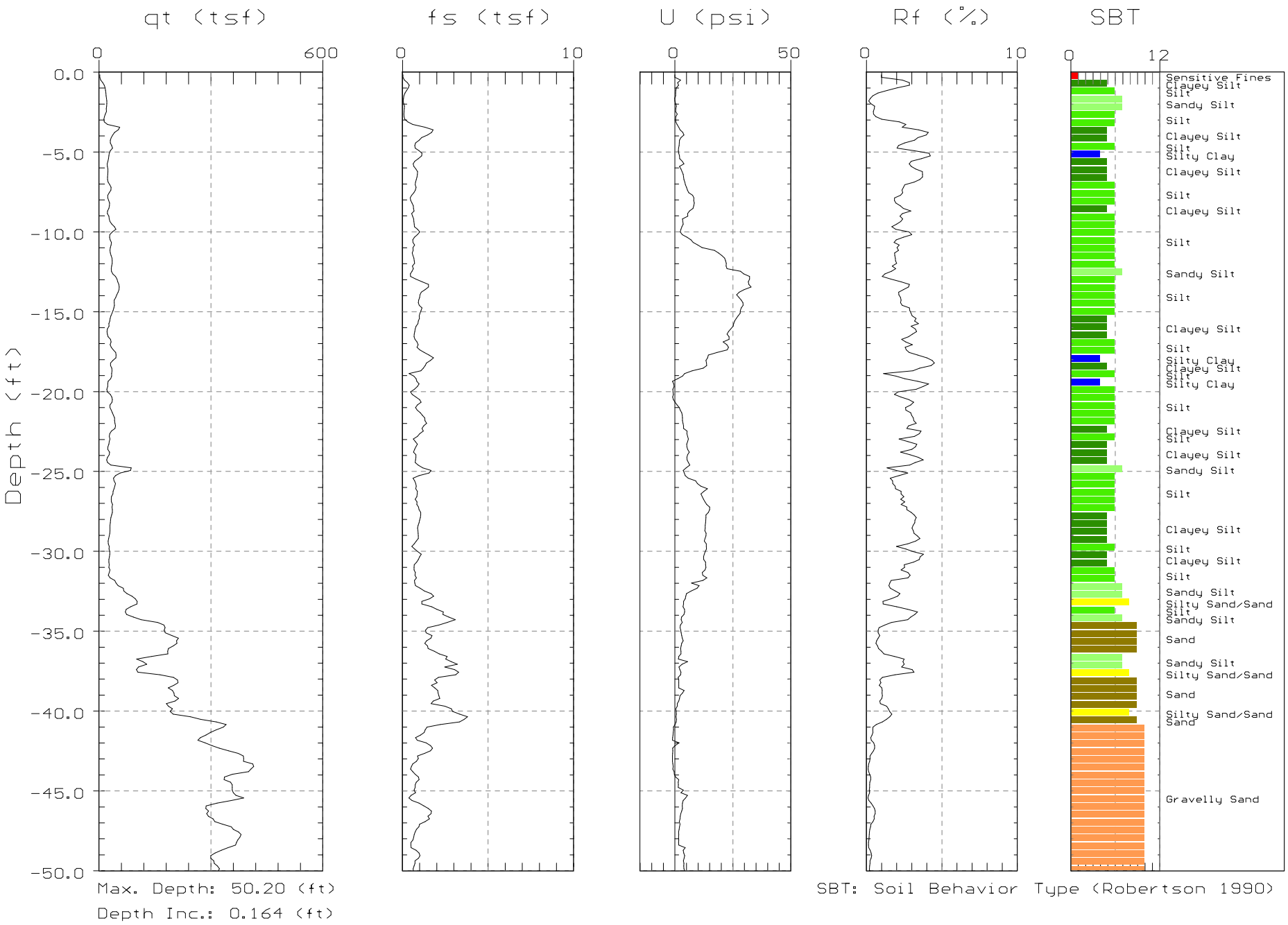
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-17

Engineer: H.RODGERS
Date: 12:15:05 17:13



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

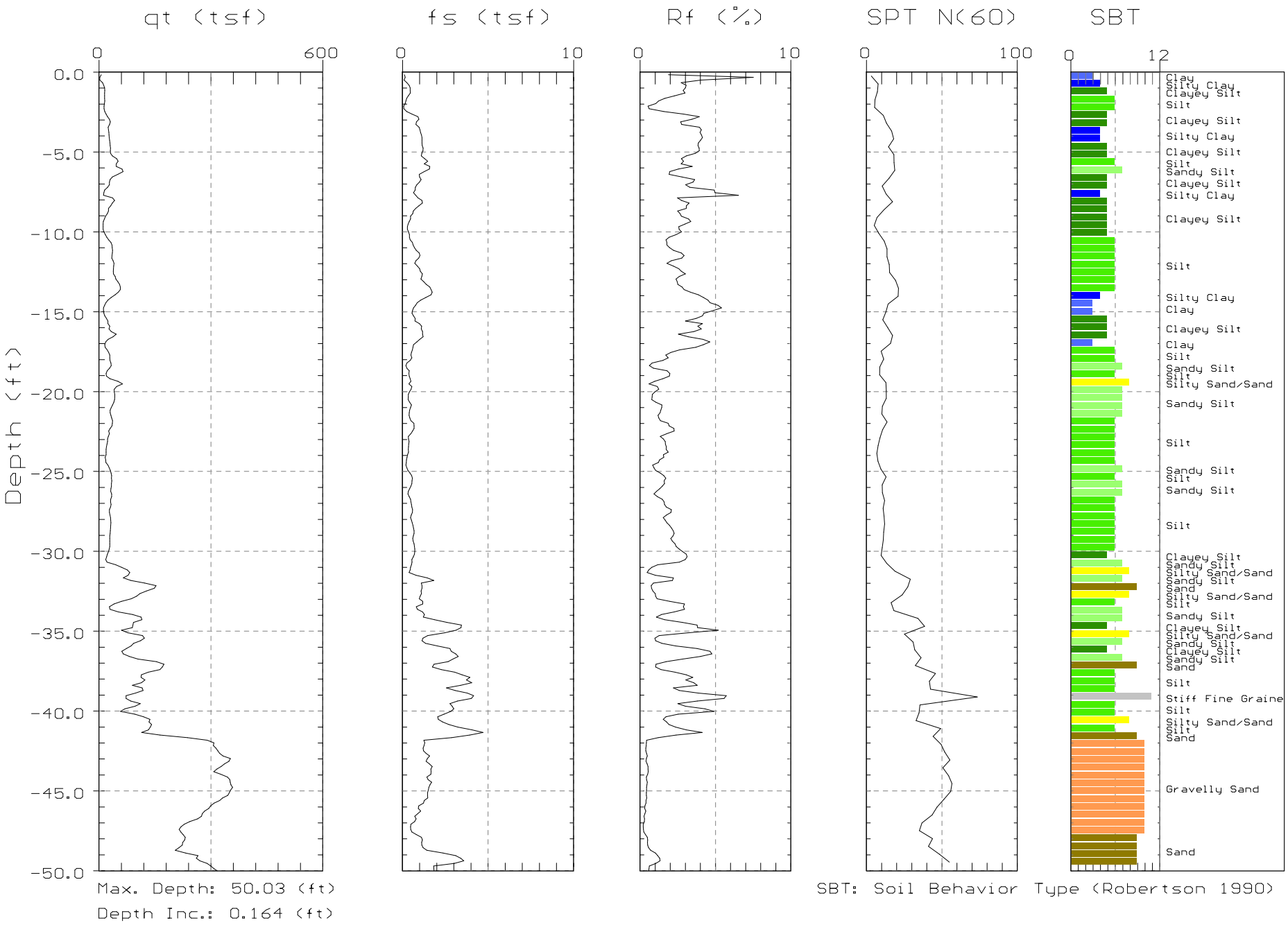
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-18

Engineer: H.RODGERS
Date: 12:15:05 17:59



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

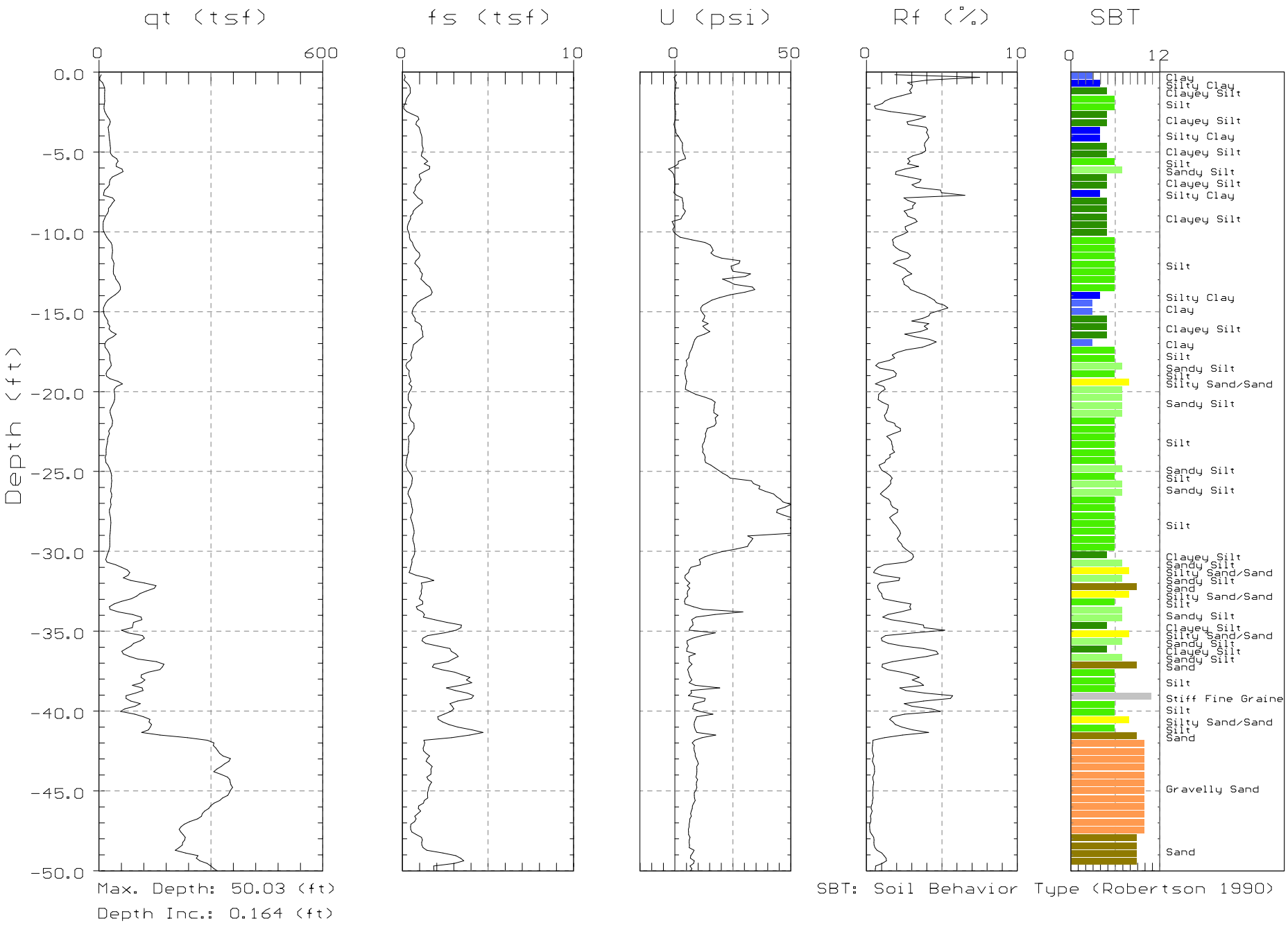
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-18

Engineer: H.RODGERS
Date: 12:15:05 17:59



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

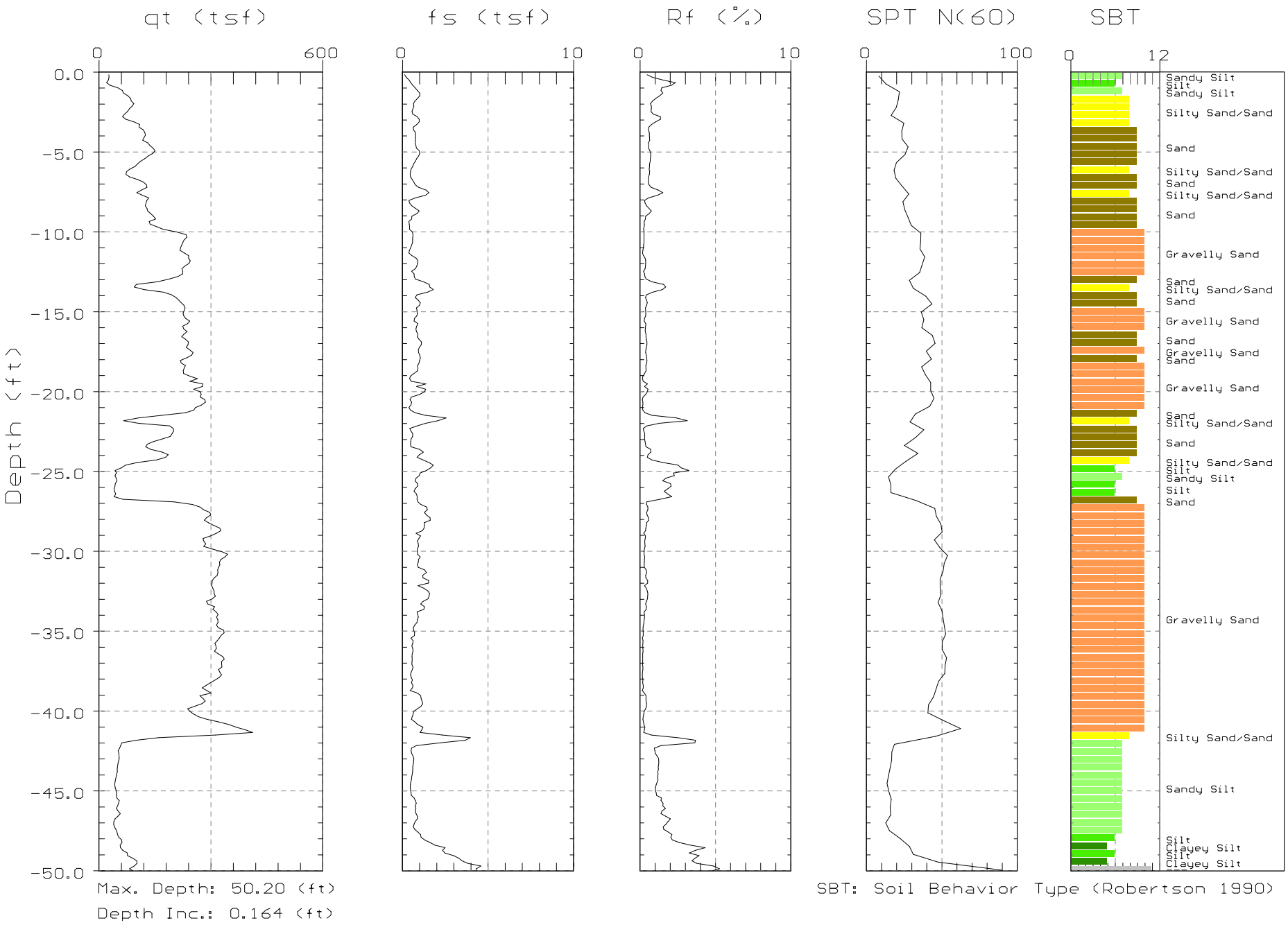
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-19

Engineer: H.RODGERS
Date: 12:15:05 18:56



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

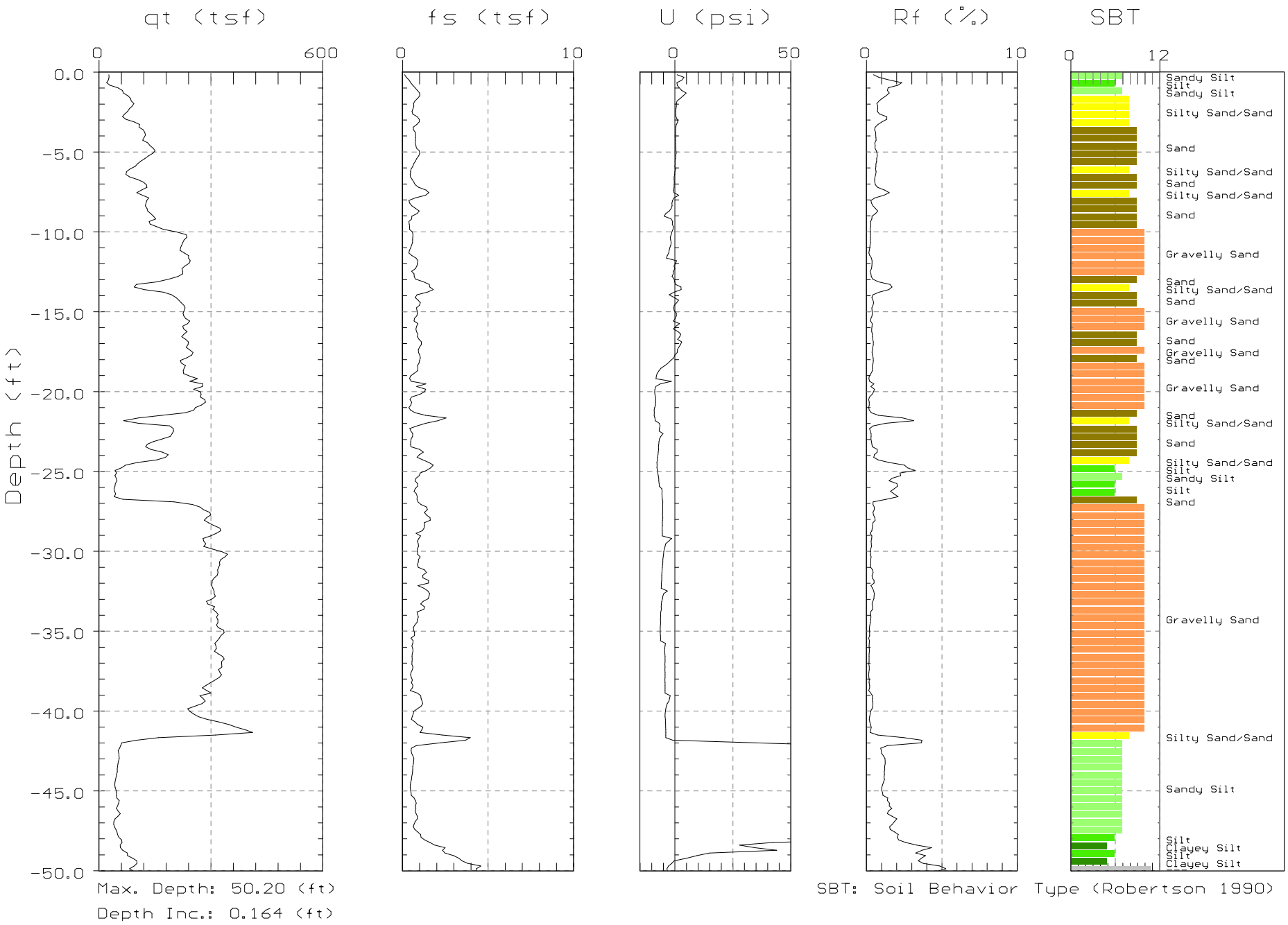
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-19

Engineer: H.RODGERS
Date: 12:15:05 18:56



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

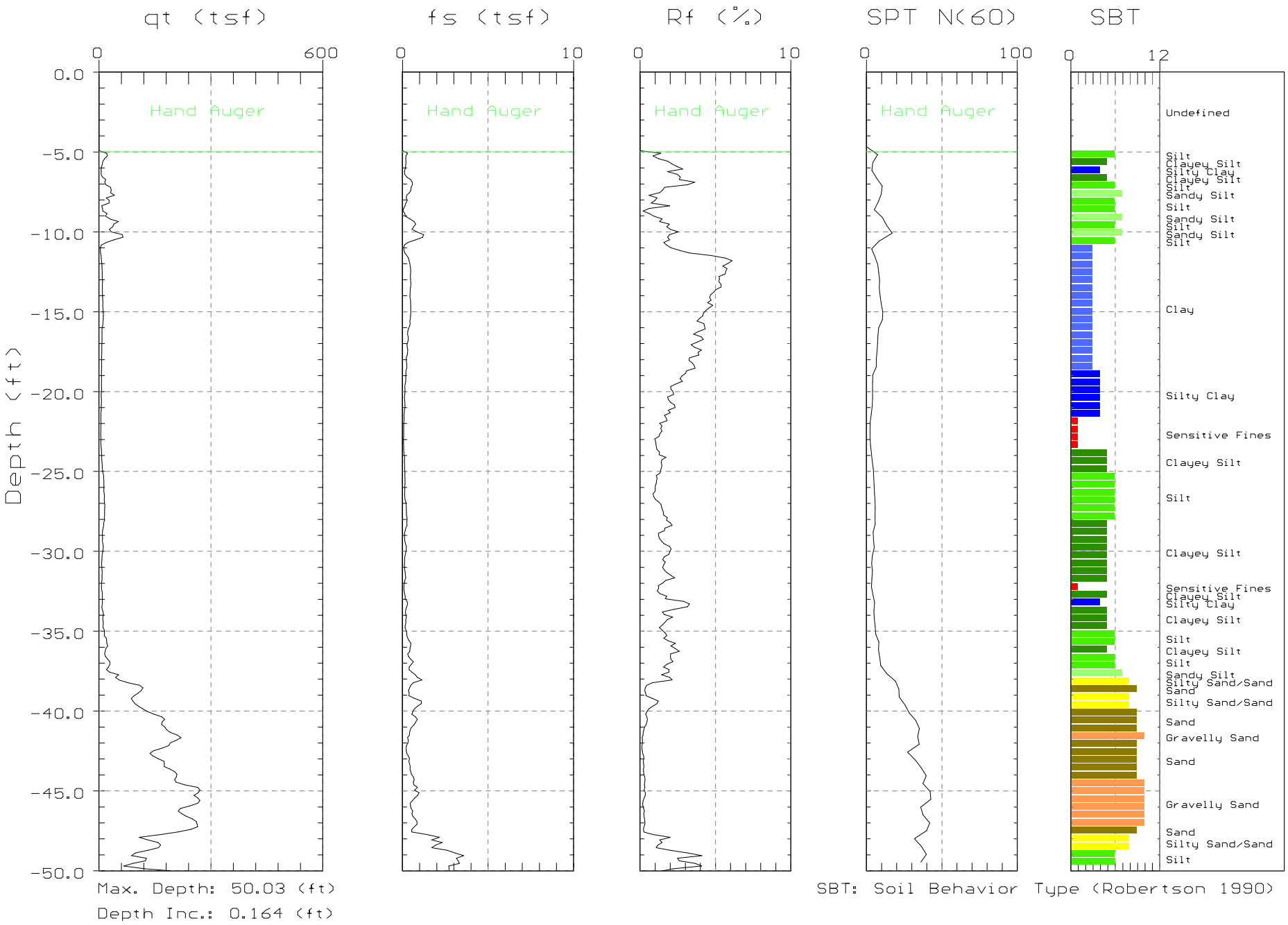
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-20

Engineer: H.RODGERS
Date: 12:15:05 20:02



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

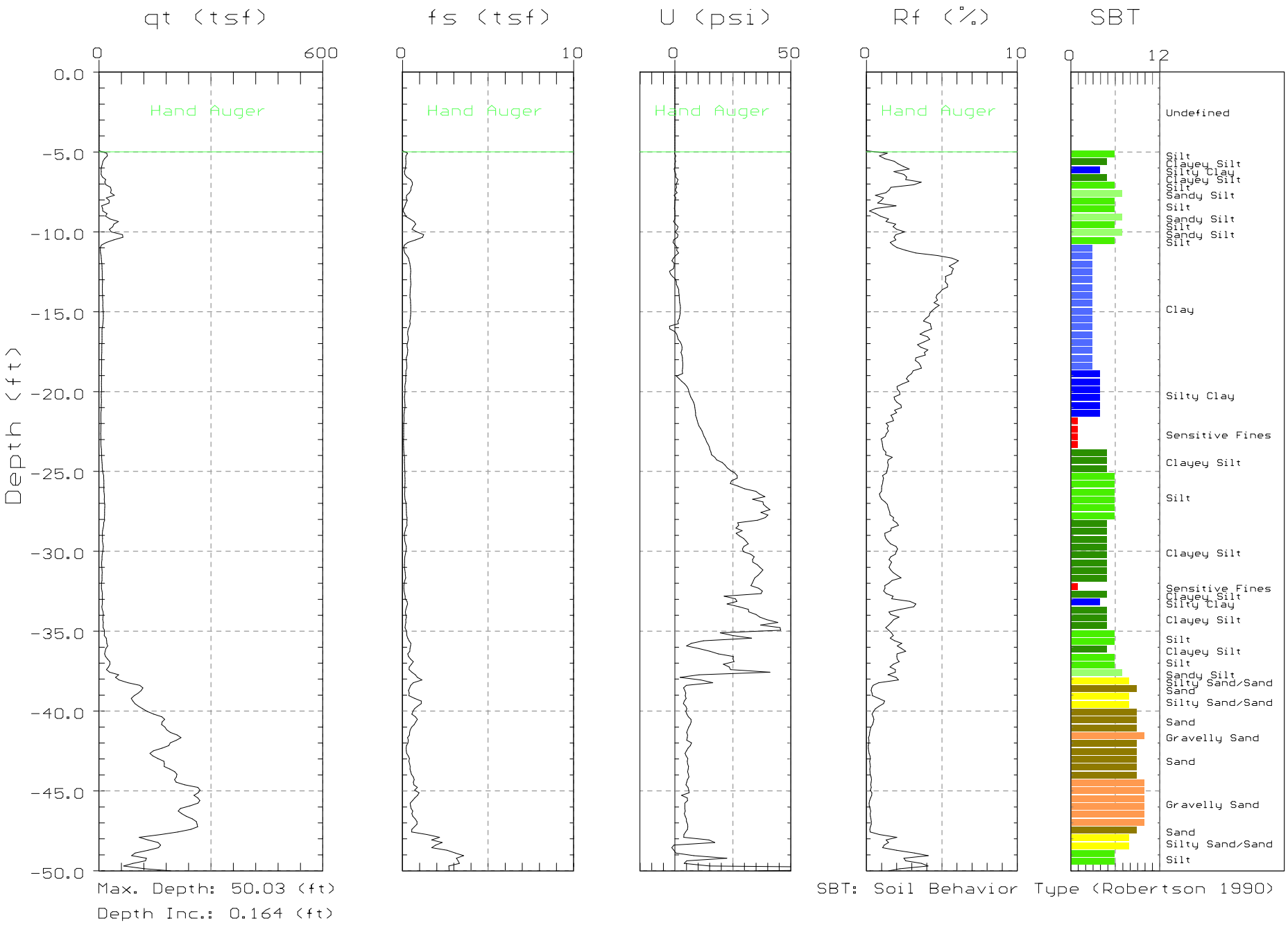
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-20

Engineer: H.RODGERS
Date: 12:15:05 20:02



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

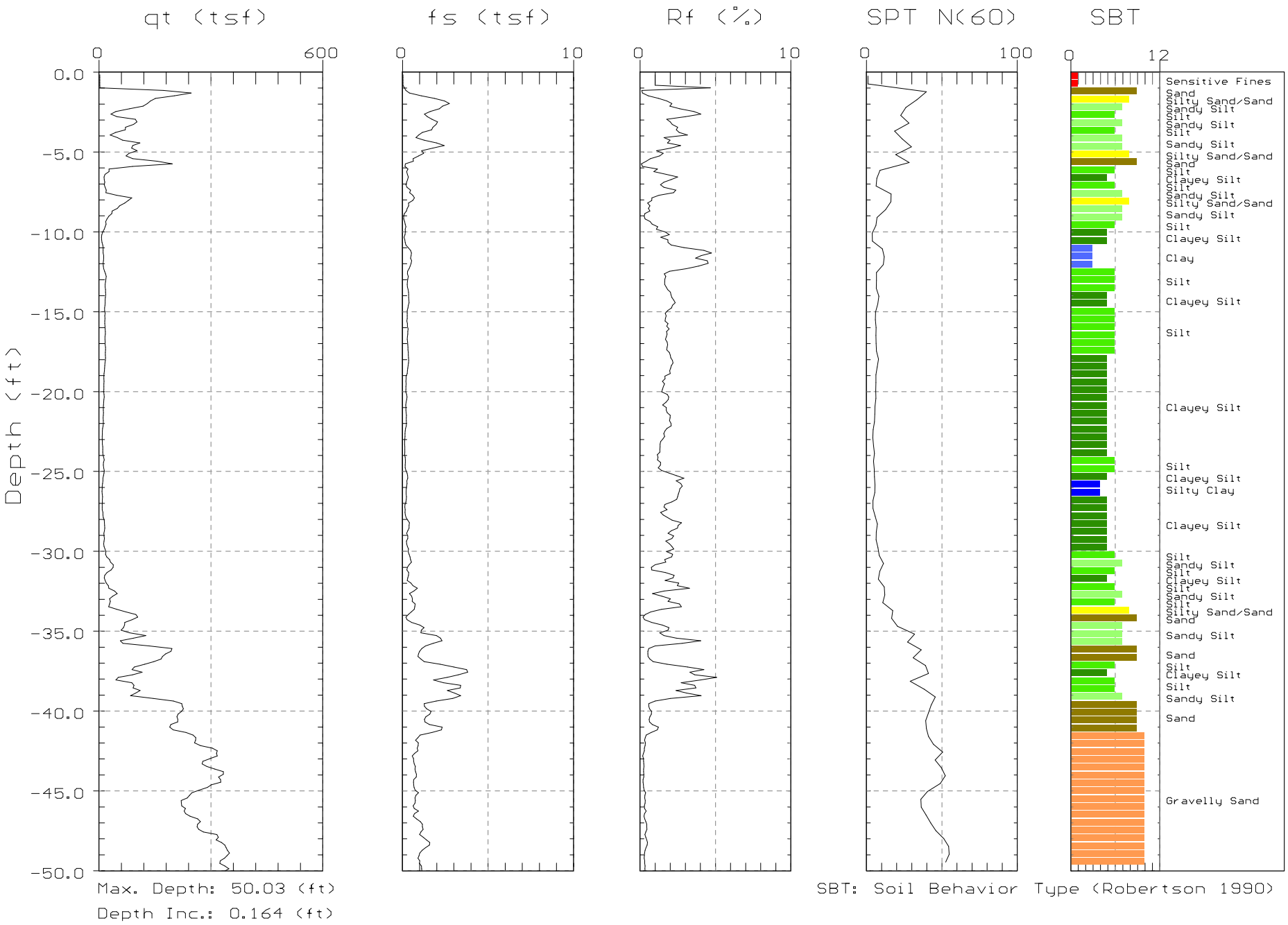
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-21

Engineer: H.RODGERS
Date: 12:16:05 11:44



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

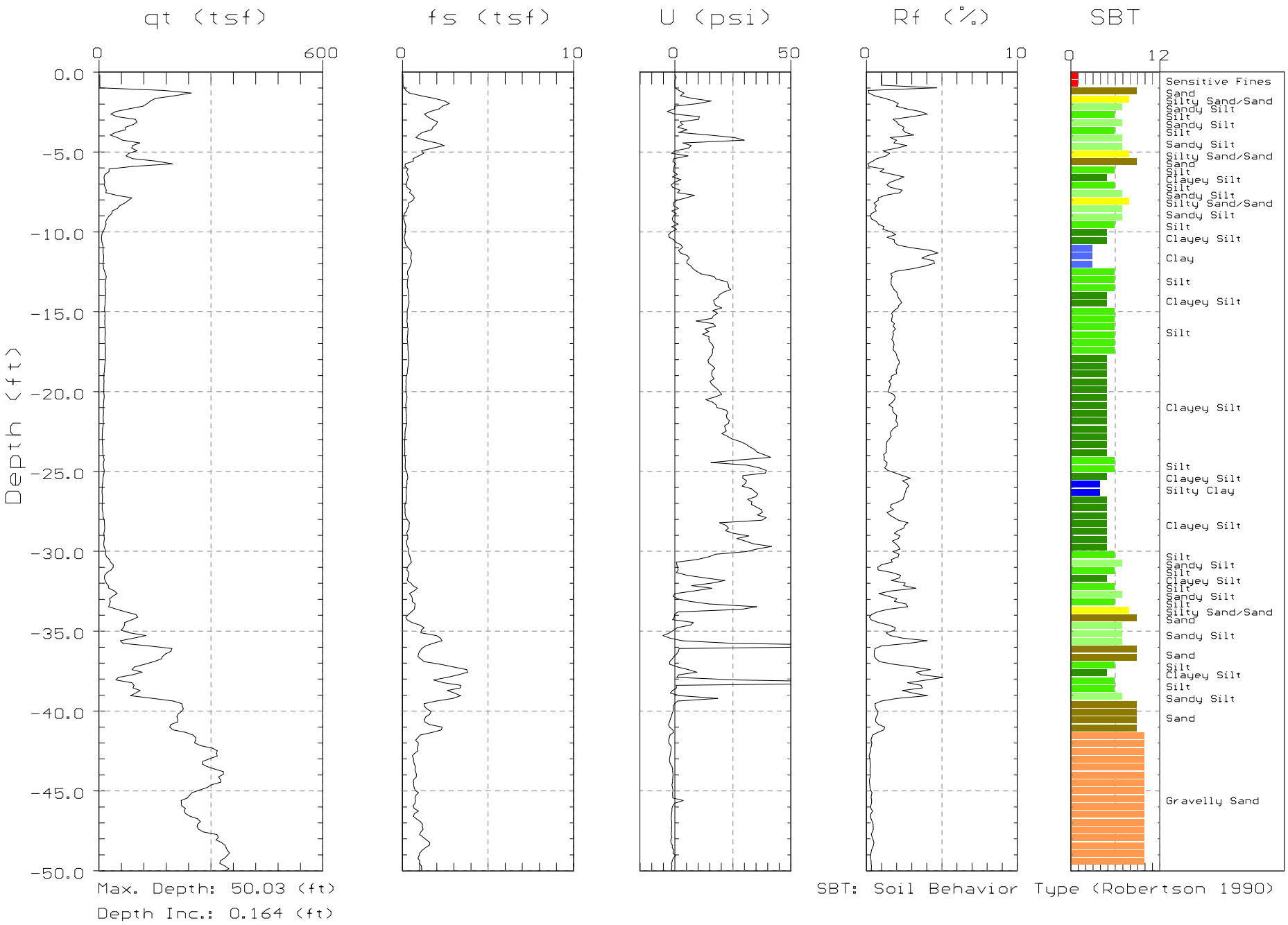
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-21

Engineer: H.RODGERS
Date: 12:16:05 11:44



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

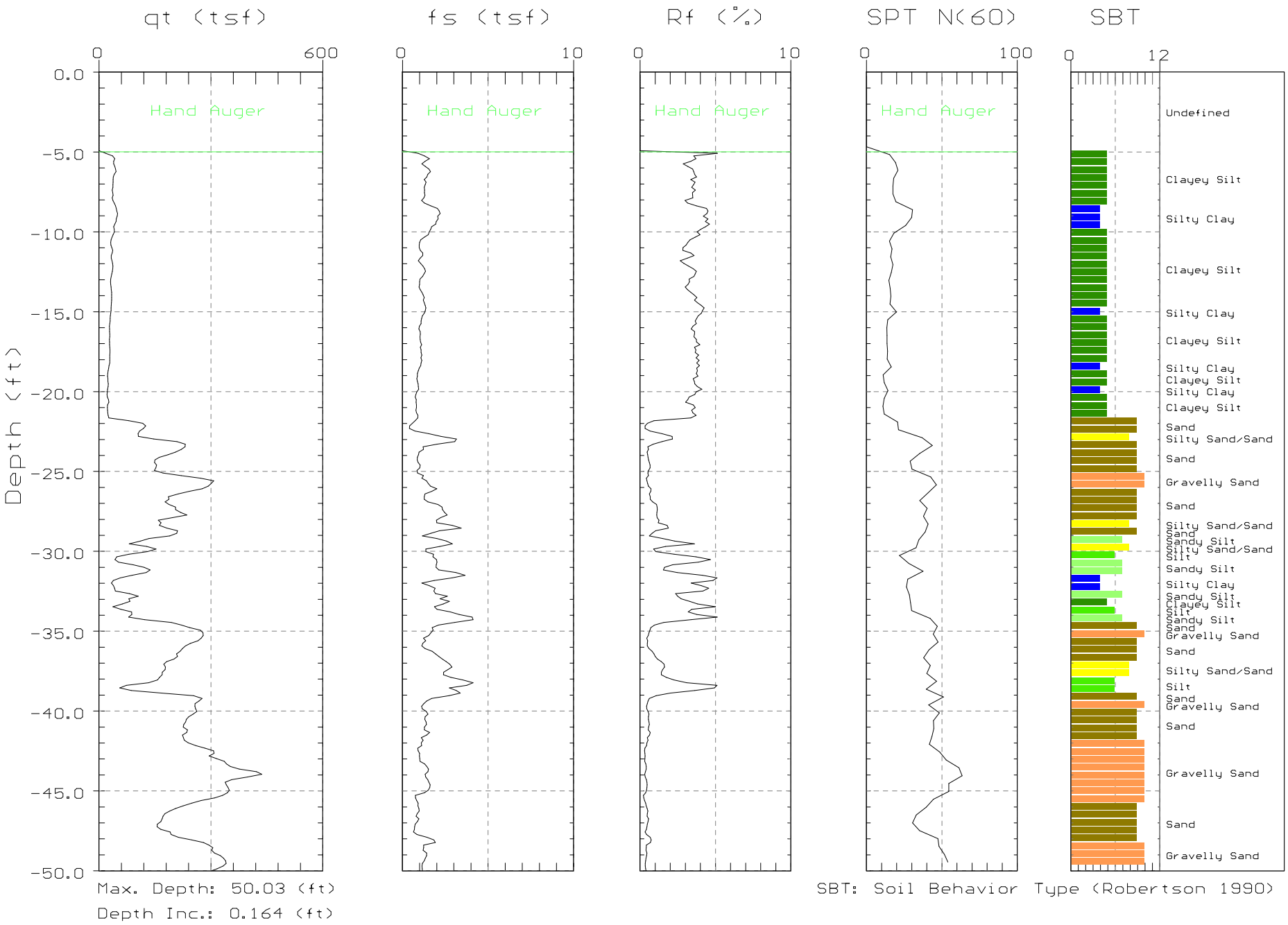
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-22

Engineer: H.RODGERS
Date: 12:16:05 13:10



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

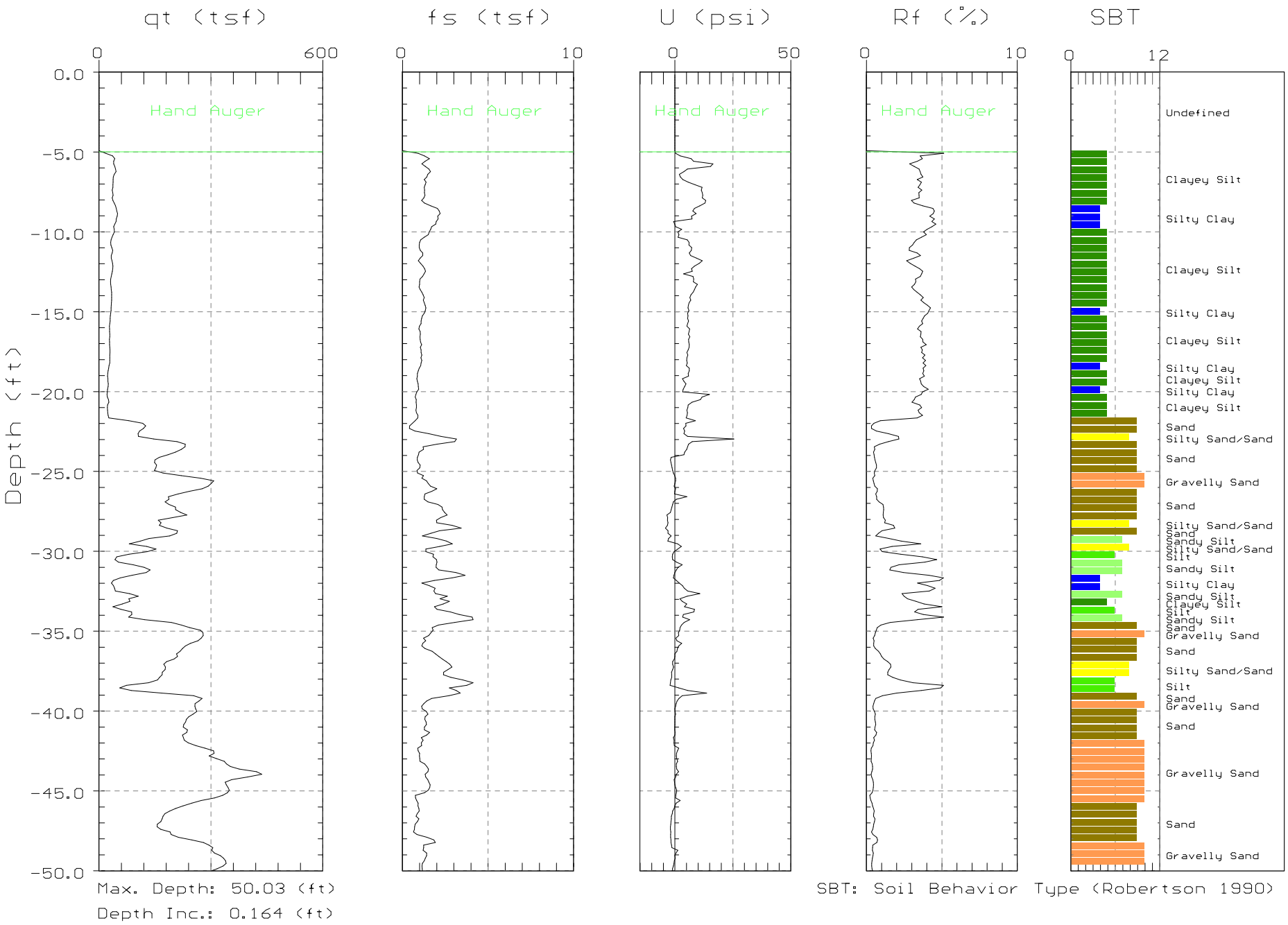
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-22

Engineer: H.RODGERS
Date: 12:16:05 13:10



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

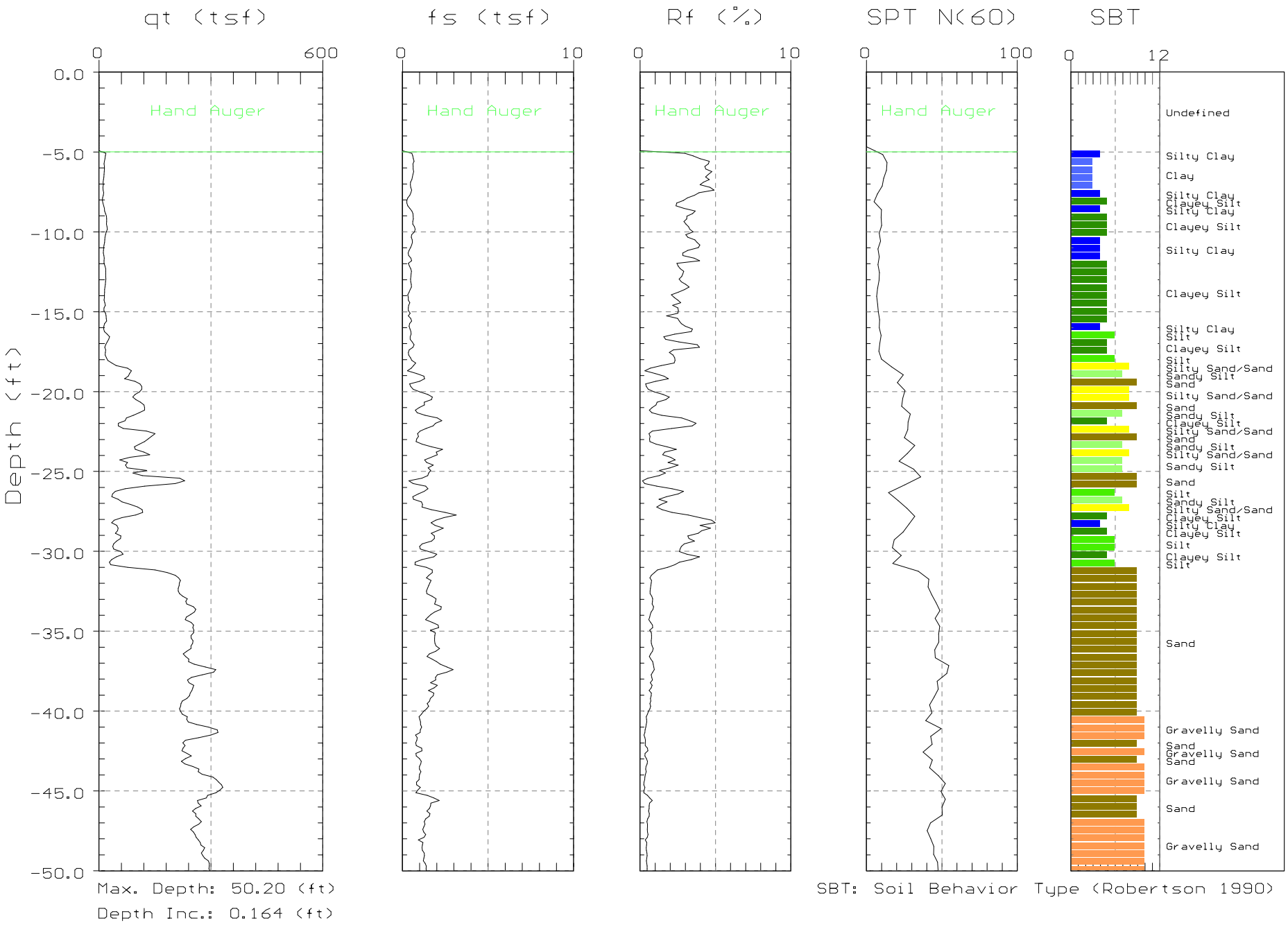
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-23

Engineer: H.RODGERS
Date: 12:16:05 14:25



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

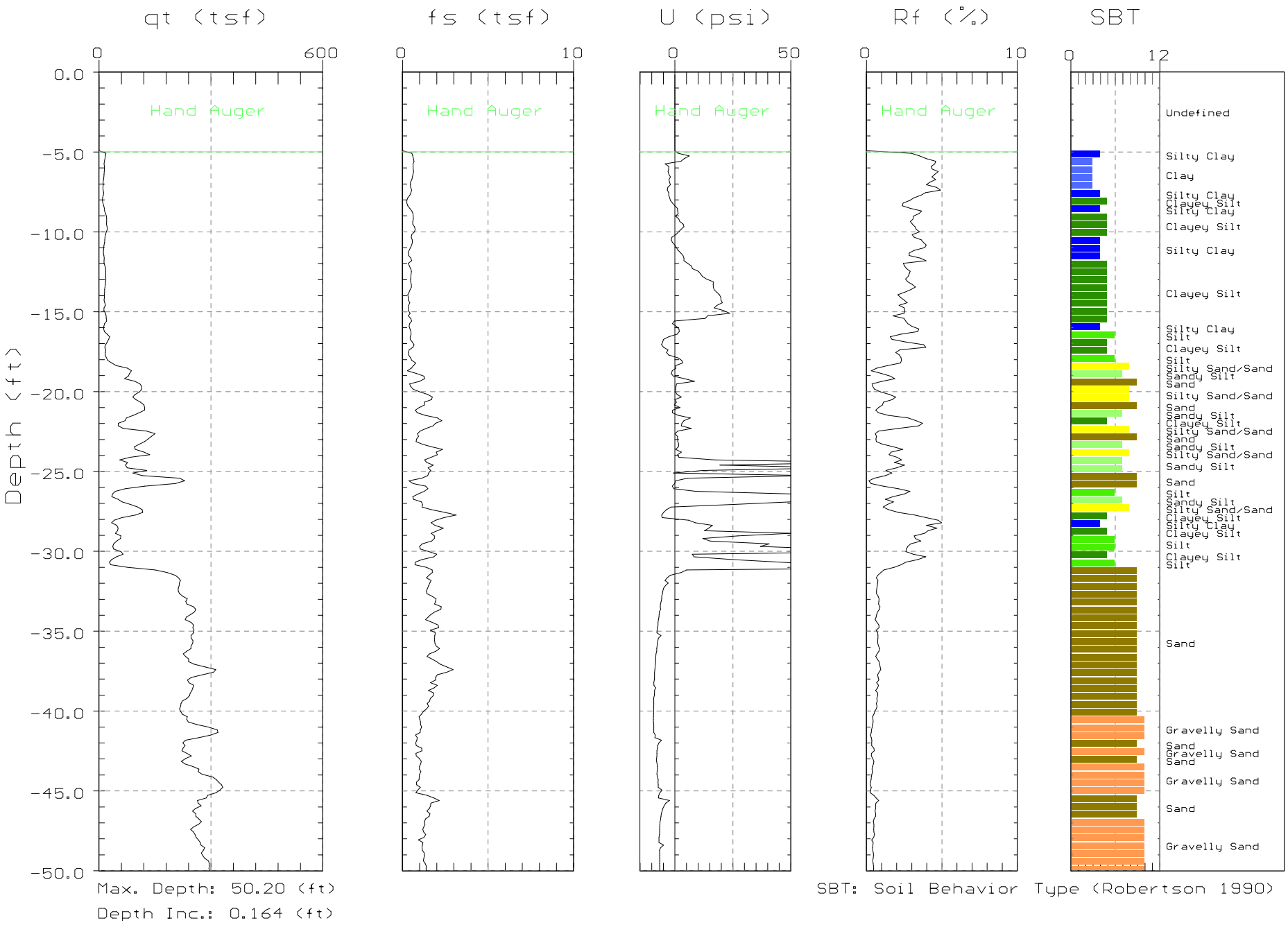
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-23

Engineer: H.RODGERS
Date: 12:16:05 14:25



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

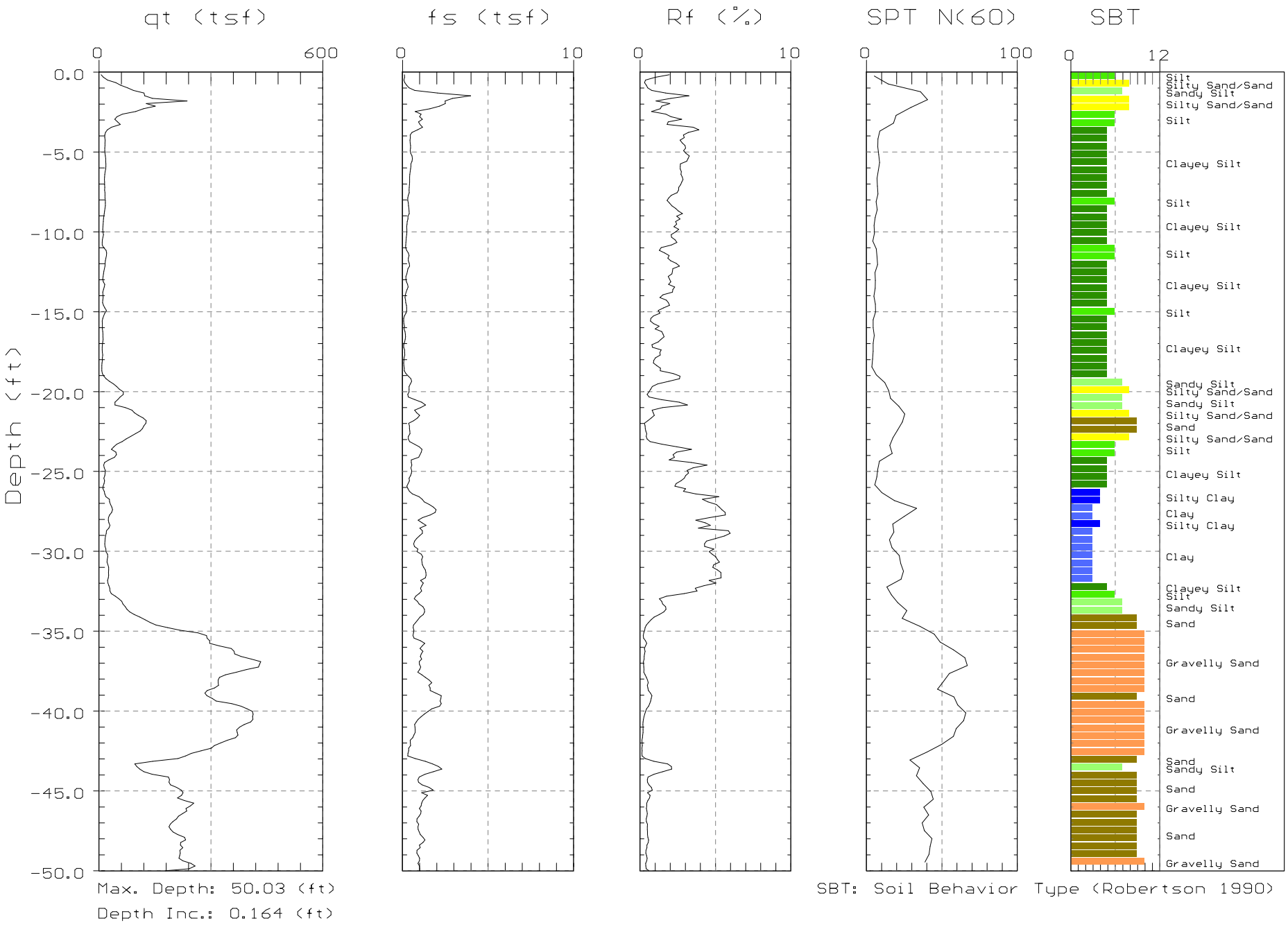
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-24

Engineer: H.RODGERS
Date: 12:16:05 15:03



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

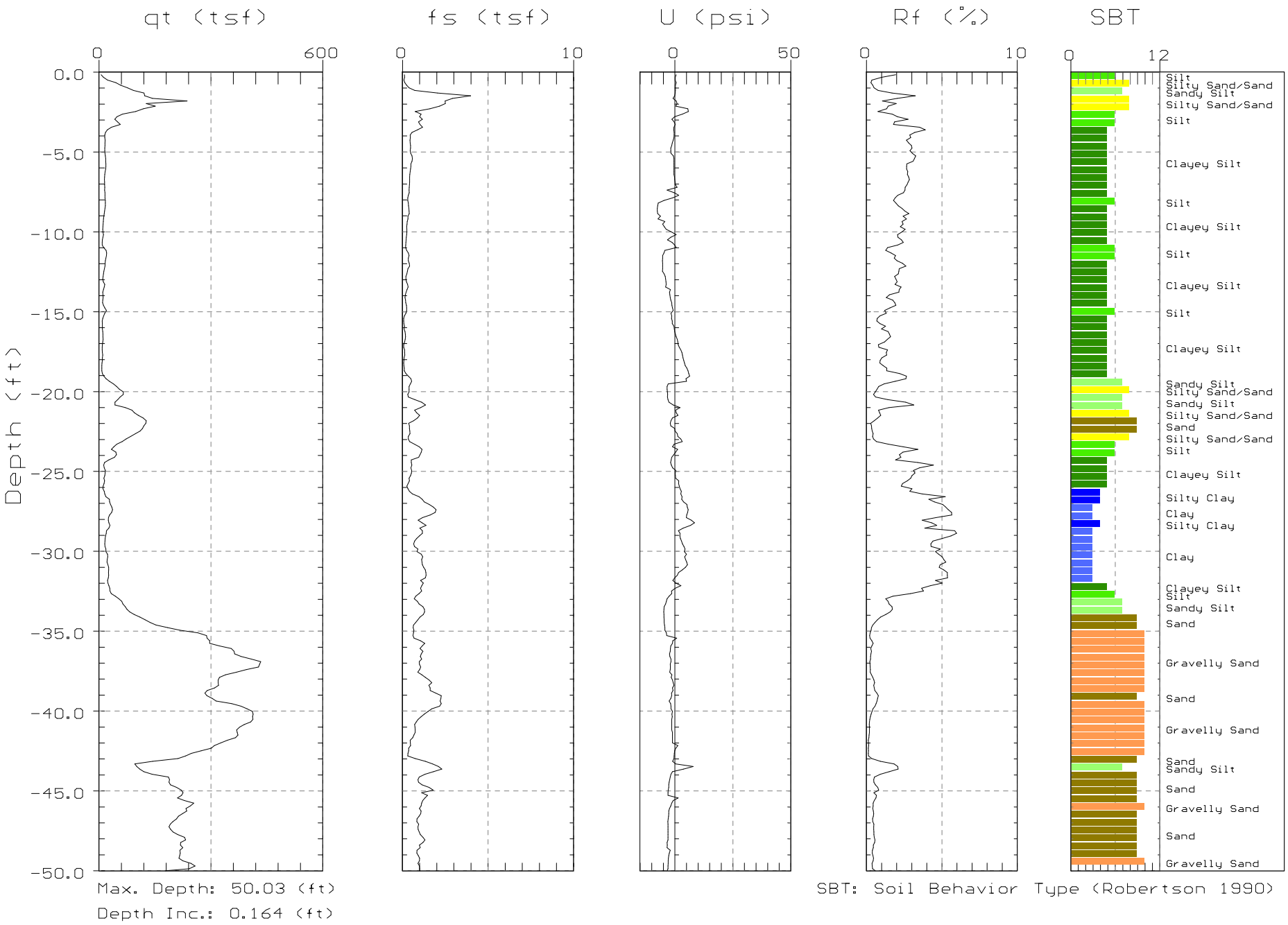
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-24

Engineer: H.RODGERS
Date: 12:16:05 15:03



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

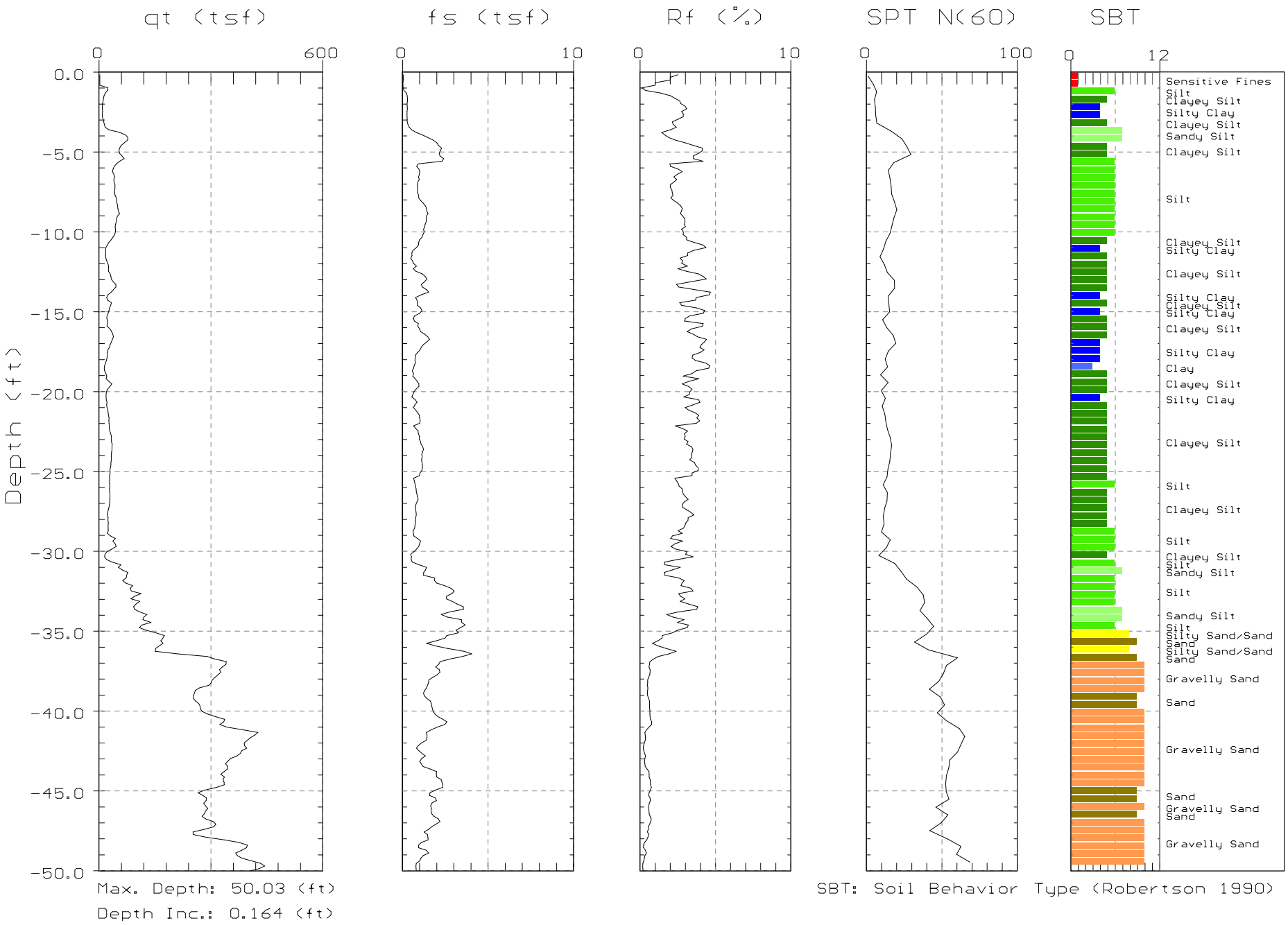
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-25

Engineer: H.RODGERS
Date: 12:16:05 16:59



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

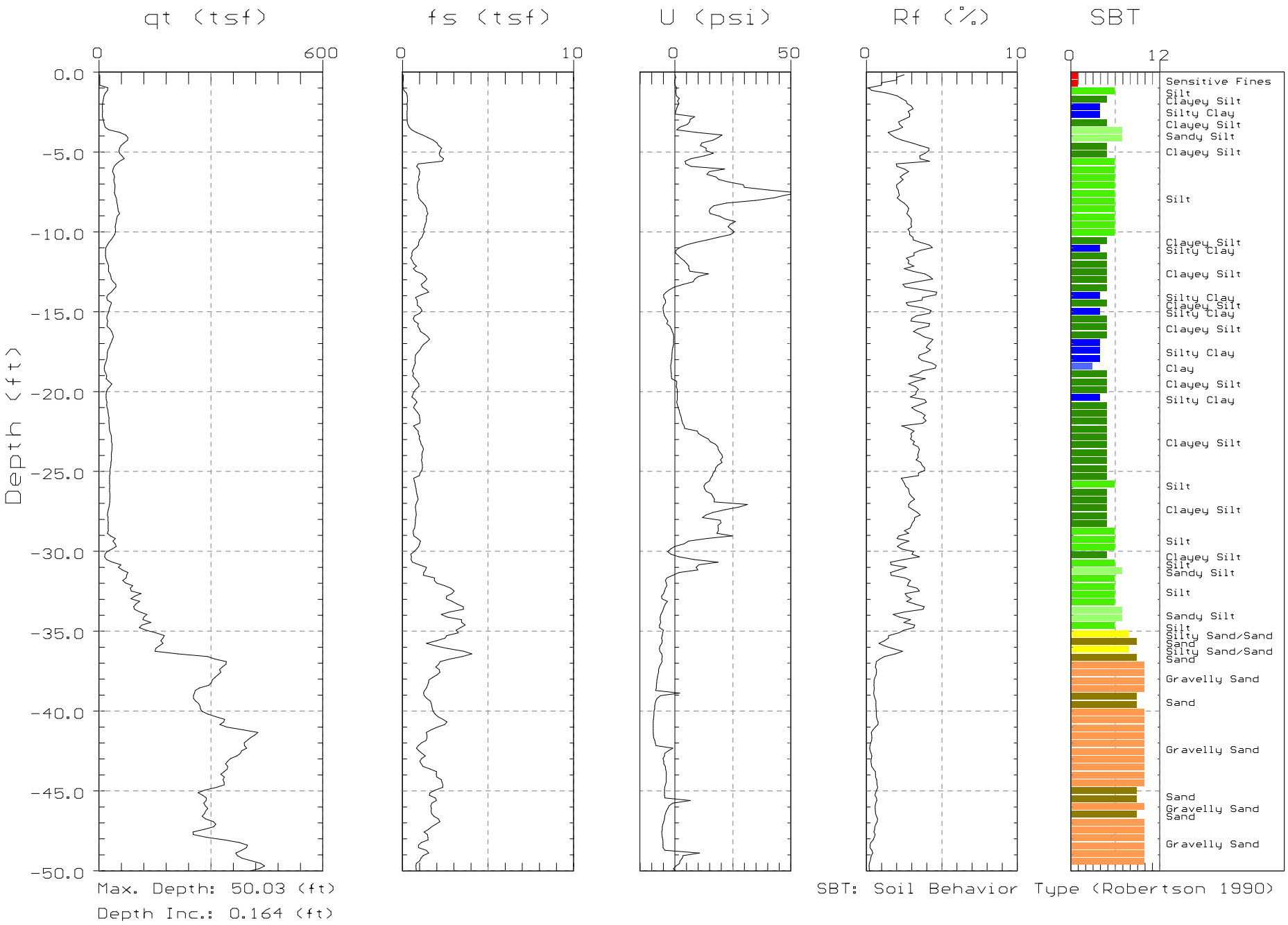
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-25

Engineer: H.RODGERS
Date: 12:16:05 16:59



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

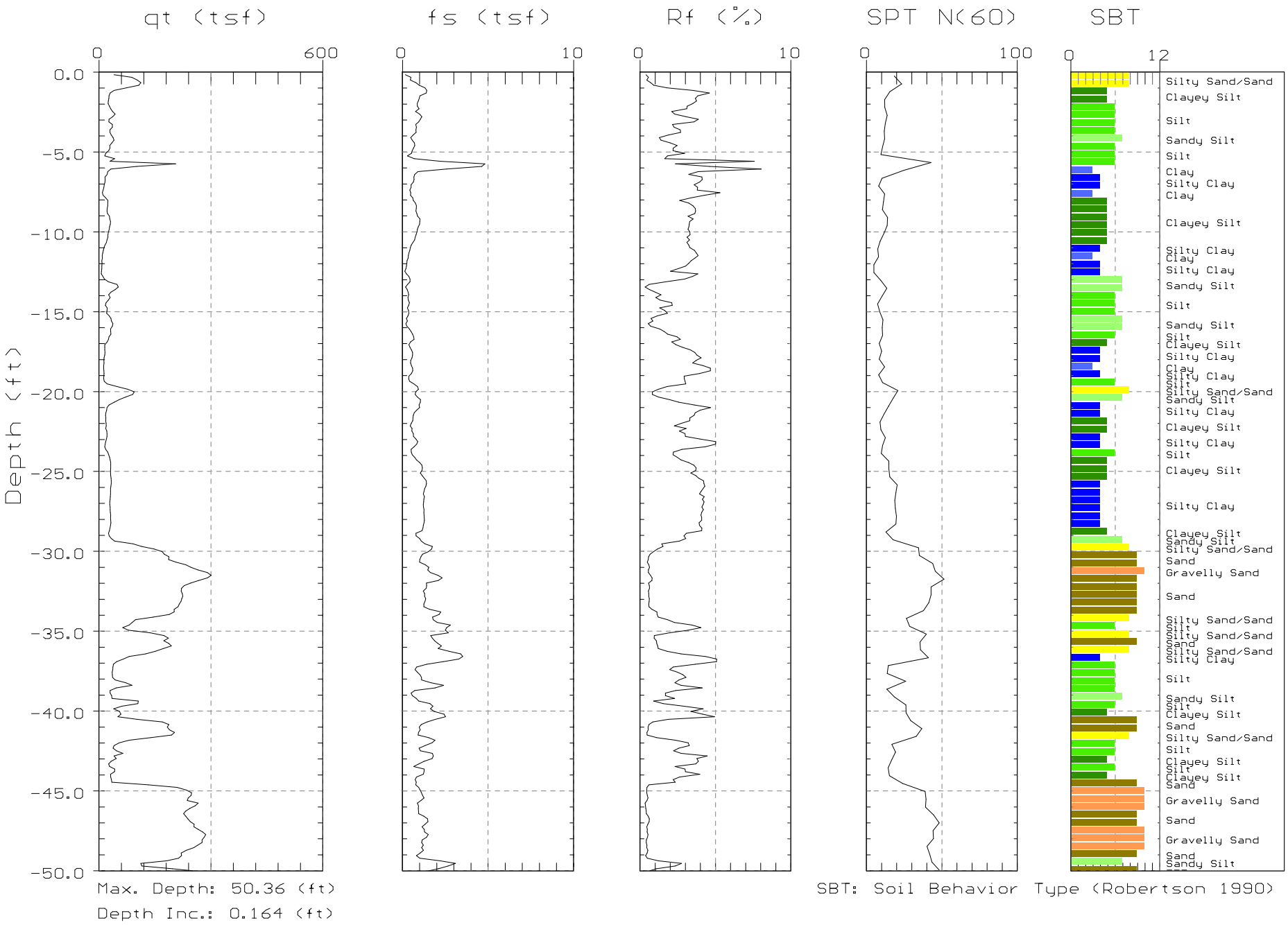
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-26

Engineer: H.RODGERS
Date: 12:16:05 17:56



Max. Depth: 50.36 (ft)
Depth Inc.: 0.164 (ft)

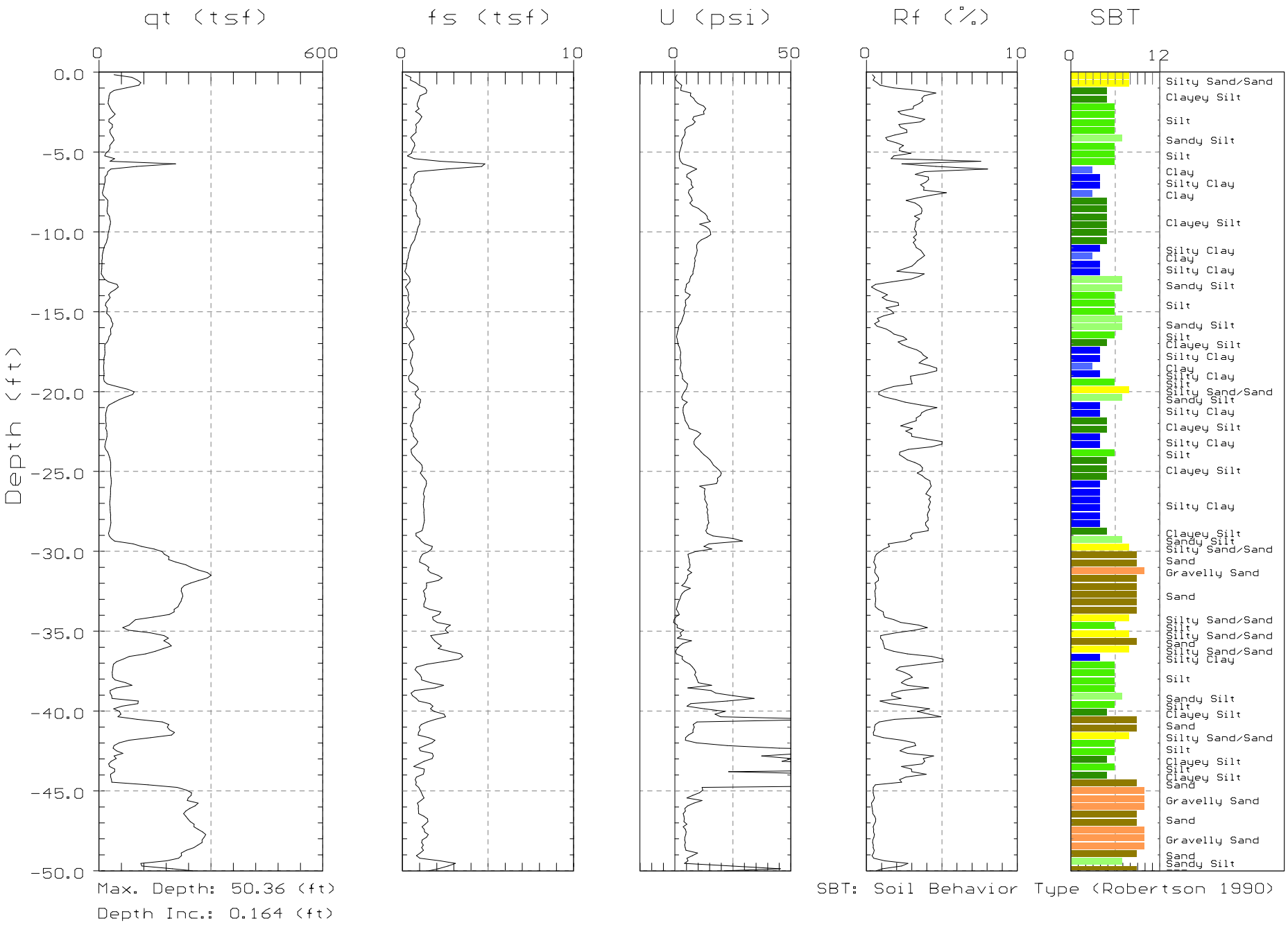
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-26

Engineer: H.RODGERS
Date: 12:16:05 17:56



Max. Depth: 50.36 (ft)
Depth Inc.: 0.164 (ft)

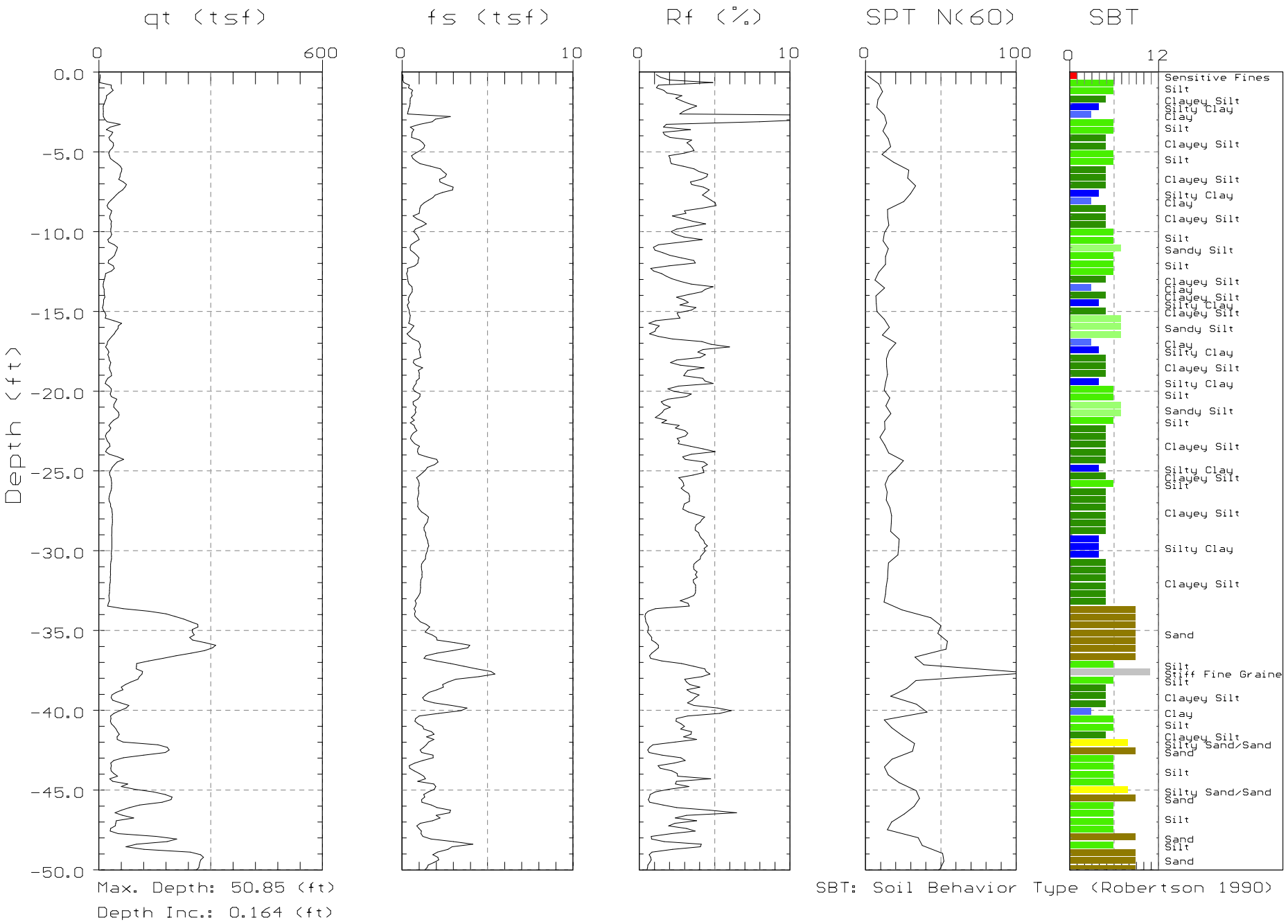
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-27

Engineer: H.RODGERS
Date: 12:16:05 18:38



Max. Depth: 50.85 (ft)
Depth Inc.: 0.164 (ft)

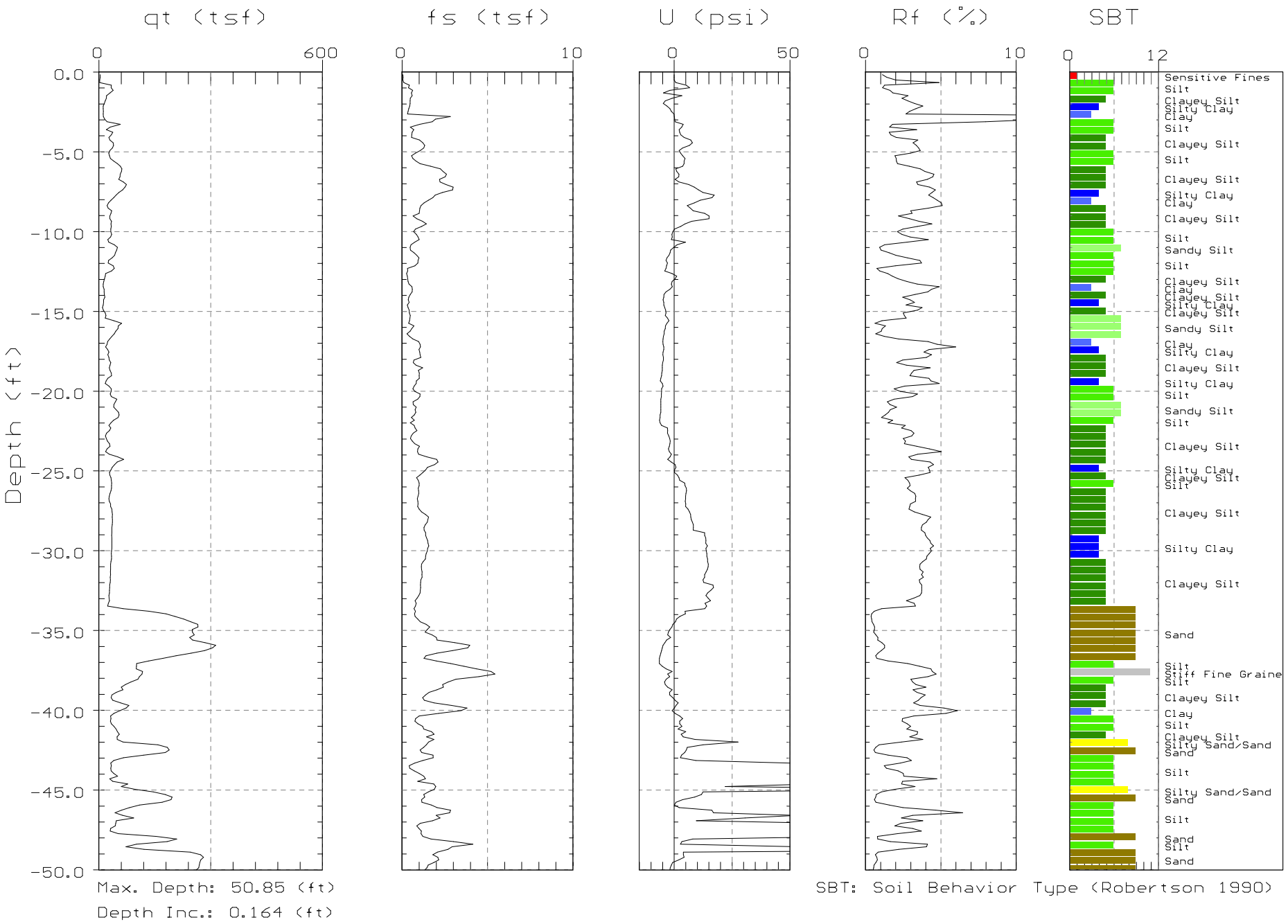
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-27

Engineer: H.RODGERS
Date: 12:16:05 18:38



Max. Depth: 50.85 (ft)
Depth Inc.: 0.164 (ft)

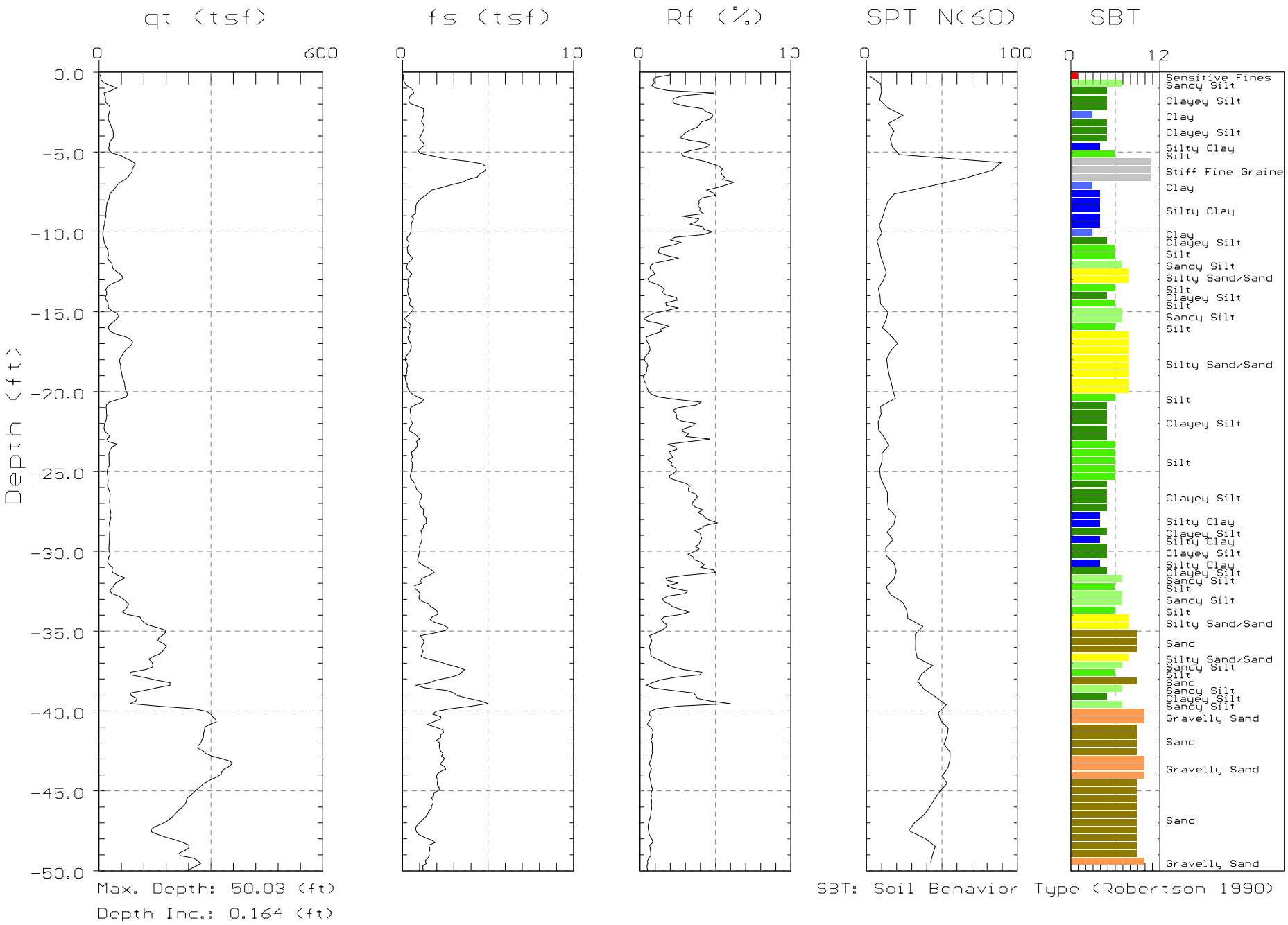
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-28

Engineer: H.RODGERS
Date: 12:16:05 19:16



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

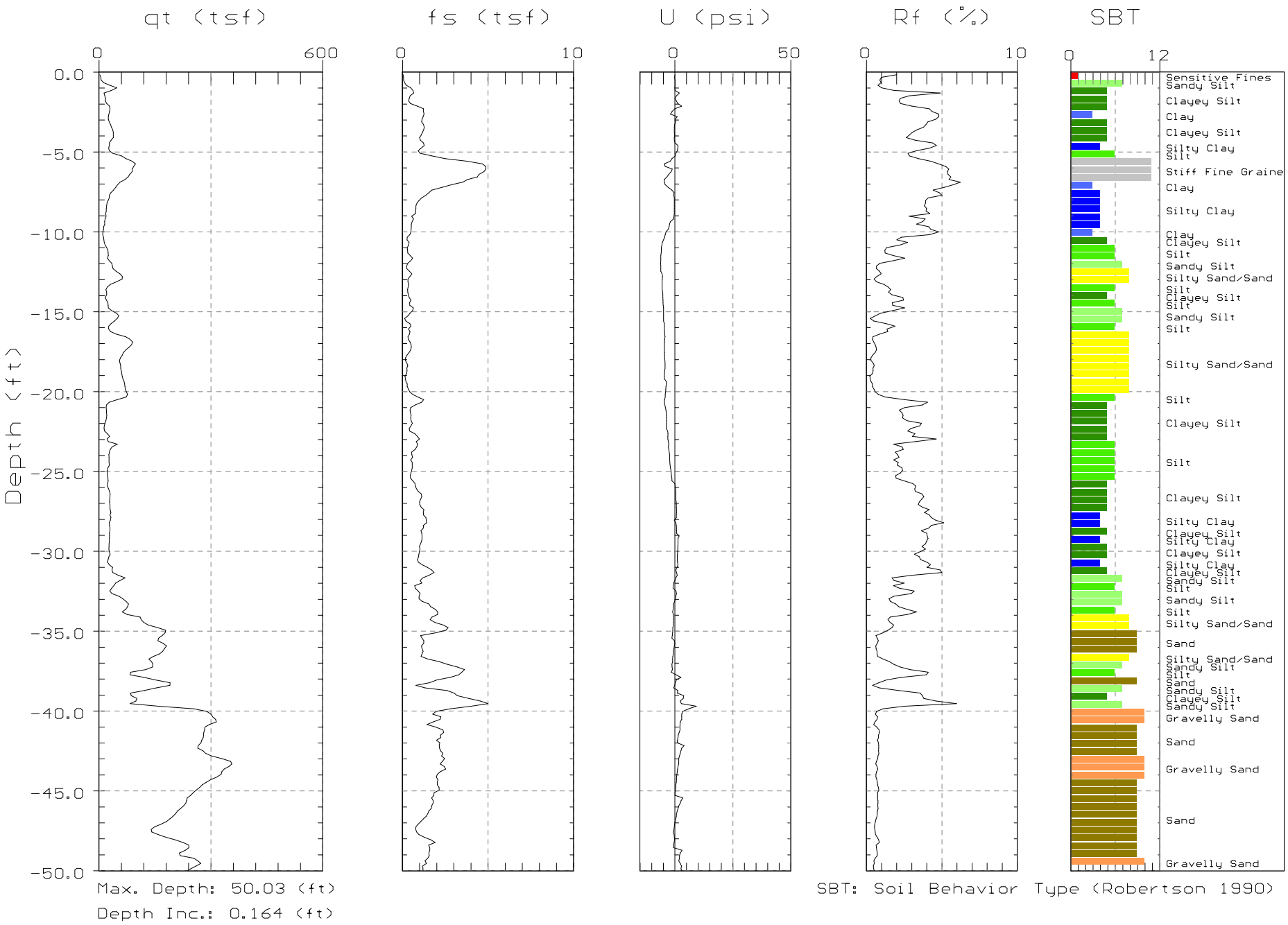
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-28

Engineer: H.RODGERS
Date: 12:16:05 19:16



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

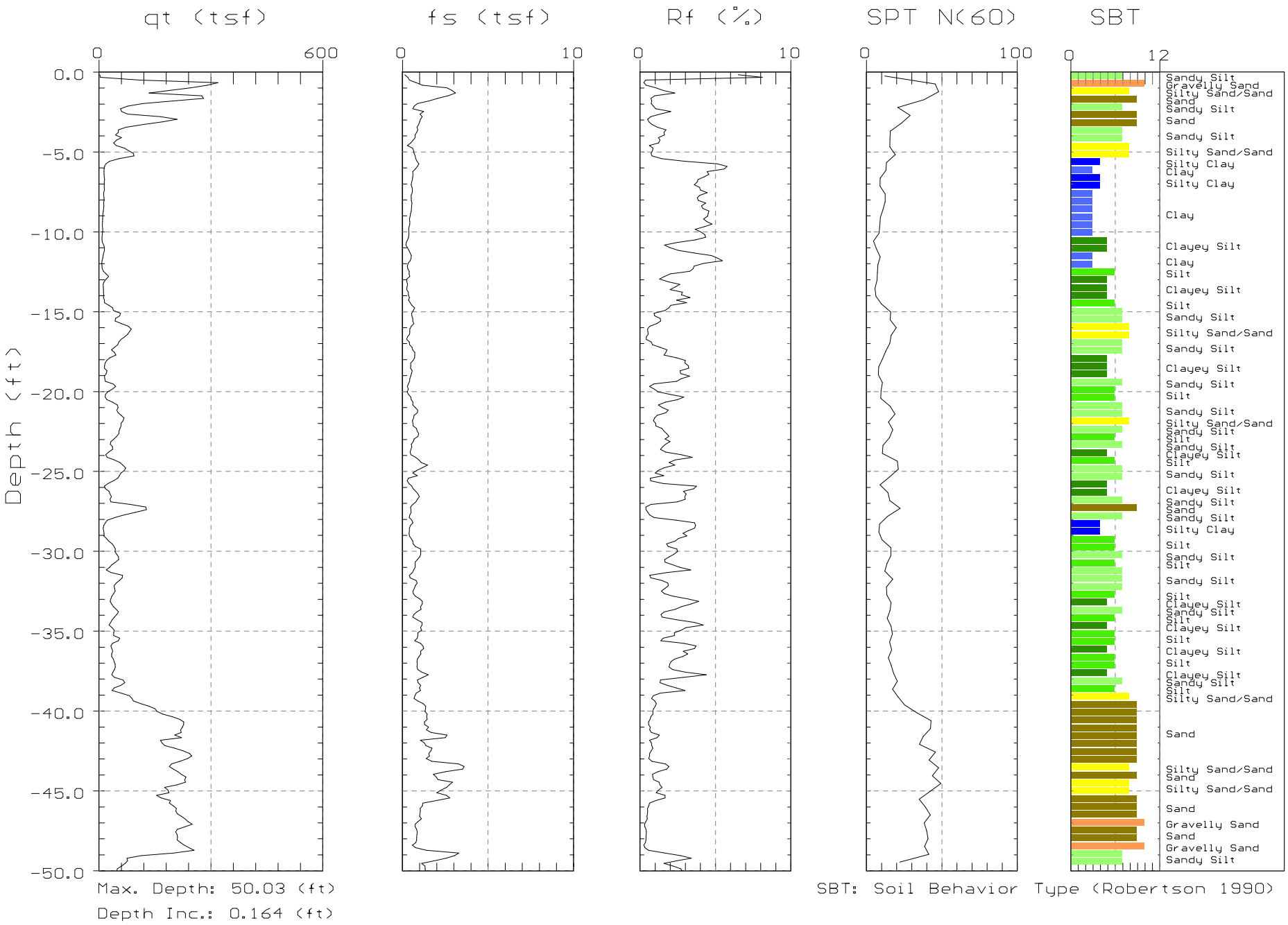
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-29

Engineer: H.RODGERS
Date: 12:19:05 04:30



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

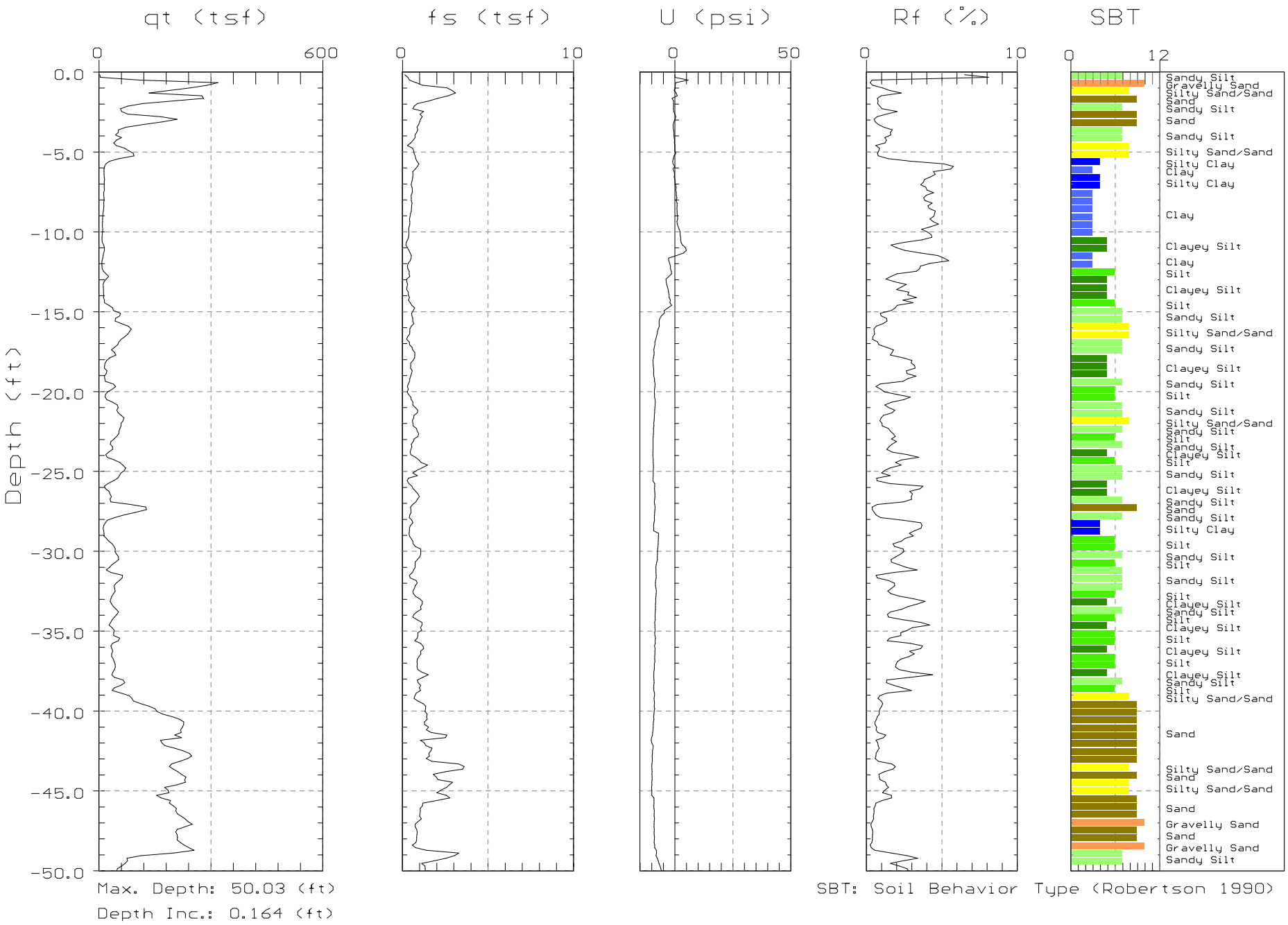
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-29

Engineer: H.RODGERS
Date: 12:19:05 04:30



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

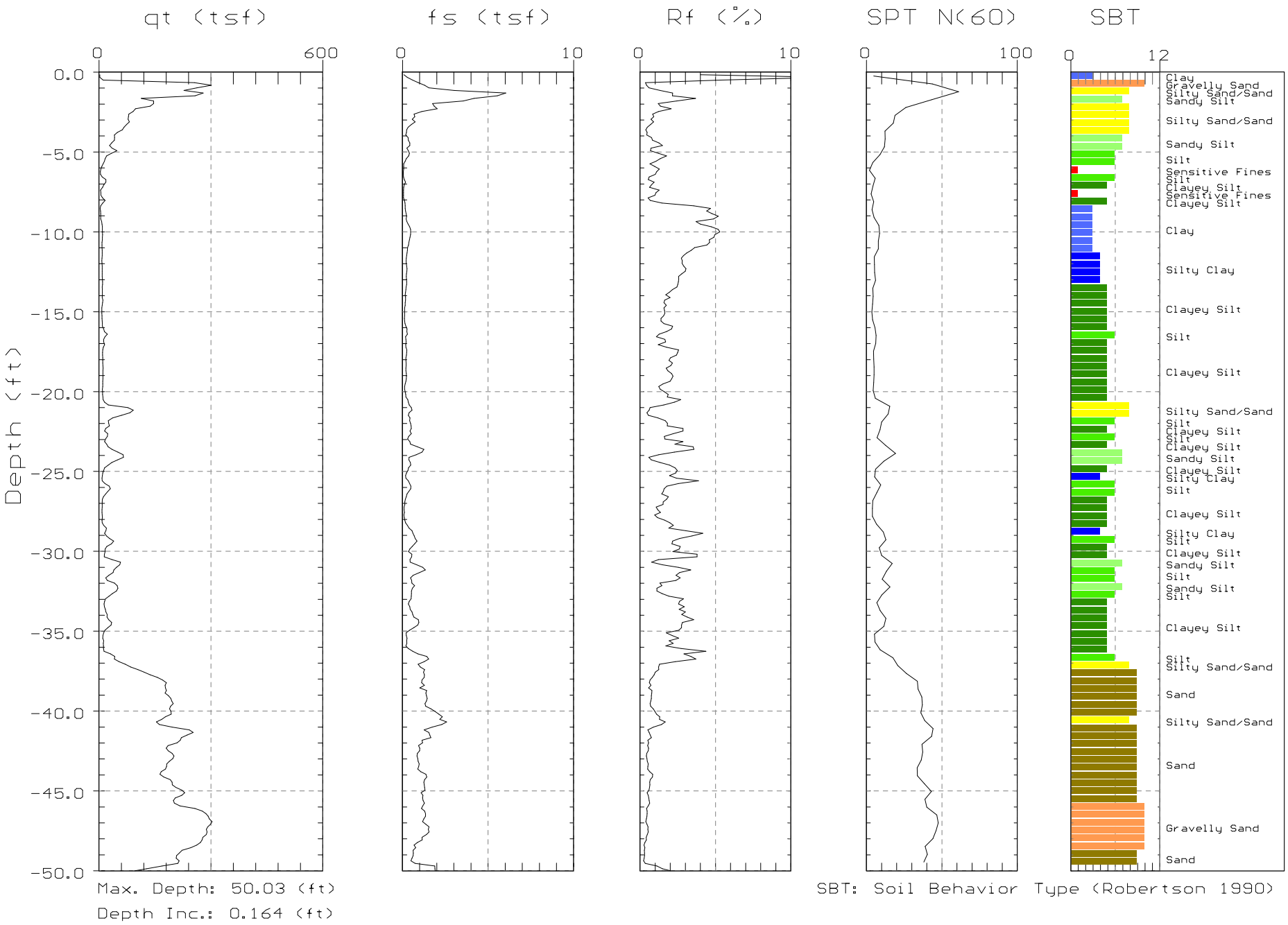
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-30

Engineer: H.RODGERS
Date: 12:19:05 05:20



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

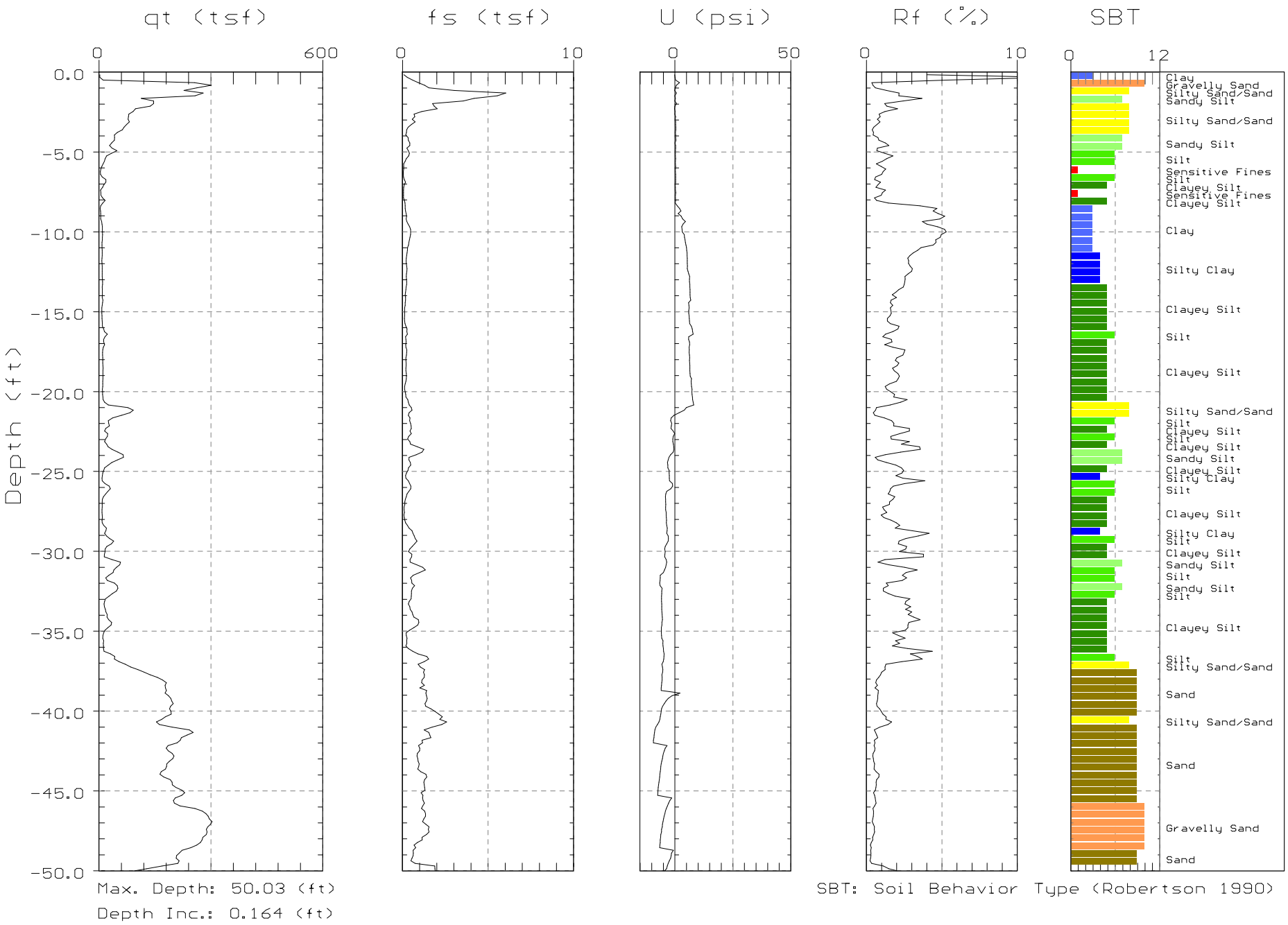
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-30

Engineer: H.RODGERS
Date: 12:19:05 05:20



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

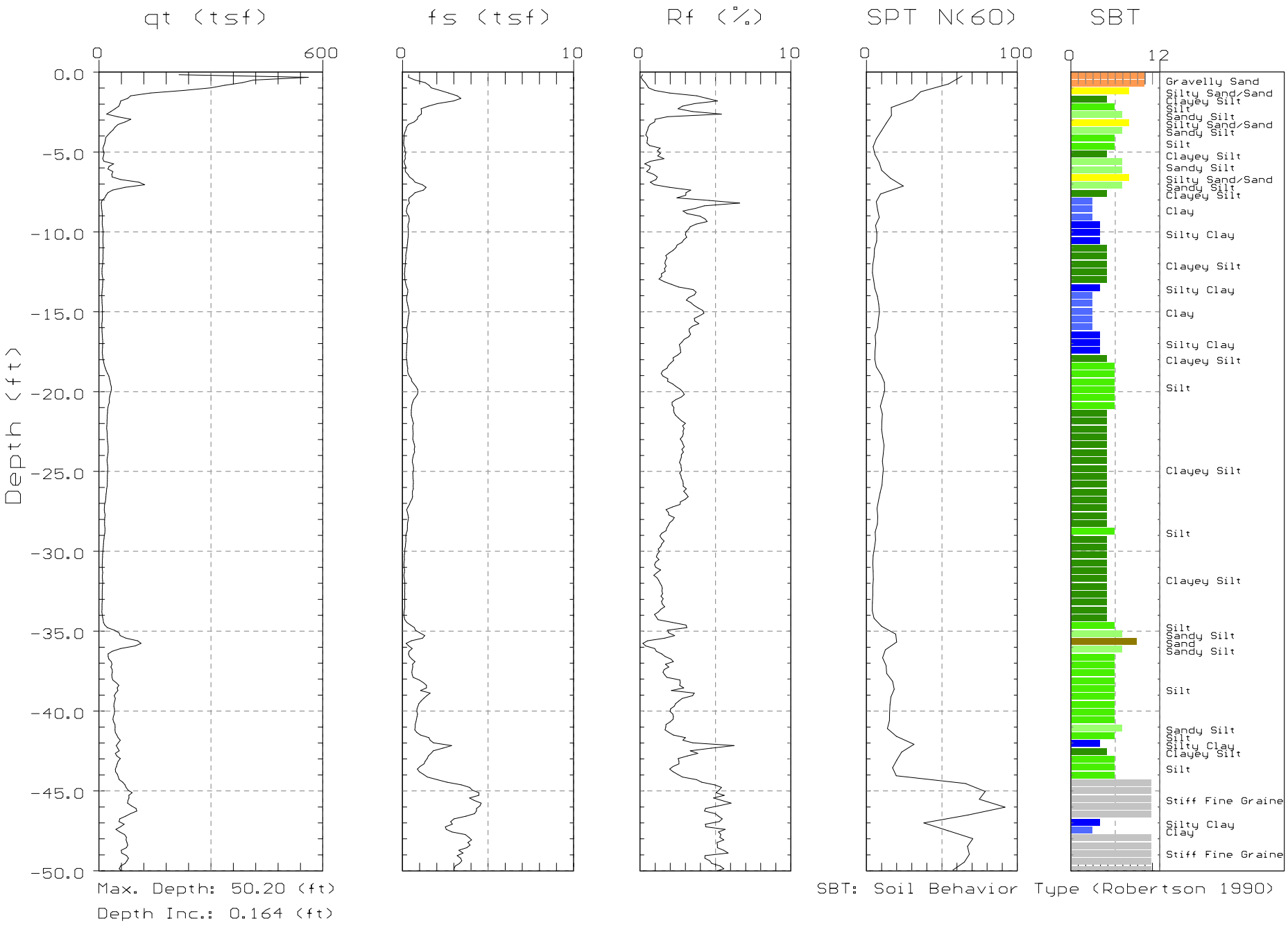
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-31

Engineer: H.RODGERS
Date: 12:19:05 06:45



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

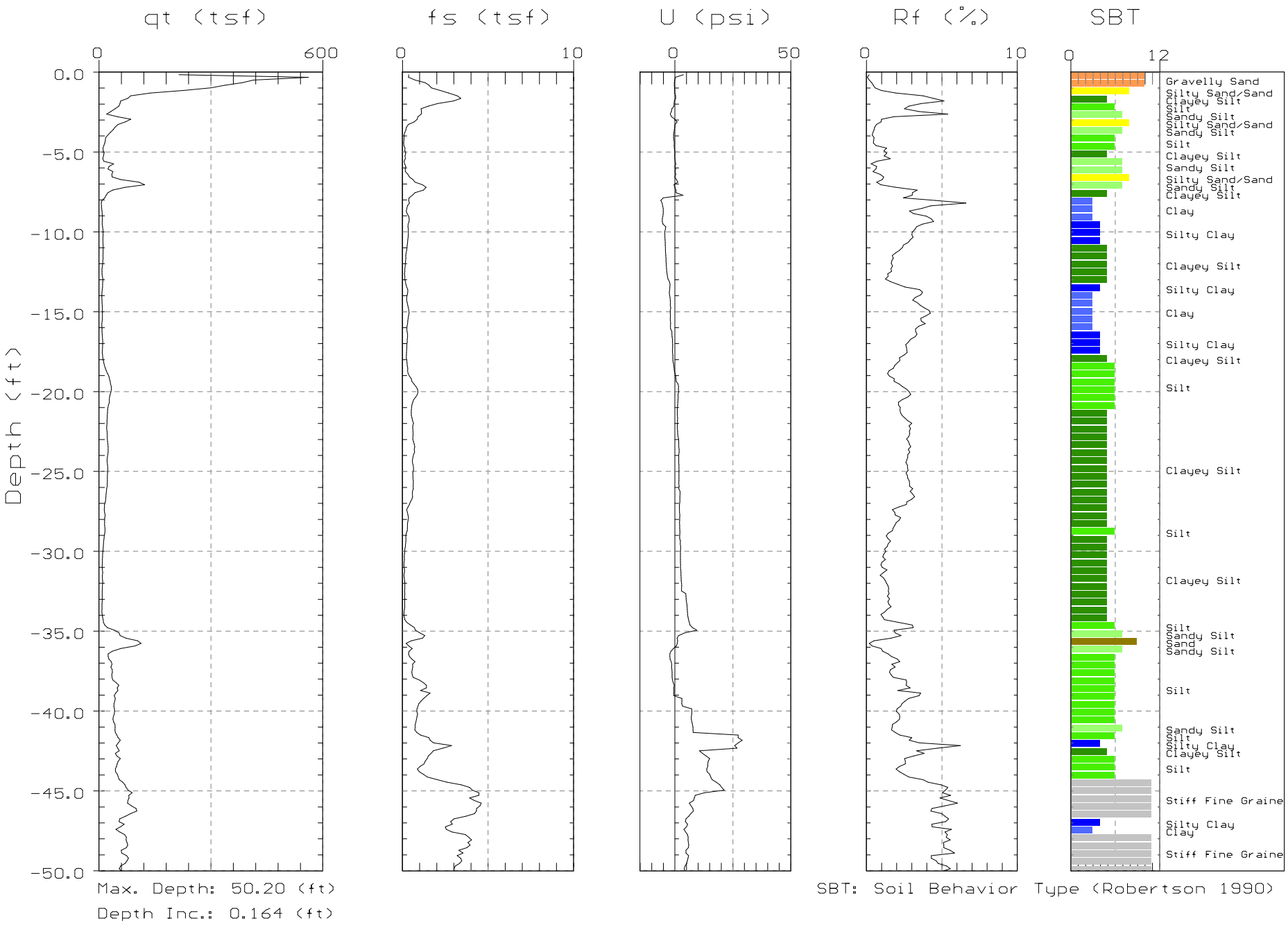
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-31

Engineer: H.RODGERS
Date: 12:19:05 06:45



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

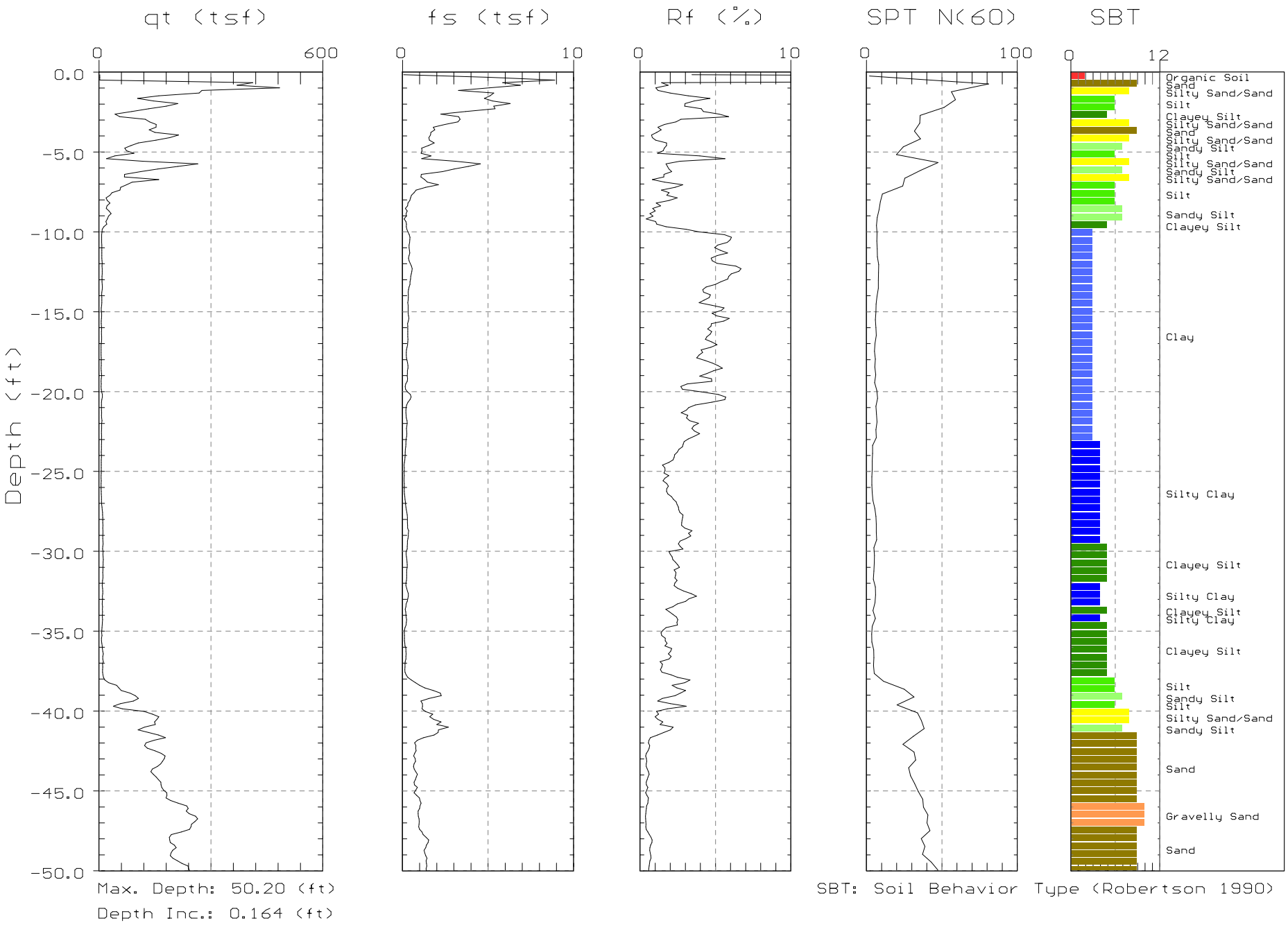
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-32

Engineer: H.RODGERS
Date: 12:19:05 10:13



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

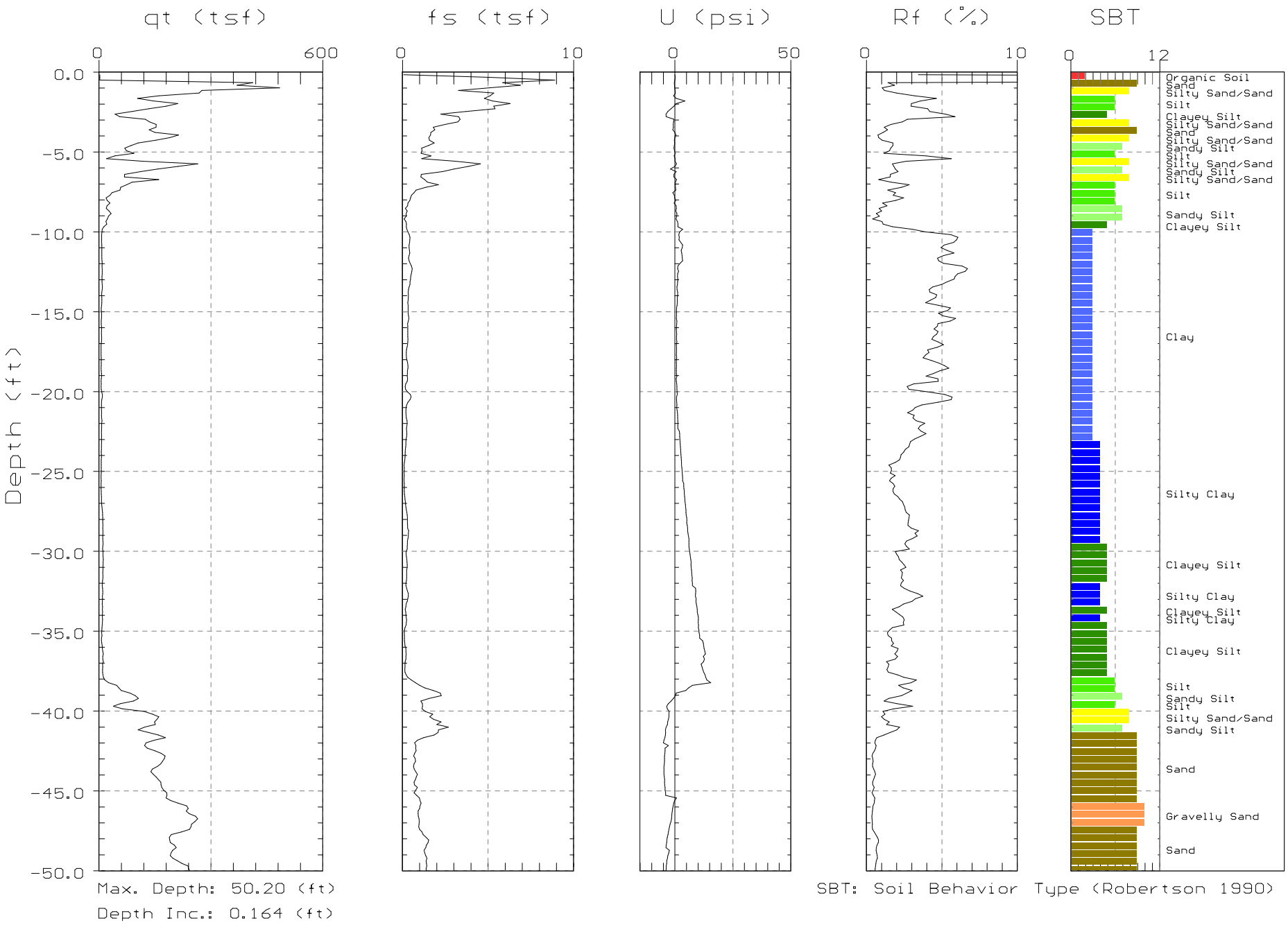
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-32

Engineer: H.RODGERS
Date: 12:19:05 10:13



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

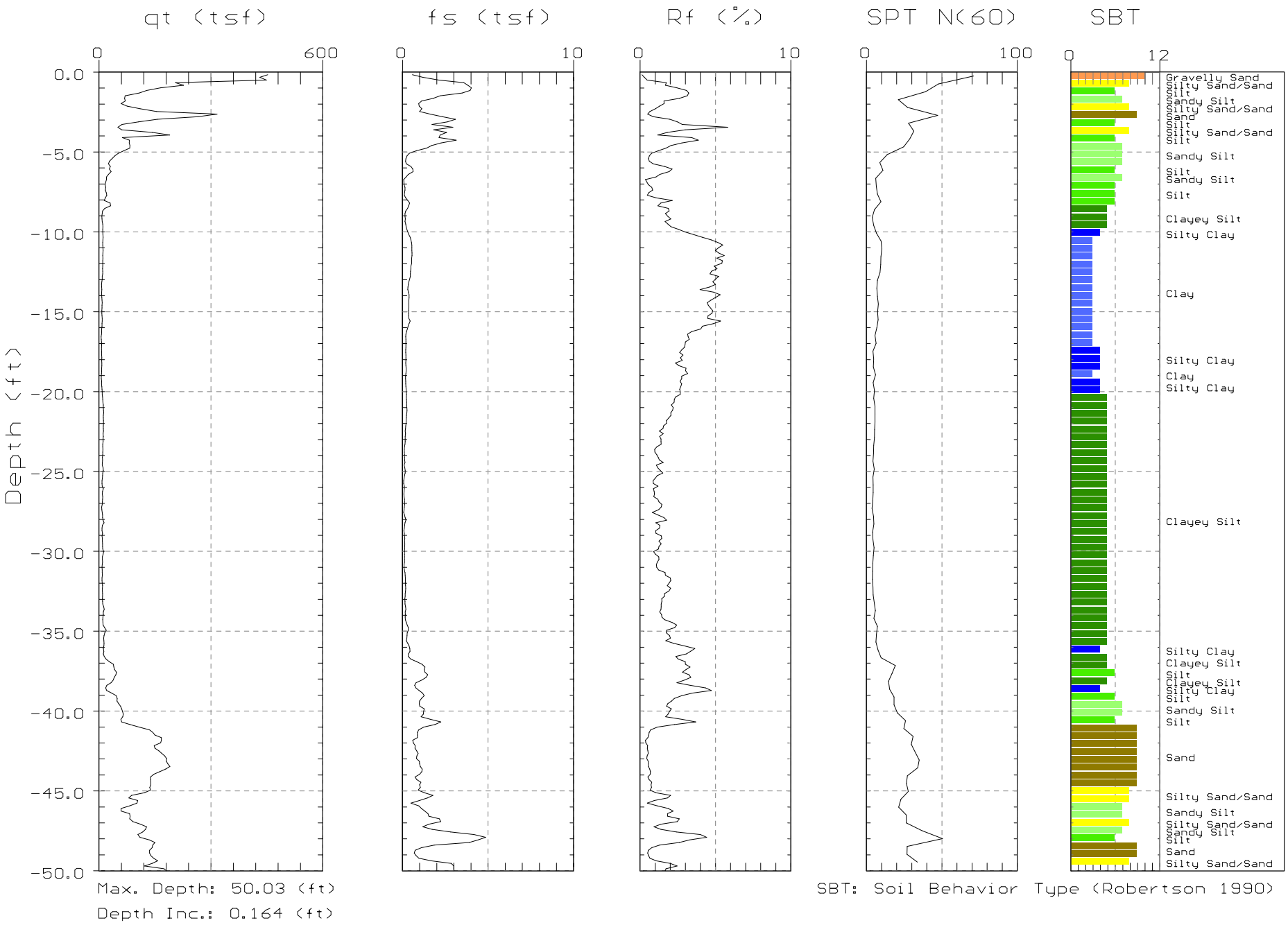
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-33

Engineer: H.RODGERS
Date: 12:19:05 11:00



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

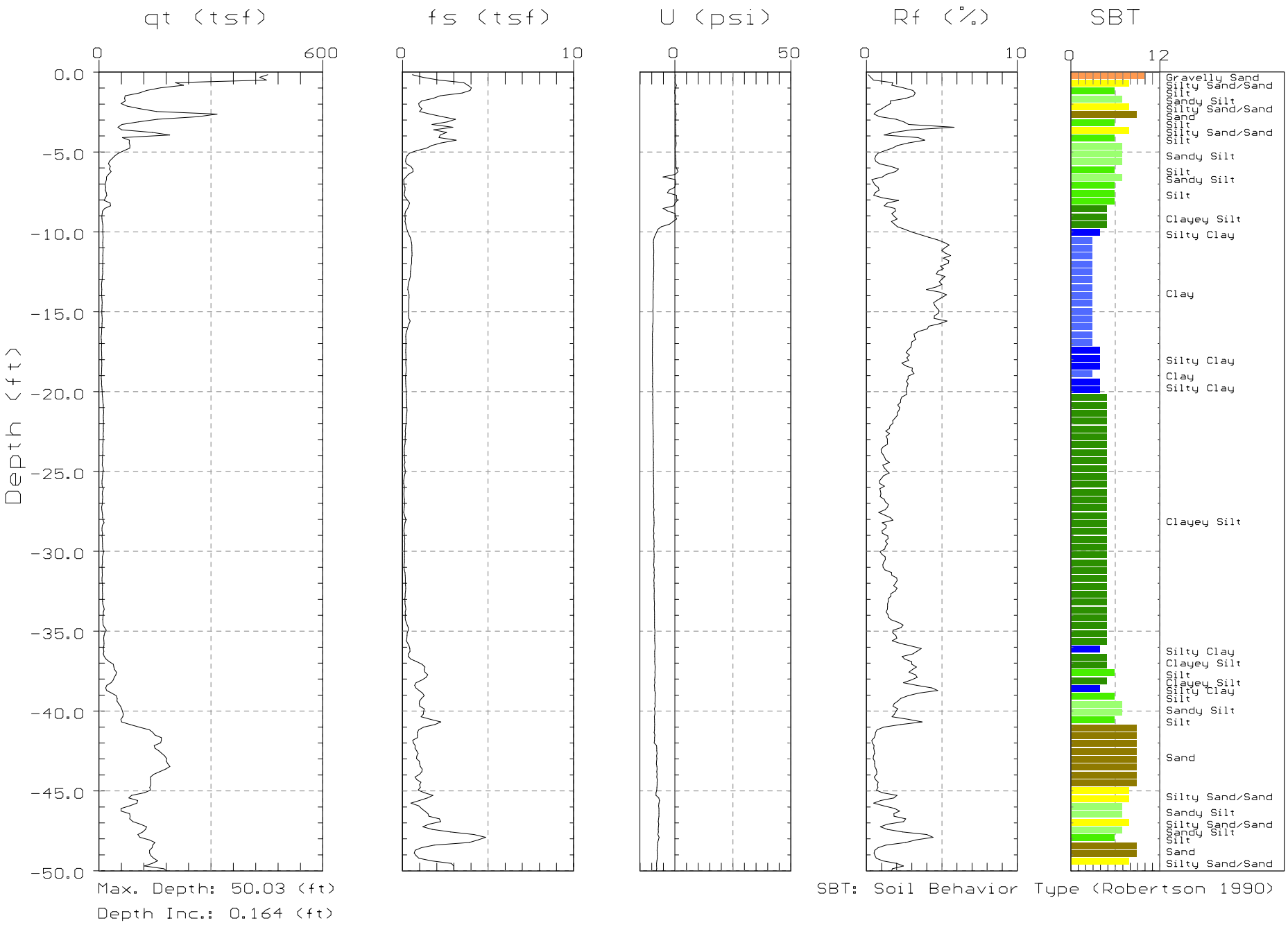
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-33

Engineer: H.RODGERS
Date: 12:19:05 11:00



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

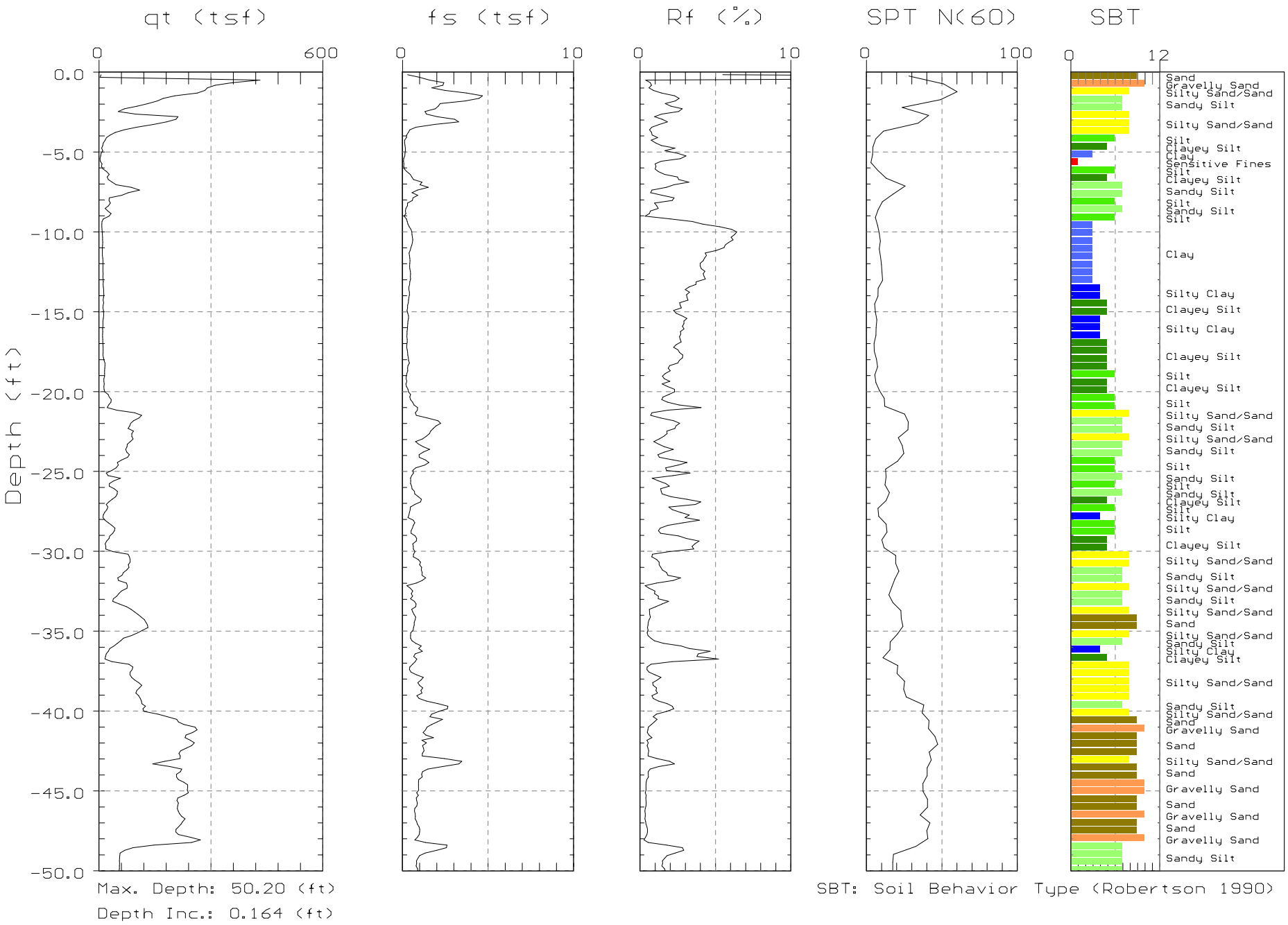
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-34

Engineer: H.RODGERS
Date: 12:19:05 11:51



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

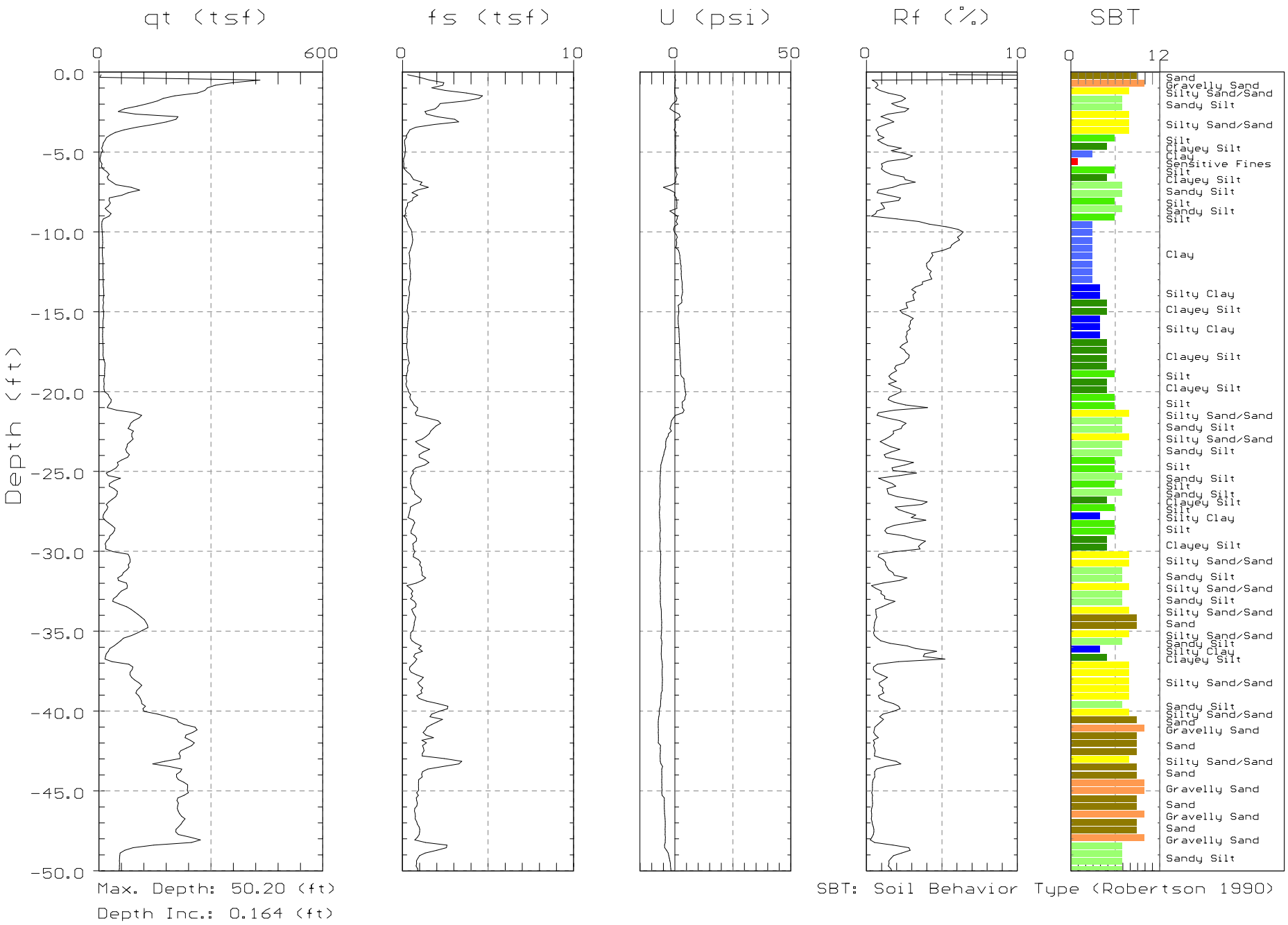
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-34

Engineer: H.RODGERS
Date: 12:19:05 11:51



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

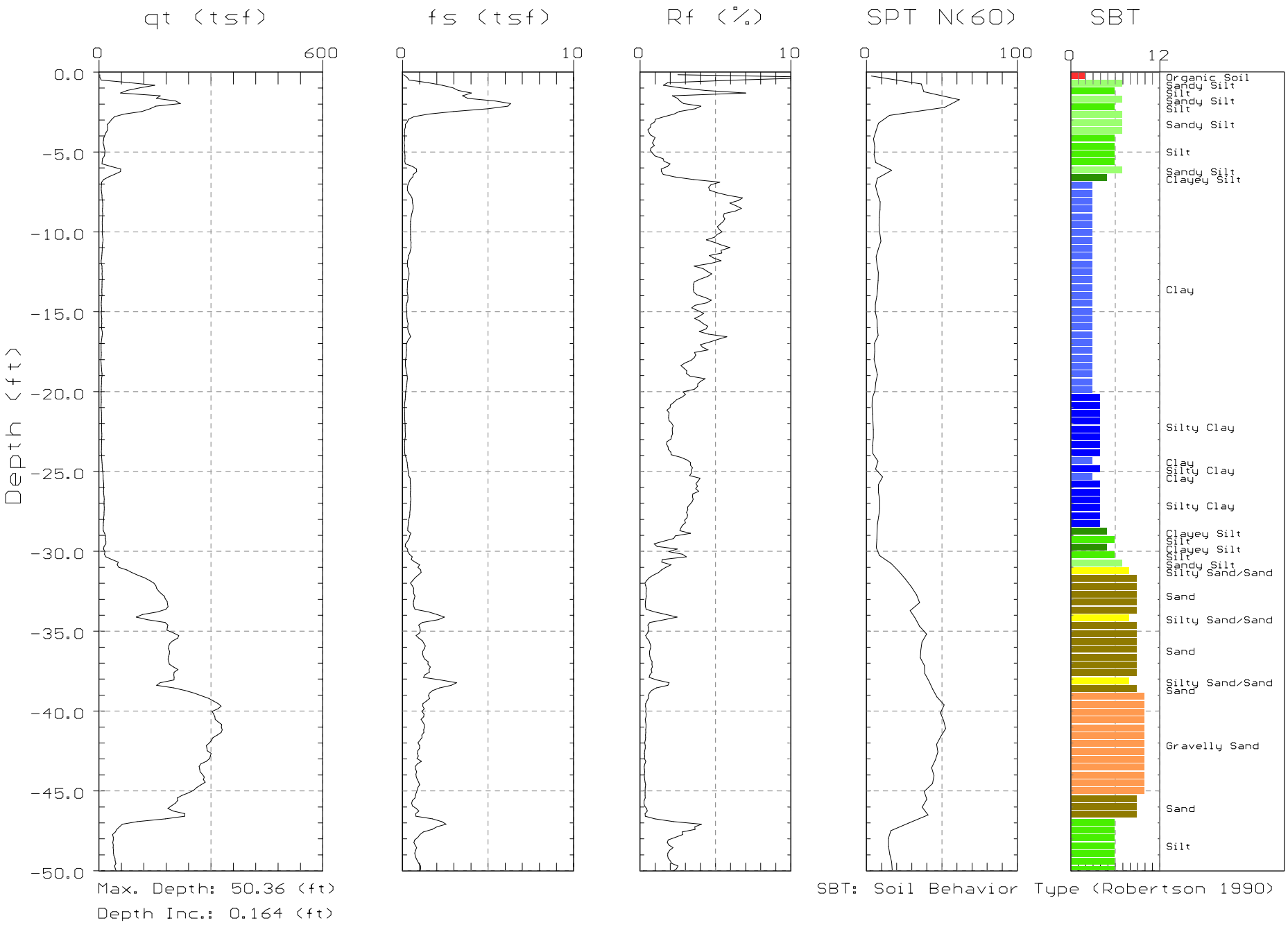
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-35

Engineer: H.RODGERS
Date: 12:20:05 04:04



Max. Depth: 50.36 (ft)
Depth Inc.: 0.164 (ft)

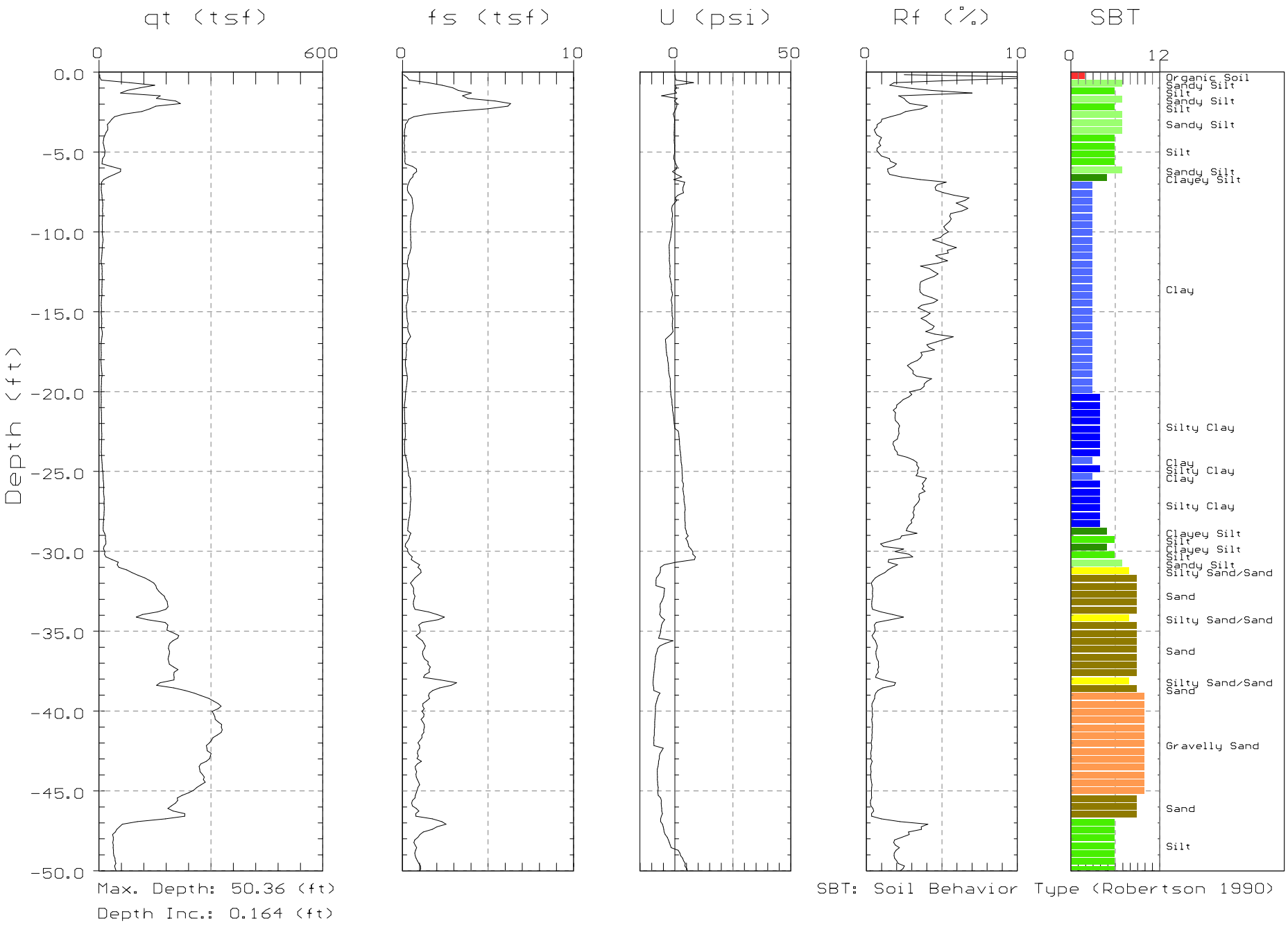
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-35

Engineer: H.RODGERS
Date: 12:20:05 04:04



Max. Depth: 50.36 (ft)
Depth Inc.: 0.164 (ft)

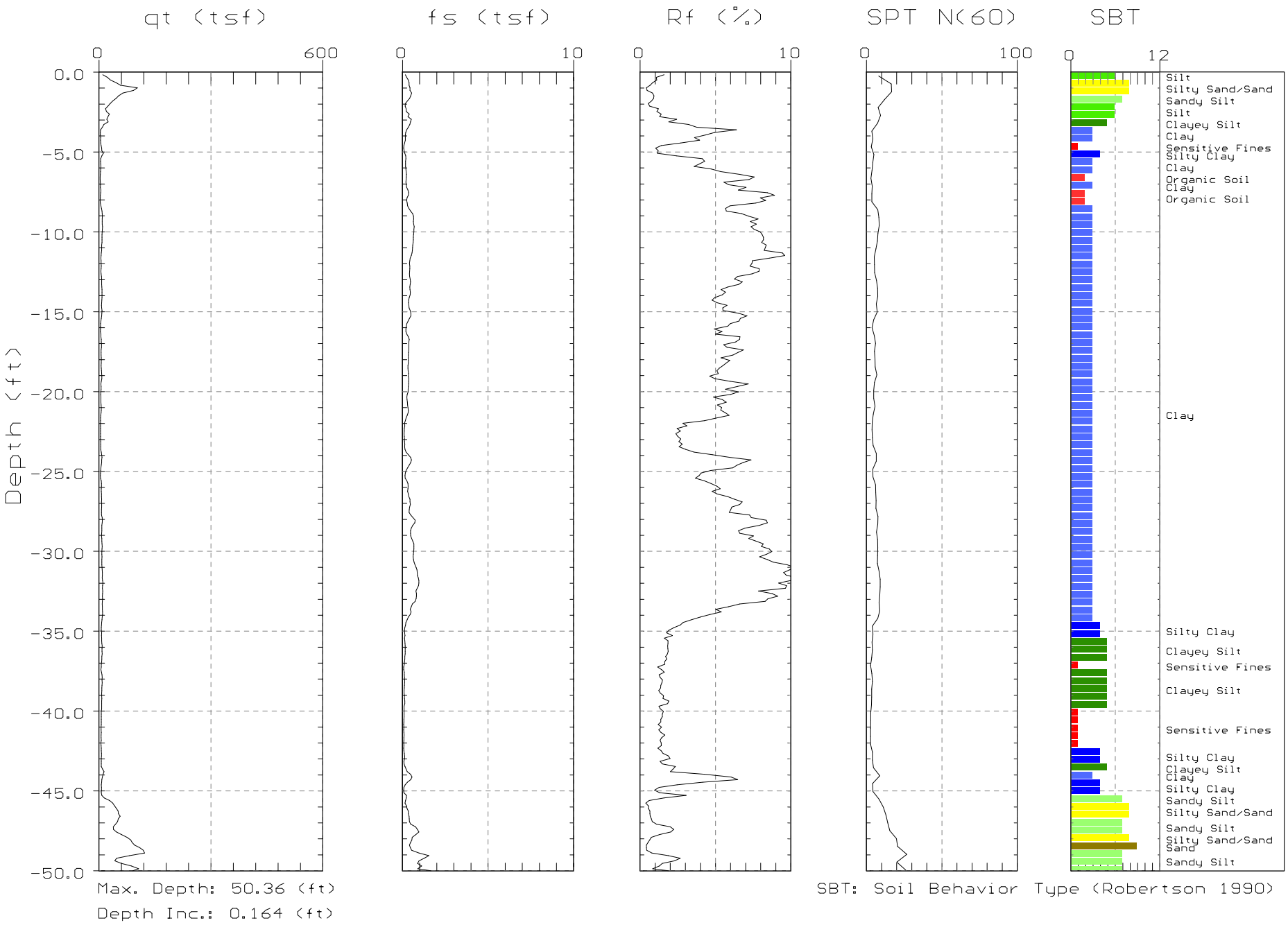
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-36

Engineer: H.RODGERS
Date: 12:20:05 04:49



Max. Depth: 50.36 (ft)
Depth Inc.: 0.164 (ft)

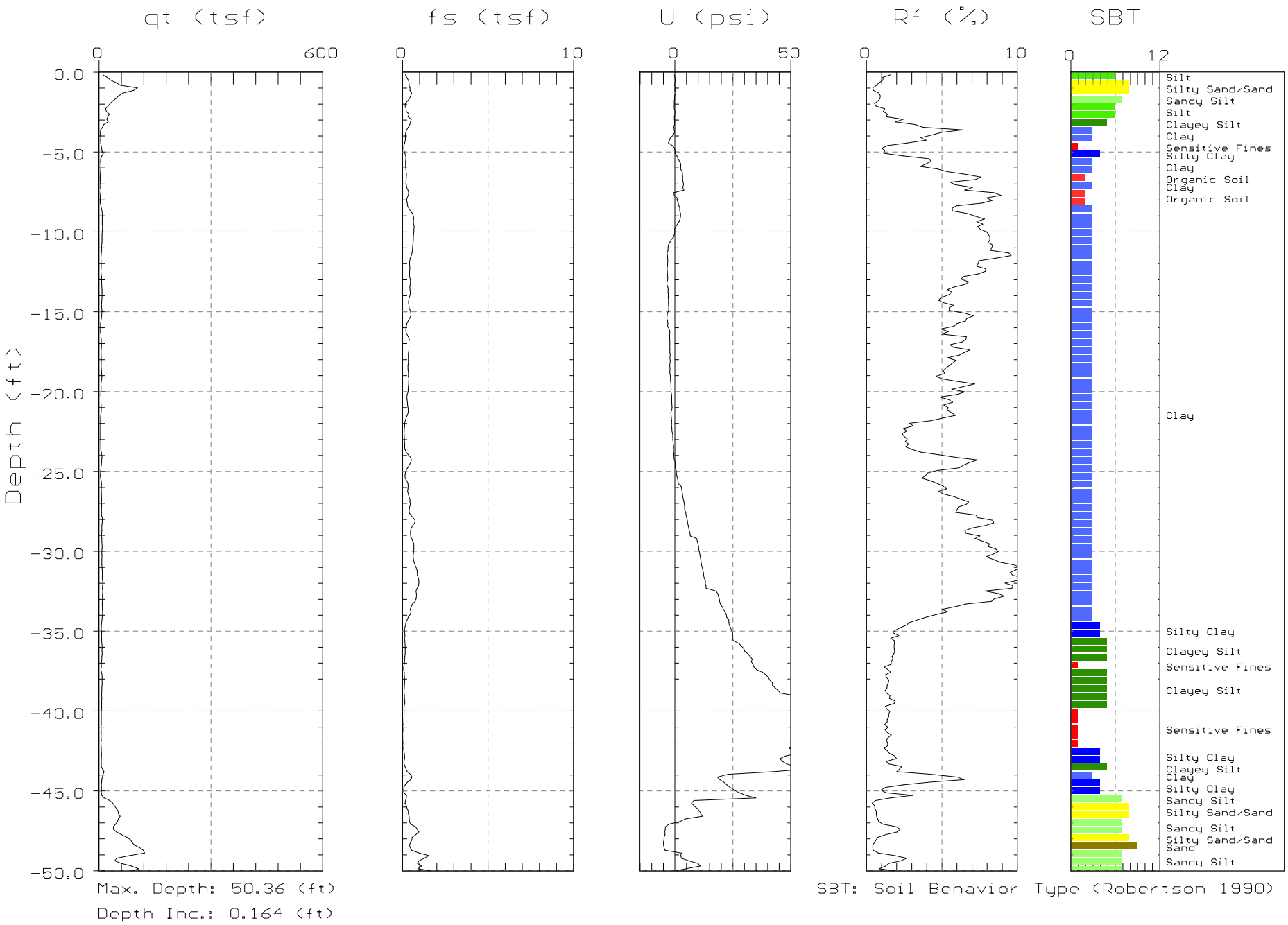
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-36

Engineer: H.RODGERS
Date: 12:20:05 04:49



Max. Depth: 50.36 (ft)
Depth Inc.: 0.164 (ft)

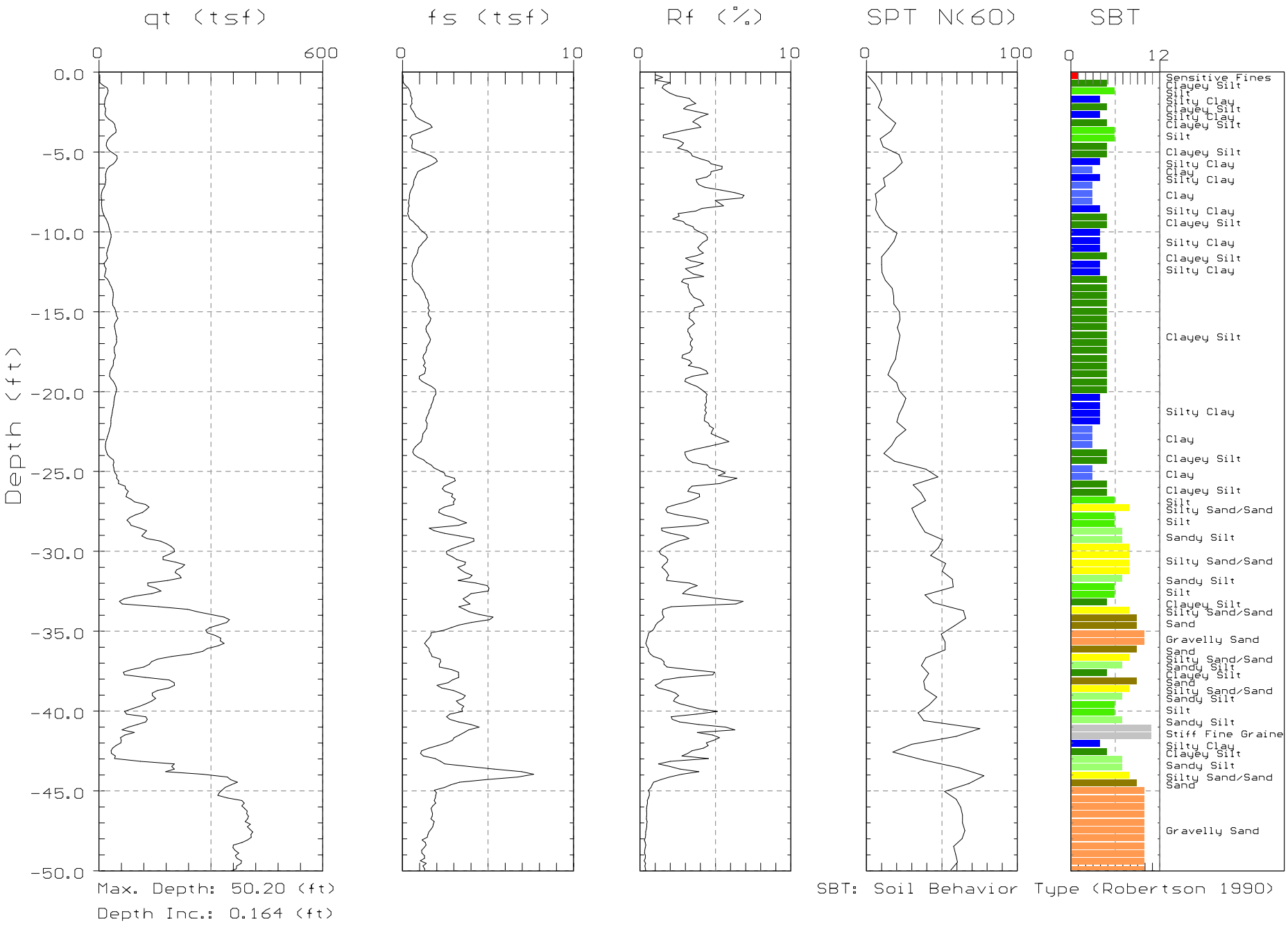
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-37

Engineer: H.RODGERS
Date: 12:20:05 05:59



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

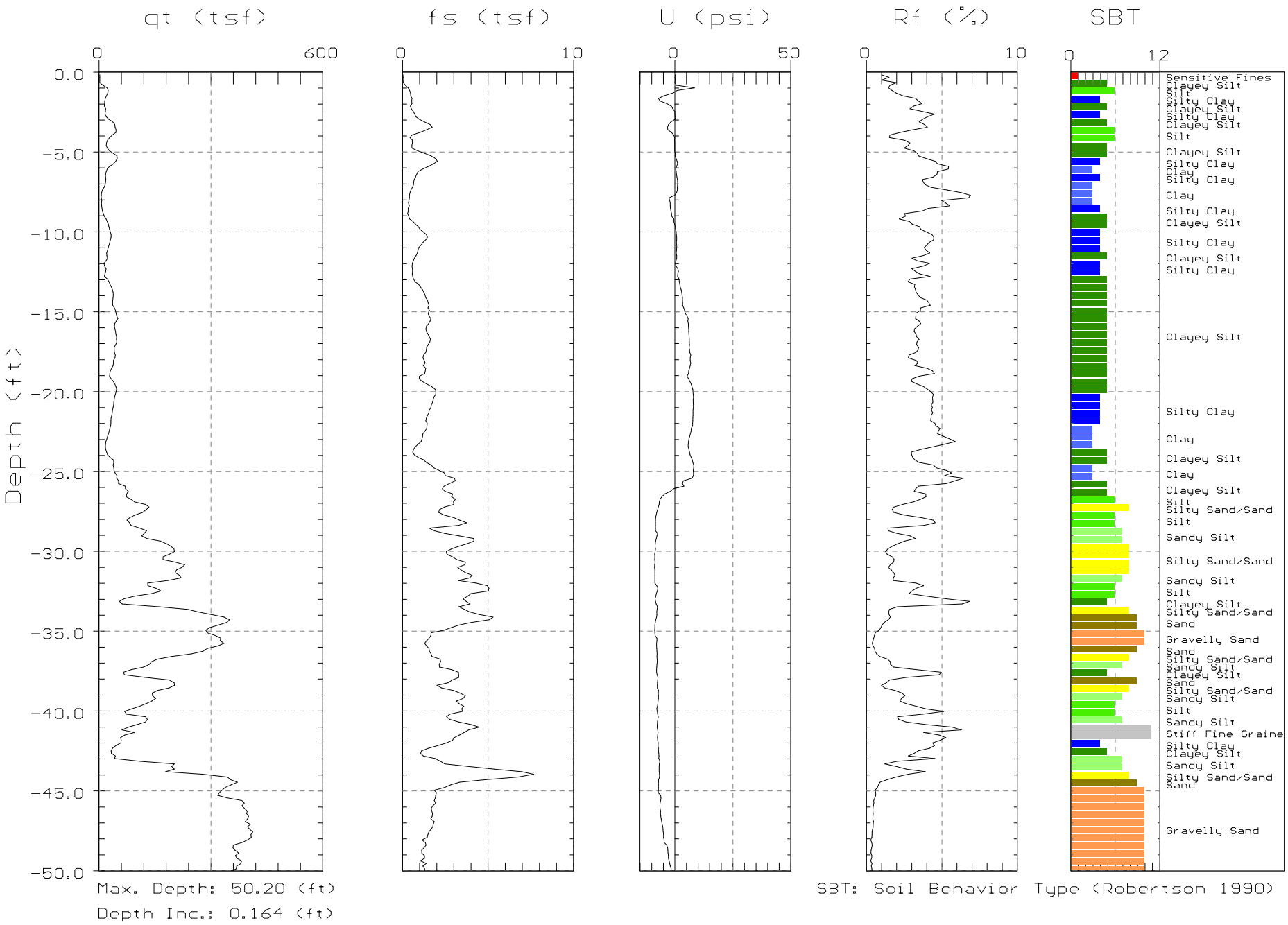
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-37

Engineer: H.RODGERS
Date: 12:20:05 05:59



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

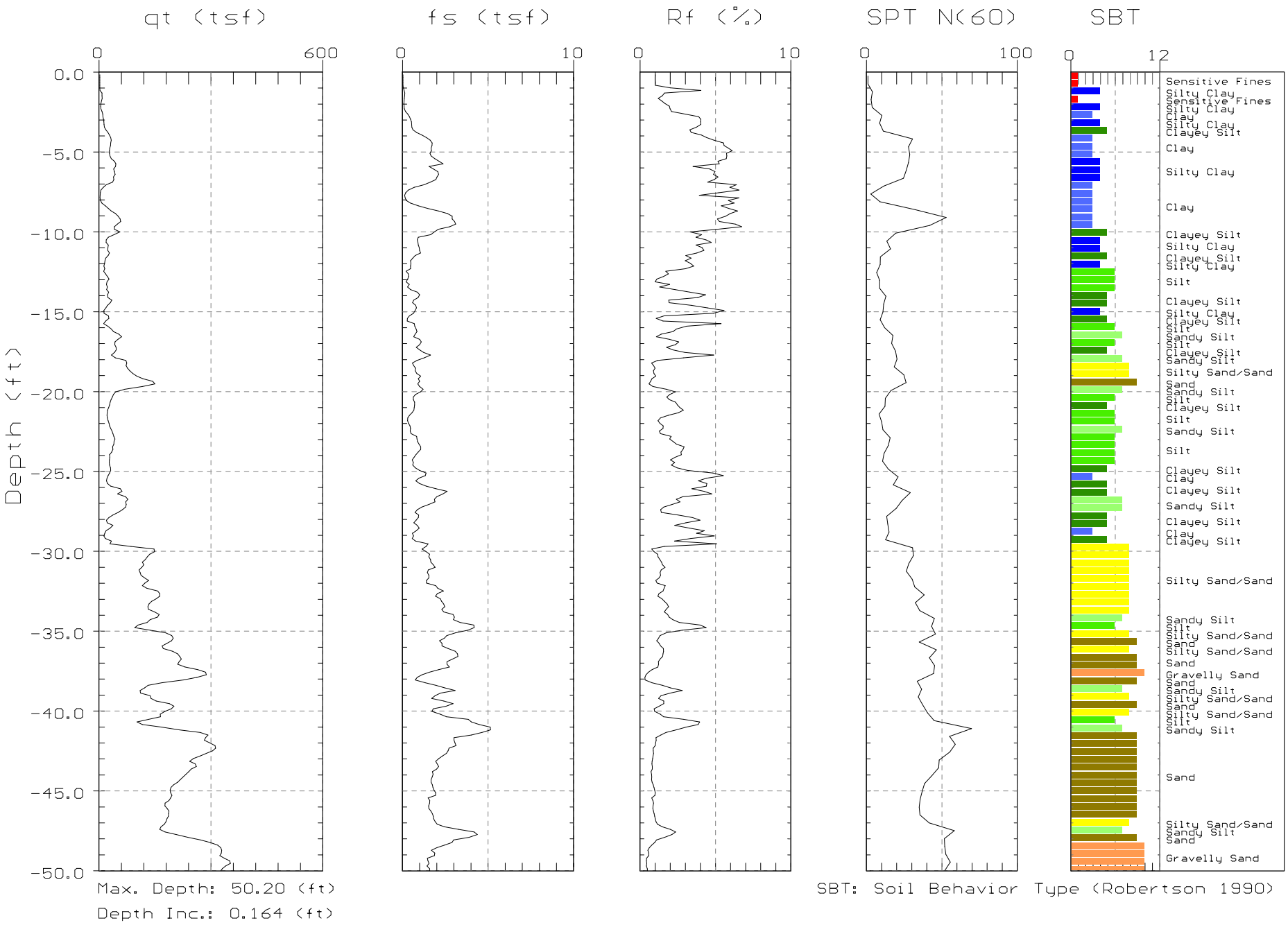
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-38

Engineer: H.RODGERS
Date: 12:20:05 06:57



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

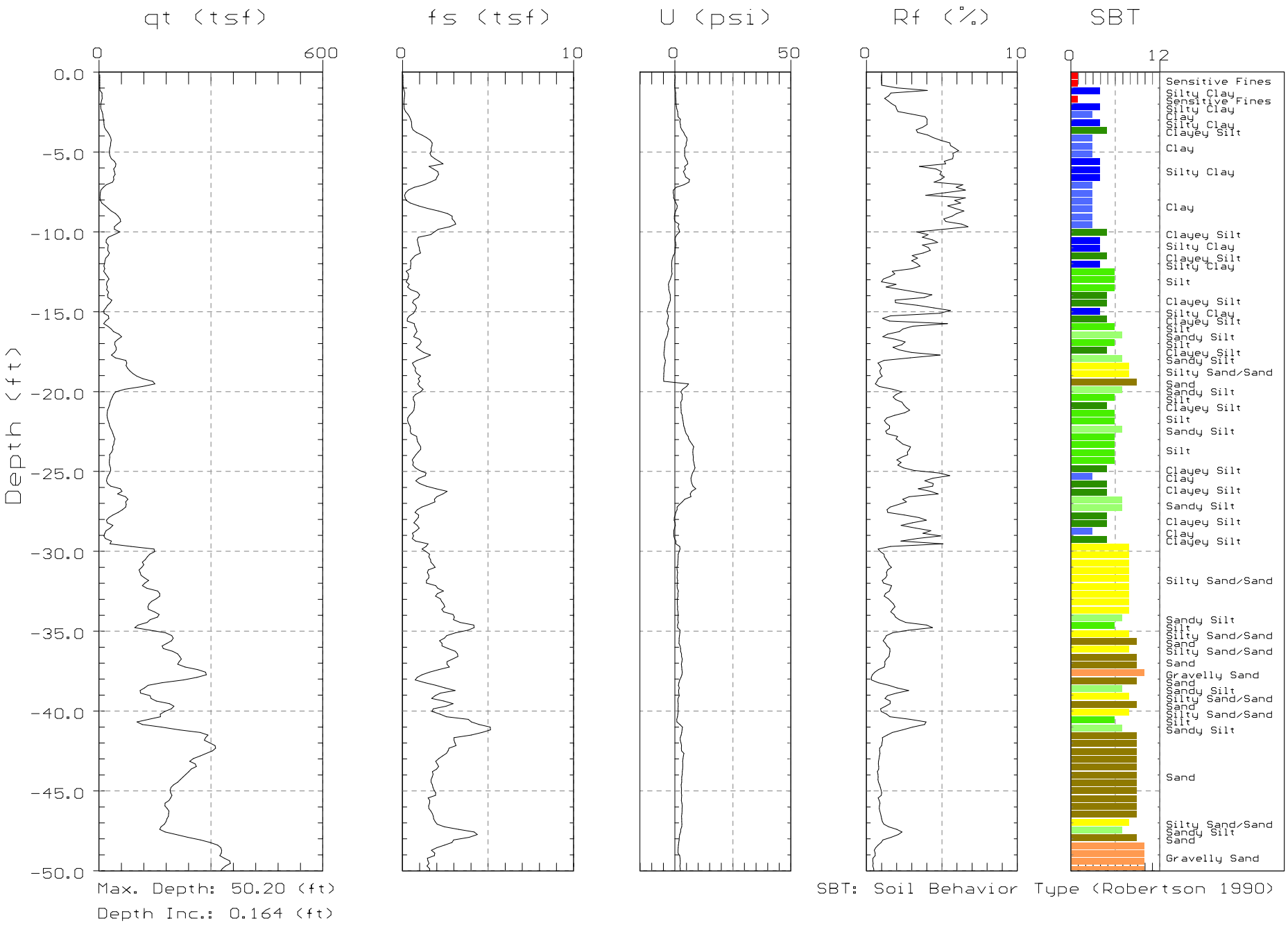
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-38

Engineer: H.RODGERS
Date: 12:20:05 06:57



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

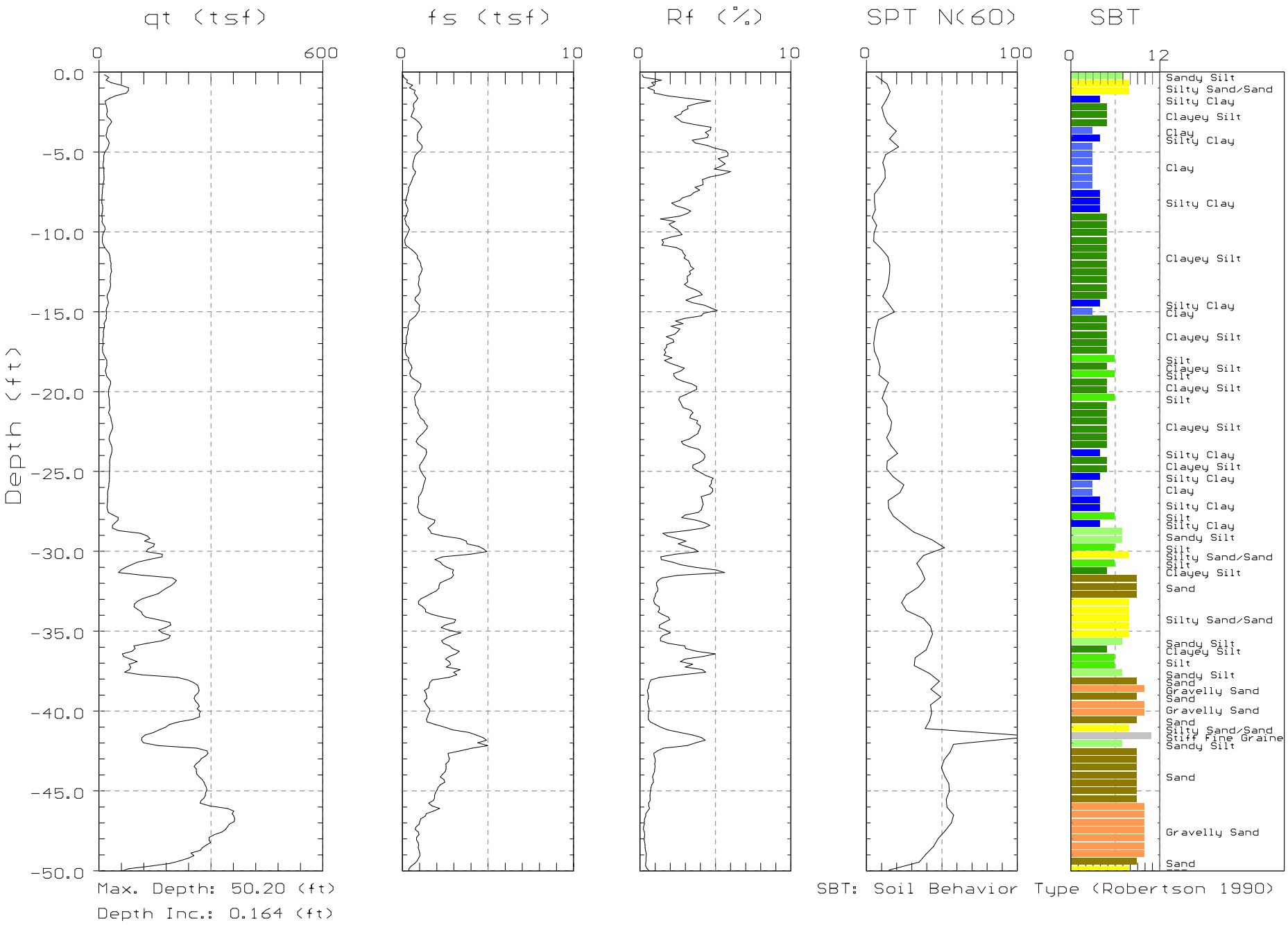
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-39

Engineer: H.RODGERS
Date: 12:20:05 10:10



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

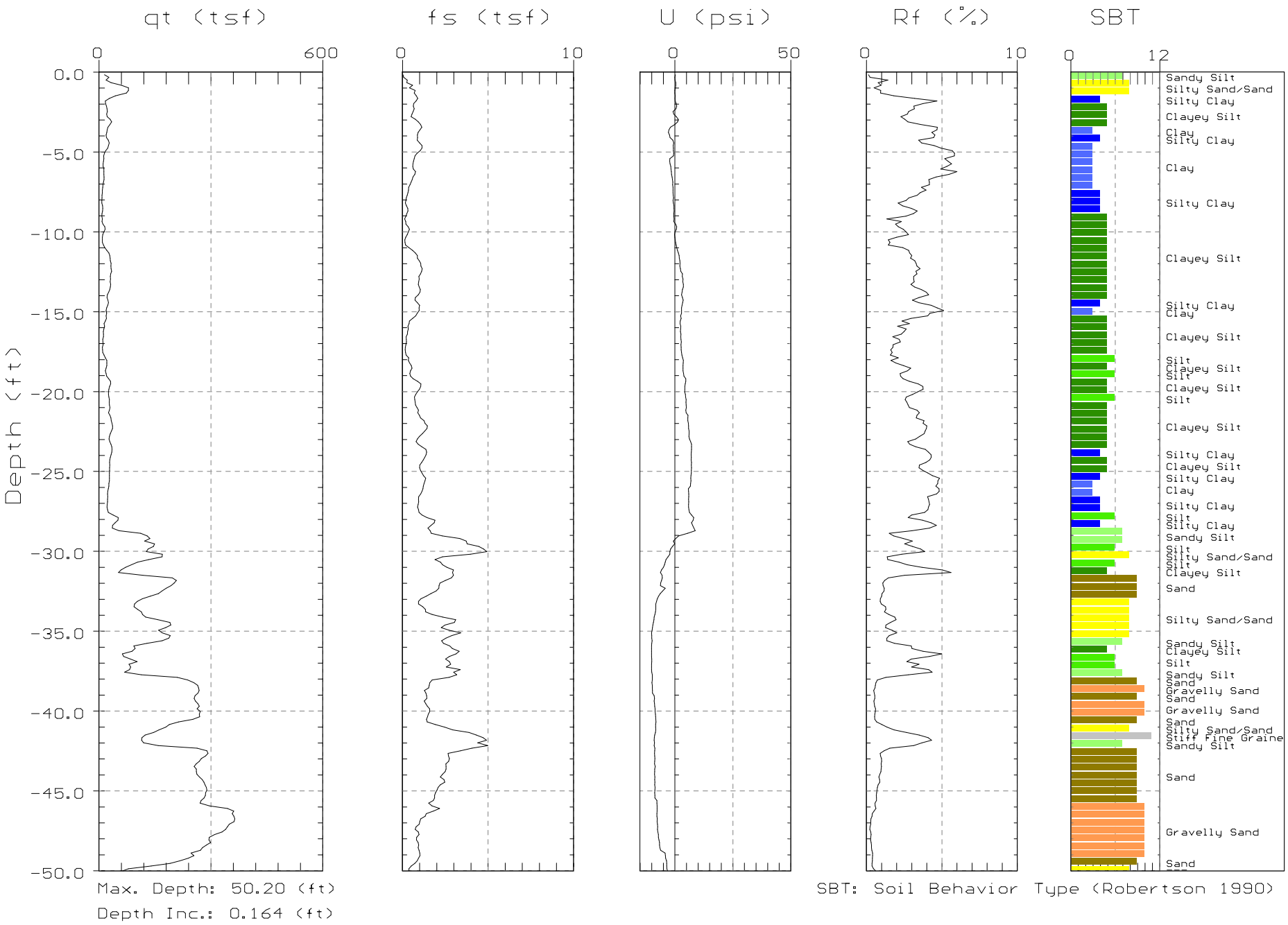
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-39

Engineer: H.RODGERS
Date: 12:20:05 10:10



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

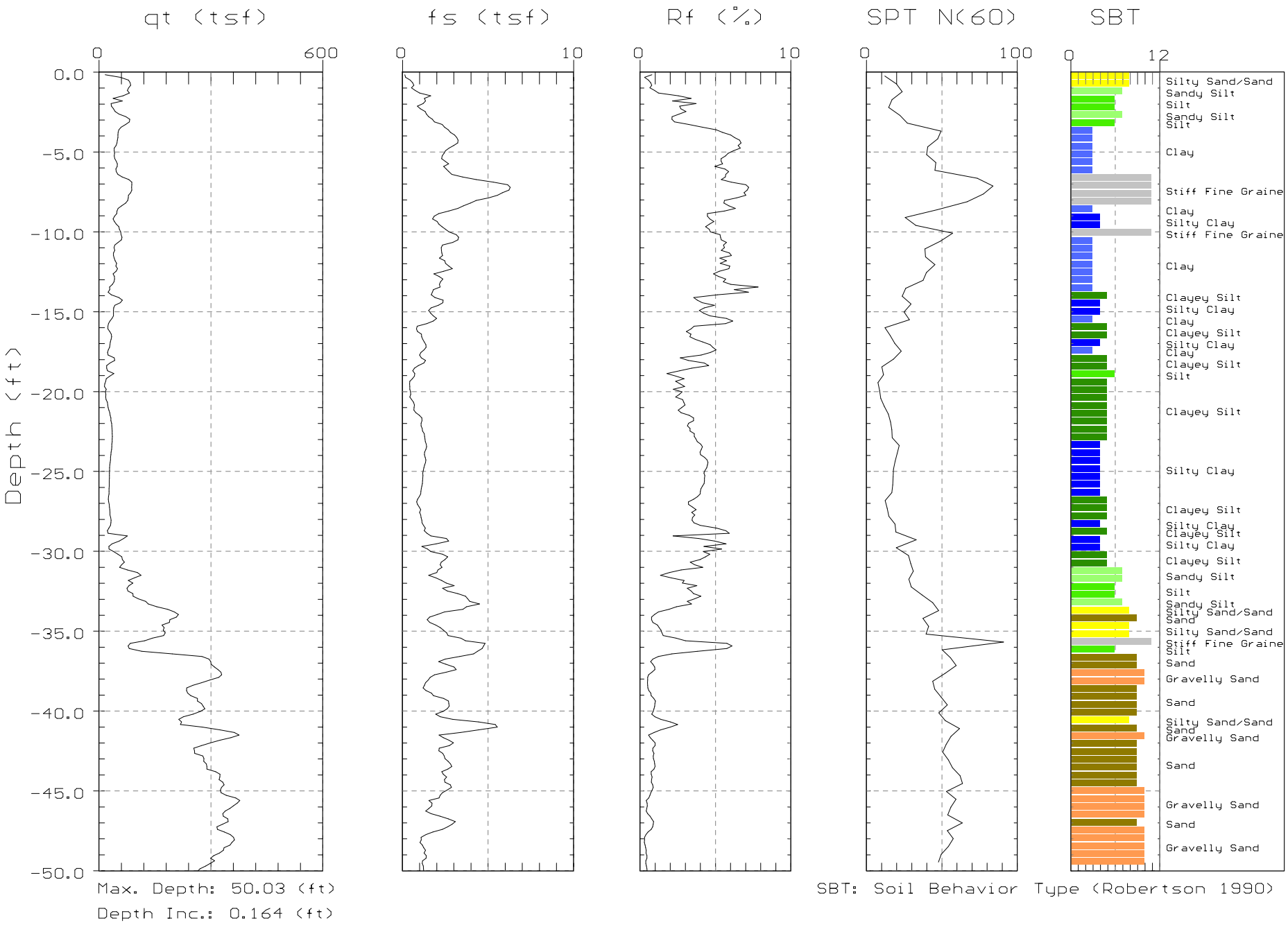
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-40

Engineer: H.RODGERS
Date: 12:20:05 10:46



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

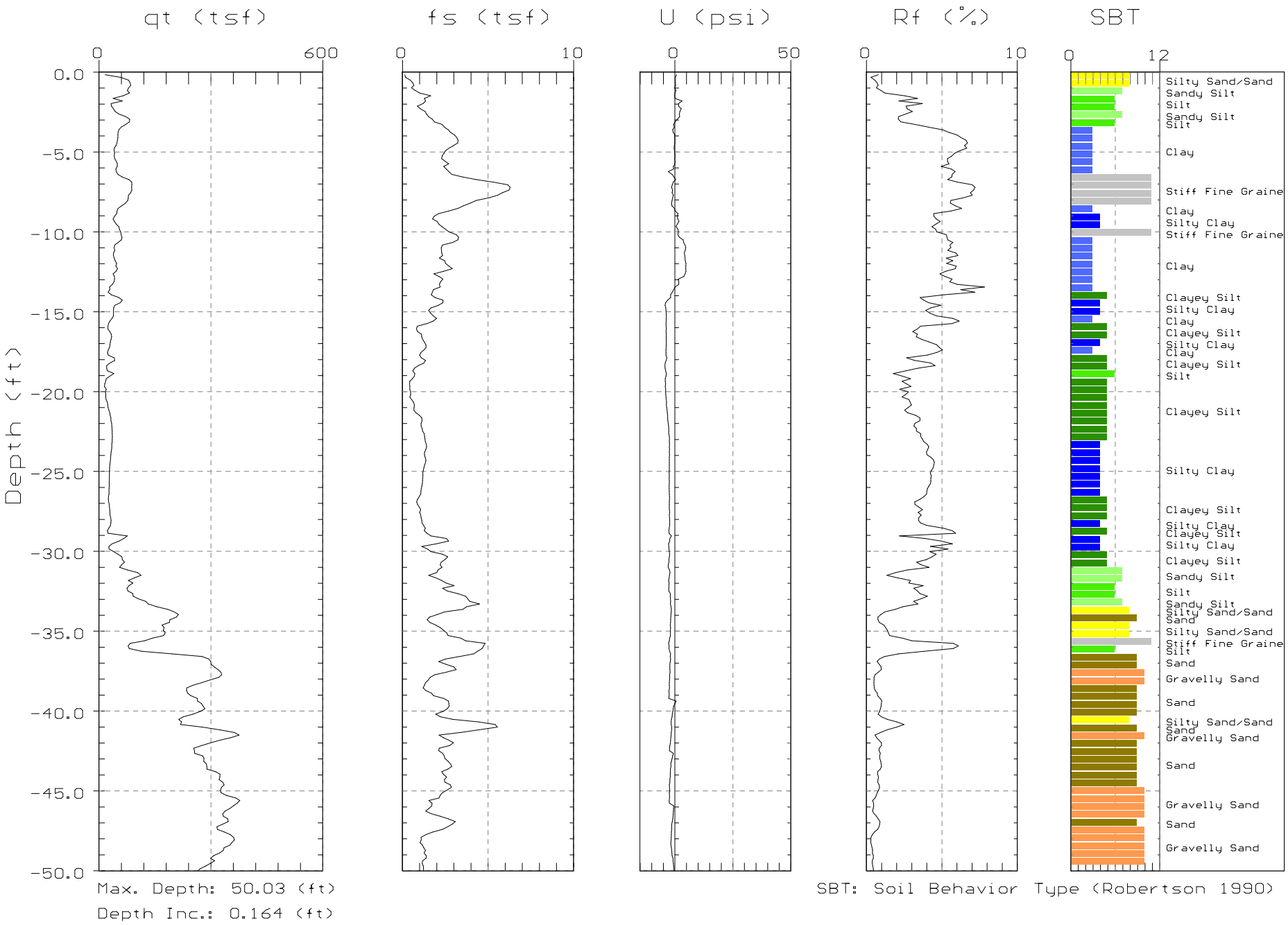
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-40

Engineer: H.RODGERS
Date: 12:20:05 10:46



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

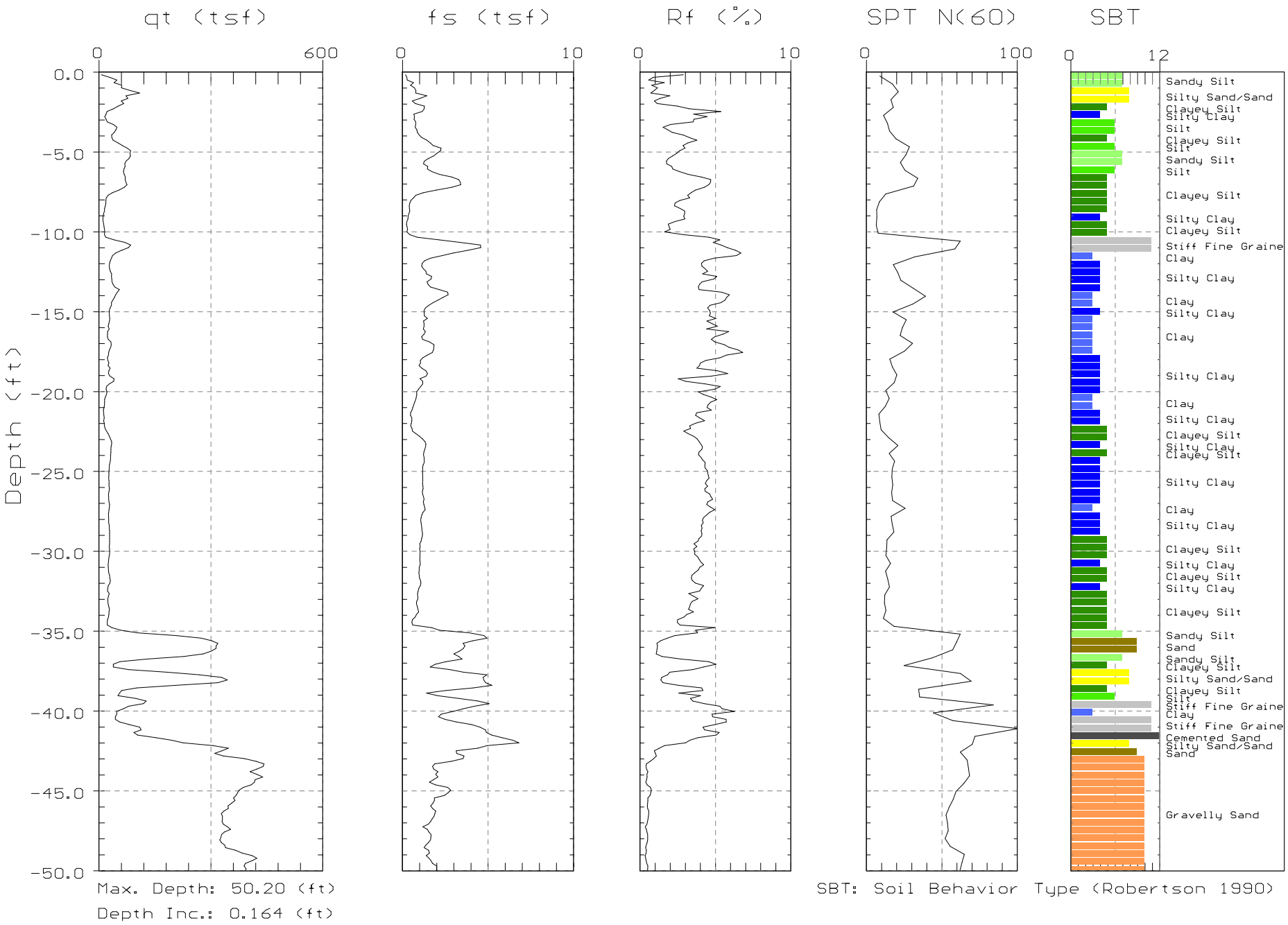
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-41

Engineer: H.RODGERS
Date: 12:20:05 11:24



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

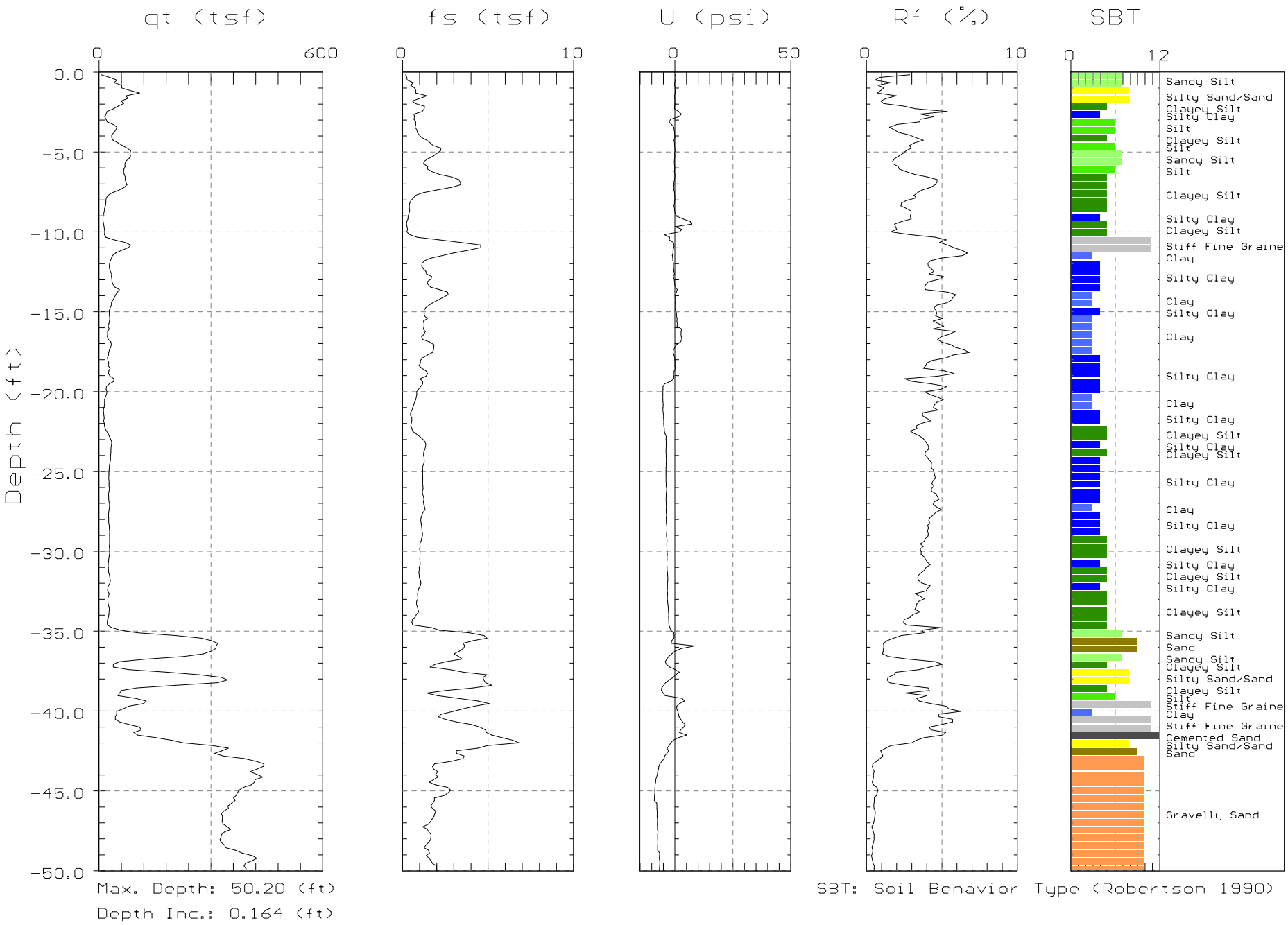
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-41

Engineer: H.RODGERS
Date: 12:20:05 11:24



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

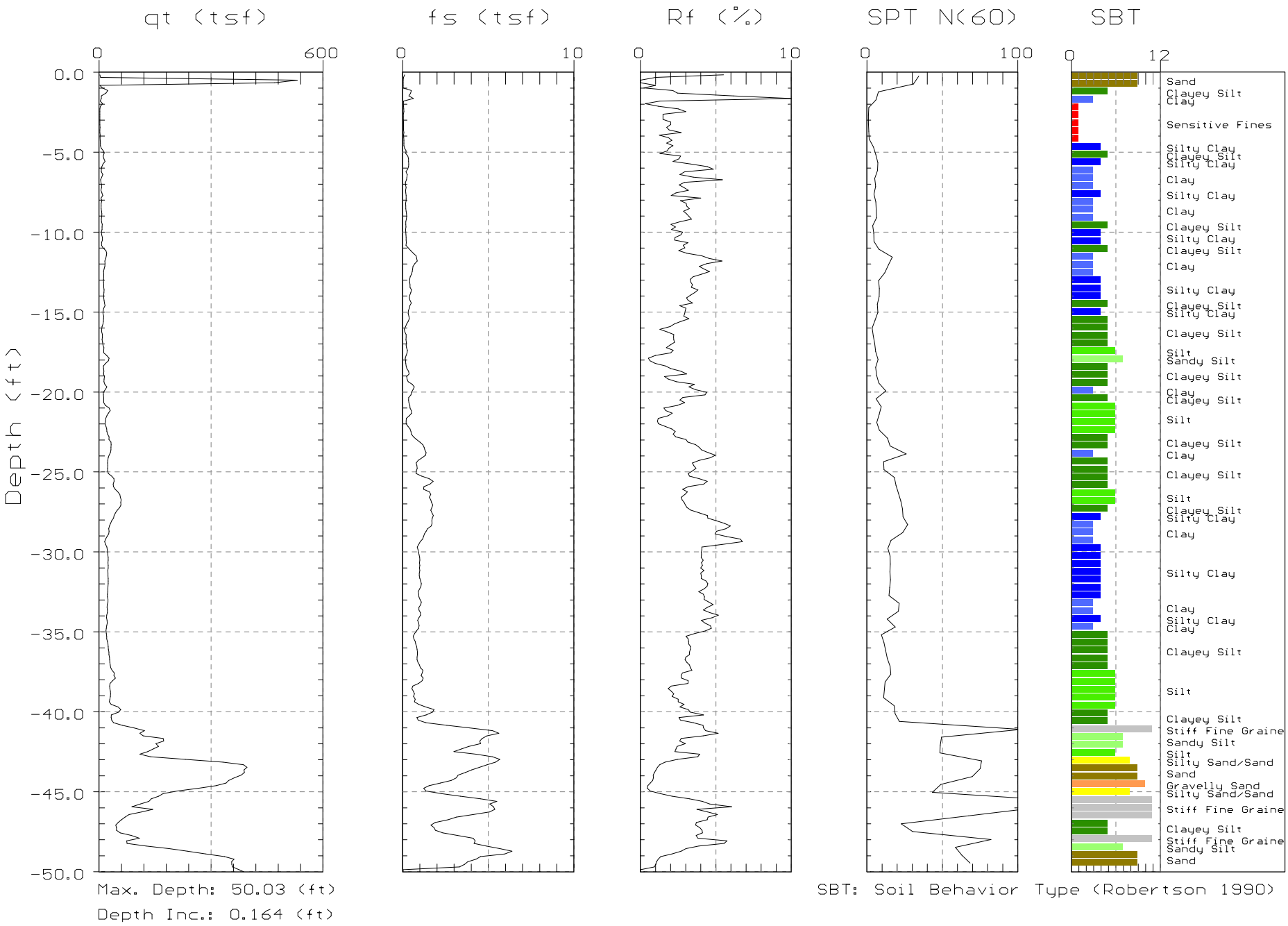
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-42

Engineer: H.RODGERS
Date: 12:21:05 05:39



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

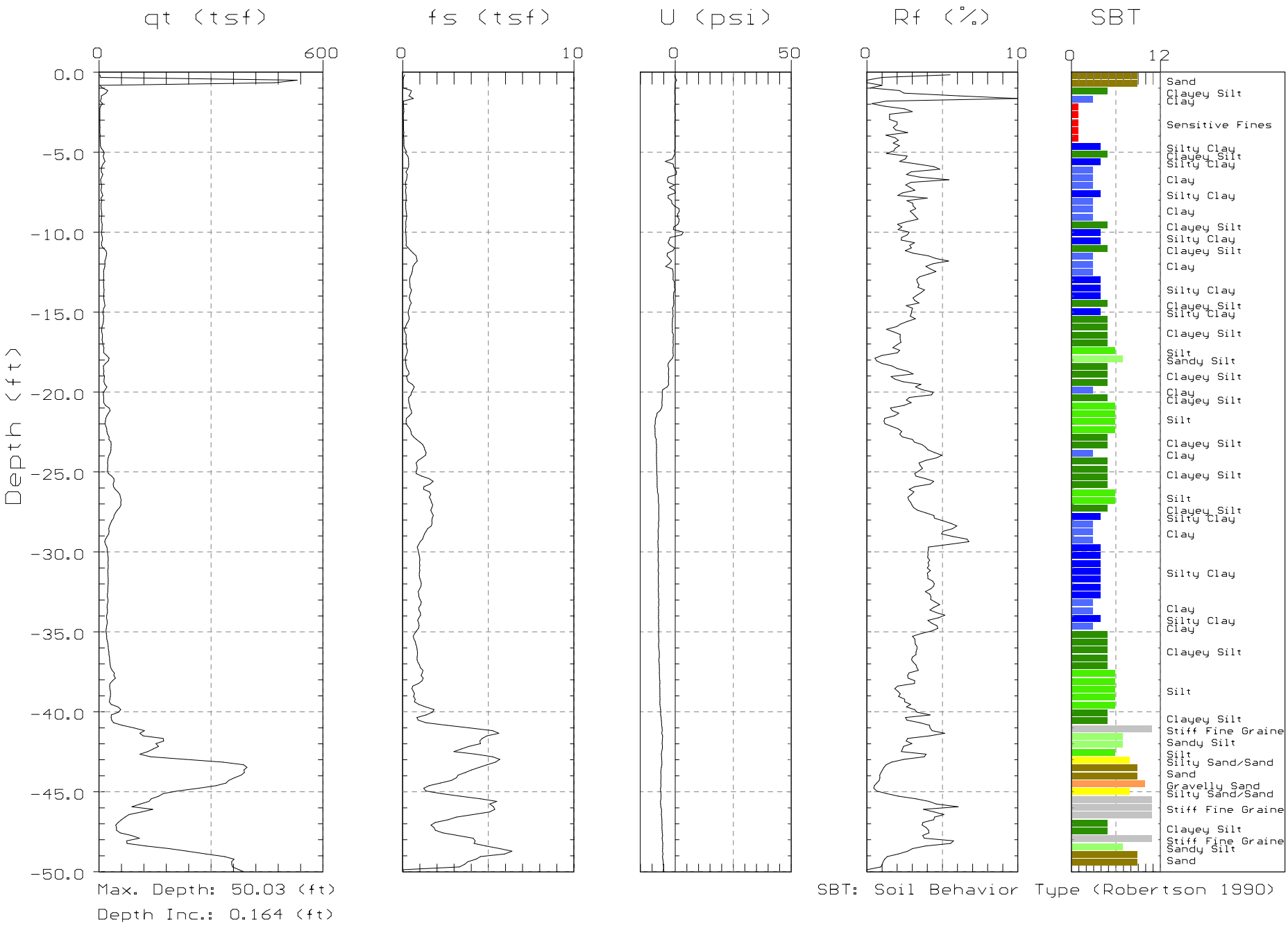
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-42

Engineer: H.RODGERS
Date: 12:21:05 05:39



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

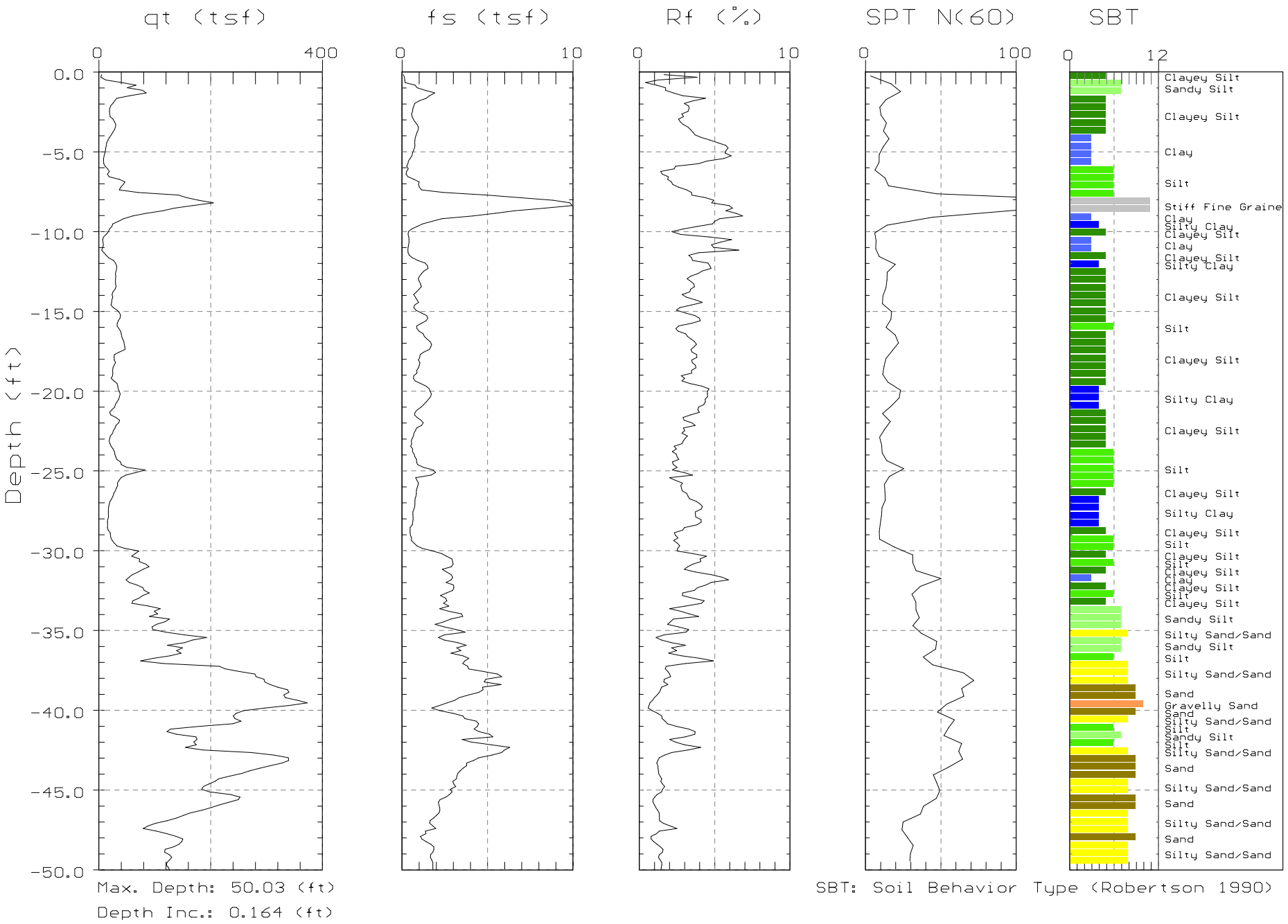
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-43

Engineer: H.RODGERS
Date: 02:02:06 12:28



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

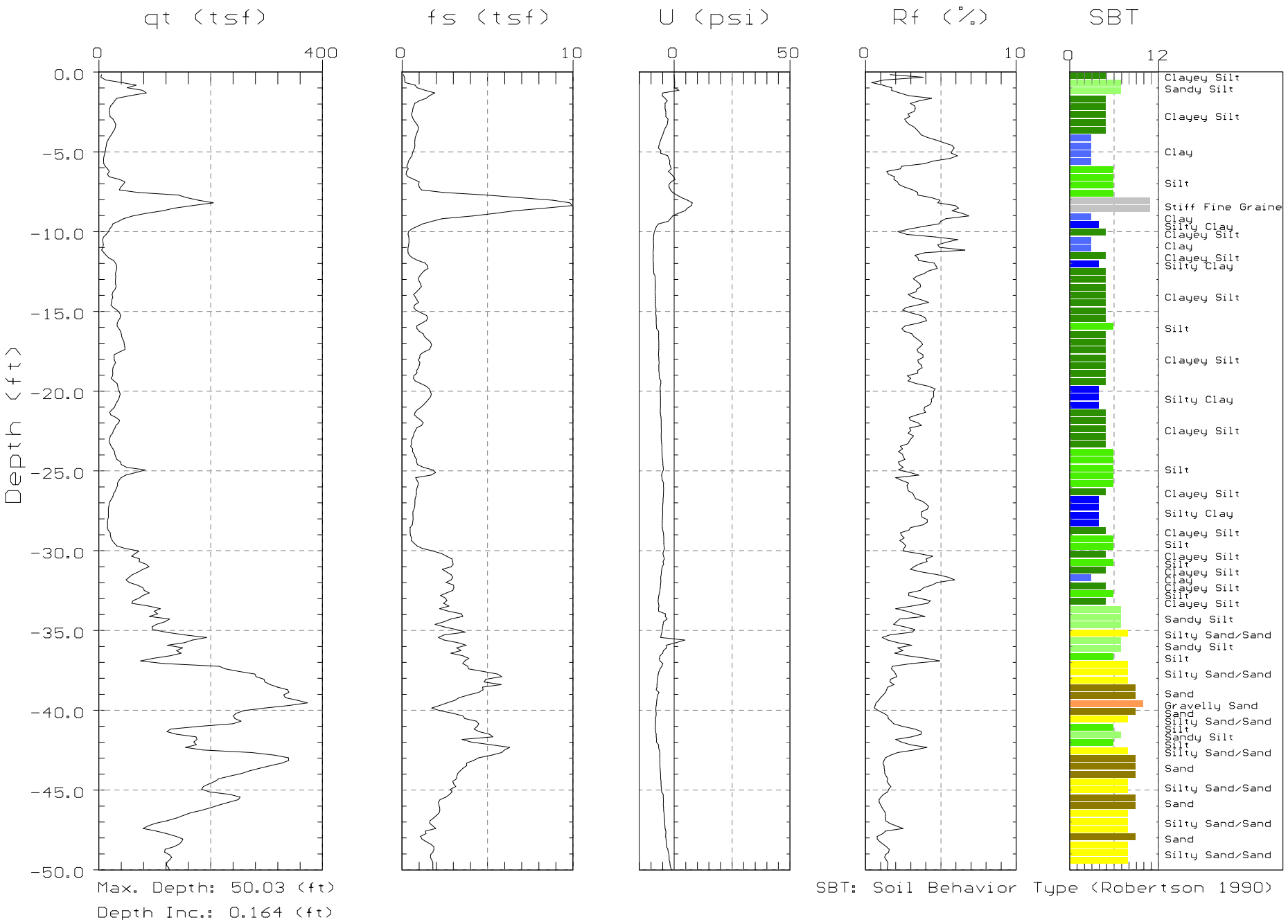
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-43

Engineer: H.RODGERS
Date: 02:02:06 12:28



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

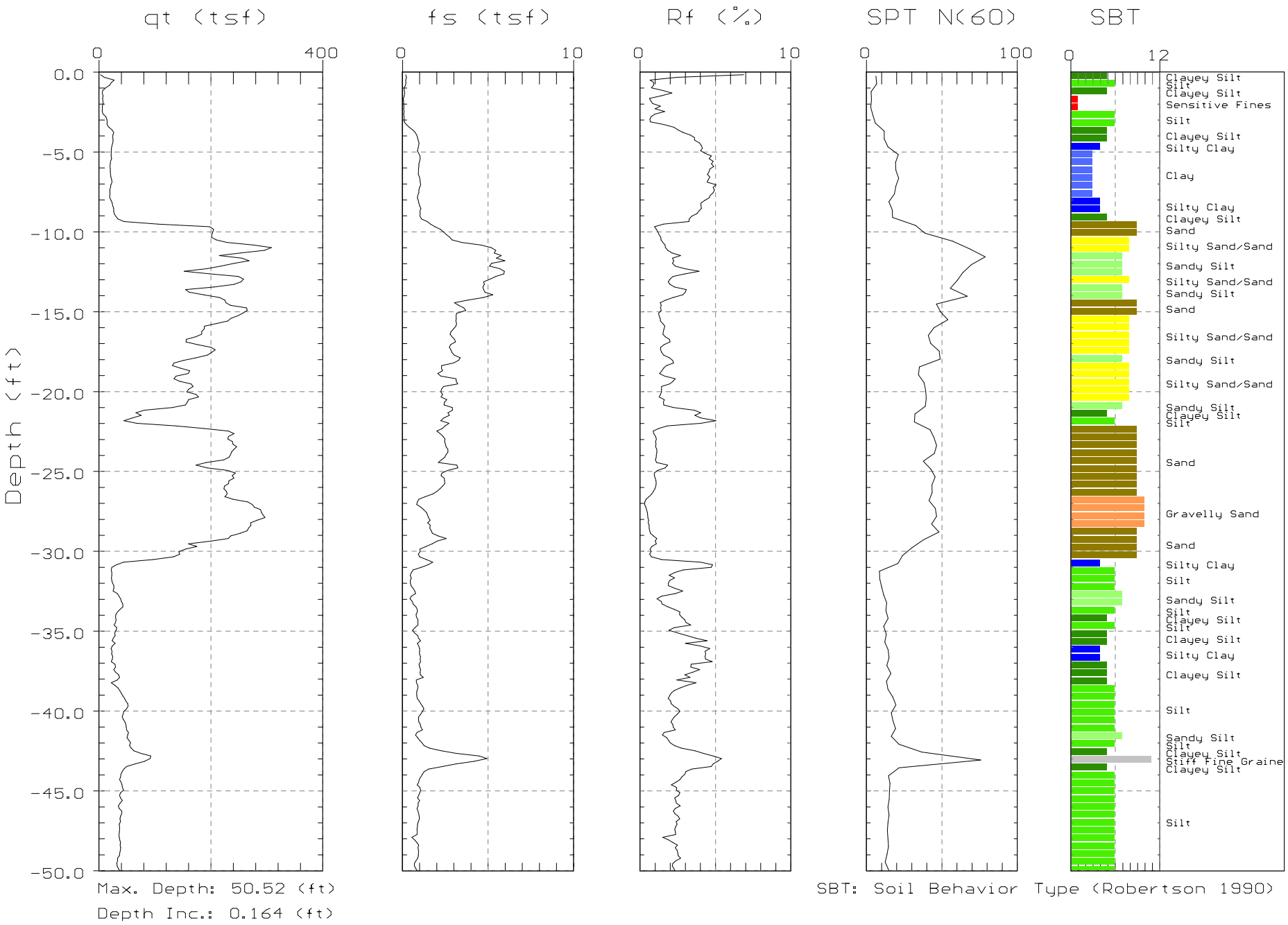
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-44

Engineer: H.RODGERS
Date: 02:02:06 14:15



Max. Depth: 50.52 (ft)
Depth Inc.: 0.164 (ft)

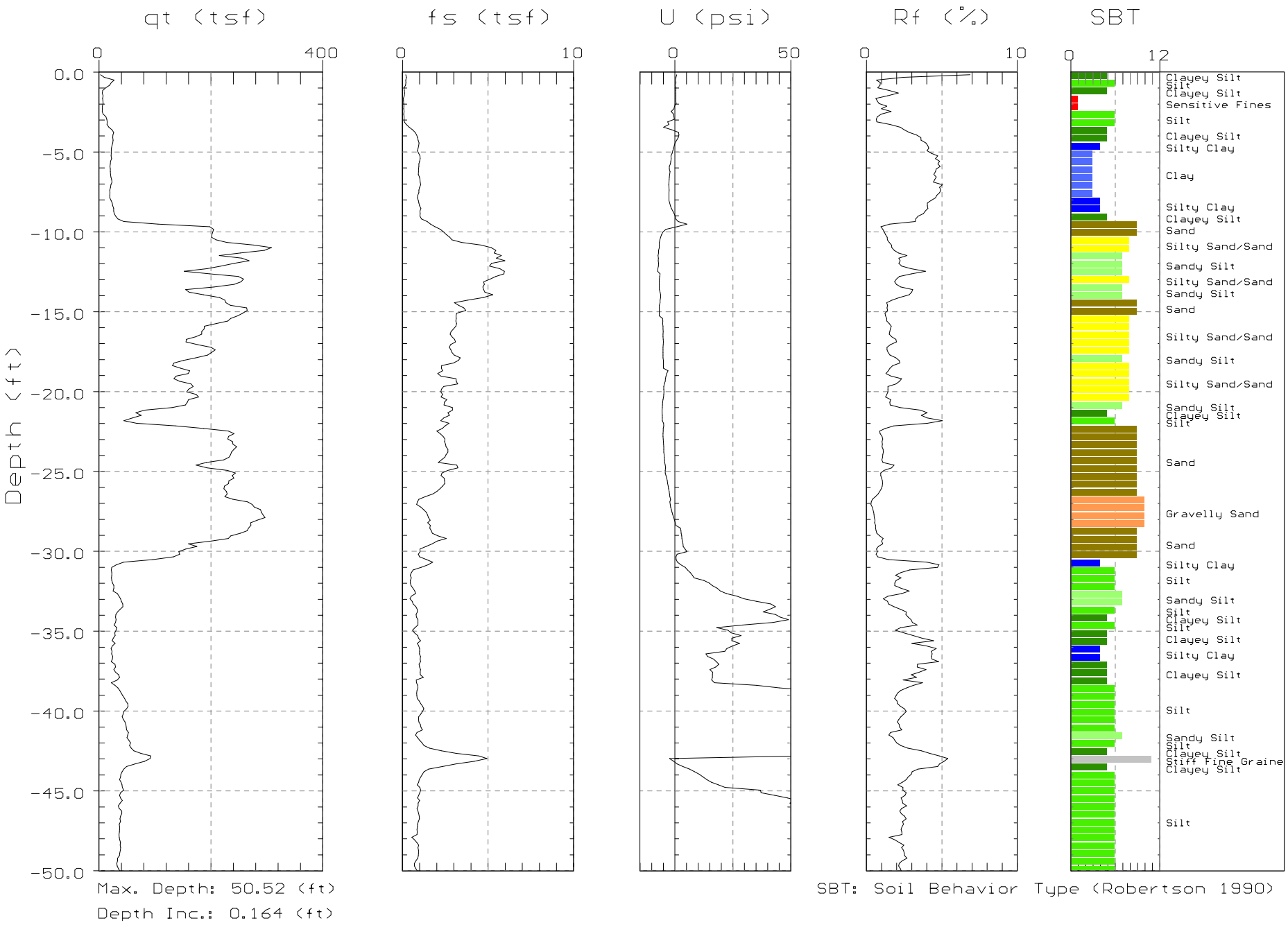
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-44

Engineer: H.RODGERS
Date: 02:02:06 14:15



Max. Depth: 50.52 (ft)
Depth Inc.: 0.164 (ft)

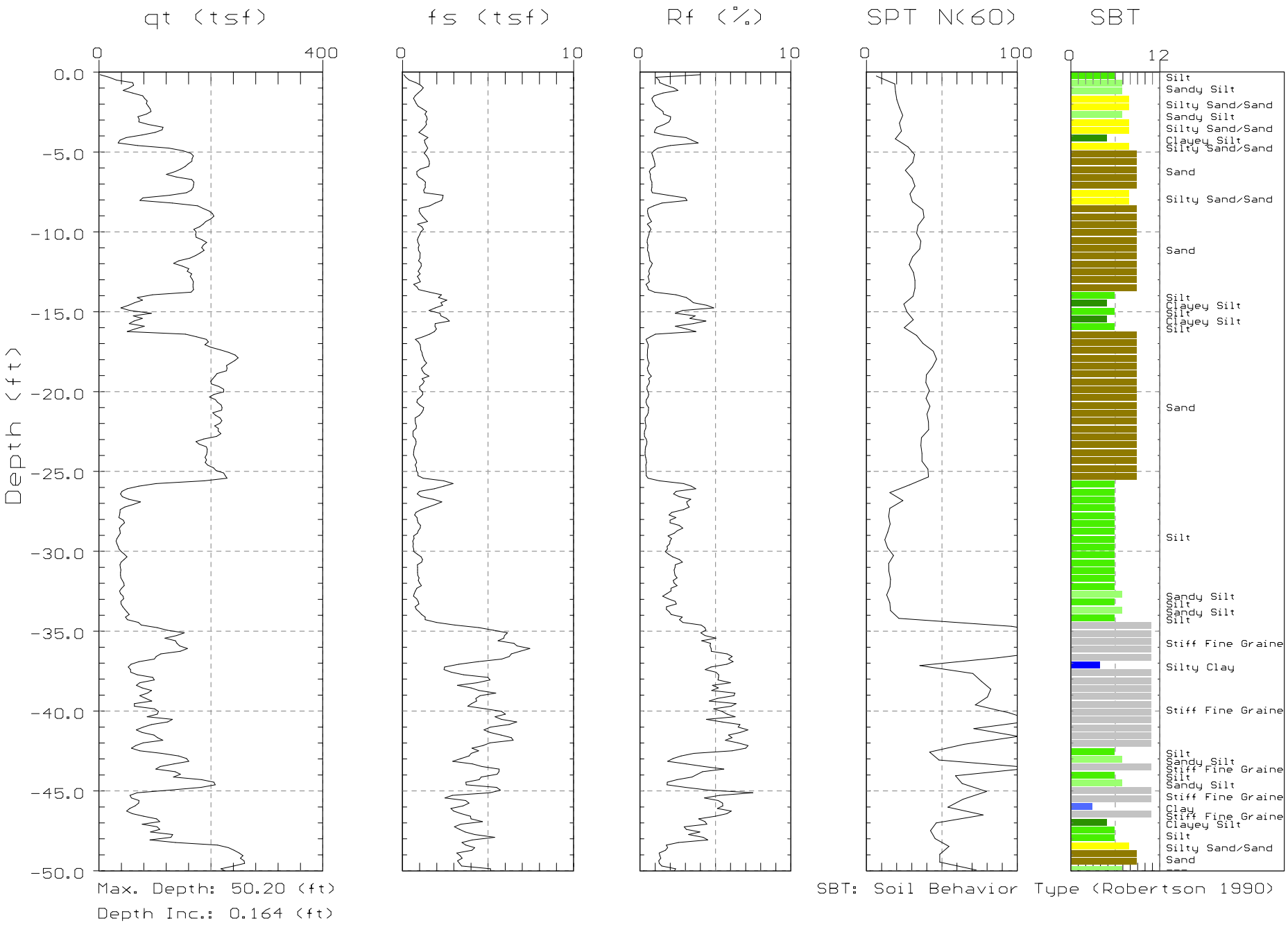
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-45

Engineer: H.RODGERS
Date: 02:02:06 14:59

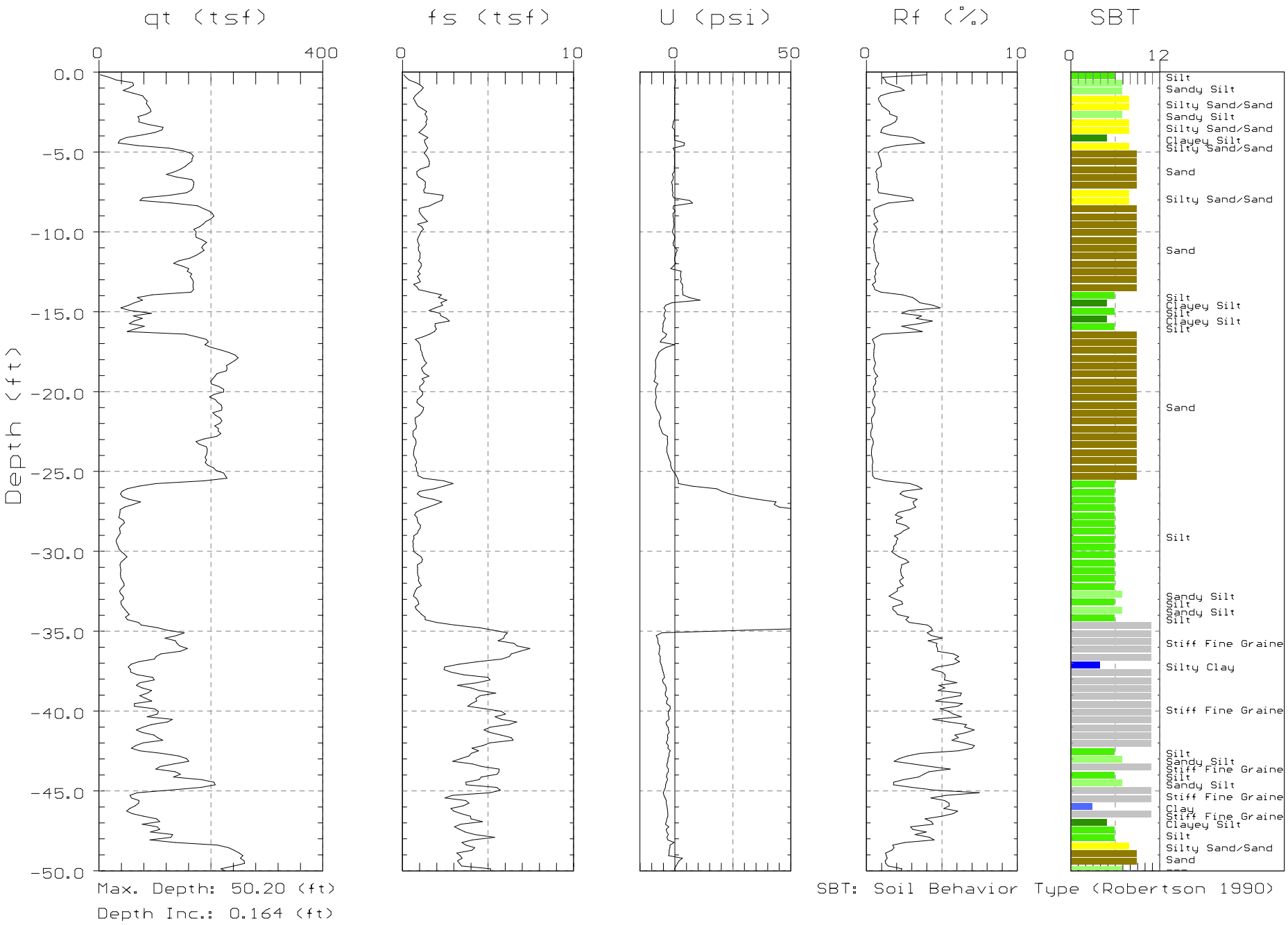


GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-45

Engineer: H.RODGERS
Date: 02:02:06 14:59

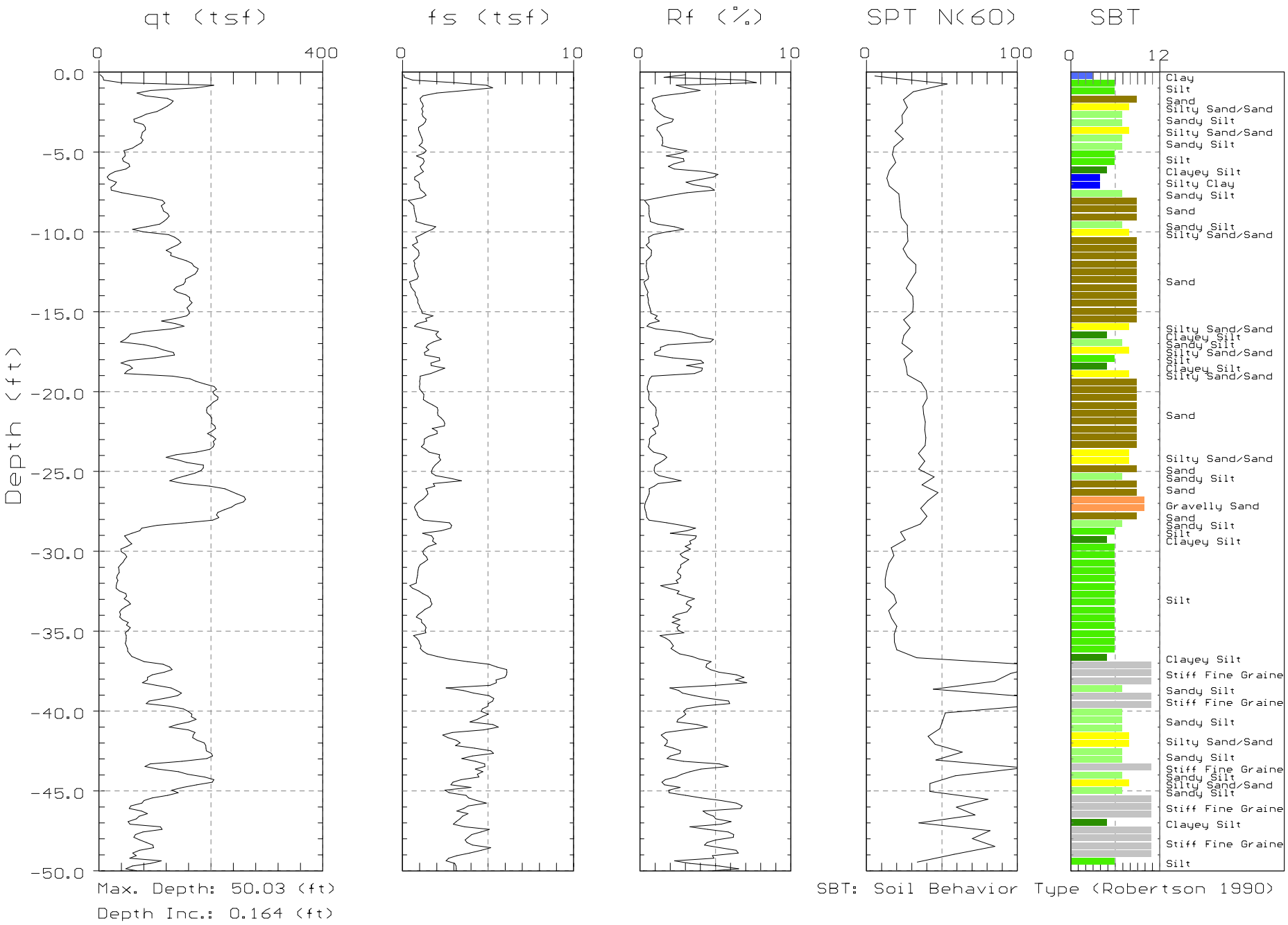


GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-46

Engineer: H.RODGERS
Date: 02:02:06 16:33

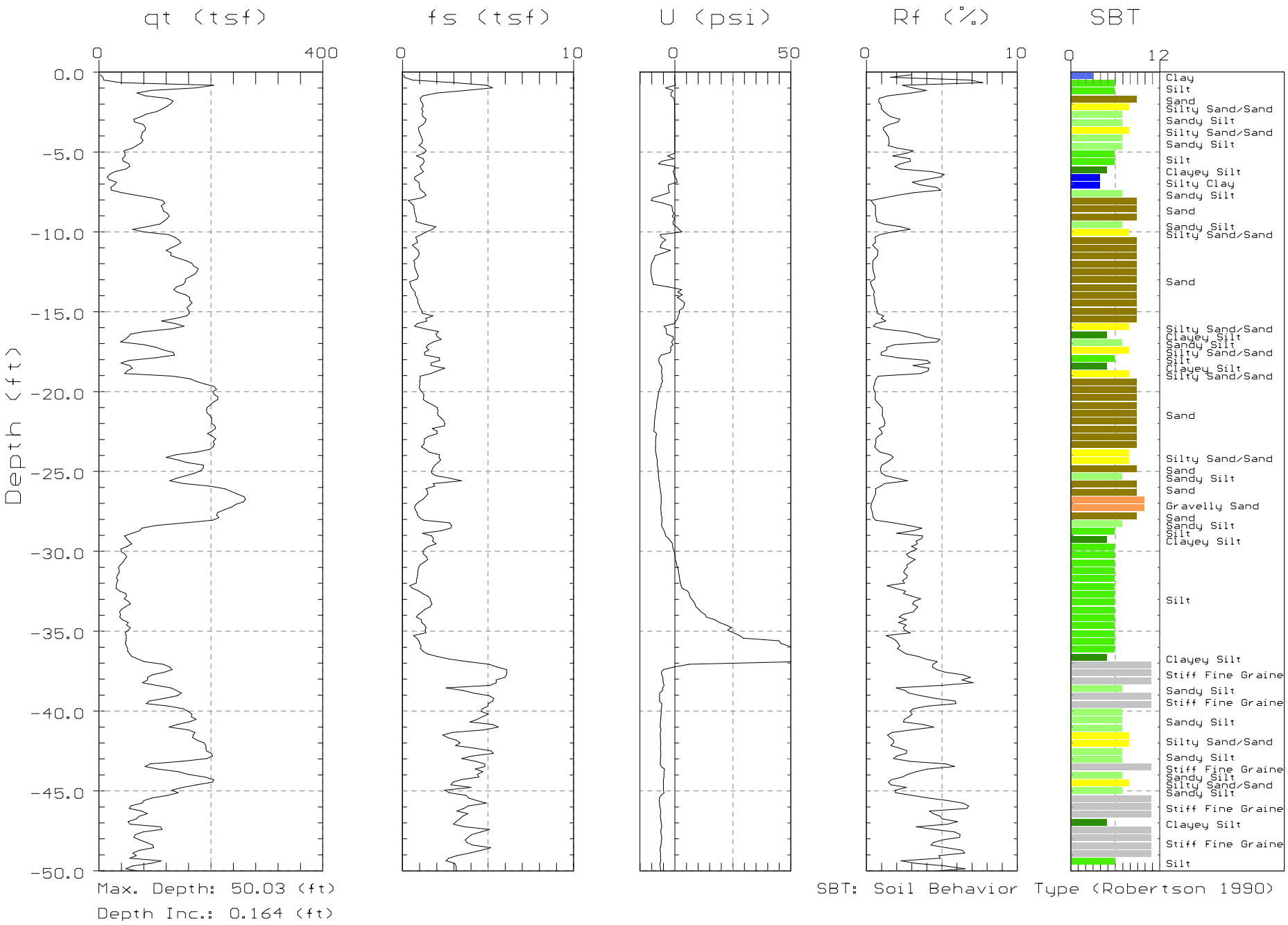


GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-46

Engineer: H.RODGERS
Date: 02:02:06 16:33



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

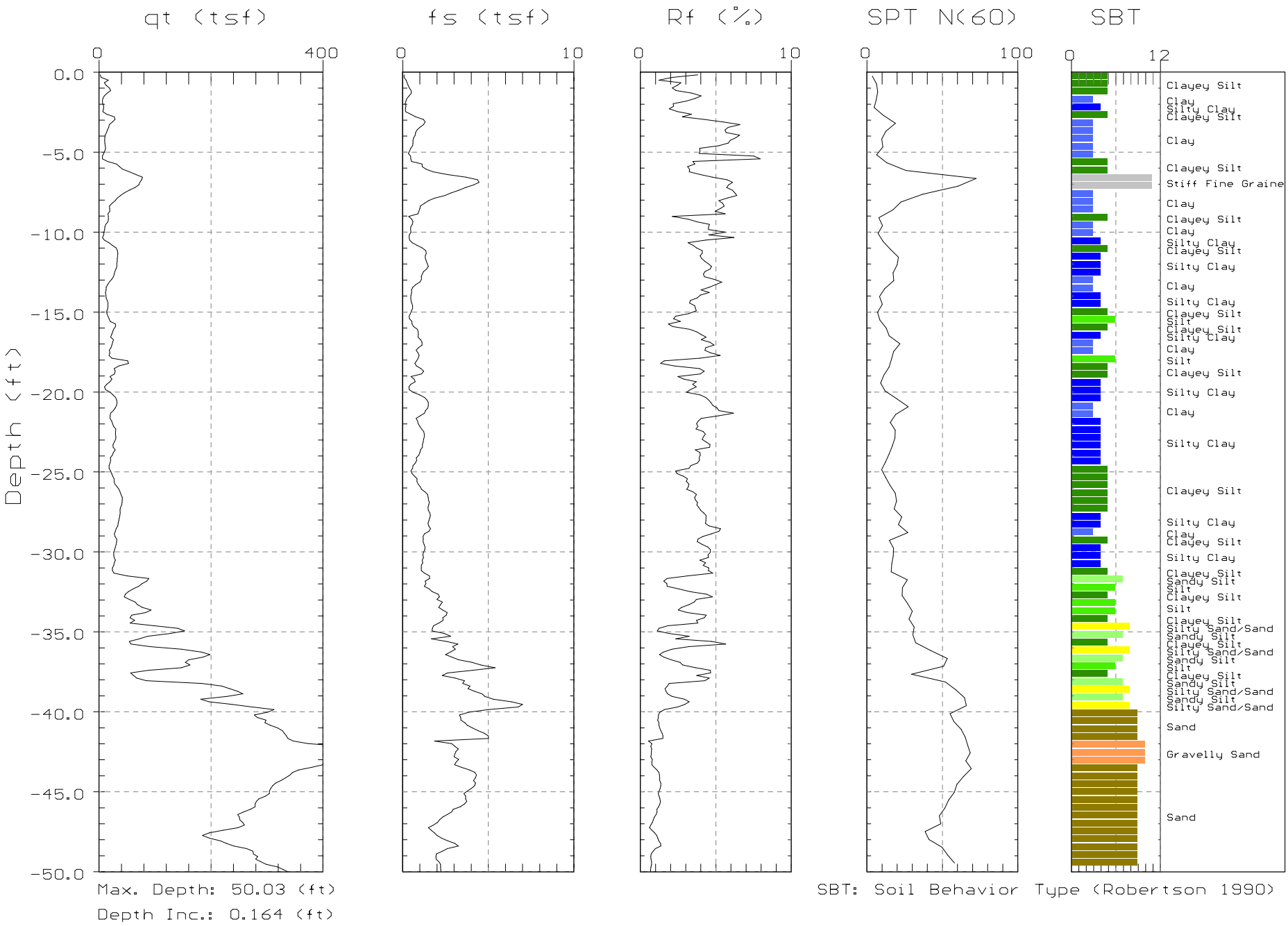
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-47

Engineer: H.RODGERS
Date: 02:02:06 17:29



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

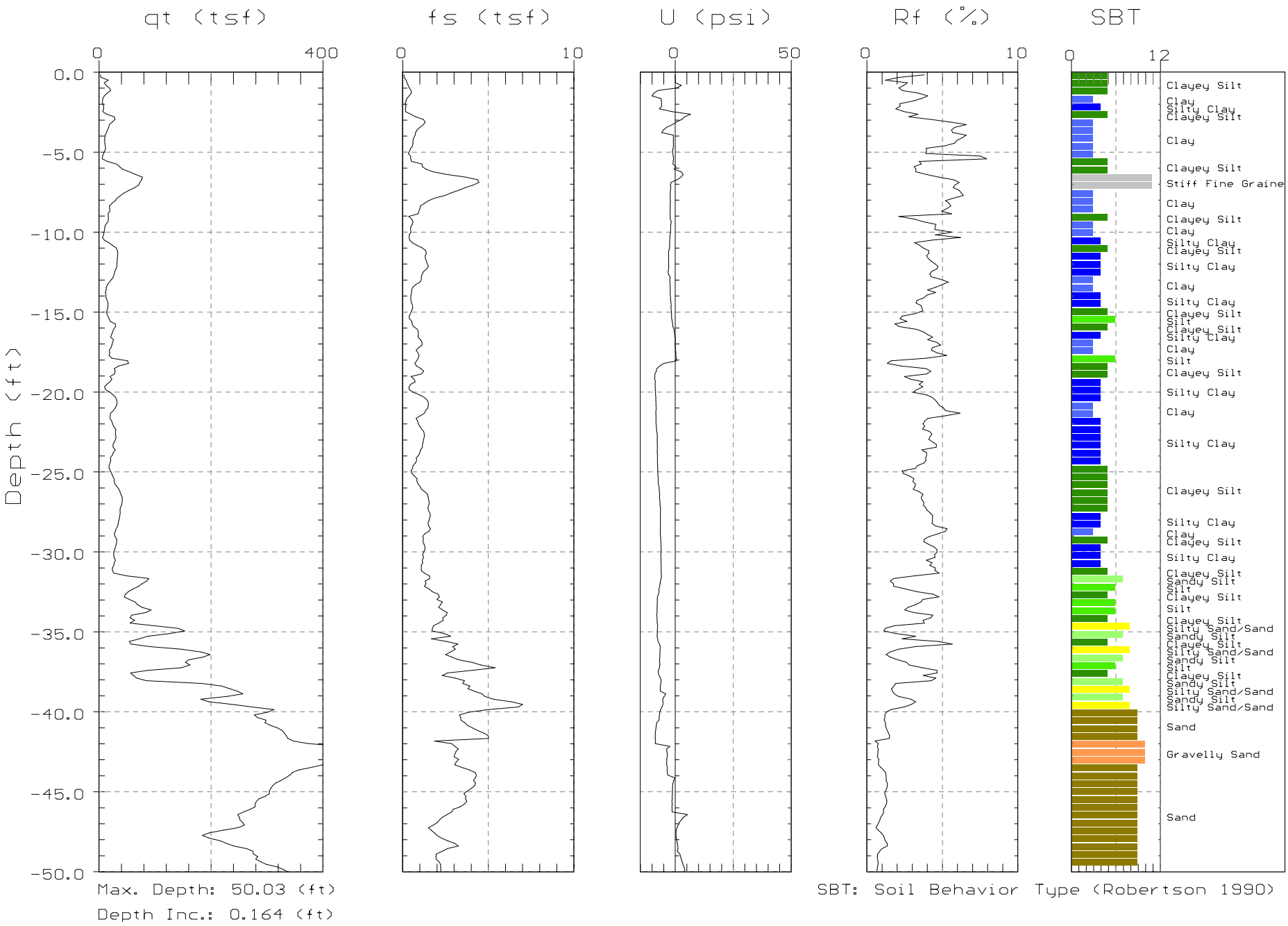
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-47

Engineer: H.RODGERS
Date: 02:02:06 17:29



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

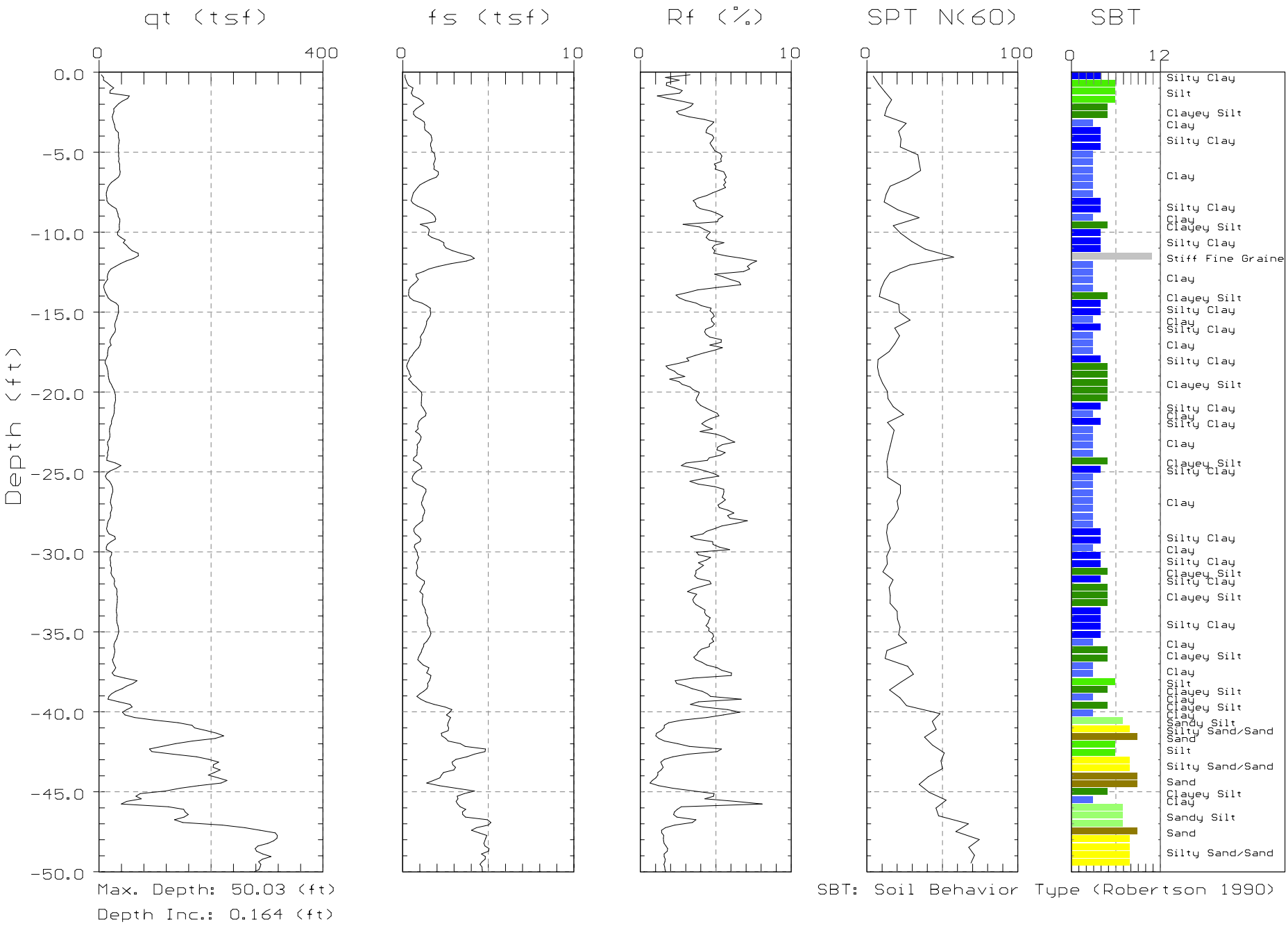
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-48

Engineer: H.RODGERS
Date: 02:02:06 18:26



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

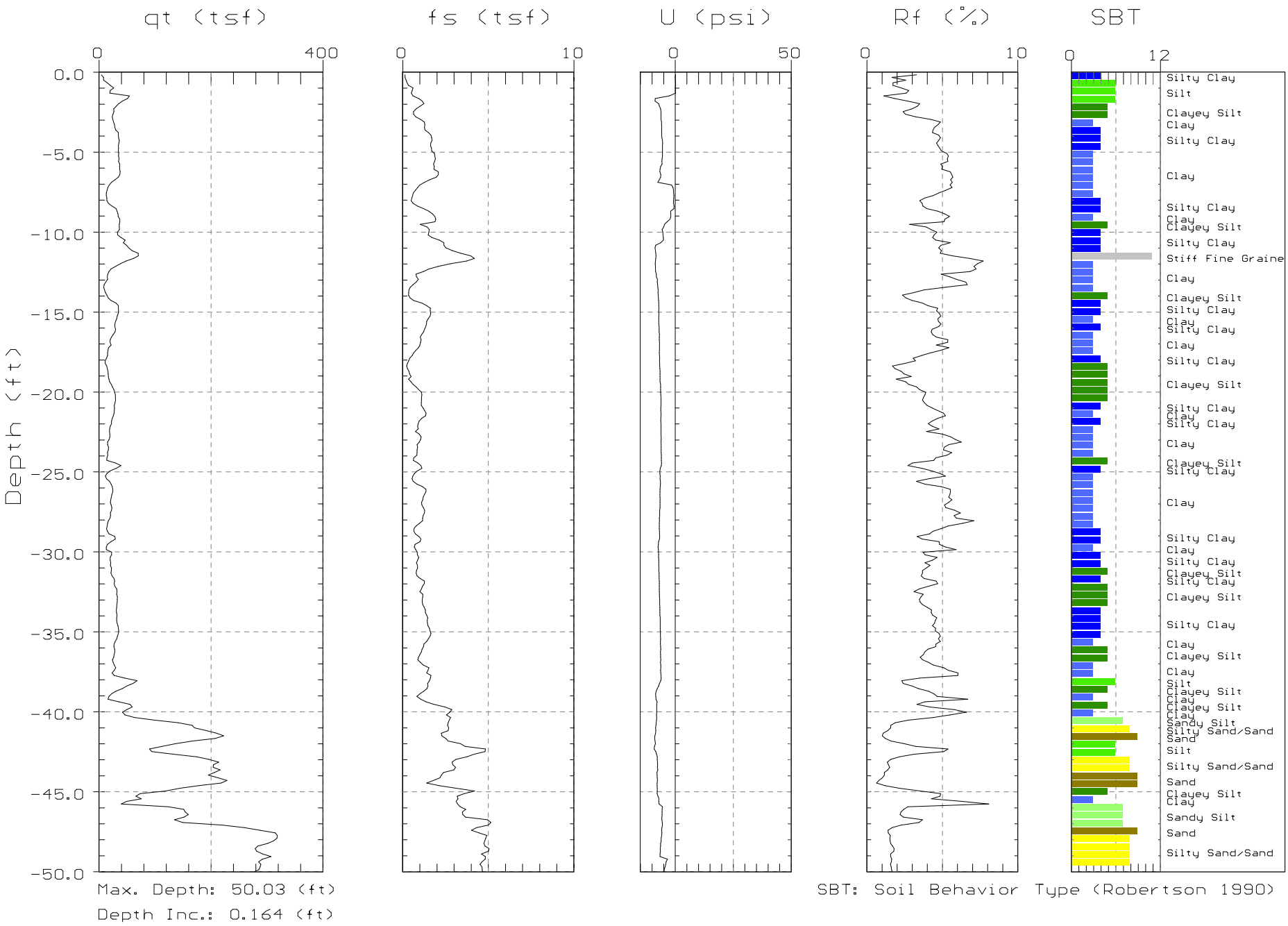
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-48

Engineer: H.RODGERS
Date: 02:02:06 18:26



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

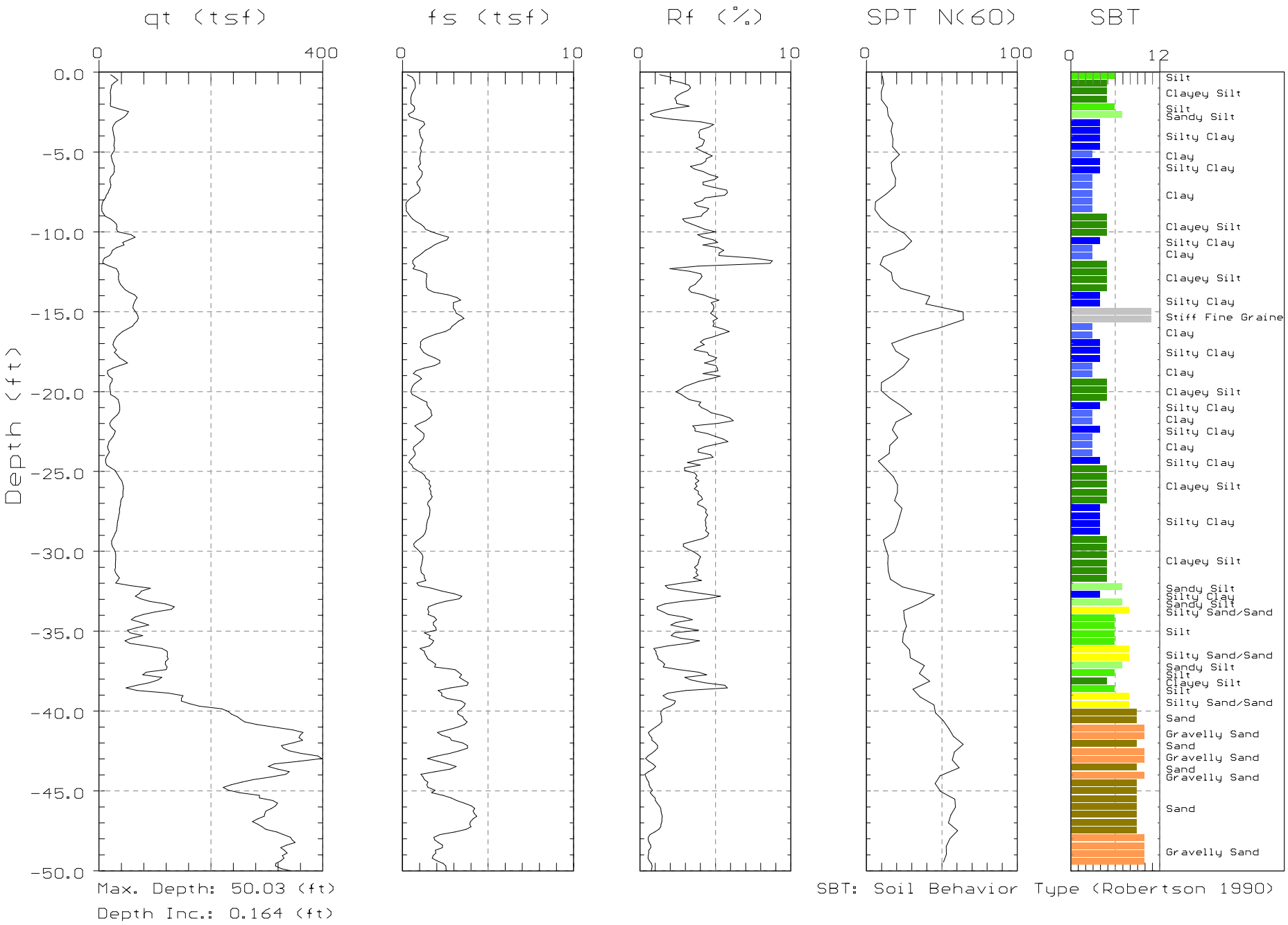
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-49

Engineer: H.RODGERS
Date: 02:02:06 19:17



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

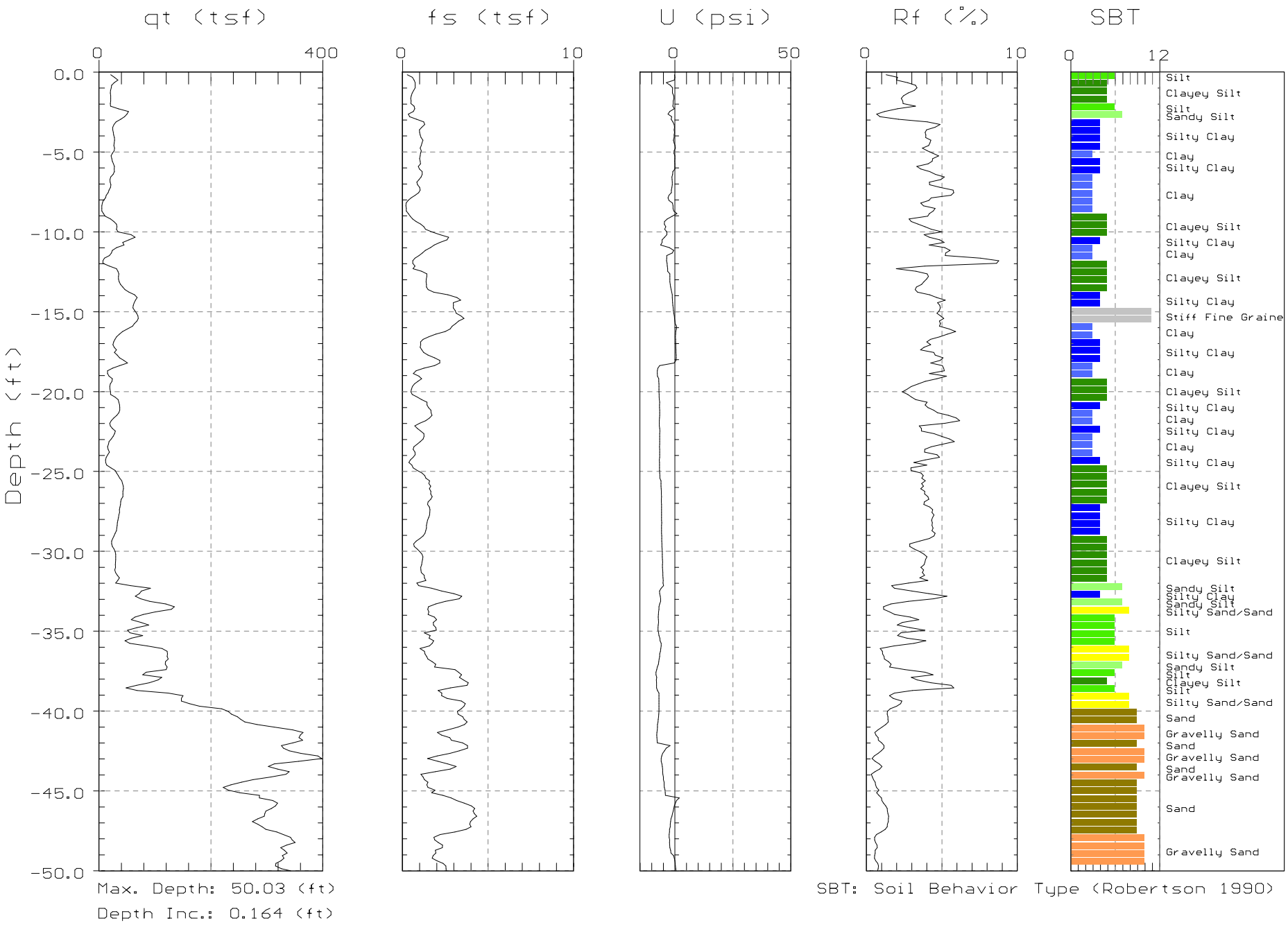
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-49

Engineer: H.RODGERS
Date: 02:02:06 19:17



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

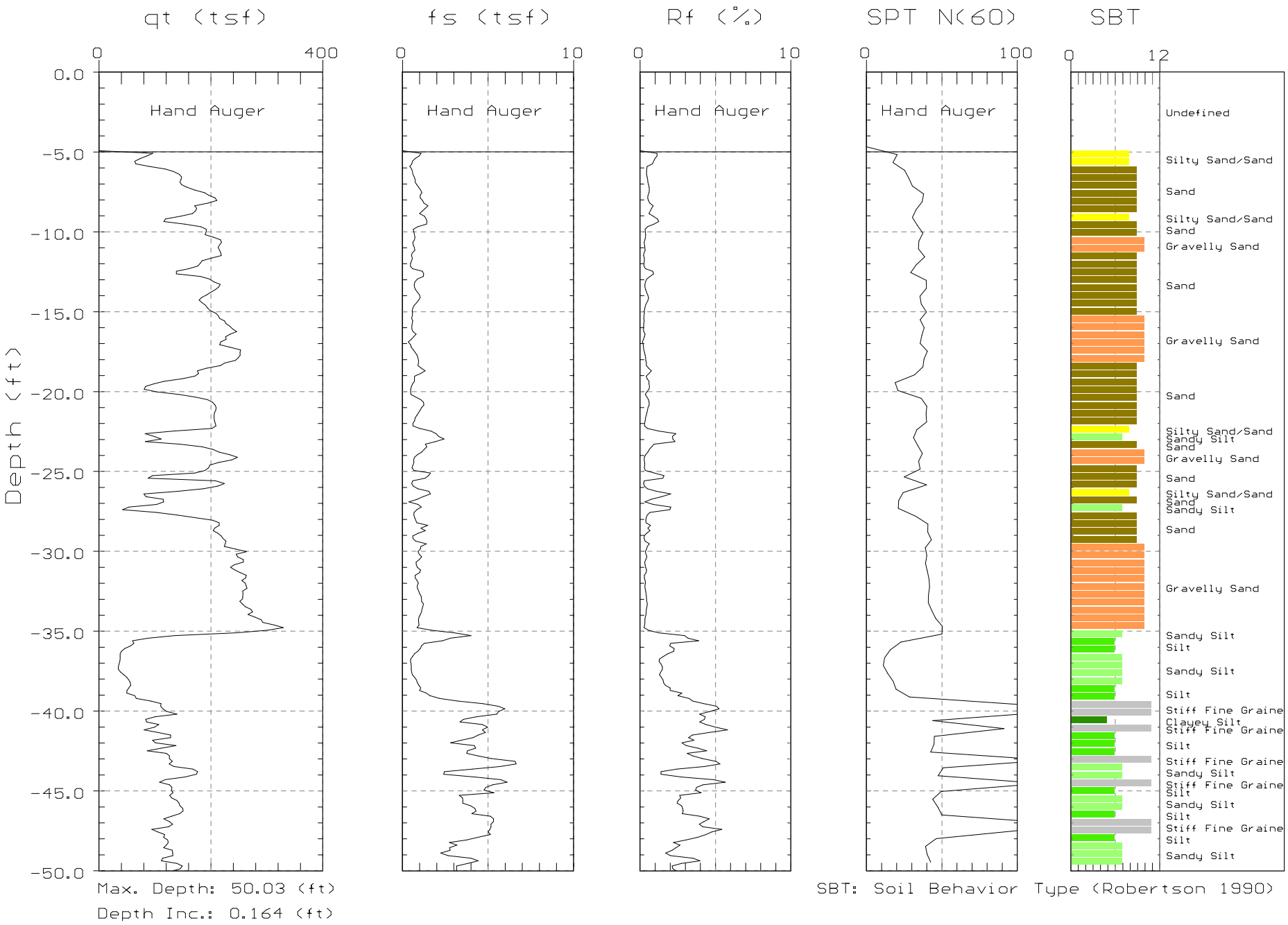
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-50

Engineer: H.RODGERS
Date: 02:10:06 08:25



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

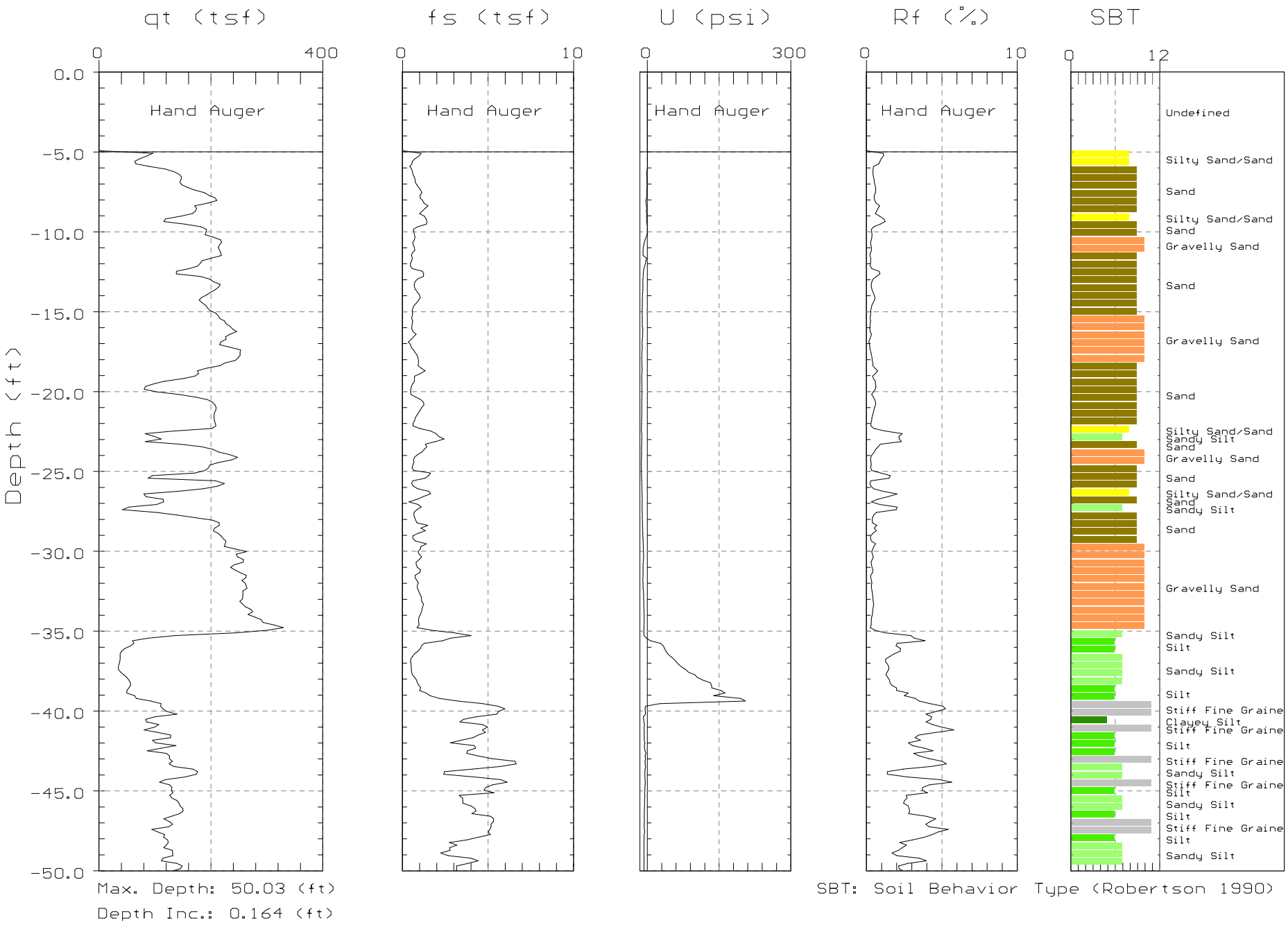
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-50

Engineer: H.RODGERS
Date: 02:10:06 08:25



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

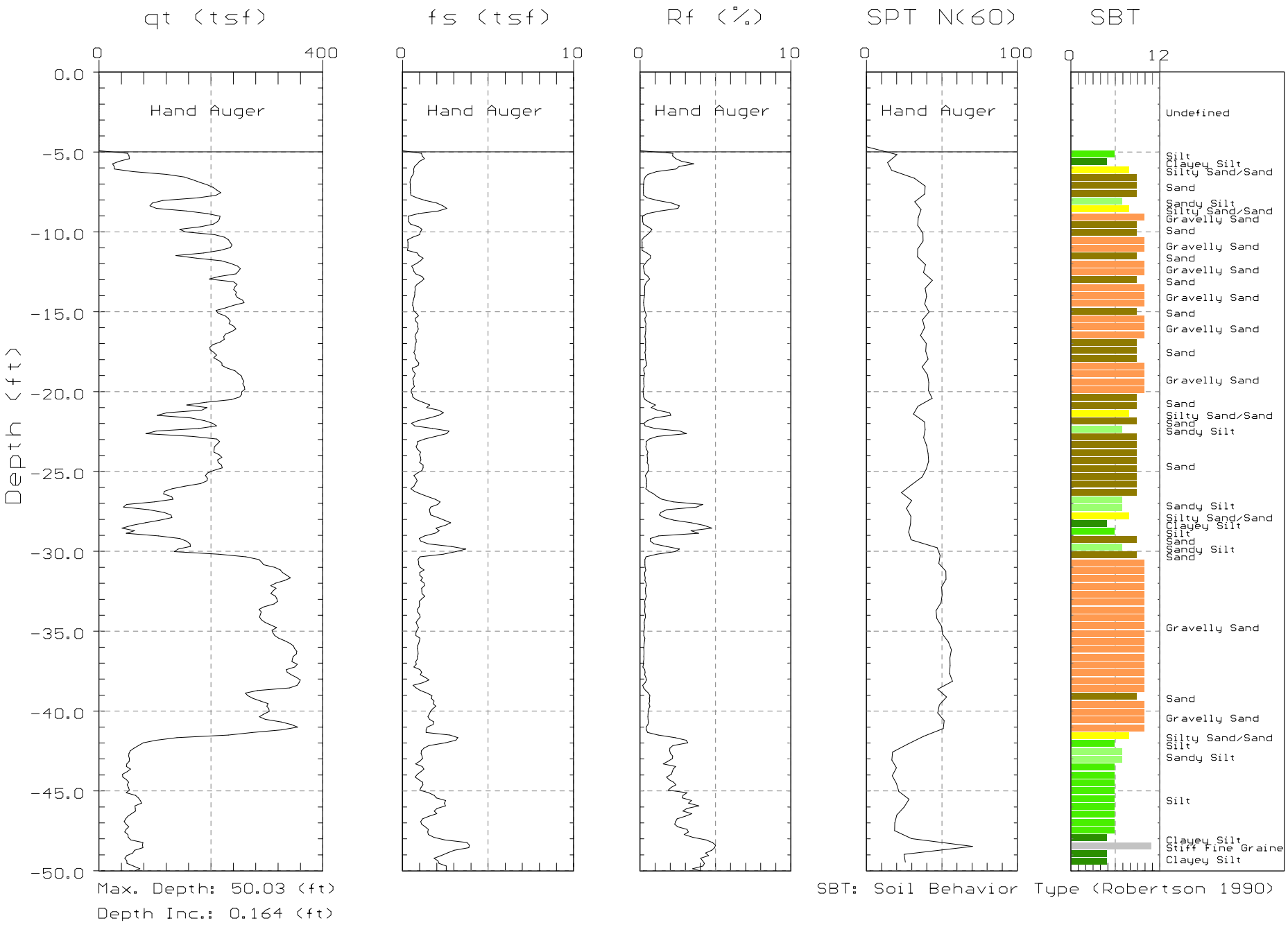
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-51

Engineer: H.RODGERS
Date: 02:10:06 09:40

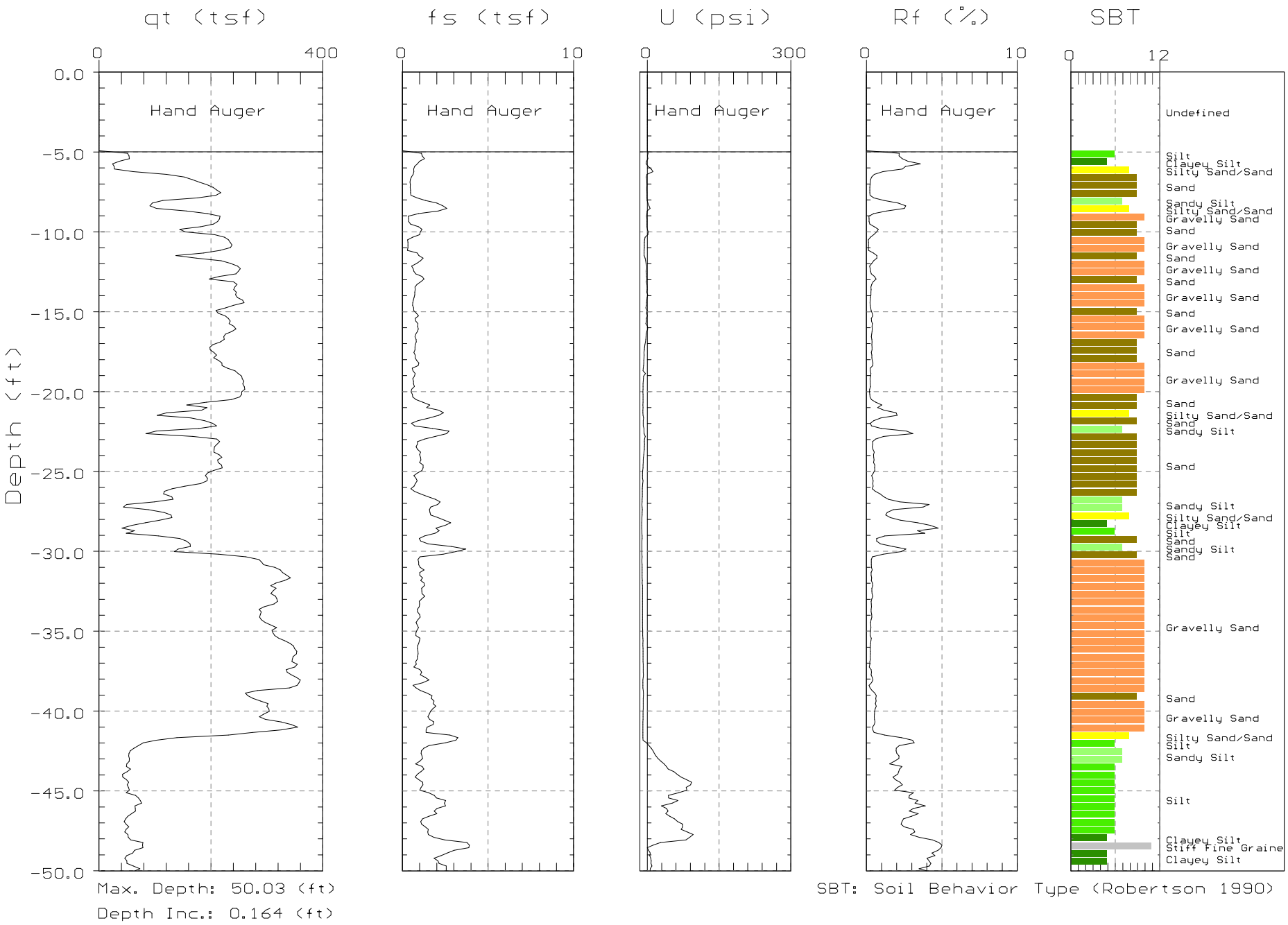


GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-51

Engineer: H.RODGERS
Date: 02:10:06 09:40



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

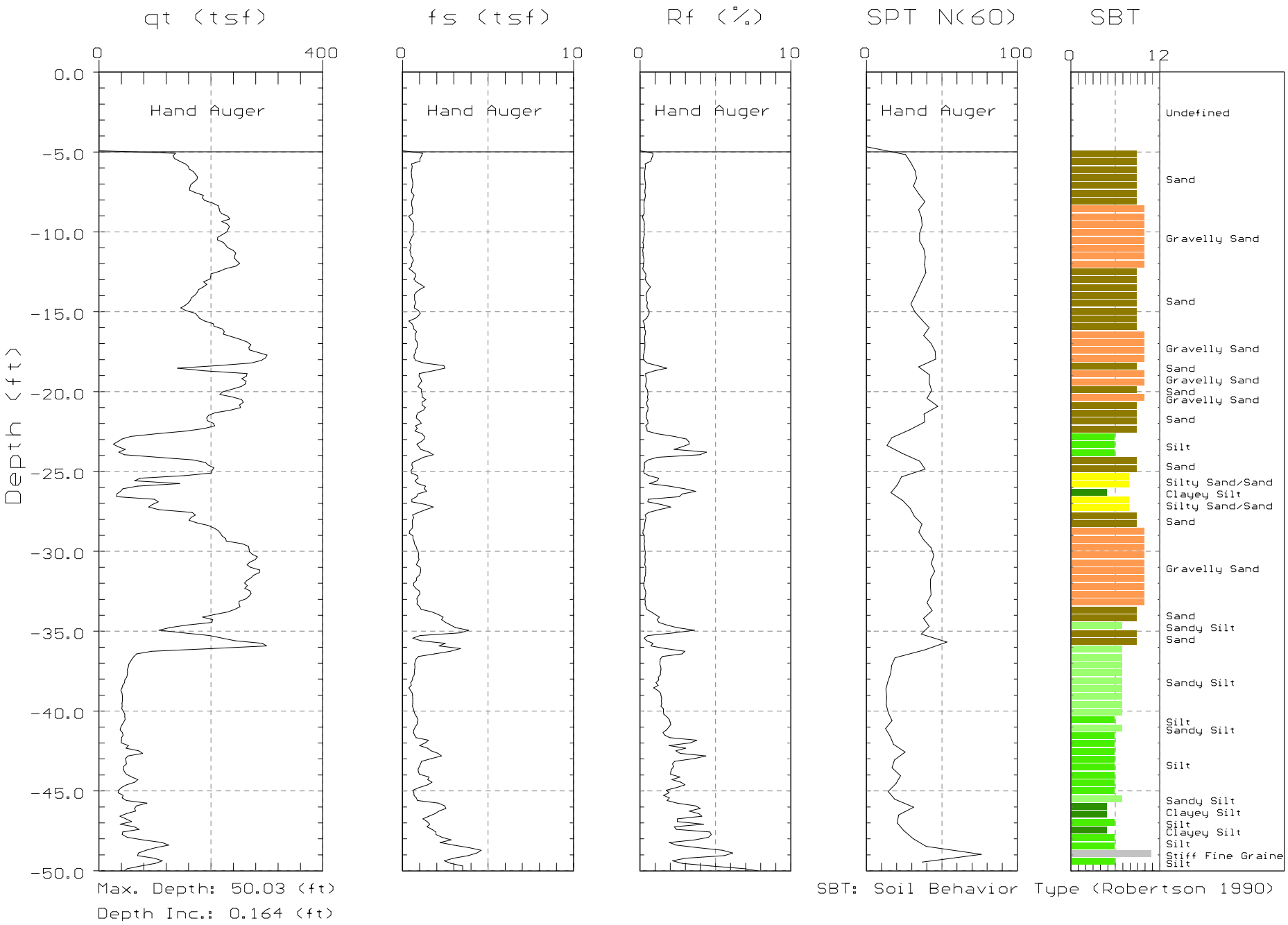
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-52

Engineer: H.RODGERS
Date: 02:10:06 10:37



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

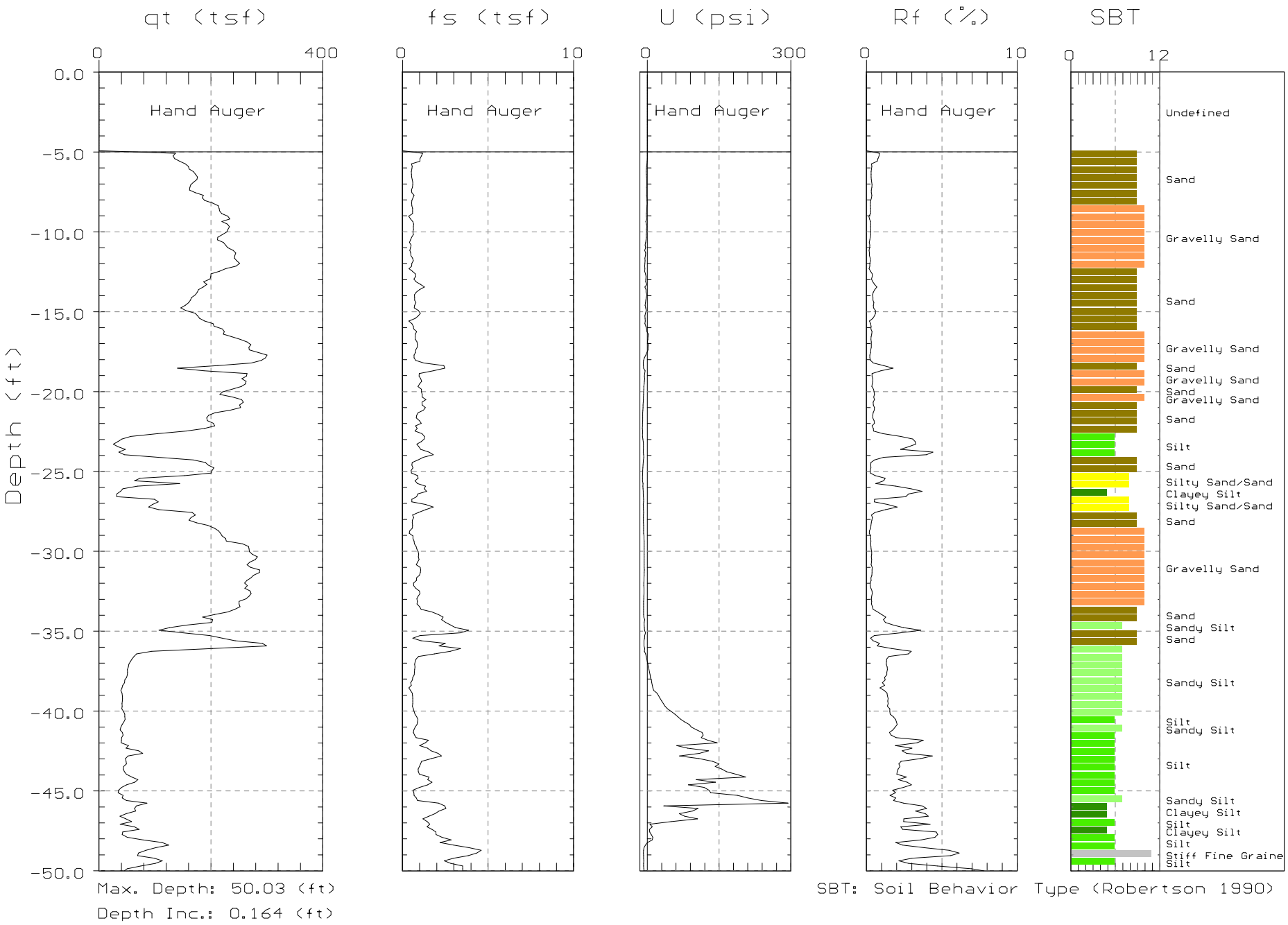
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-52

Engineer: H.RODGERS
Date: 02:10:06 10:37



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

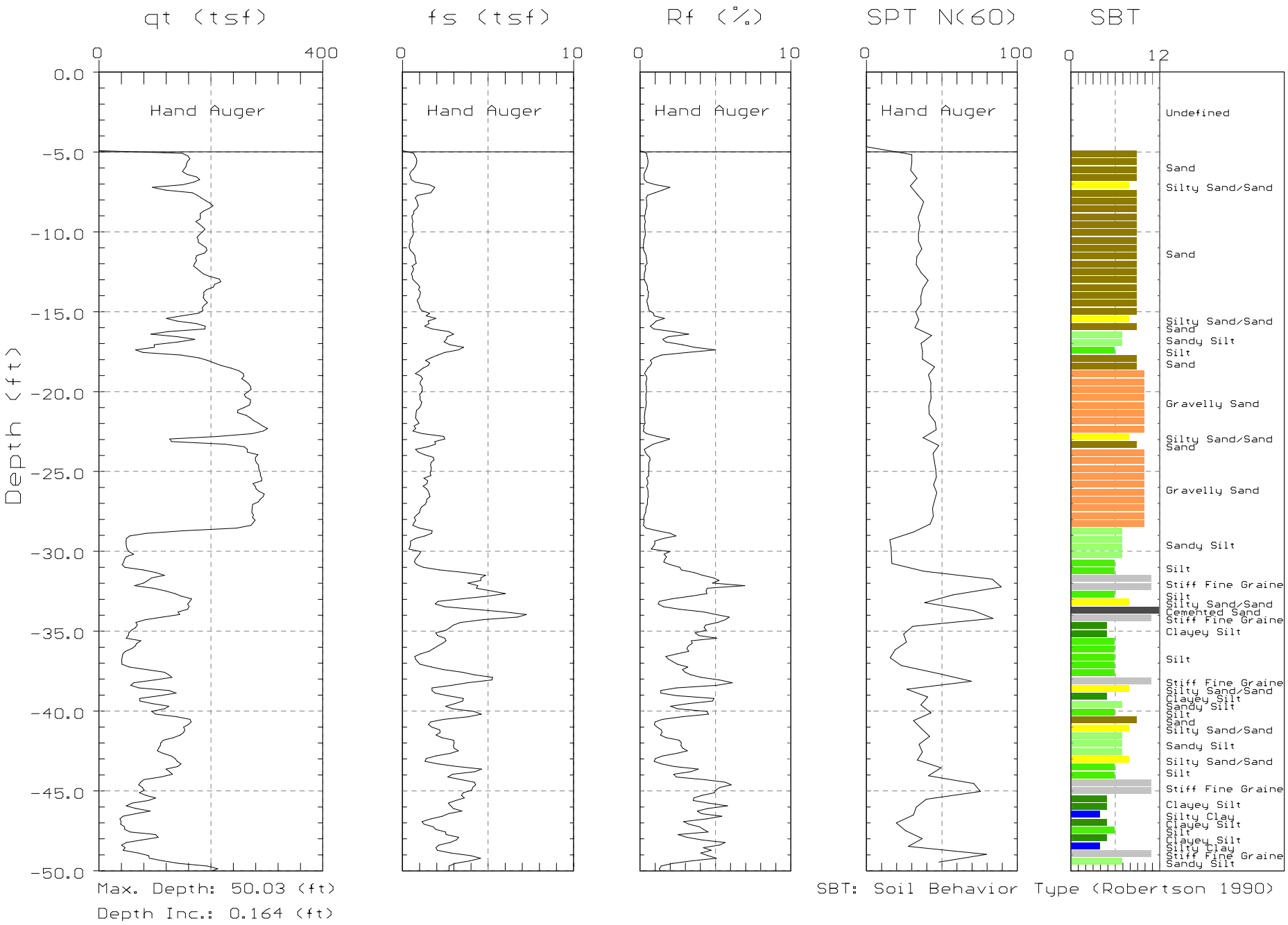
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-53

Engineer: H.RODGERS
Date: 02:10:06 11:28

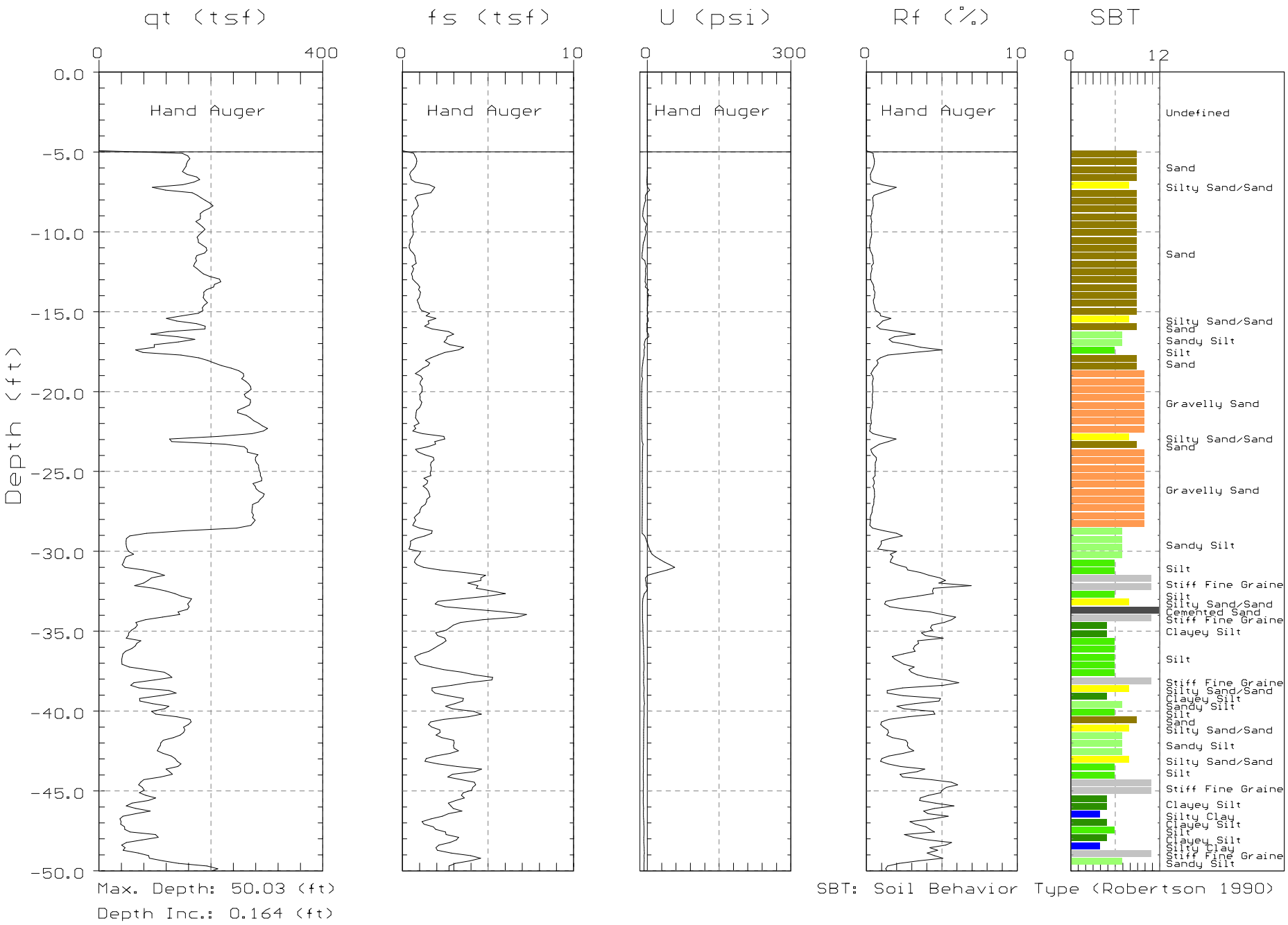


GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-53

Engineer: H.RODGERS
Date: 02:10:06 11:28



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

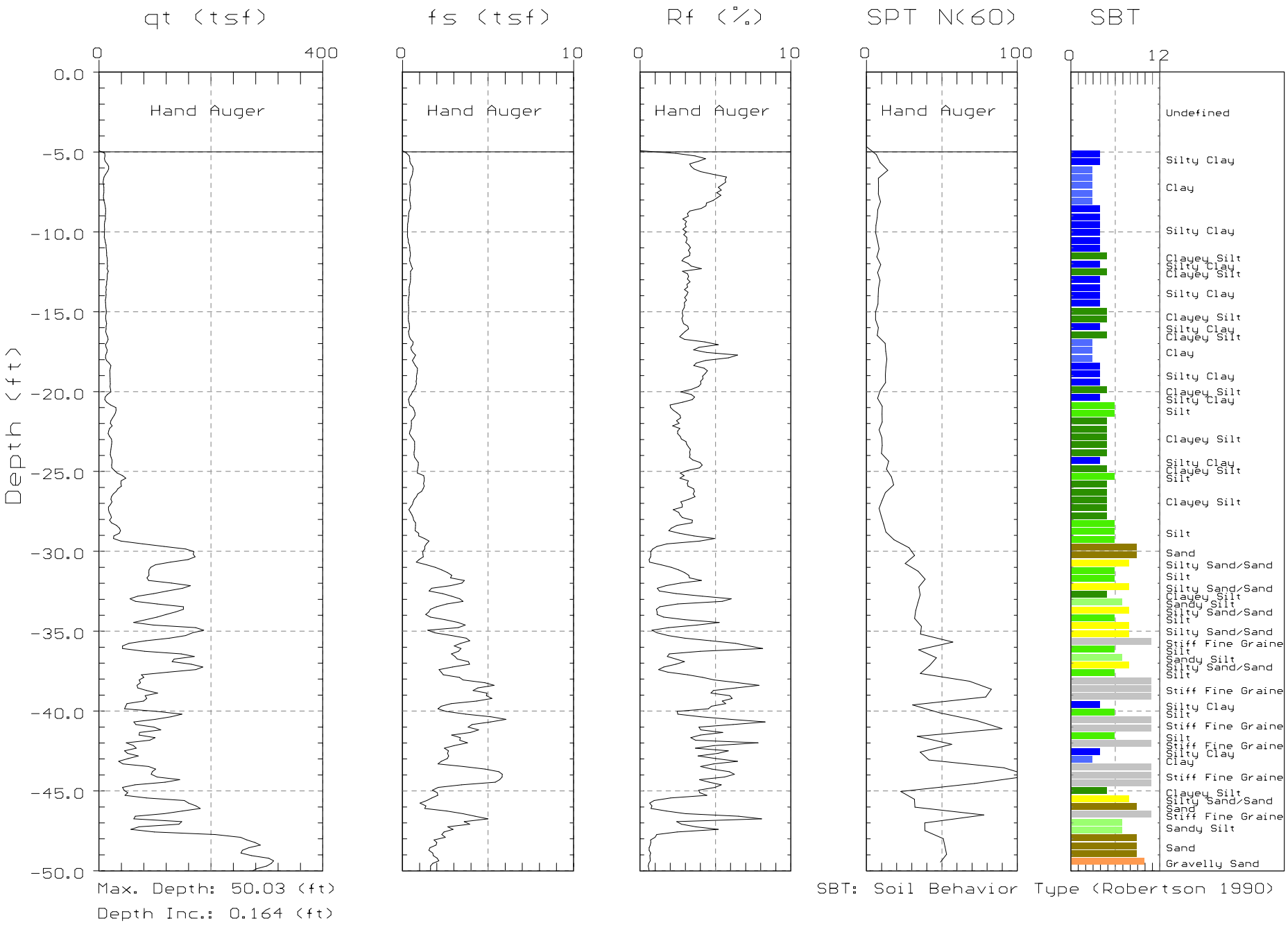
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-54

Engineer: H.RODGERS
Date: 02:10:06 13:26



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

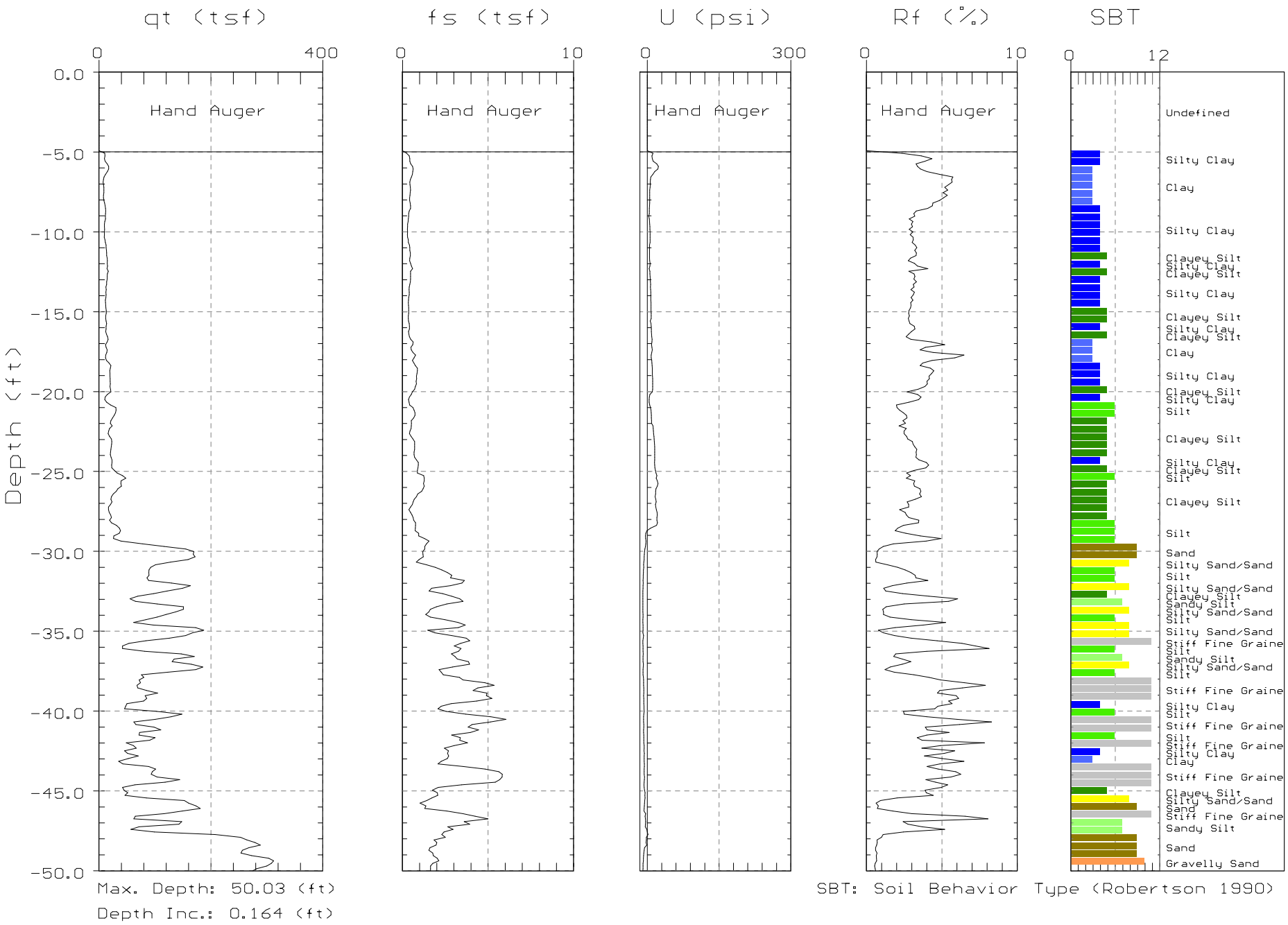
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-54

Engineer: H.RODGERS
Date: 02:10:06 13:26



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

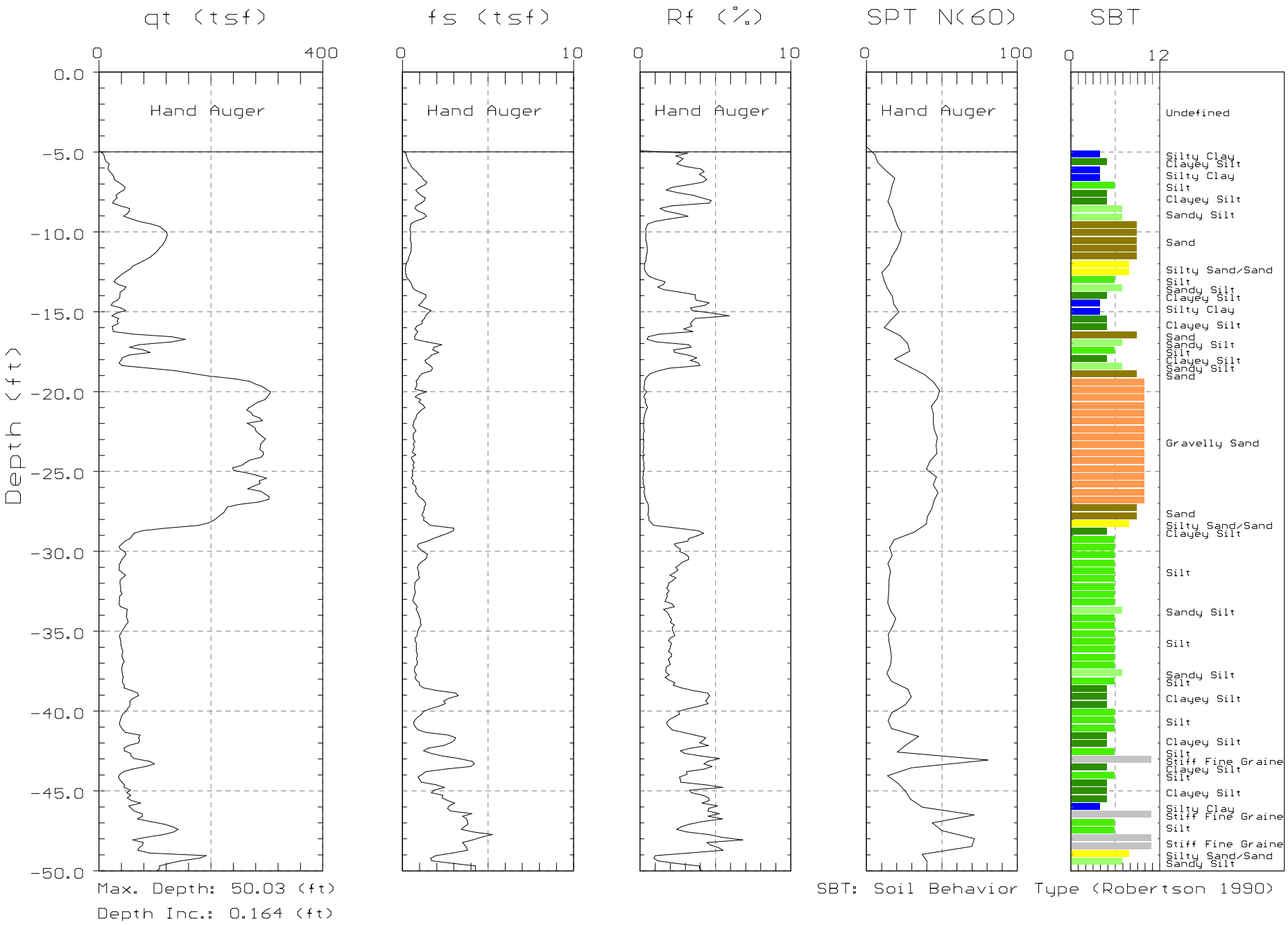
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-55

Engineer: H.RODGERS
Date: 02:10:06 14:23



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

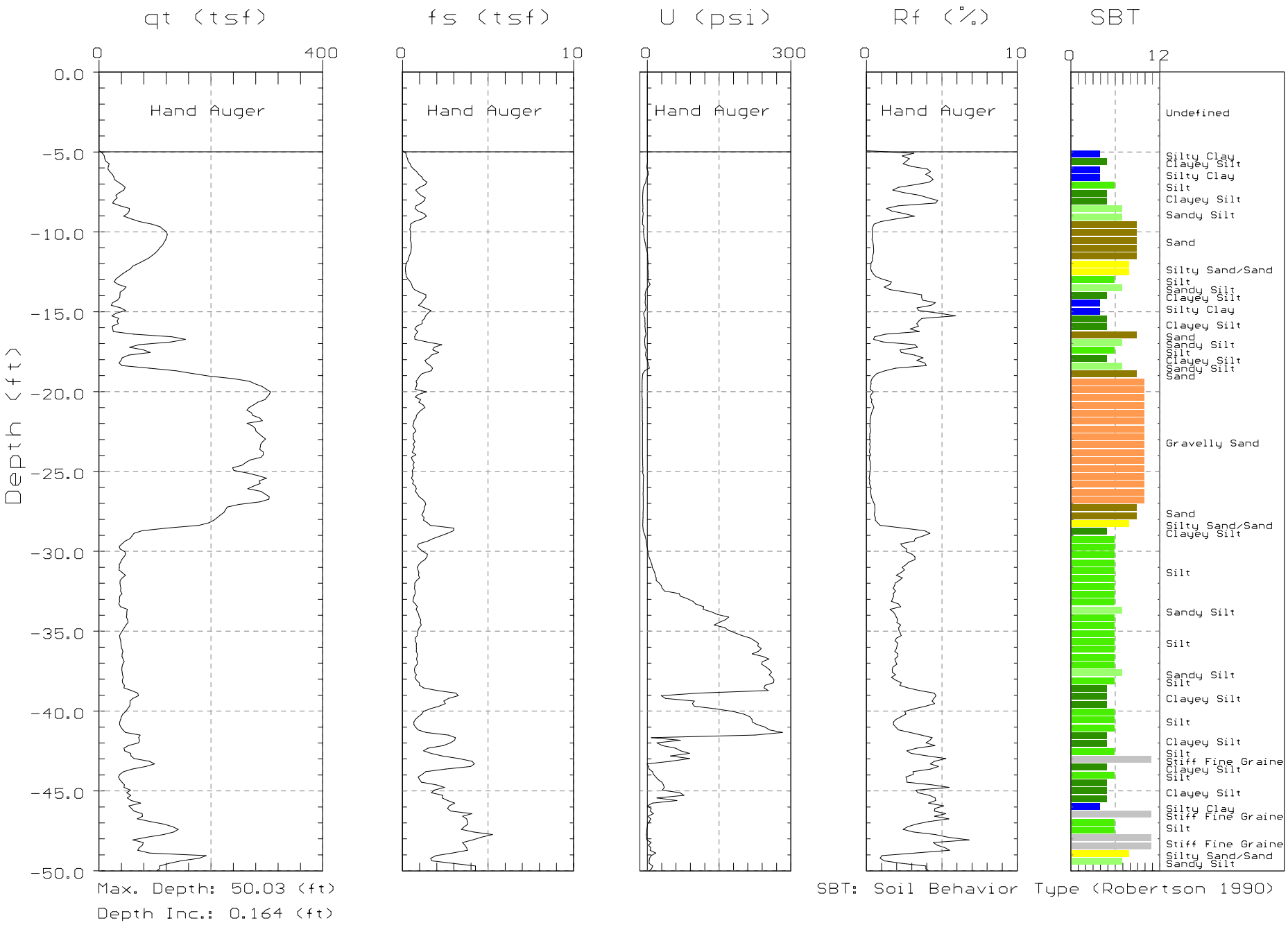
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-55

Engineer: H.RODGERS
Date: 02:10:06 14:23



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

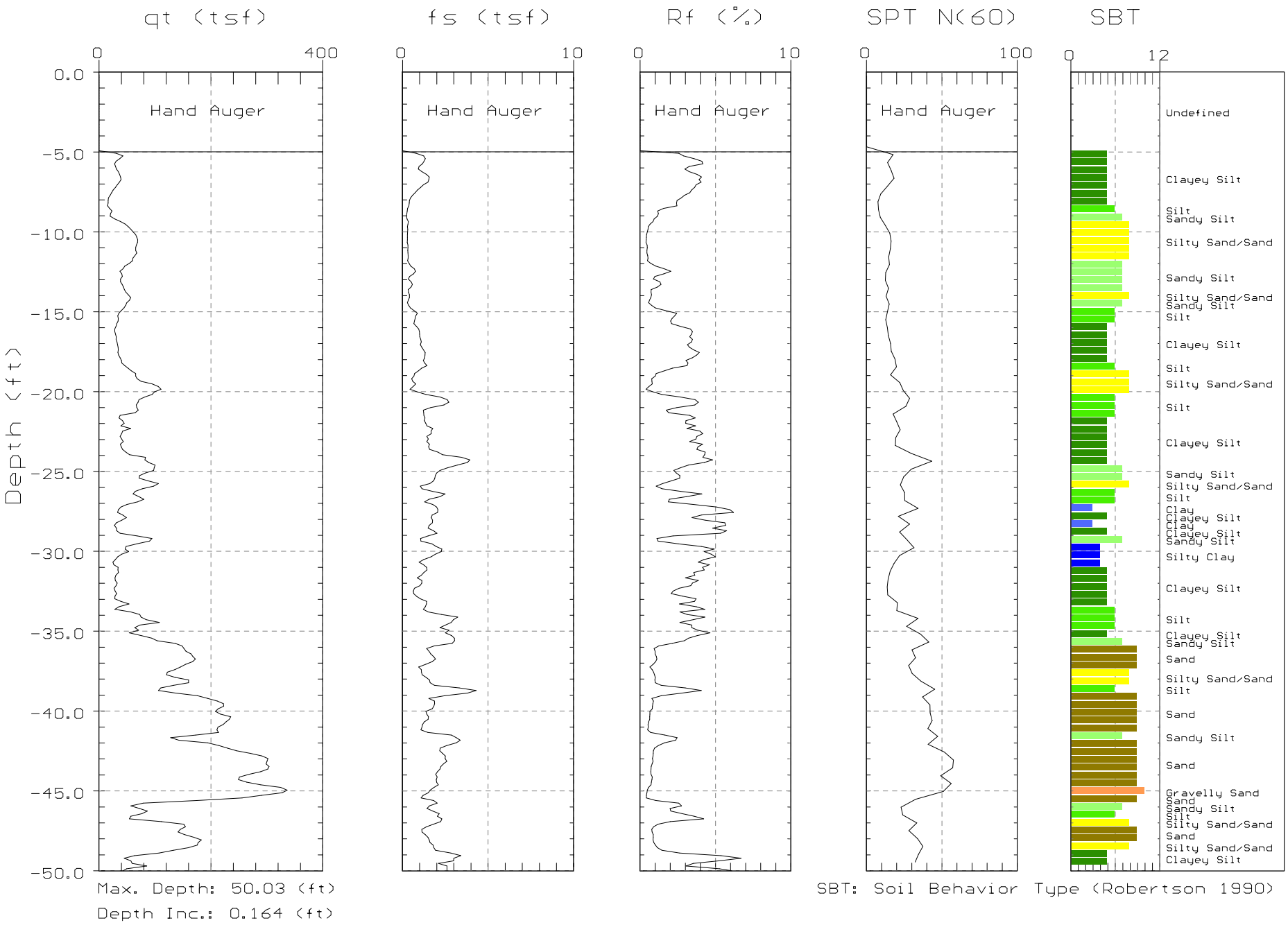
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-56

Engineer: H.RODGERS
Date: 02:10:06 15:13

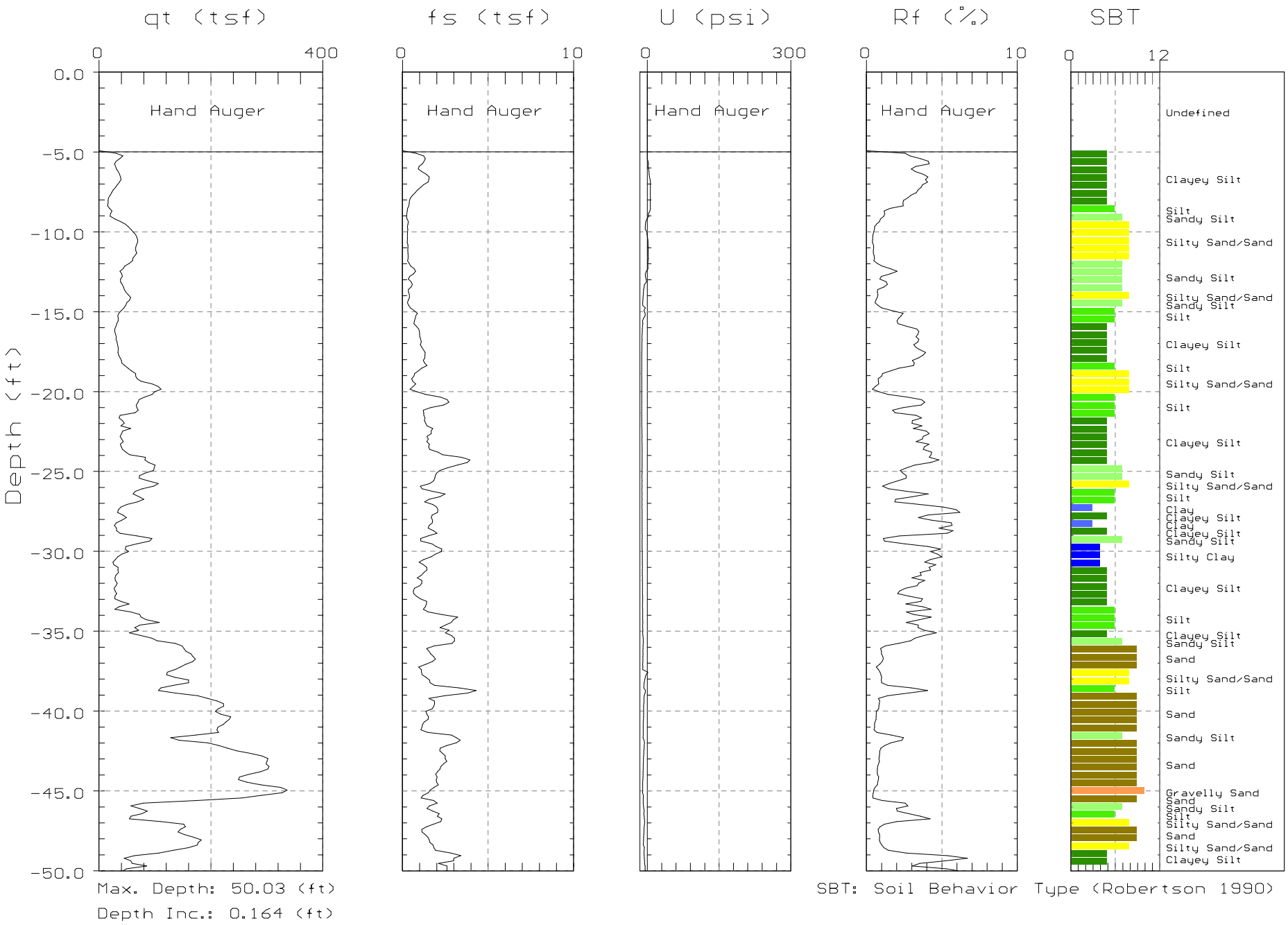


GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-56

Engineer: H.RODGERS
Date: 02:10:06 15:13



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

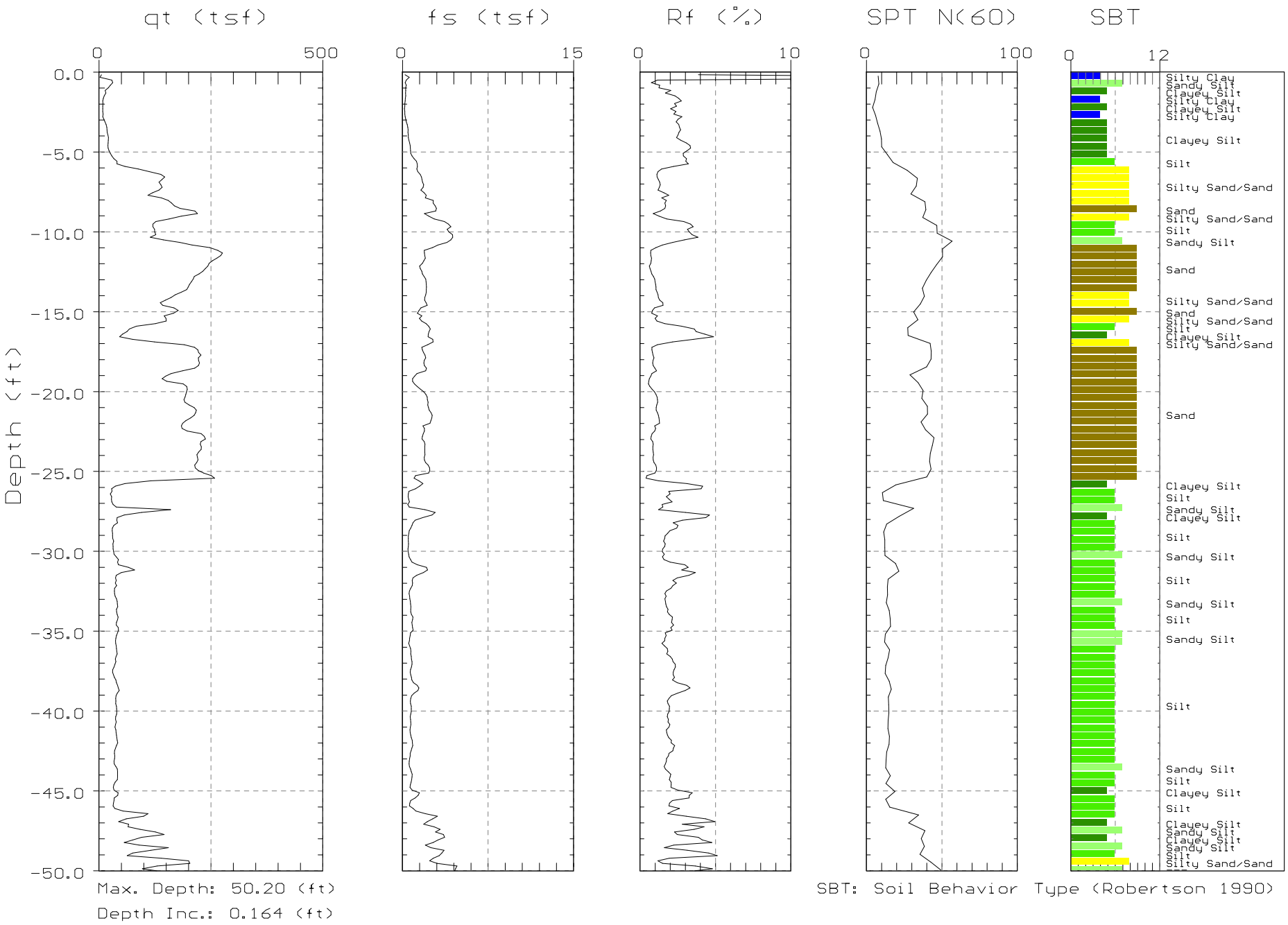
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-57

Engineer: H.RODGERS
Date: 02:24:06 09:12



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

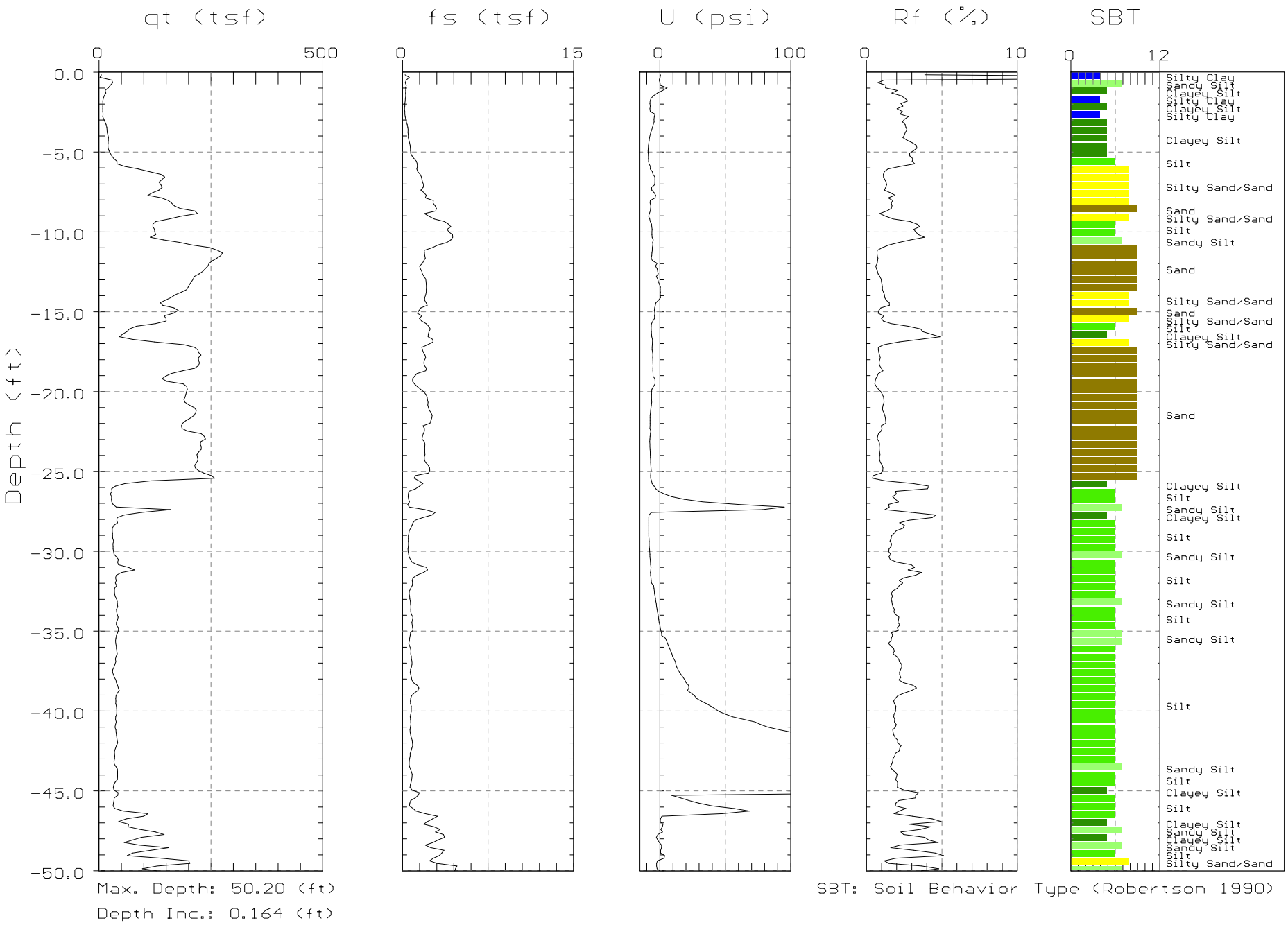
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-57

Engineer: H.RODGERS
Date: 02:24:06 09:12



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

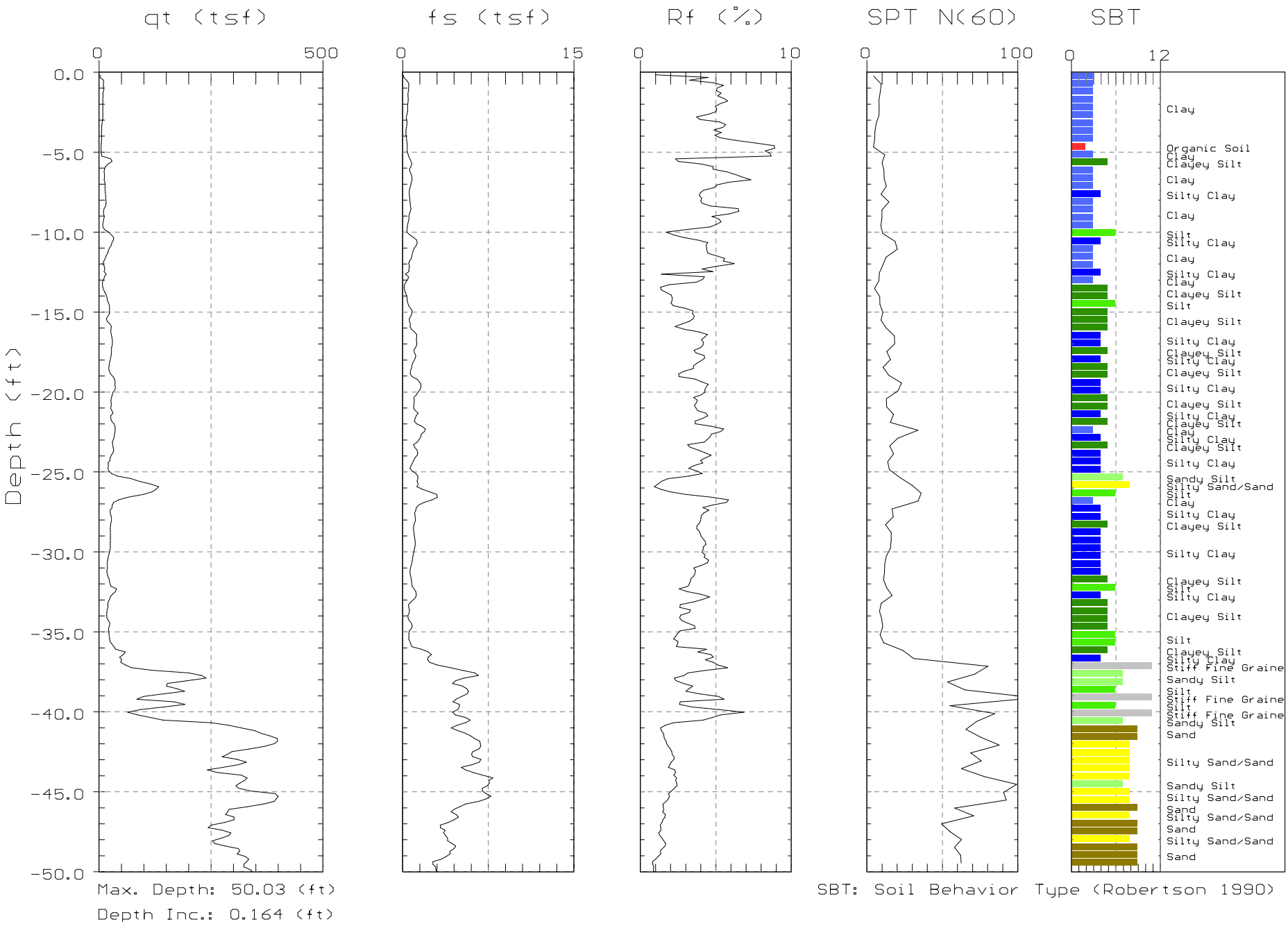
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-58

Engineer: H.RODGERS
Date: 02:24:06 10:07



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

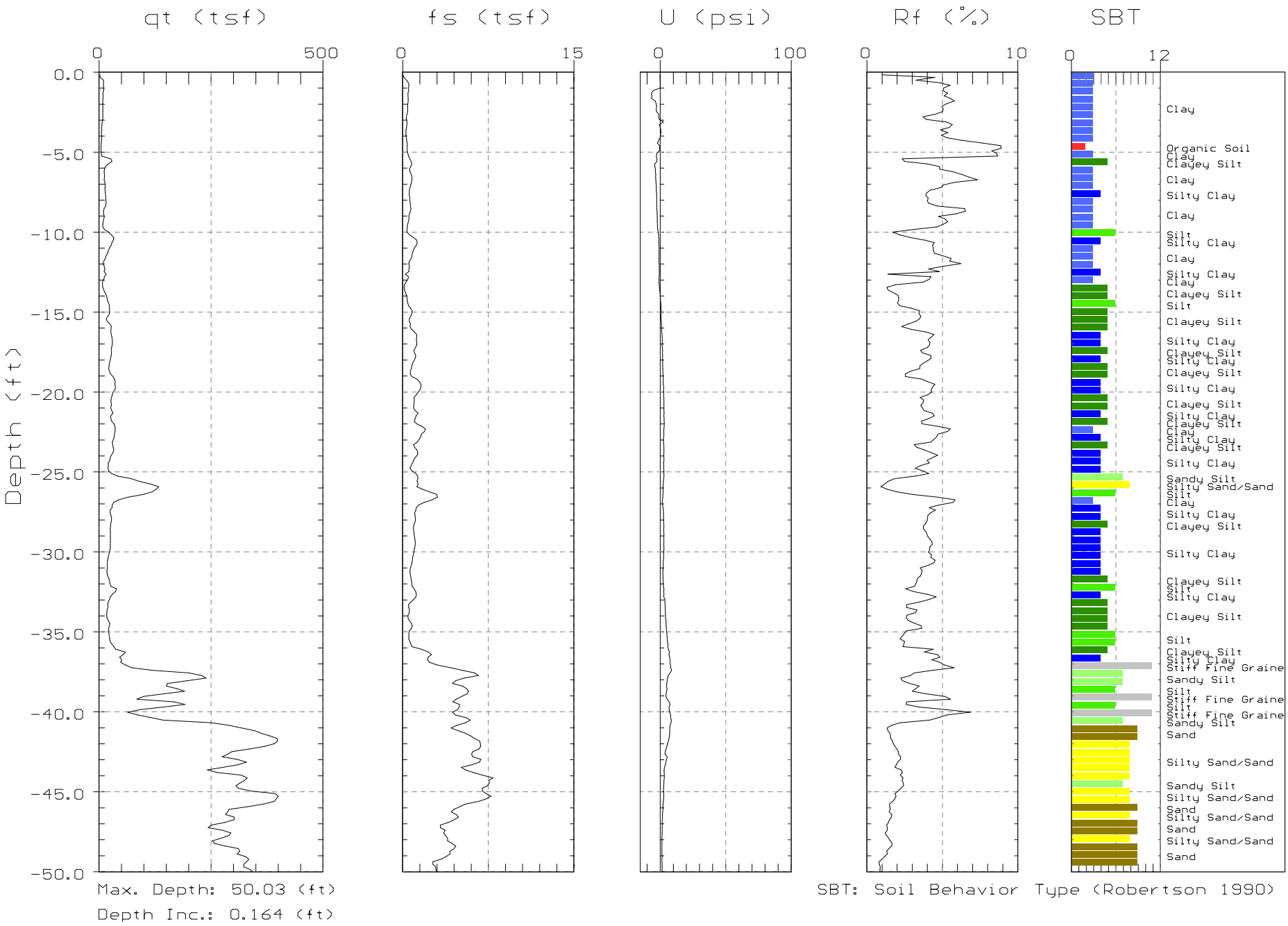
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-58

Engineer: H.RODGERS
Date: 02:24:06 10:07



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

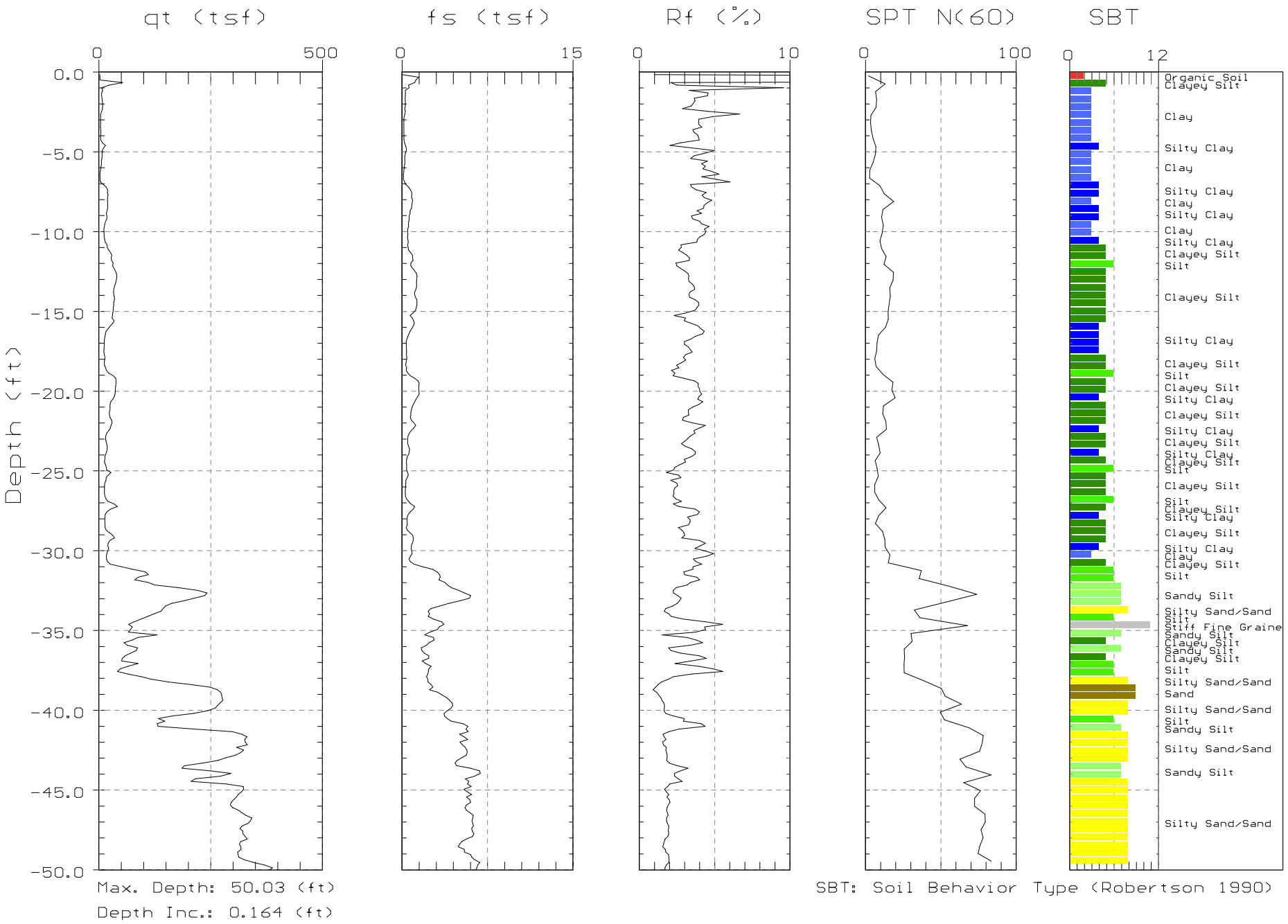
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-59

Engineer: H.RODGERS
Date: 02:24:06 10:58



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

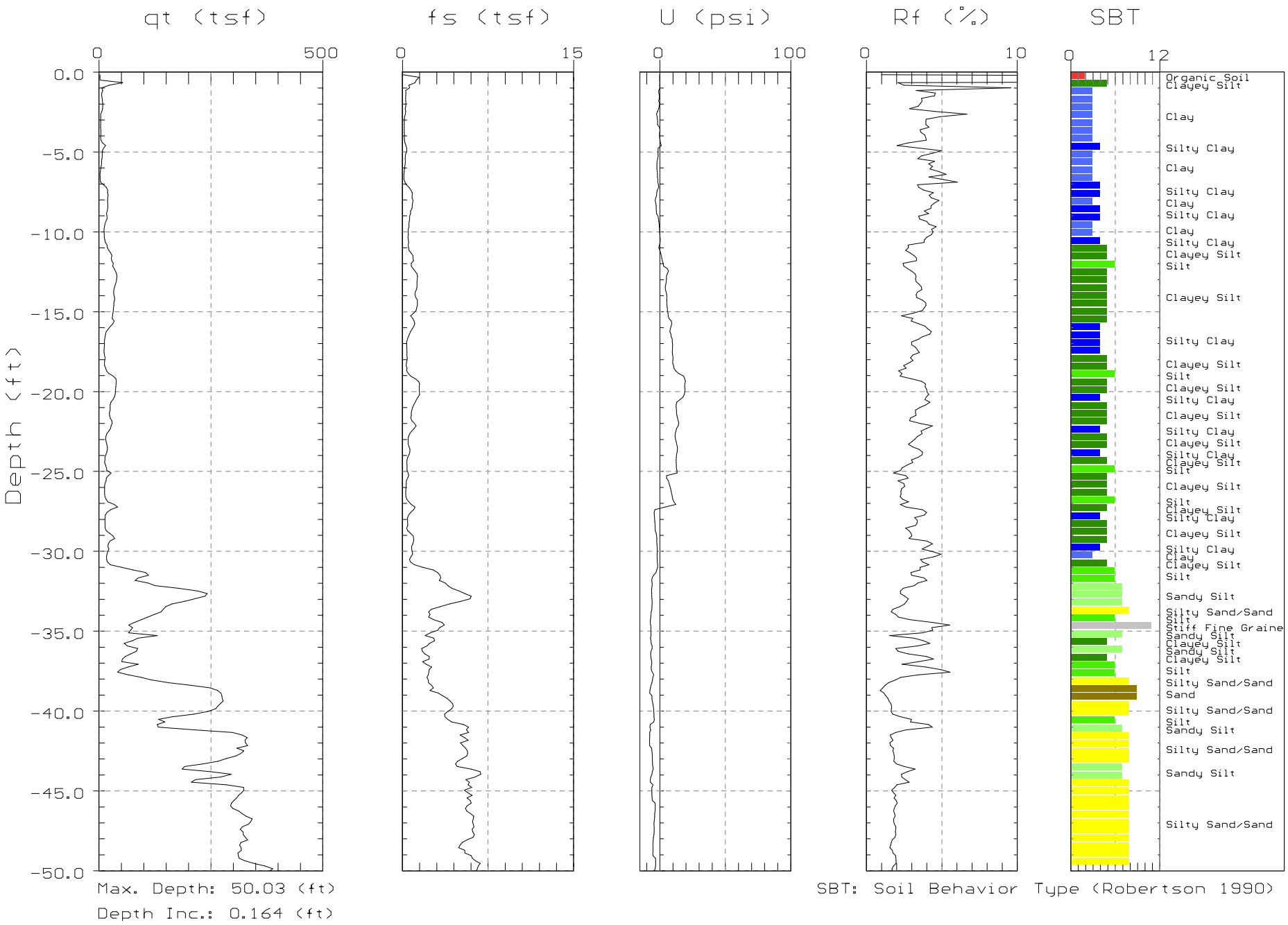
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-59

Engineer: H.RODGERS
Date: 02:24:06 10:58



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

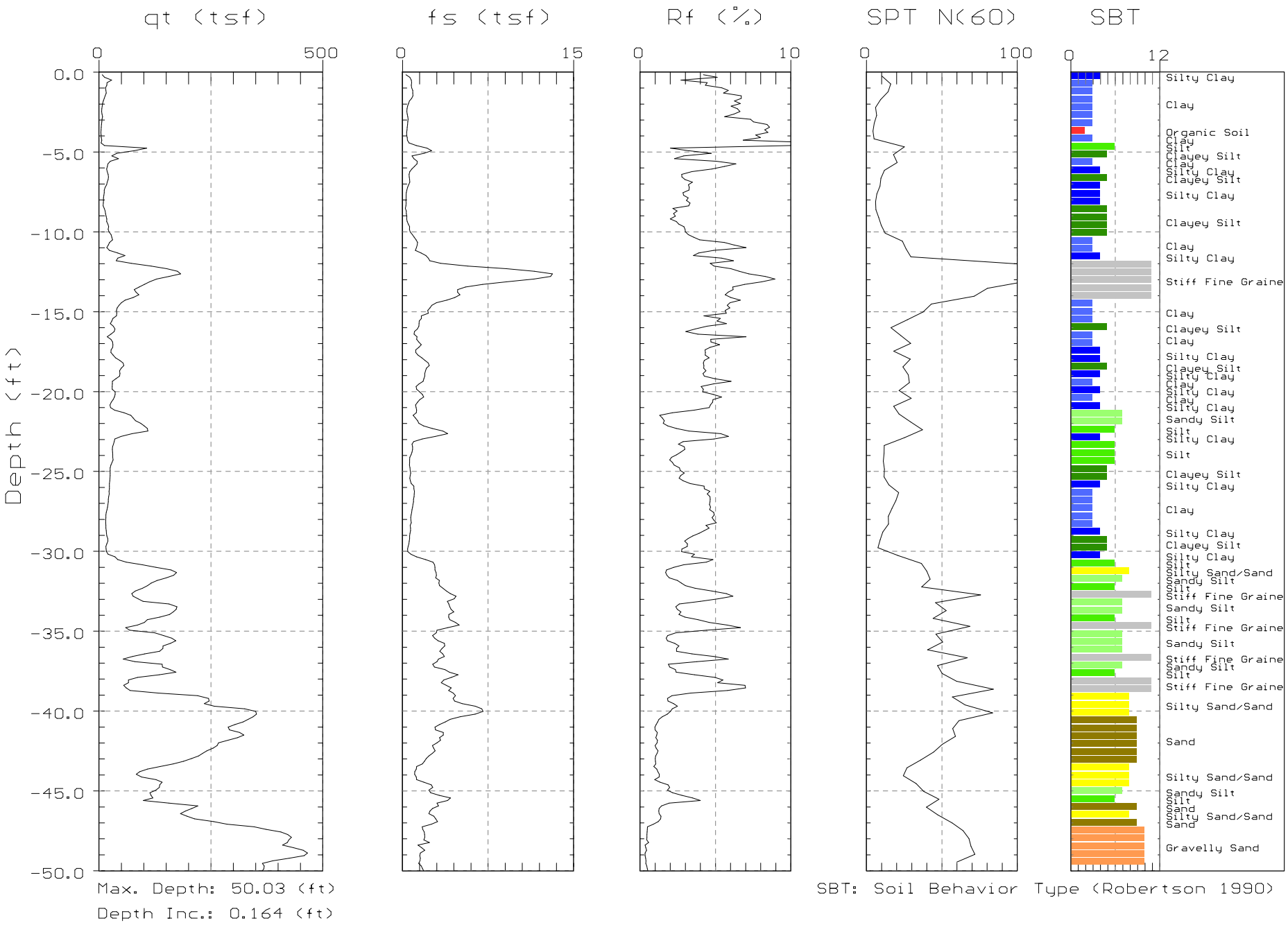
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-60

Engineer: H.RODGERS
Date: 02:24:06 11:51



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

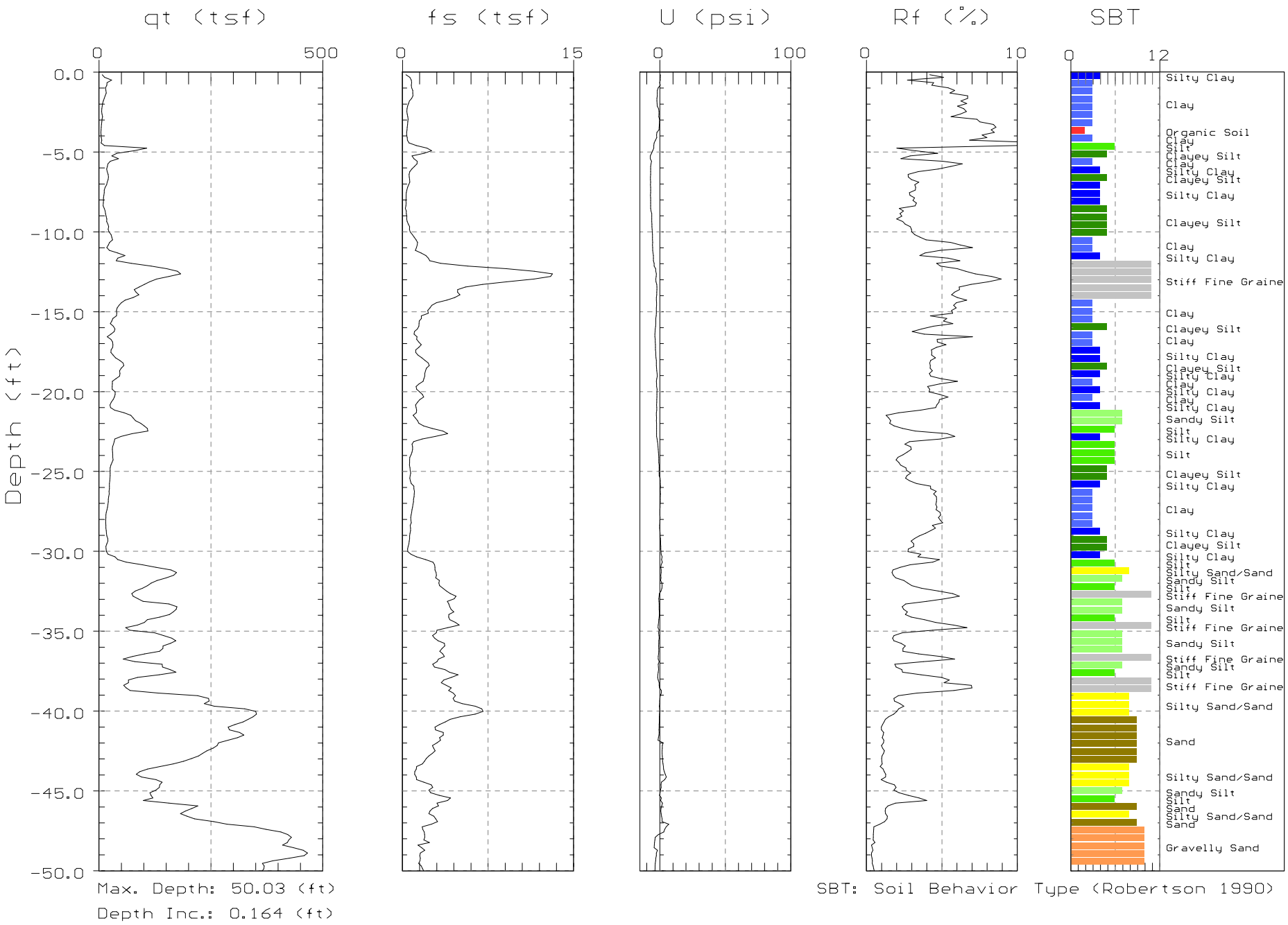
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-60

Engineer: H.RODGERS
Date: 02:24:06 11:51



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

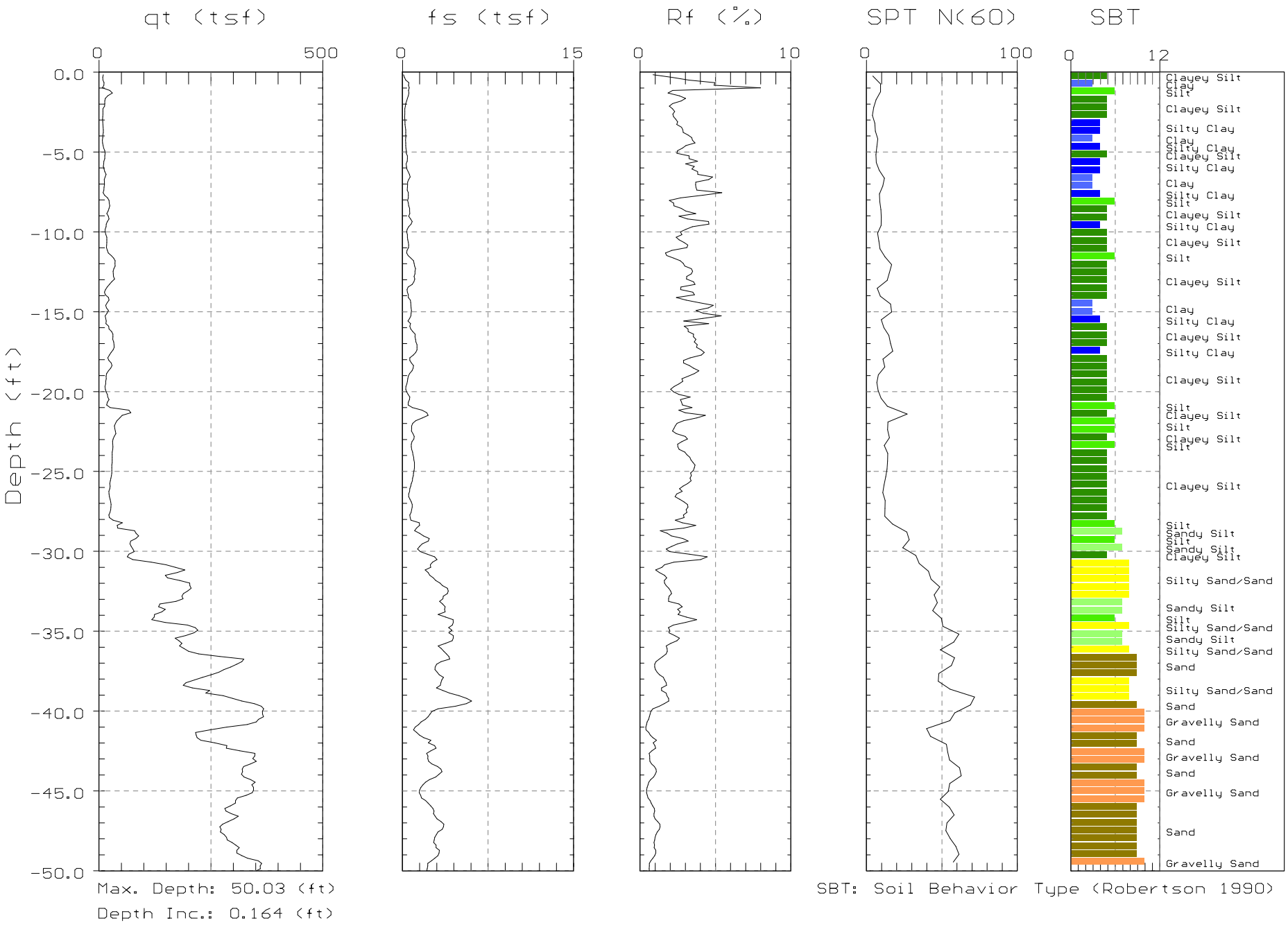
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-61

Engineer: H.RODGERS
Date: 02:24:06 12:37



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

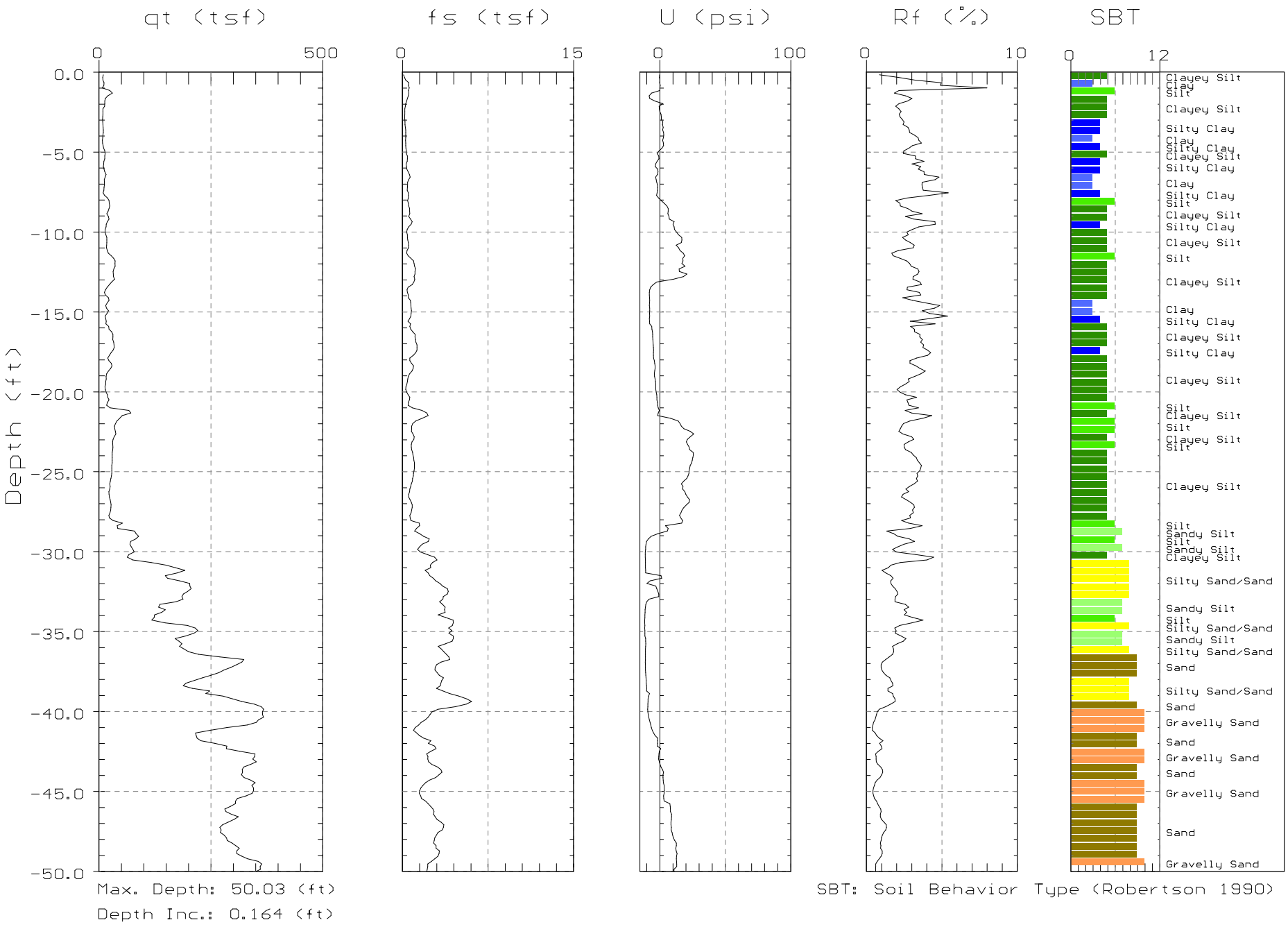
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-61

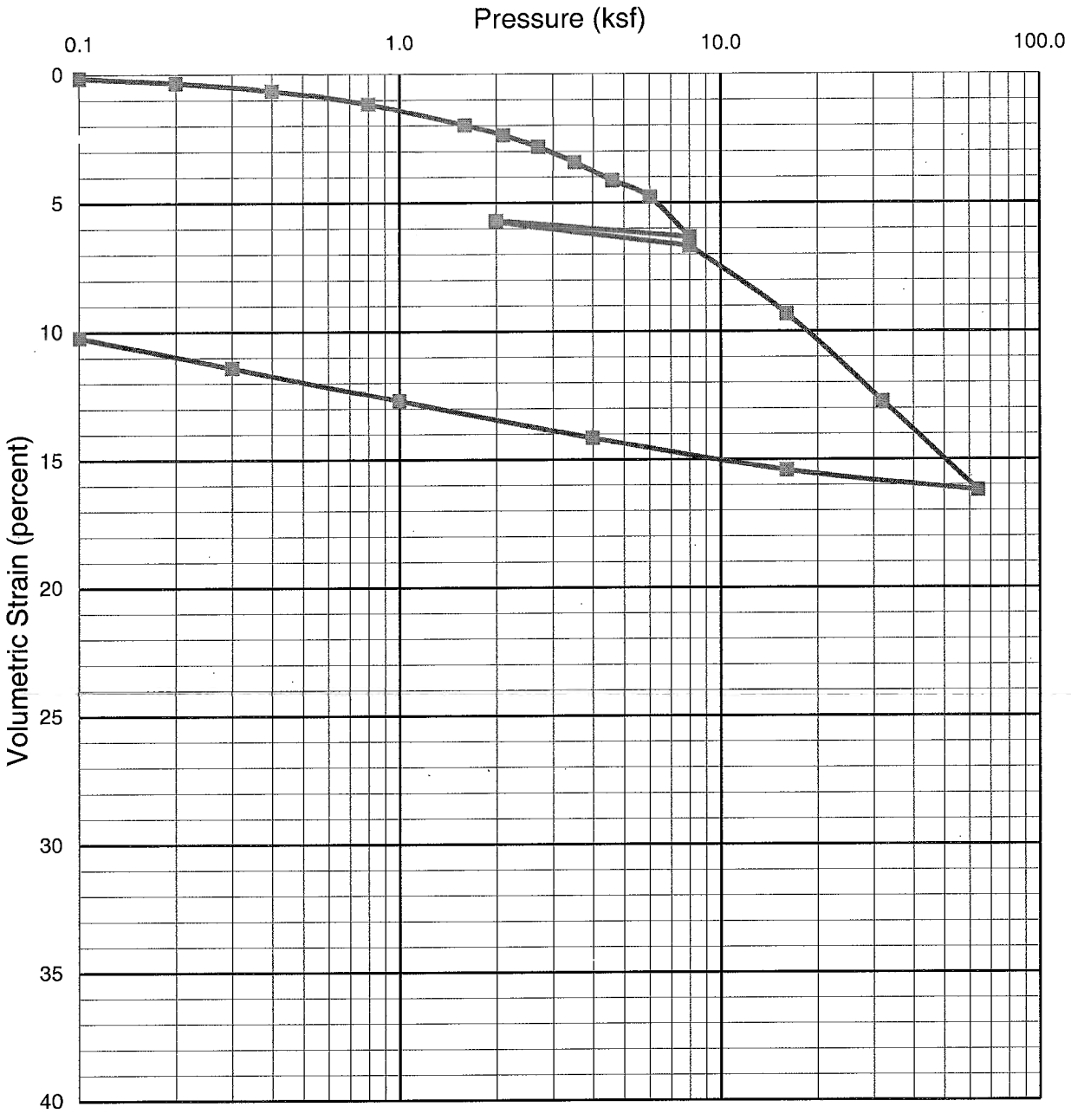
Engineer: H.RODGERS
Date: 02:24:06 12:37



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

APPENDIX C
Geotechnical Laboratory Test Results



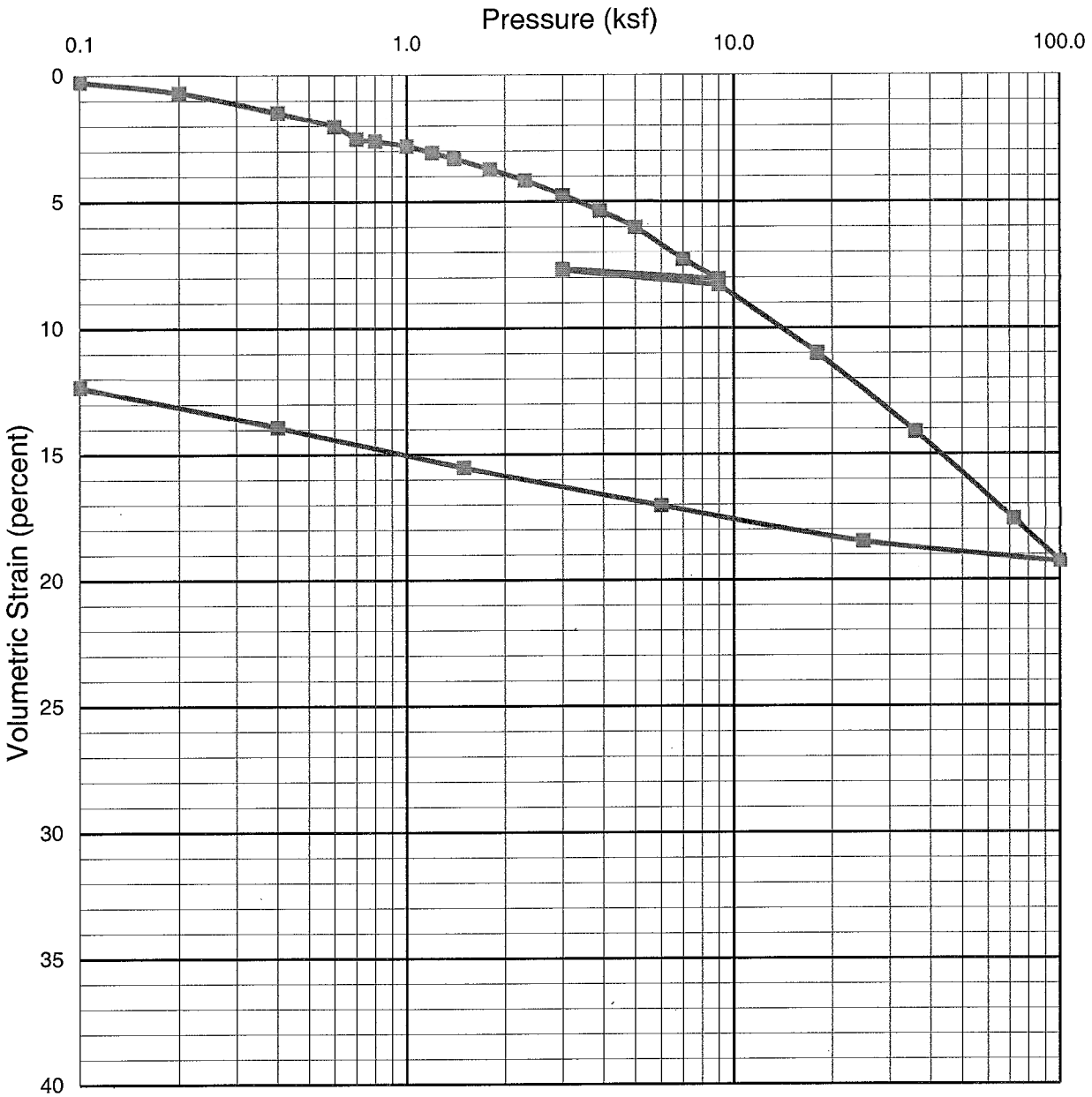
Sampler Type: Sprague & Henwood			Condition	Before Test			After Test	
Diameter (in)	2.42	Height (in) 1.00	Water Content	w_o	23.6 %		w_f	17.8 %
Overburden Pressure, p_o	700 psf		Void Ratio	e_o	0.64		e_f	0.48
Preconsol. Pressure, p_c	7,500 psf		Saturation	S_o	99 %		S_f	100 %
Compression Ratio, $C_{\varepsilon c}$	0.12		Dry Density	γ_d	103 pcf		γ_d	114 pcf
LL ND	PL ND		PI ND			G_s 2.70 (assumed)		
Classification CLAY (CL), brown			Source B-1 @ 5.5 feet					

HARBOR PARK
Pittsburg, California

CONSOLIDATION TEST REPORT

Treadwell&Rollo

Date 06/12/06 | Project No. 4245.02 | Figure C-1



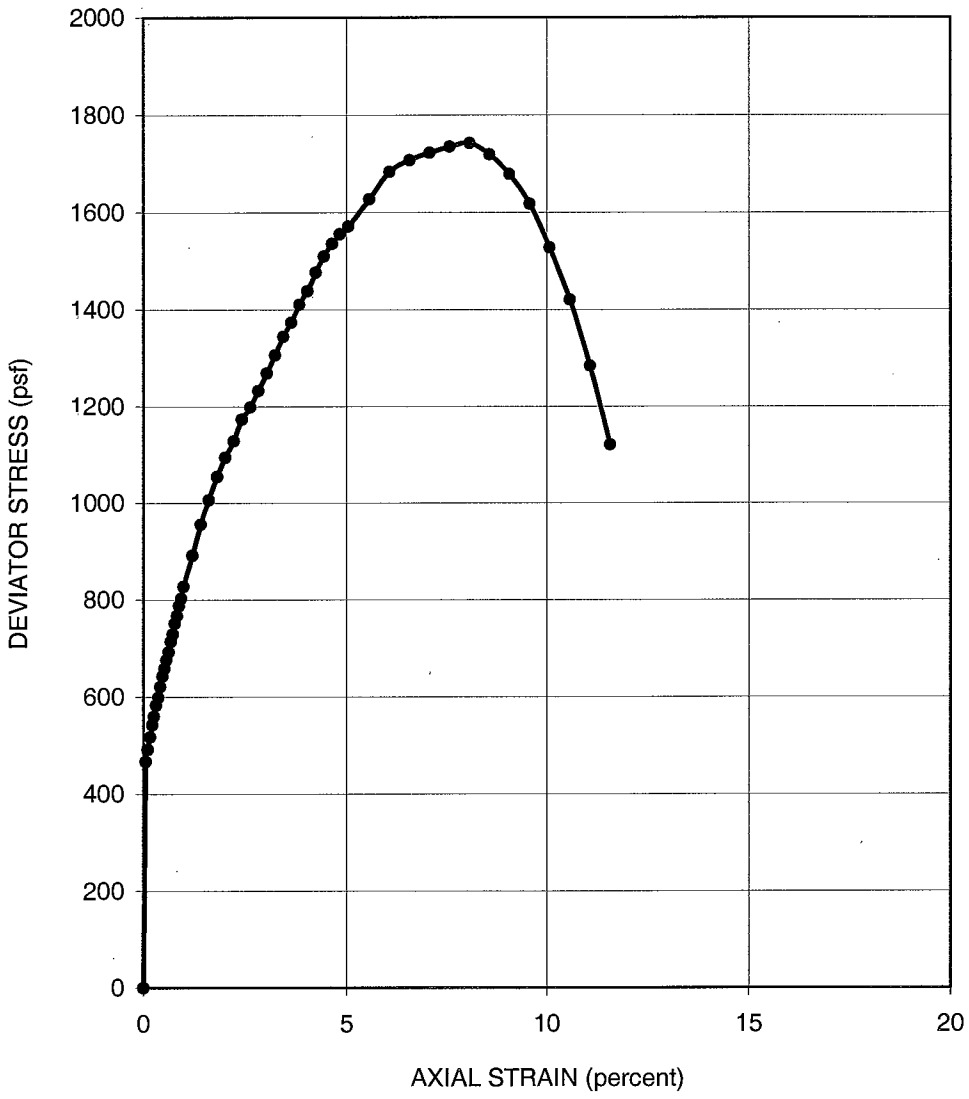
Sampler Type: Sprague & Henwood			Condition	Before Test			After Test	
Diameter (in)	2.42	Height (in) 1.00	Water Content	w_o	23.5 %		w_f	19.1 %
Overburden Pressure, p_o	1,540 psf		Void Ratio	e_o	0.71		e_f	0.50
Preconsol. Pressure, p_c	8,000 psf		Saturation	S_o	89 %		S_f	100 %
Compression Ratio, $C_{\varepsilon c}$	0.11		Dry Density	γ_d	99 pcf		γ_d	113 pcf
LL ND	PL ND		PI ND			G_s 2.70 (assumed)		
Classification CLAY with SAND (CL), yellow-brown			Source B-1 @ 15.5 feet					

HARBOR PARK
Pittsburg, California

CONSOLIDATION TEST REPORT

Treadwell&Rollo

Date 06/12/06 | Project No. 4245.02 | Figure C-2



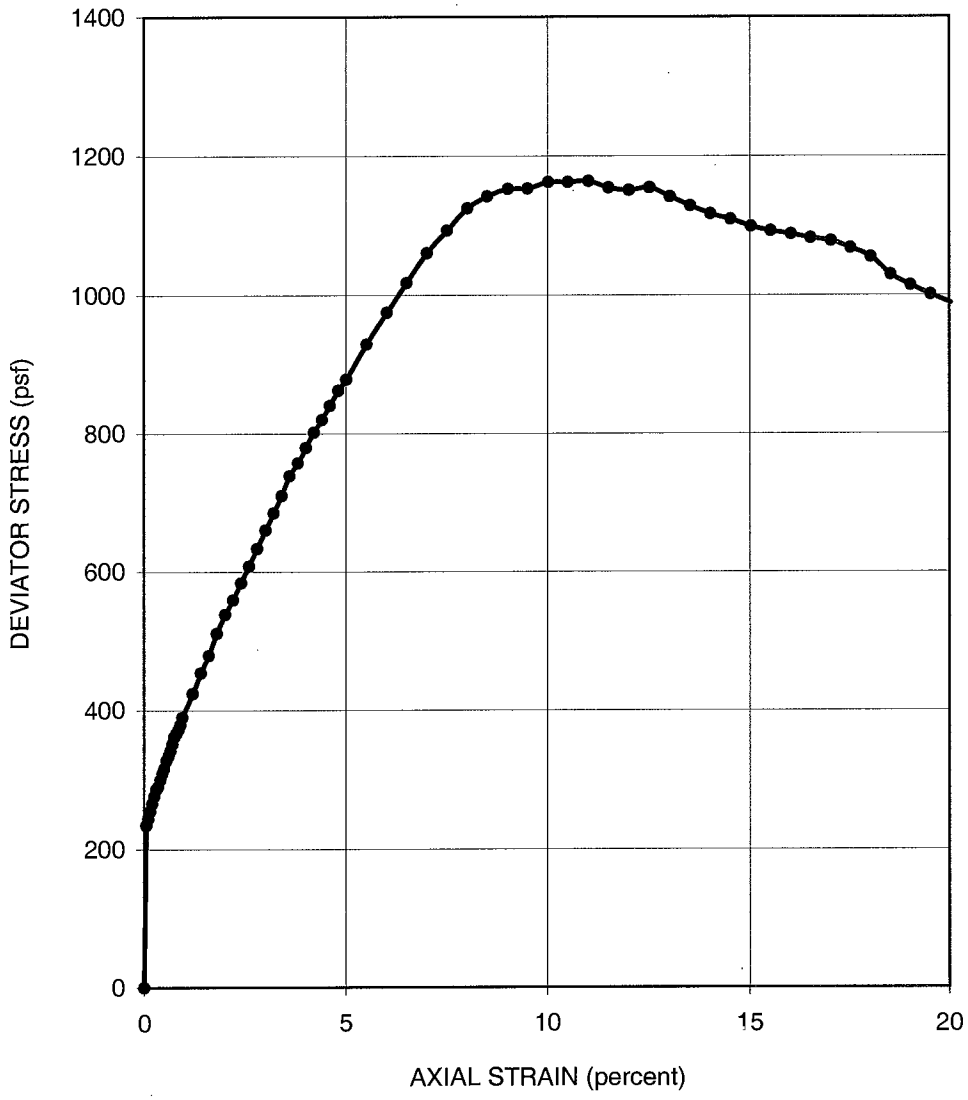
SAMPLER TYPE	Sprague & Henwood		SHEAR STRENGTH	870	psf
DIAMETER (in.)	2.42	HEIGHT (in.) 5.66	STRAIN AT FAILURE	8.1	%
MOISTURE CONTENT	22.6	%	CONFINING PRESSURE	1,100	psf
DRY DENSITY	103	pcf	STRAIN RATE	1.00	% / min
DESCRIPTION	CLAY (CL), brown		SOURCE	B-1 @ 11 feet	

HARBOR PARK
Pittsburg, California

UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST

Treadwell&Rollo

Date	06/12/06	Project No.	4245.02	Figure	C-3



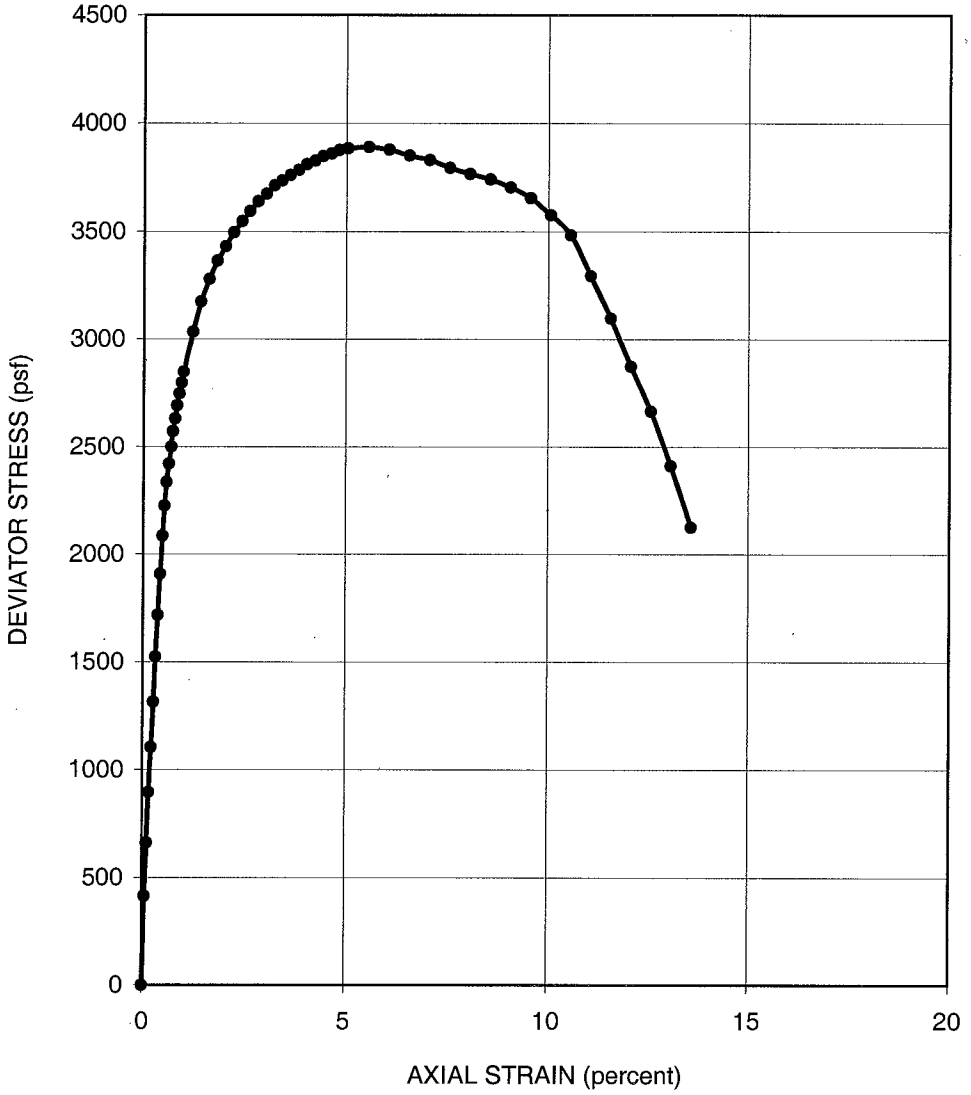
SAMPLER TYPE	Sprague & Henwood			SHEAR STRENGTH	580 psf
DIAMETER (in.)	2.42	HEIGHT (in.)	5.35	STRAIN AT FAILURE	11.0 %
MOISTURE CONTENT	26.2 %			CONFINING PRESSURE	1,600 psf
DRY DENSITY	98 pcf			STRAIN RATE	0.75 % / min
DESCRIPTION	CLAY (CL), yellow-brown			SOURCE	B-1 @ 16 feet

HARBOR PARK
Pittsburg, California

UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST

Treadwell&Rollo

Date	06/12/06	Project No.	4245.02	Figure	C-4



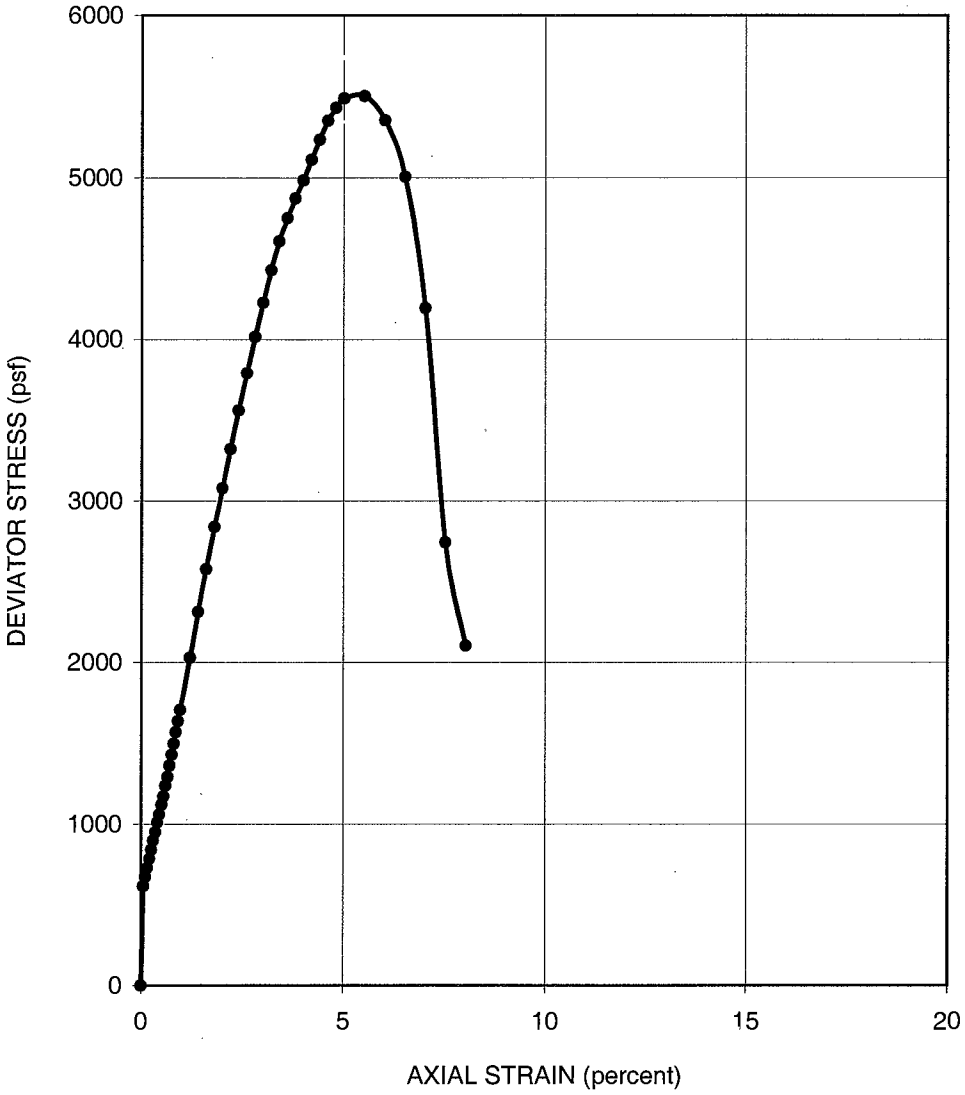
SAMPLER TYPE	Sprague & Henwood			SHEAR STRENGTH	1,940 psf
DIAMETER (in.)	2.42	HEIGHT (in.)	5.65	STRAIN AT FAILURE	5.5 %
MOISTURE CONTENT	24.6 %			CONFINING PRESSURE	550 psf
DRY DENSITY	100 pcf			STRAIN RATE	1.00 % / min
DESCRIPTION	CLAY (CL), dark brown			SOURCE	B-2 @ 5.5 feet

HARBOR PARK
Pittsburg, California

UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST

Treadwell&Rollo

Date	06/12/06	Project No.	4245.02	Figure	C-5



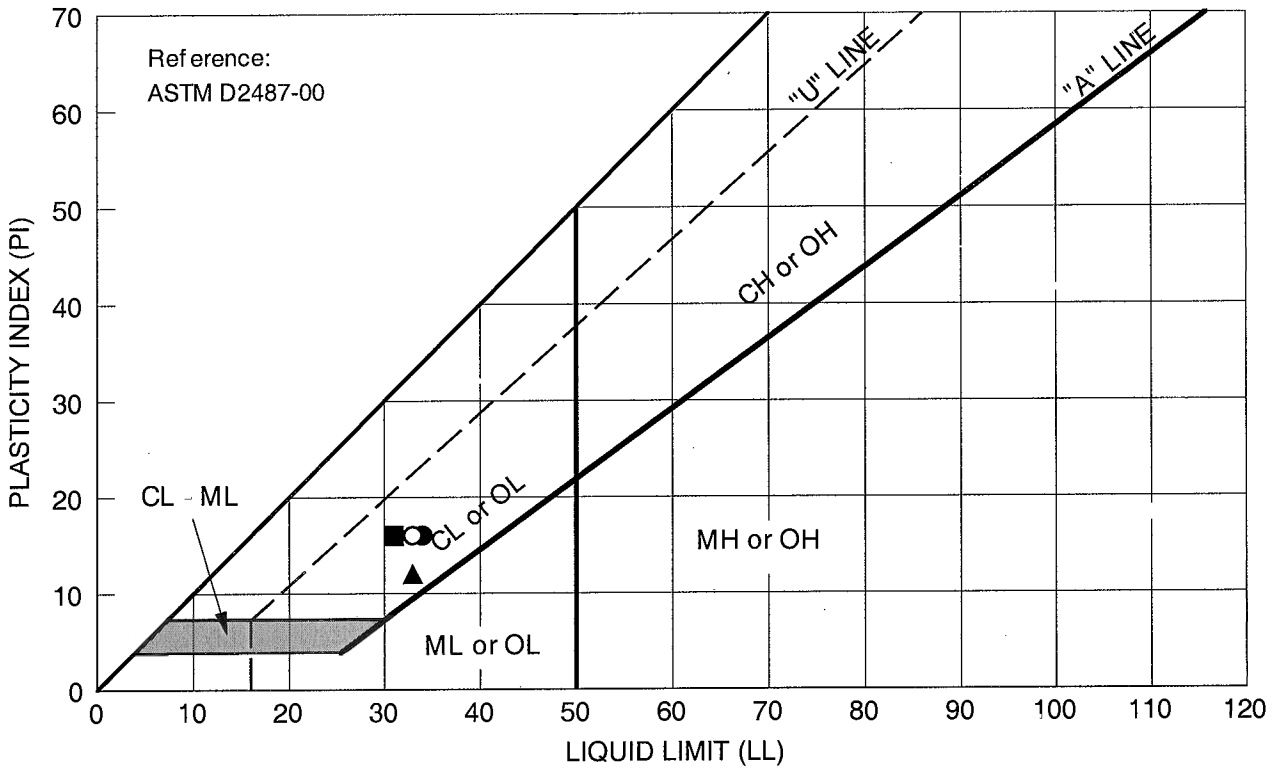
SAMPLER TYPE	Sprague & Henwood		SHEAR STRENGTH	2,750	psf
DIAMETER (in.)	2.42	HEIGHT (in.) 5.63	STRAIN AT FAILURE	5.5	%
MOISTURE CONTENT	17.3	%	CONFINING PRESSURE	600	psf
DRY DENSITY	113	pcf	STRAIN RATE	0.75	% / min
DESCRIPTION	SILT with CLAY (ML), yellow-brown		SOURCE	B-3 @ 6 feet	

HARBOR PARK
Pittsburg, California

UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST

Treadwell&Rollo

Date	06/12/06	Project No.	4245.02	Figure	C-6



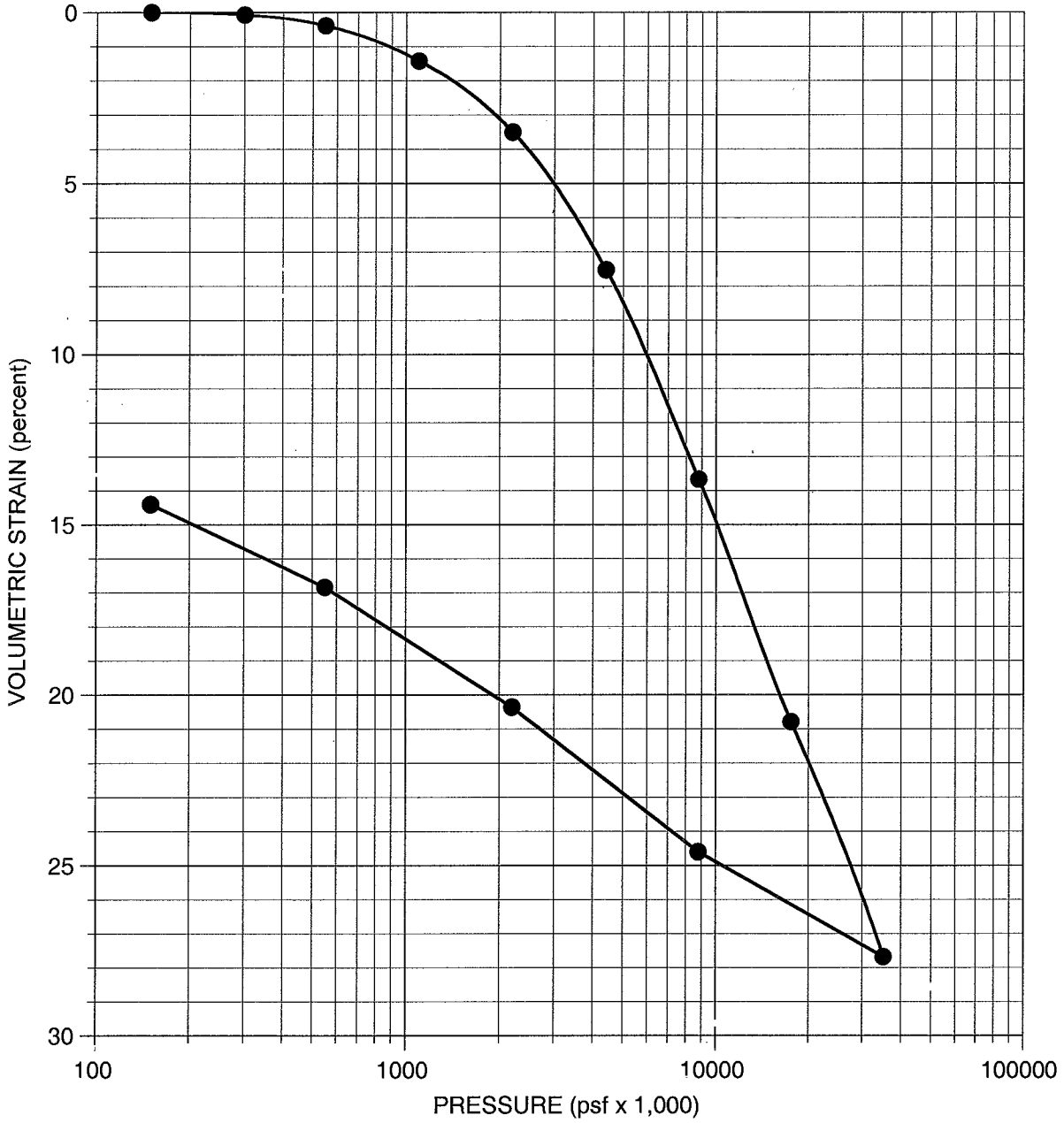
Symbol	Source	Description and Classification	Natural M.C. (%)	Liquid Limit (%)	Plasticity Index (%)	% Passing #200 Sieve
●	B-1 at 3 feet	CLAY with SILT (CL), gray-brown	19.4	34	16	---
▲	B-2 at 3 feet	SANDY CLAY (CL), gray-brown	---	33	12	---
■	B-3 at 2.5 feet	CLAY (CL), olive-brown	---	31	16	88.0
○	B-4 at 1.5 feet	CLAY with SAND and SILT (CL), olive-brown	20.8	33	16	---

HARBOR PARK
Pittsburg, California

PLASTICITY CHART

Treadwell&Rollo

Date 10/14/05 | Project No. 4245.02 | Figure C-7



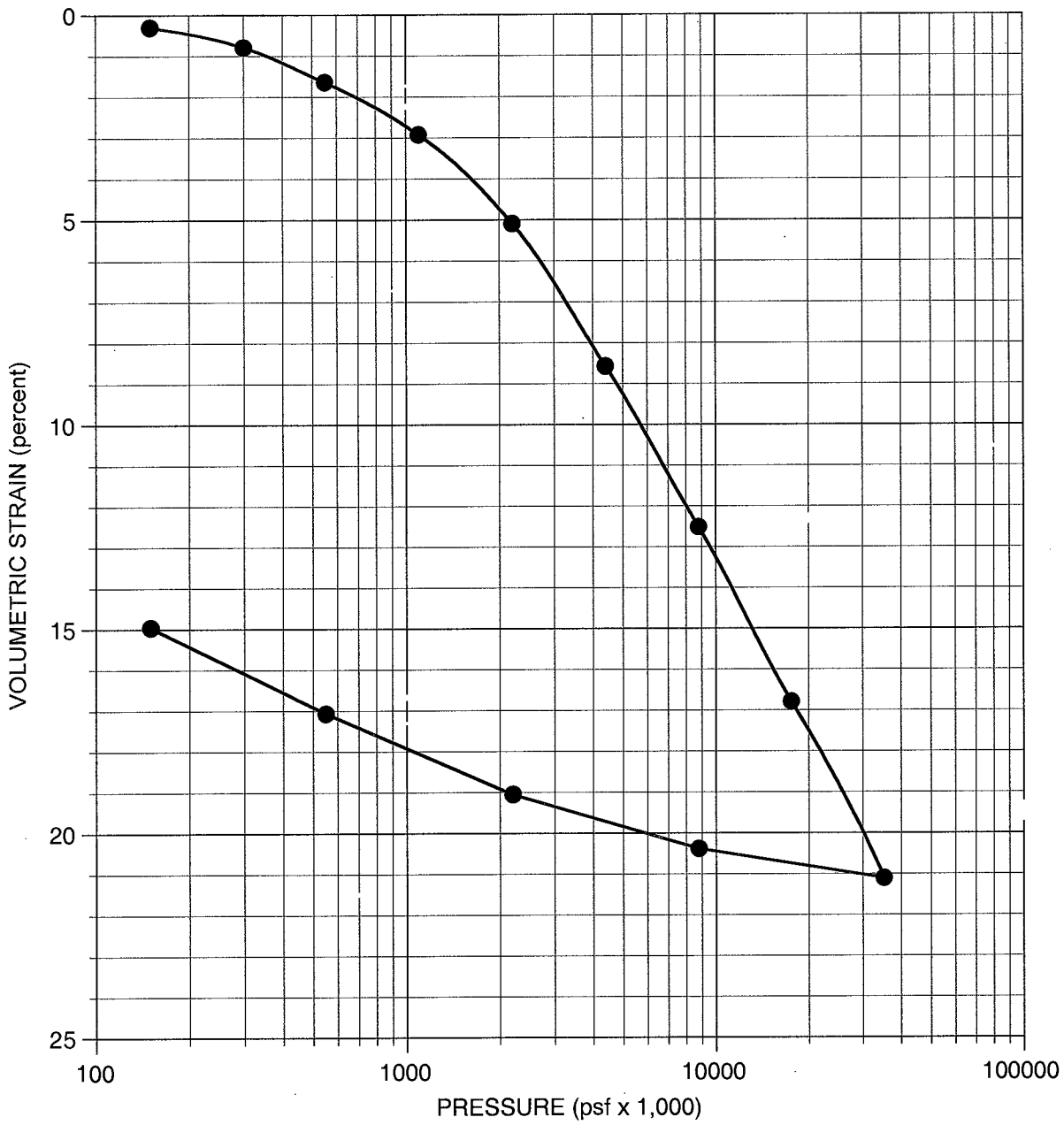
Diameter (in) 2.41	Height (in) 1.00	Condition		Before test		After test	
Overburden Pressure, P_o	1,280 psf	Water Content	w_o	58.1 %	w_f	46.3 %	
Preconsol. Pressure, P_c	3,000 psf	Void Ratio	e_o	1.568	e_f	1.249	
Compression Ratio, C_{ec}	0.23	Saturation	S_o	100 %	S_f	100 %	
Recompression Ratio, C_{er}	---	Dry Density	g_d	66 pcf	g_d	75 pcf	
LL ---	PL ---	PI 65.6		G_s 2.65 (assumed)			
Classification CLAY with SILT (CL), gray		Source B-7 at 15.5 feet					

HARBOR PARK
Pittsburg, California

CONSOLIDATION TEST REPORT

Treadwell&Rollo

Date 05/02/06 | Project No. 4245.02 | Figure C-8



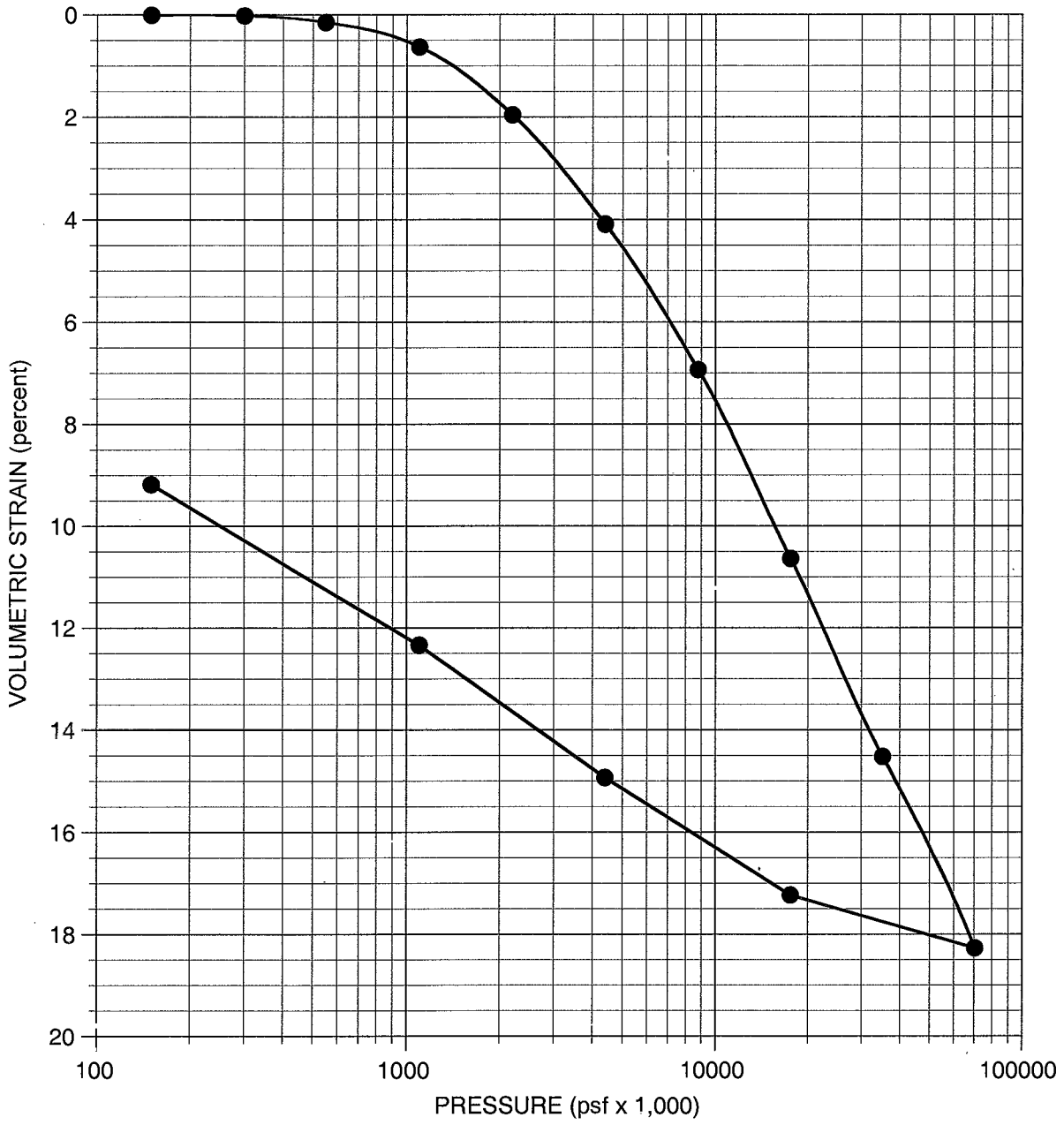
Diameter (in) 2.41	Height (in) 1.00	Condition		Before test		After test	
Overburden Pressure, P_o	1,890 psf	Water Content	w_o	35.7 %	w_f	25.7 %	
Preconsol. Pressure, P_c	2,000 psf	Void Ratio	e_o	0.971	e_f	0.679	
Compression Ratio, C_{ec}	0.14	Saturation	S_o	97.5 %	S_f	100 %	
Recompression Ratio, C_{er}	---	Dry Density	g_d	84 pcf	g_d	99 pcf	
LL 38	PL 20	PI 18		G_s 2.7 (assumed)			
Classification SANDY CLAY (CL), gray		Source B-7 at 25.25 feet					

HARBOR PARK
Pittsburg, California

CONSOLIDATION TEST REPORT

Treadwell&Rollo

Date 05/02/06 | Project No. 4245.02 | Figure C-9



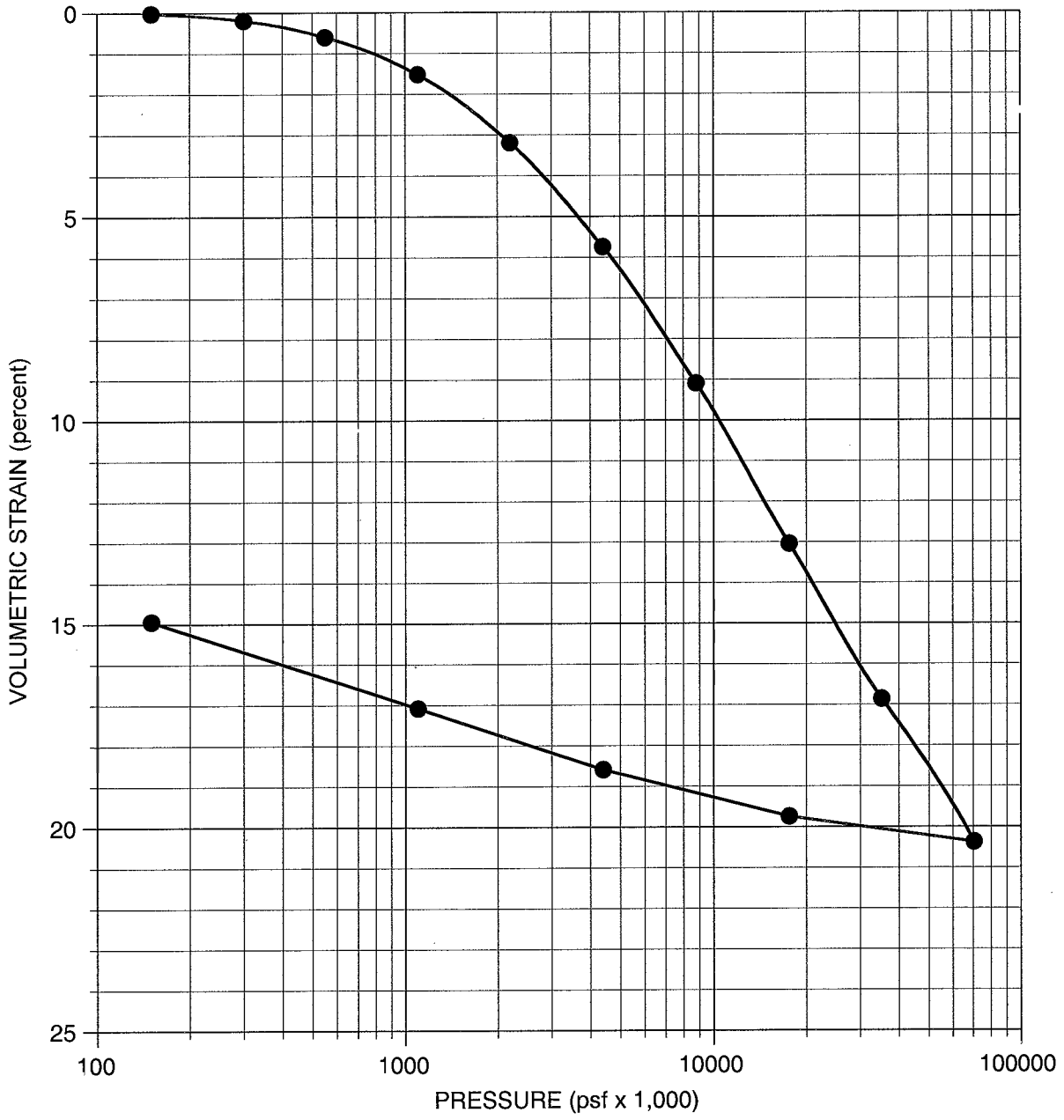
Diameter (in) 2.41	Height (in) 1.00	Condition		Before test		After test	
Overburden Pressure, P_o	1,500 psf	Water Content	w_o	24.1 %	w_f	20.3 %	
Preconsol. Pressure, P_c	3,160 psf	Void Ratio	e_o	0.654	e_f	0.546	
Compression Ratio, C_{ec}	0.13	Saturation	S_o	99.6 %	S_f	100 %	
Recompression Ratio, C_{er}	---	Dry Density	g_d	102 pcf	g_d	109 pcf	
LL ---	PL ---	PI ---		G_s 2.7 (assumed)			
Classification SANDY CLAY (CL), gray				Source B-8 at 15 feet			

HARBOR PARK
Pittsburg, California

CONSOLIDATION TEST REPORT

Treadwell&Rollo

Date 05/02/06 | Project No. 4245.02 | Figure C-10



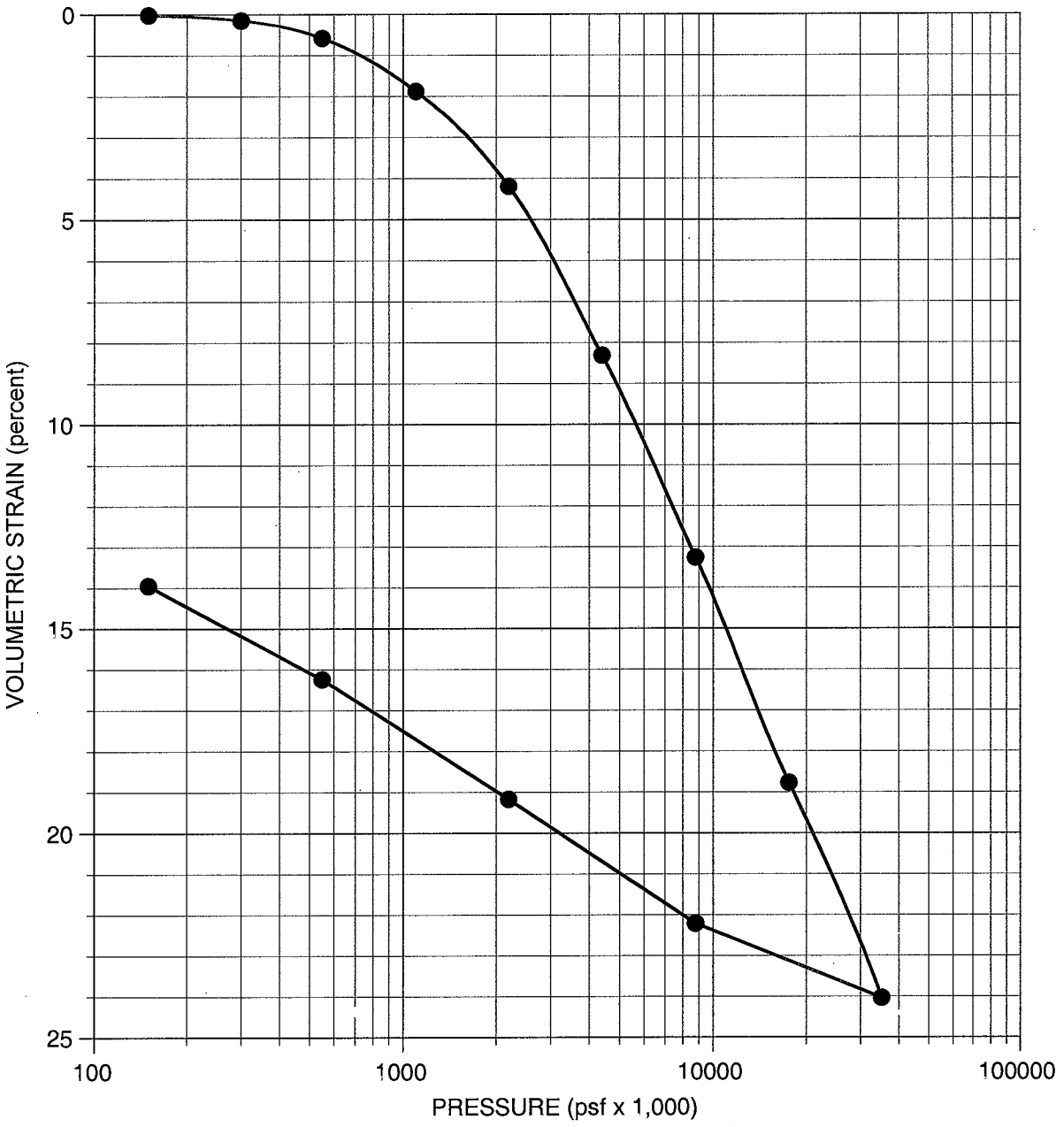
Diameter (in) 2.41	Height (in) 1.00	Condition		Before test		After test	
Overburden Pressure, P_o	1,800 psf	Water Content	w_o	26.4 %	w_f	17.7 %	
Preconsol. Pressure, P_c	2,670 psf	Void Ratio	e_o	0.737	e_f	0.478	
Compression Ratio, C_{ec}	0.13	Saturation	S_o	96.6 %	S_f	100 %	
Recompression Ratio, C_{er}	---	Dry Density	g_d	97 pcf	g_d	114 pcf	
LL ---	PL ---	PI ---		G_s 2.7 (assumed)			
Classification SANDY CLAY (CL), olive-brown				Source B-8 at 20 feet			

HARBOR PARK
Pittsburg, California

CONSOLIDATION TEST REPORT

Treadwell&Rollo

Date 05/02/06	Project No. 4245.02	Figure C-11



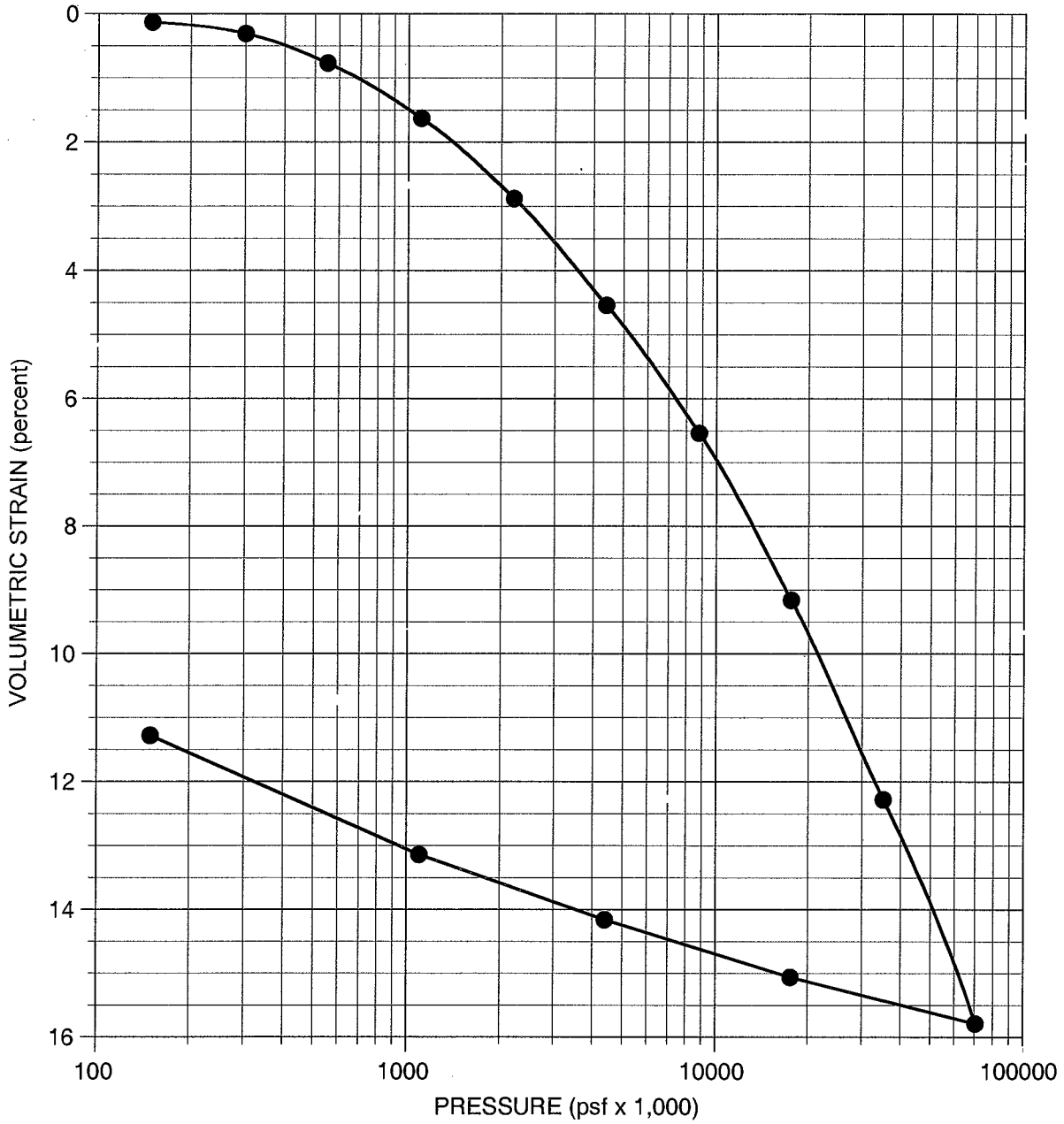
Diameter (in) 2.41	Height (in) 1.00	Condition		Before test		After test	
Overburden Pressure, P_o	1,330 psf	Water Content	w_o	38.4 %	w_f	30.8 %	
Preconsol. Pressure, P_c	2,100 psf	Void Ratio	e_o	1.100	e_f	0.846	
Compression Ratio, C_{ec}	0.18	Saturation	S_o	96.0 %	S_f	100 %	
Recompression Ratio, C_{er}	---	Dry Density	g_d	82 pcf	g_d	93 pcf	
LL 61	PL 17	PI 44		G_s 2.75 (assumed)			
Classification CLAY (CH), gray				Source B-11 at 15 feet			

HARBOR PARK
Pittsburg, California

CONSOLIDATION TEST REPORT

Treadwell&Rollo

Date 05/02/06 | Project No. 4245.02 | Figure C-12



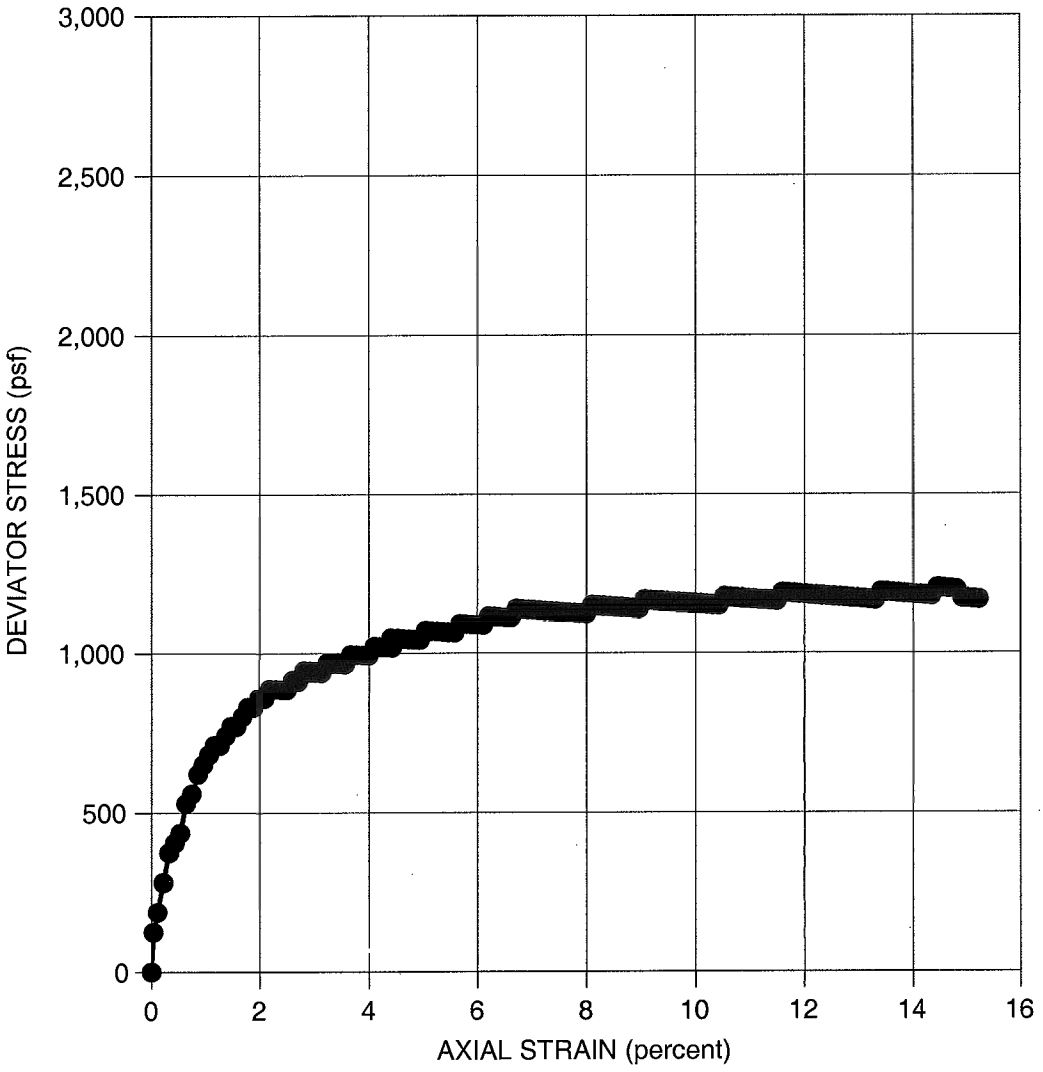
Diameter (in) 2.41	Height (in) 1.00	Condition		Before test		After test	
Overburden Pressure, P_o	1,100 psf	Water Content	w_o	23.6 %	w_f	18.6 %	
Preconsol. Pressure, P_c	4,400 psf	Void Ratio	e_o	0.659	e_f	0.501	
Compression Ratio, C_{ec}	0.11	Saturation	S_o	96.9 %	S_f	100 %	
Recompression Ratio, C_{er}	---	Dry Density	g_d	102 pcf	g_d	112 pcf	
LL ---	PL ---	PI ---		G_s 2.7 (assumed)			
Classification SANDY CLAY (CL), yellow-brown				Source B-12 at 10 feet			

HARBOR PARK
Pittsburg, California

CONSOLIDATION TEST REPORT

Treadwell&Rollo

Date 05/02/06 | Project No. 4245.02 | Figure C-13



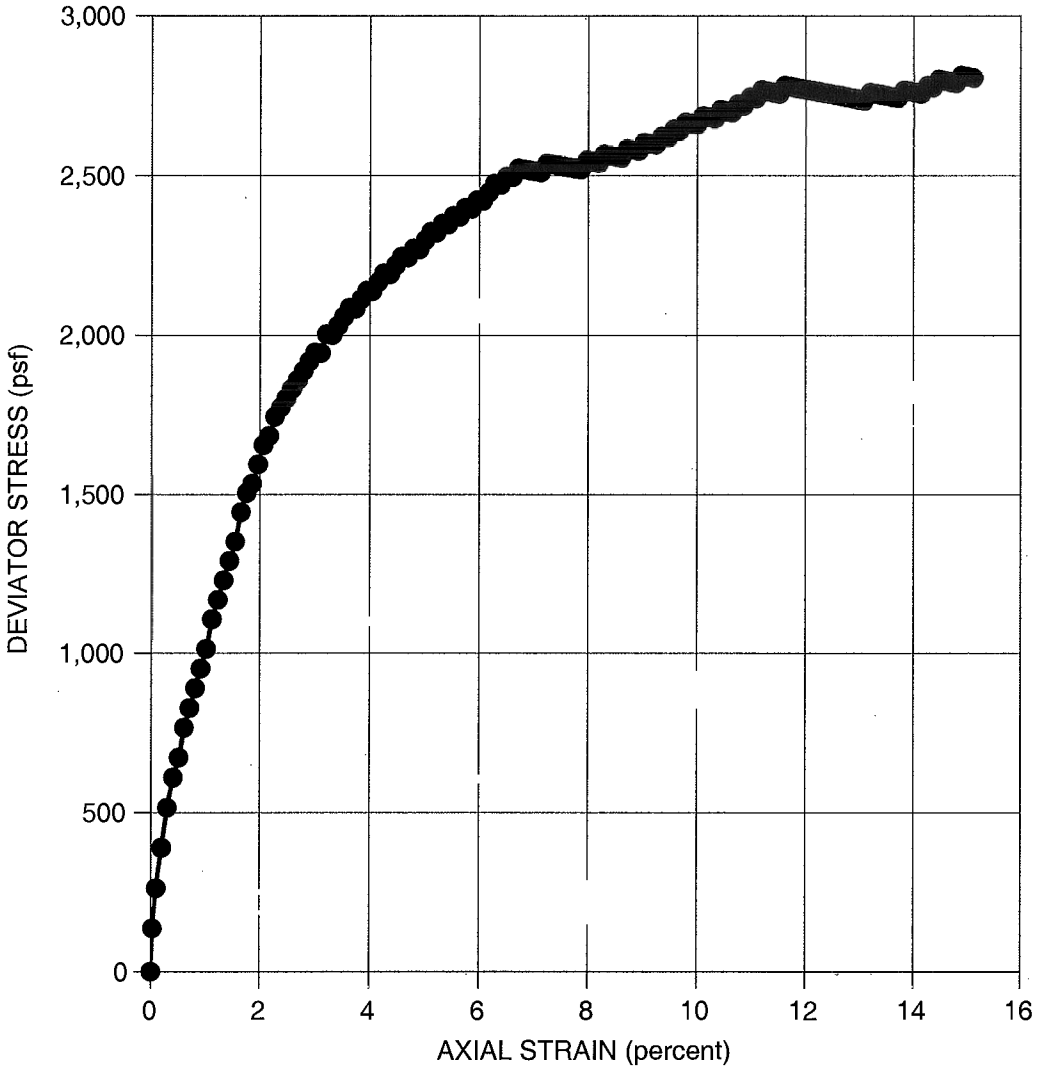
SAMPLER TYPE Sprague & Henwood		SHEAR STRENGTH	600 psf
DIAMETER (in) 2.42	HEIGHT (in) 4.97	STRAIN AT FAILURE	14.5 %
MOISTURE CONTENT	43.9 %	CONFINING PRESSURE	1,000 psf
DRY DENSITY	77 pcf	STRAIN RATE	1.01 % /min
DESCRIPTION CLAY (CL), olive-gray		SOURCE B-7 at 10.5 feet	

HARBOR PARK
Pittsburg, California

UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST

Treadwell&Rollo

Date 05/02/06 | Project No. 4245.02 | Figure C-14



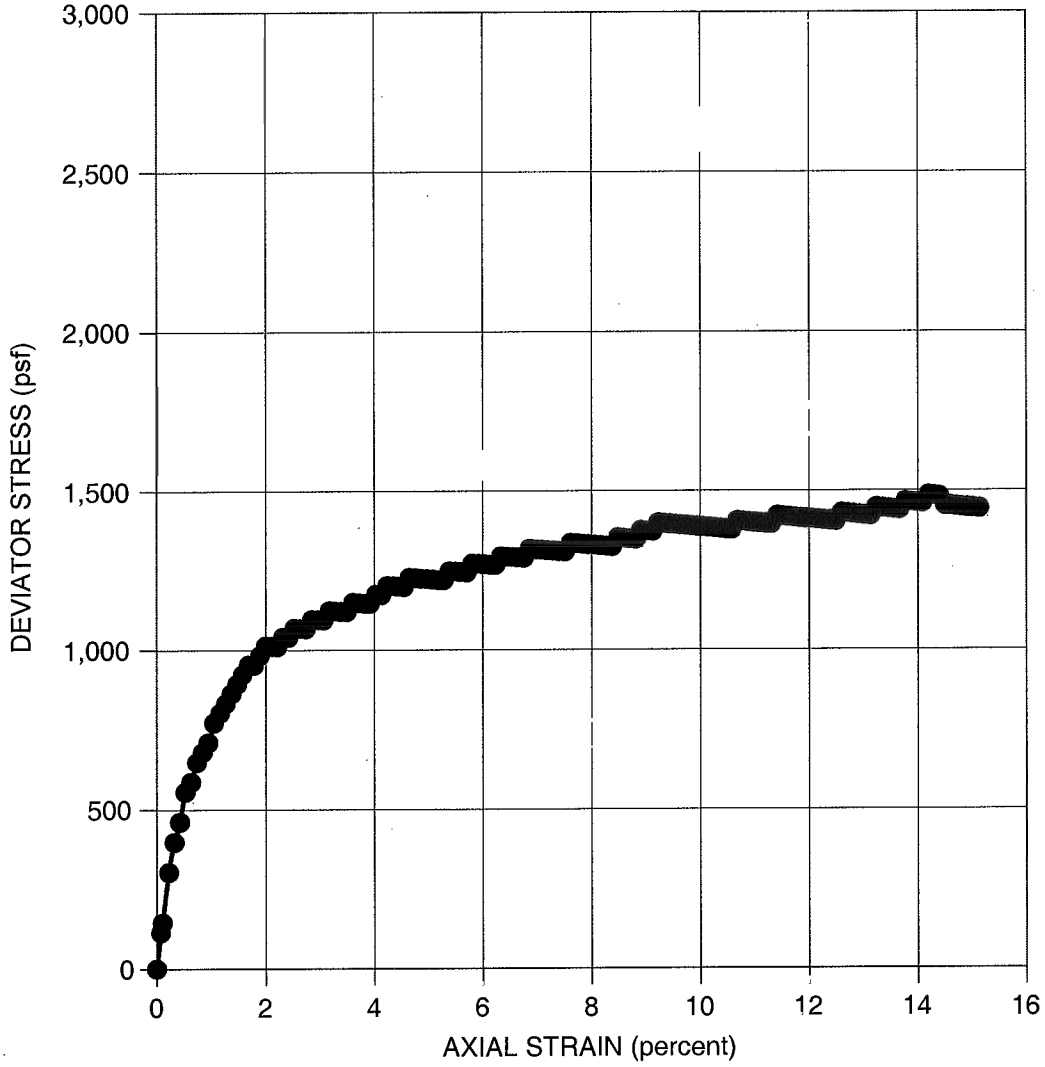
SAMPLER TYPE Dames & Moore		SHEAR STRENGTH	1,400 psf
DIAMETER (in) 2.41	HEIGHT (in) 5.01	STRAIN AT FAILURE	14.9 %
MOISTURE CONTENT	22.8 %	CONFINING PRESSURE	1,500 psf
DRY DENSITY	104 pcf	STRAIN RATE	1.00 % /min
DESCRIPTION CLAY (CL), gray mottled with yellow-brown		SOURCE B-8 at 15 feet	

HARBOR PARK
Pittsburg, California

UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST

Treadwell&Rollo

Date 4/27/06 | Project No. 4245.02 | Figure C-15



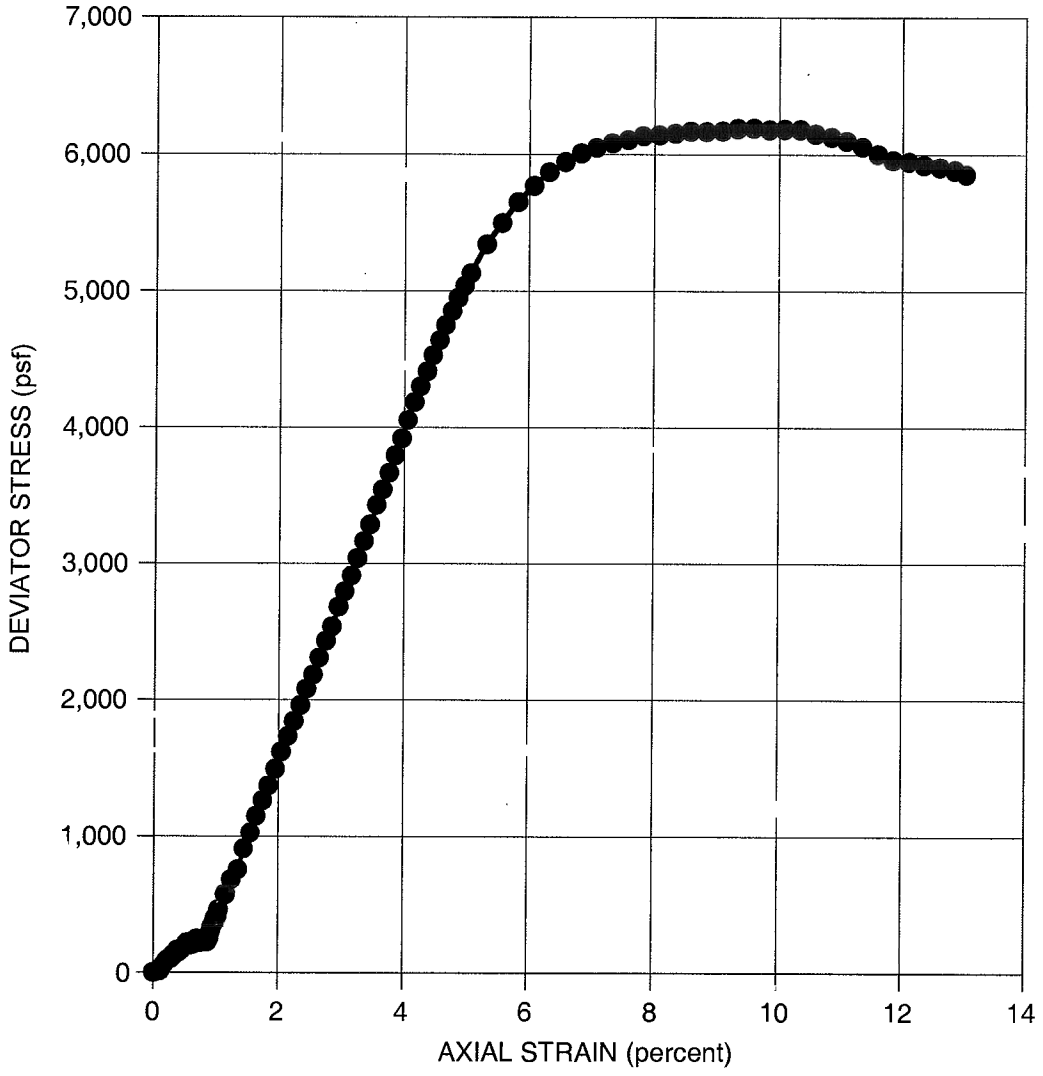
SAMPLER TYPE Dames & Moore		SHEAR STRENGTH	740 psf
DIAMETER (in) 2.91	HEIGHT (in) 5.01	STRAIN AT FAILURE	14.2 %
MOISTURE CONTENT	26.6 %	CONFINING PRESSURE	2,000 psf
DRY DENSITY	99 pcf	STRAIN RATE	1.00 % /min
DESCRIPTION SANDY CLAY (CL), olive-brown		SOURCE B-8 at 20 feet	

HARBOR PARK
Pittsburg, California

UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST

Treadwell&Rollo

Date 05/02/06 | Project No. 4245.02 | Figure C-16



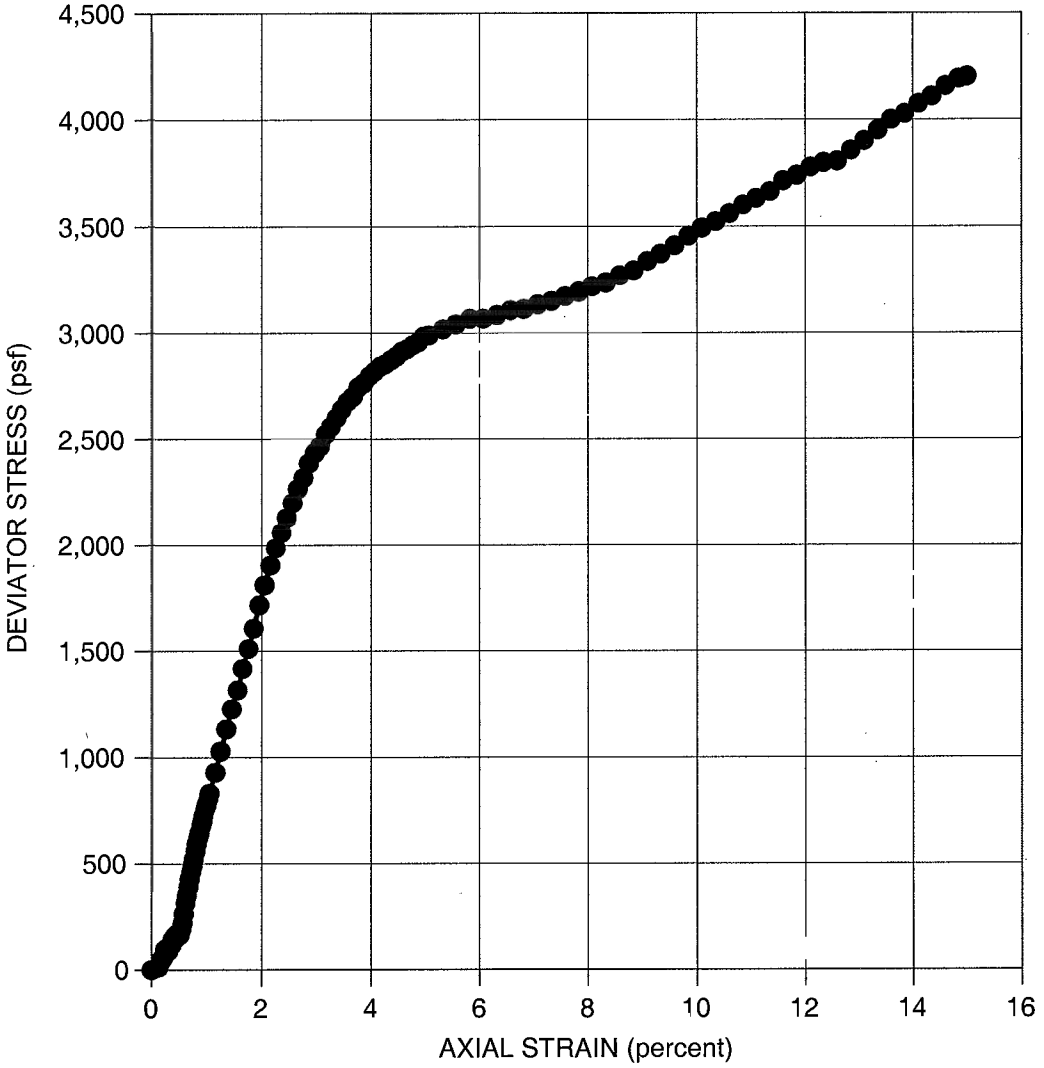
SAMPLER TYPE Sprague & Henwood		SHEAR STRENGTH	3,100 psf
DIAMETER (in) 2.43	HEIGHT (in) 5.12	STRAIN AT FAILURE	9.3 %
MOISTURE CONTENT	17.7 %	CONFINING PRESSURE	1,600 psf
DRY DENSITY	93 pcf	STRAIN RATE	0.98 %/min
DESCRIPTION SILT (ML), olive		SOURCE B-9 at 16.0 feet	

HARBOR PARK
Pittsburg, California

UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST

Treadwell&Rollo

Date 05/02/06 | Project No. 4245.02 | Figure C-17



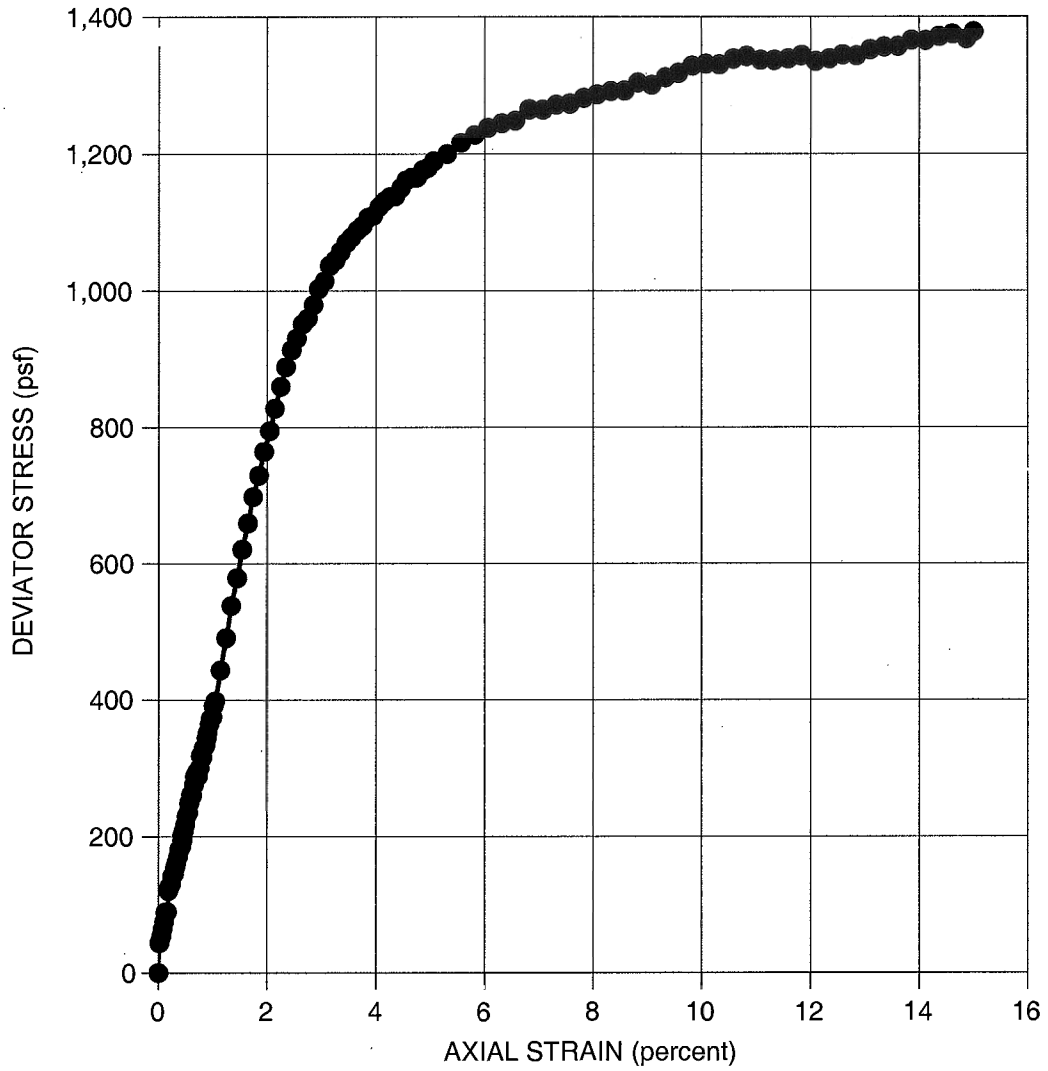
SAMPLER TYPE Sprague & Henwood		SHEAR STRENGTH	2,100 psf
DIAMETER (in) 2.42	HEIGHT (in) 5.00	STRAIN AT FAILURE	15.0 %
MOISTURE CONTENT	22.1 %	CONFINING PRESSURE	2,600 psf
DRY DENSITY	102 pcf	STRAIN RATE	1.00 %/min
DESCRIPTION SILTY SAND (SM), red-brown		SOURCE B-9 at 26.5 feet	

HARBOR PARK
Pittsburg, California

UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST

Treadwell&Rollo

Date 05,02,06	Project No. 4245.02	Figure C-18



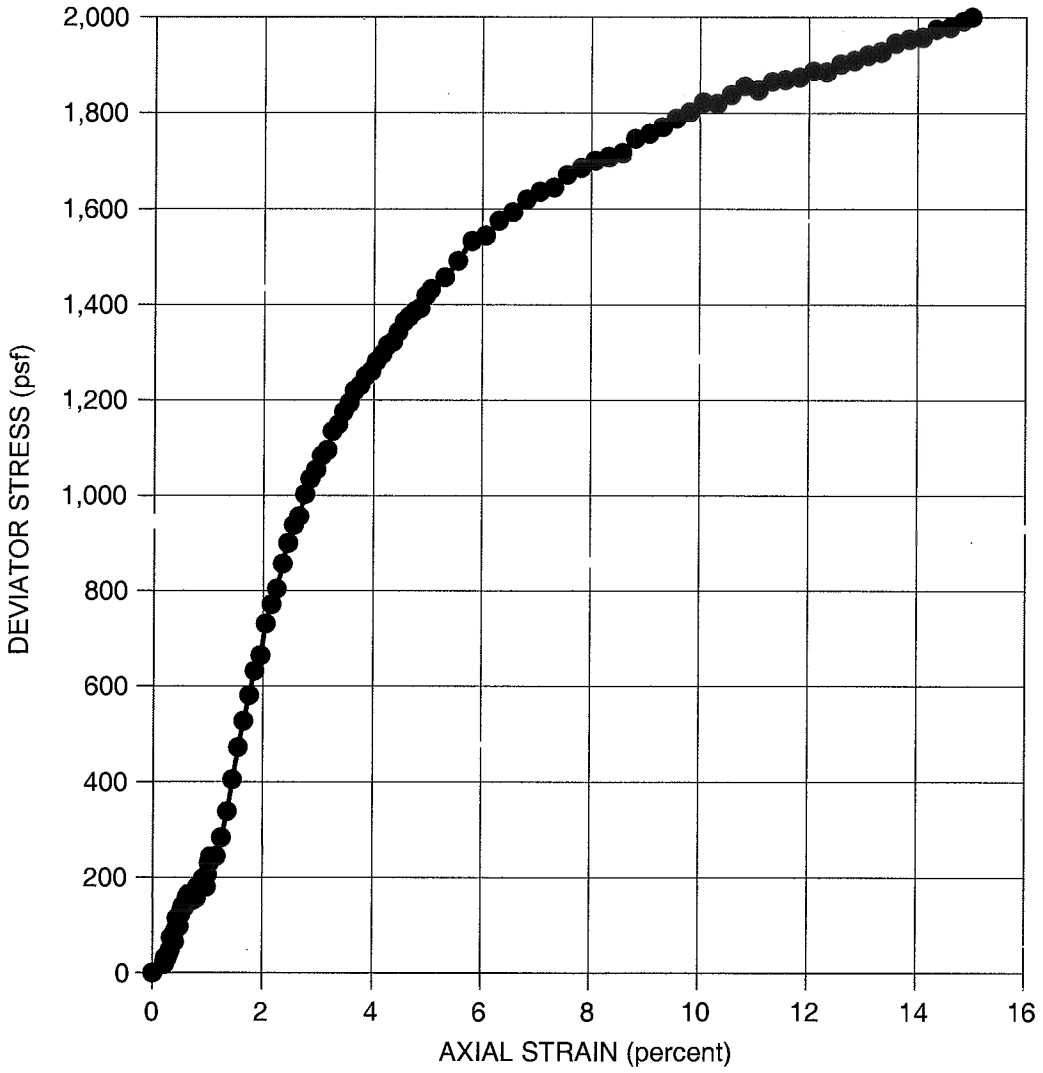
SAMPLER TYPE Dames & Moore		SHEAR STRENGTH	690 psf
DIAMETER (in) 2.40	HEIGHT (in) 4.94	STRAIN AT FAILURE	15.0 %
MOISTURE CONTENT	35.9 %	CONFINING PRESSURE	1,400 psf
DRY DENSITY	86 pcf	STRAIN RATE	1.01 %/min
DESCRIPTION CLAY (CH), gray		SOURCE B-11 at 14.0 feet	

HARBOR PARK
Pittsburg, California

UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST

Treadwell&Rollo

Date 05/02/06 | Project No. 4245.02 | Figure C-19



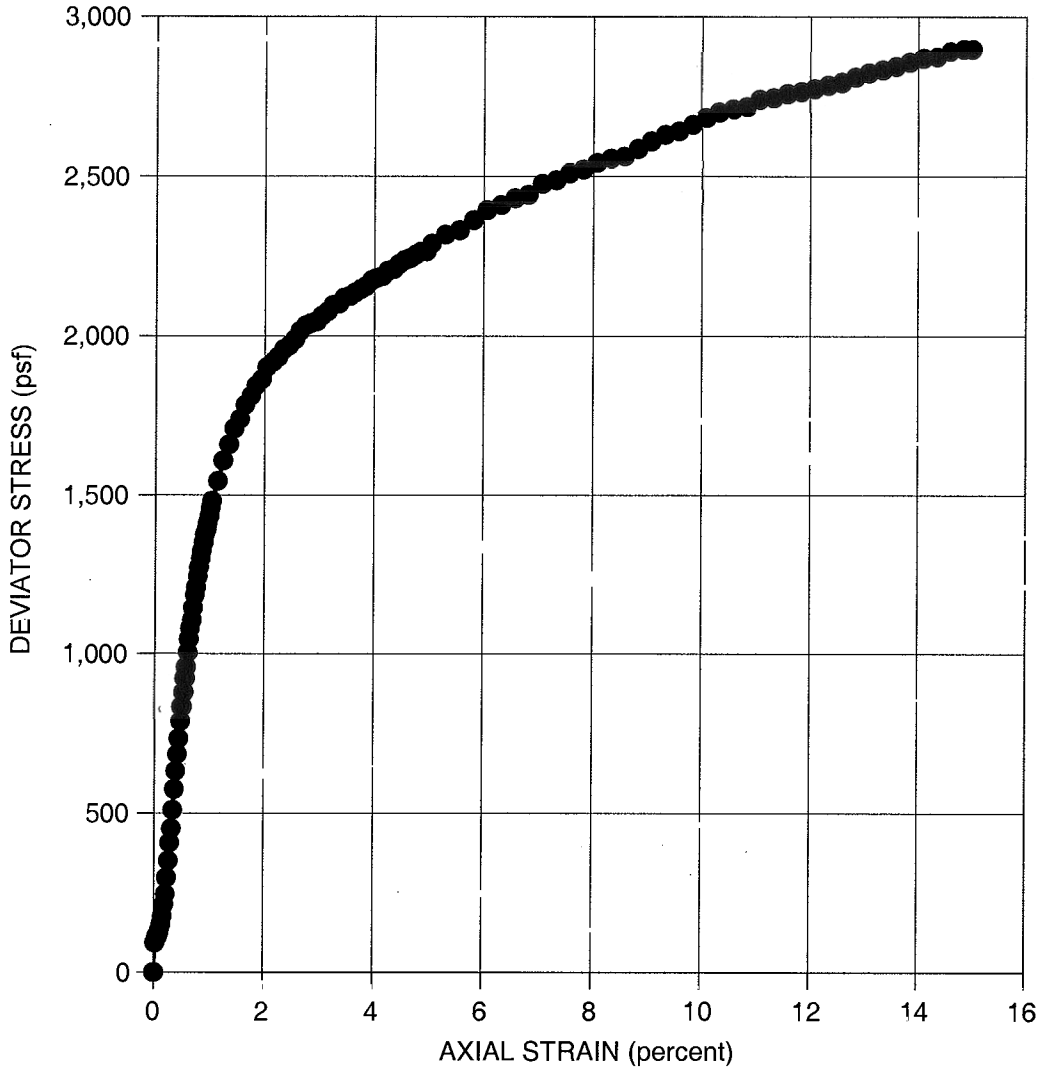
SAMPLER TYPE Sprague & Henwood		SHEAR STRENGTH	1,000 psf
DIAMETER (in) 2.41	HEIGHT (in) 4.98	STRAIN AT FAILURE	15.0 %
MOISTURE CONTENT	28.2 %	CONFINING PRESSURE	2,150 psf
DRY DENSITY	97 pcf	STRAIN RATE	1.00 %/min
DESCRIPTION CLAY (CL), blue-gray		SOURCE B-11 at 21.5 feet	

HARBOR PARK
Pittsburg, California

UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST

Treadwell&Rollo

Date 05/02/06 | Project No. 4245.02 | Figure C-20



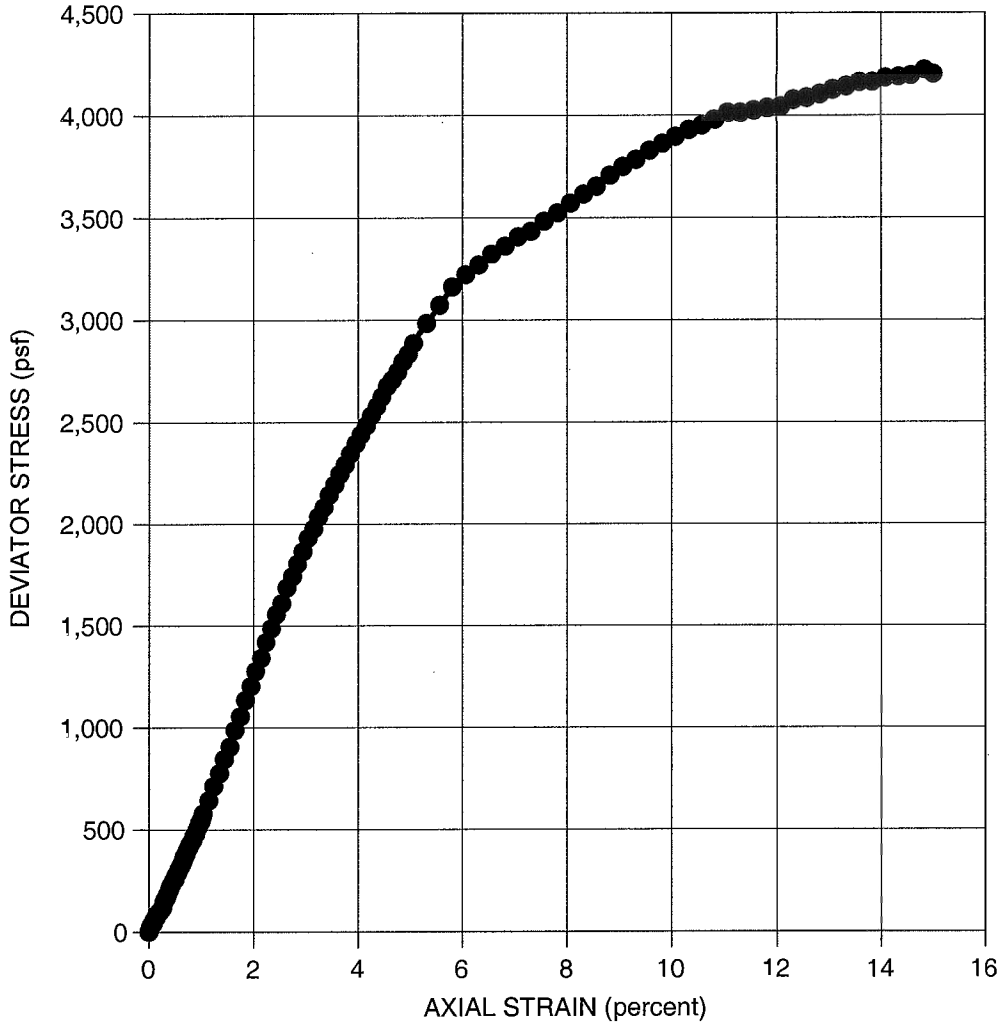
SAMPLER TYPE Sprague & Henwood		SHEAR STRENGTH	1,450 psf
DIAMETER (in) 2.42	HEIGHT (in) 4.97	STRAIN AT FAILURE	14.8 %
MOISTURE CONTENT	23.0 %	CONFINING PRESSURE	500 psf
DRY DENSITY	102 pcf	STRAIN RATE	1.01 %/min
DESCRIPTION CLAY with SAND (CL), yellow-brown		SOURCE B-12 at 5 feet	

HARBOR PARK
Pittsburg, California

UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST

Treadwell&Rollo

Date 4/27/06	Project No. 4245.02	Figure C-21



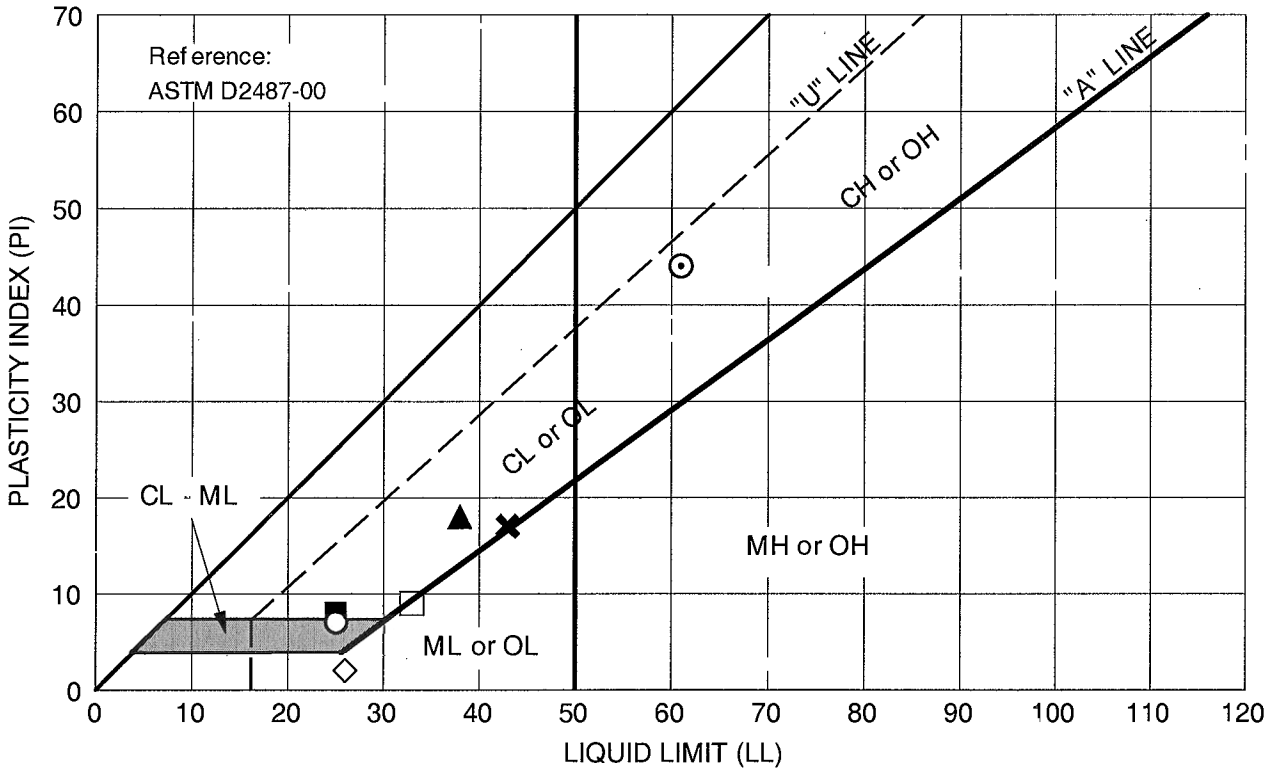
SAMPLER TYPE Sprague & Henwood		SHEAR STRENGTH	2,110 psf
DIAMETER (in) 2.43	HEIGHT (in) 4.98	STRAIN AT FAILURE	14.8 %
MOISTURE CONTENT	31.8 %	CONFINING PRESSURE	1,540 psf
DRY DENSITY	92 pcf	STRAIN RATE	1.00 %/min
DESCRIPTION SANDY SILT (ML), brown		SOURCE B-13 at 15.5 feet	

HARBOR PARK
Pittsburg, California

UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST

Treadwell&Rollo

Date 05/02/06	Project No. 4245.02	Figure C-22



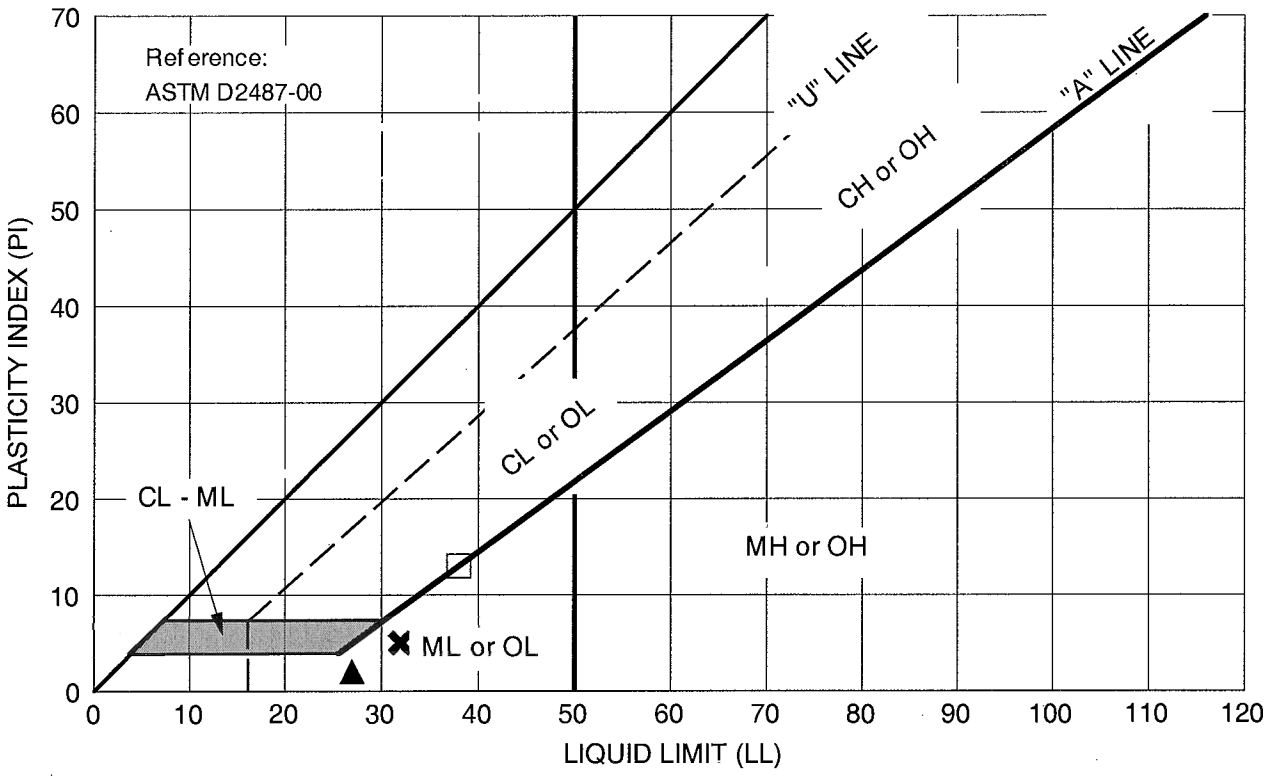
Symbol	Source	Description and Classification	Natural M.C. (%)	Liquid Limit (%)	Plasticity Index (%)	% Passing #200 Sieve
	B-6 at 31 feet	SANDY SILT (ML), brown	26.9	--	NP	69.2
▲	B-7 at 25 feet	SANDY CLAY (CL), gray to black	35.7	38	18	--
■	B-7 at 31 foot	CLAYEY SAND (SC), gray	23.3	25	8	7.5
○	B-8 at 26 feet	CLAYEY SAND (SC), brown	--	25	7	42.5
	B-10B at 5 feet	SILTY SAND (SM), red-brown	15.7	--	NP	18.6
□	B-10B at 30.0 ft	SANDY SILT (ML), yellow-brown	--	33	9	--
✖	B-10B at 35.5 ft	CLAY (CL), olive-brown	31.6	43	17	--
◇	B-10B at 46 ft	SILTY SAND (SM), olive-brown	29.2	26	2	43.3
⊙	B-11 at 14 feet	CLAY (CH), gray	35.9	61	44	--

HARBOR PARK
Pittsburg, California

PLASTICITY CHART

Treadwell&Rollo

Date 05/01/06 | Project No. 4245.02 | Figure C-23



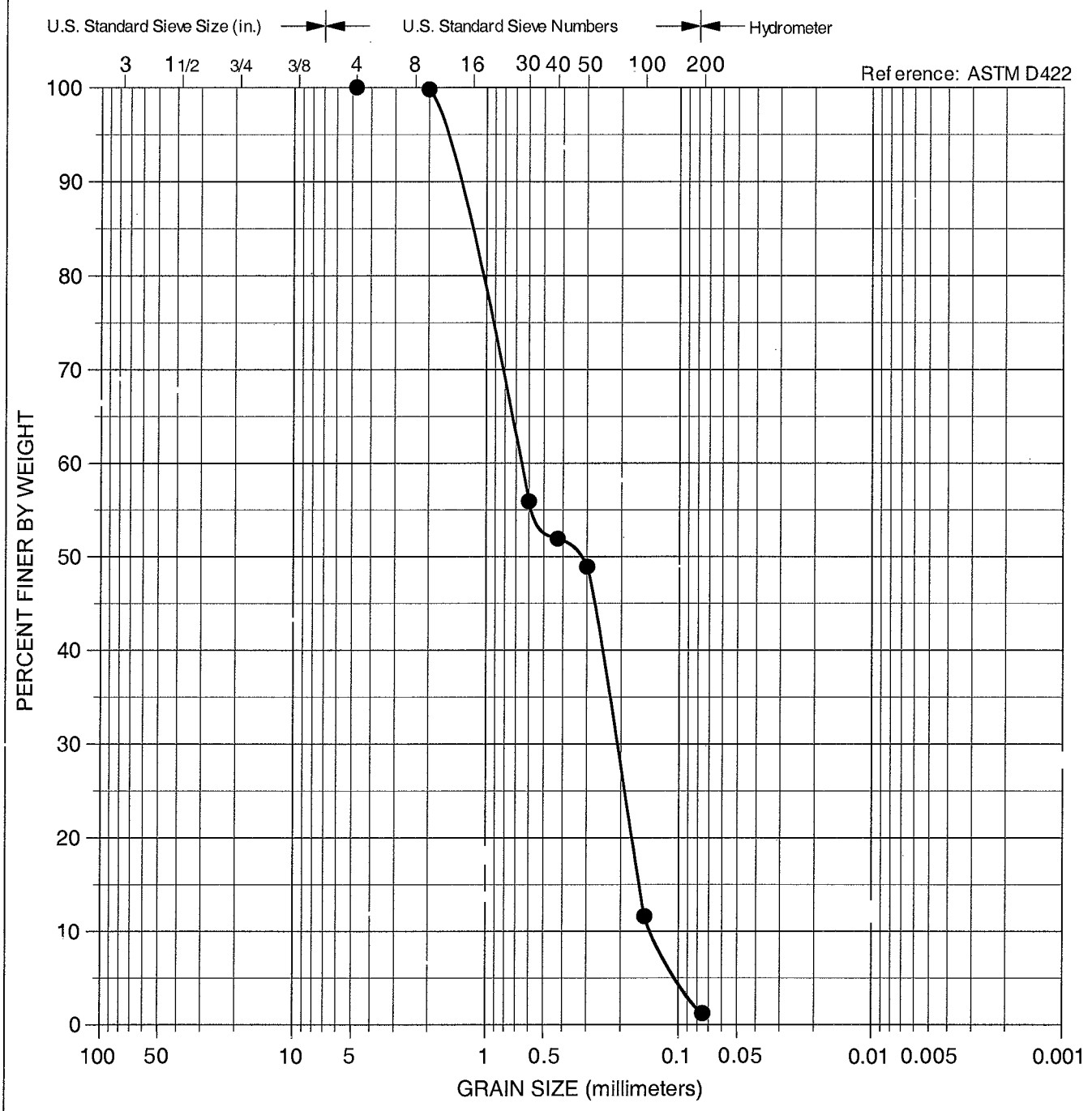
Symbol	Source	Description and Classification	Natural M.C. (%)	Liquid Limit (%)	Plasticity Index (%)	% Passing #200 Sieve
	B-11 at 30 feet	SAND (SP), gray	--	--	NP	4.1
▲	B-12 at 29 feet	SILTY SAND (SM), olive-brown	28.4	27	2	--
	B-12 at 35 foot	SILTY SAND (SM), gray	--	--	NP	46.4
	B-13 at 6 feet	SILTY SAND (SM), red-brown	--	--	NP	--
	B-13 at 10 feet	SAND with SILT (SP), olive-brown	--	--	NP	6.3
□	B-13 at 15.5 ft	SANDY SILT (ML), brown	31.8	38	13	82.4
✖	B-13 at 31 feet	SILT (ML), olive-gray	--	32	5	--
	CPT-24 at 0-1 ft	SAND (SP), gray	--	--	NP	1.2

HARBOR PARK
Pittsburg, California

PLASTICITY CHART

Treadwell&Rollo

Date 05/01/06 | Project No. 4245.02 | Figure C-24



Cobbles	Gravel: Coarse	Gravel: Fine	Sand: Coarse	Sand: Medium	Sand: Fine	Silt or Clay

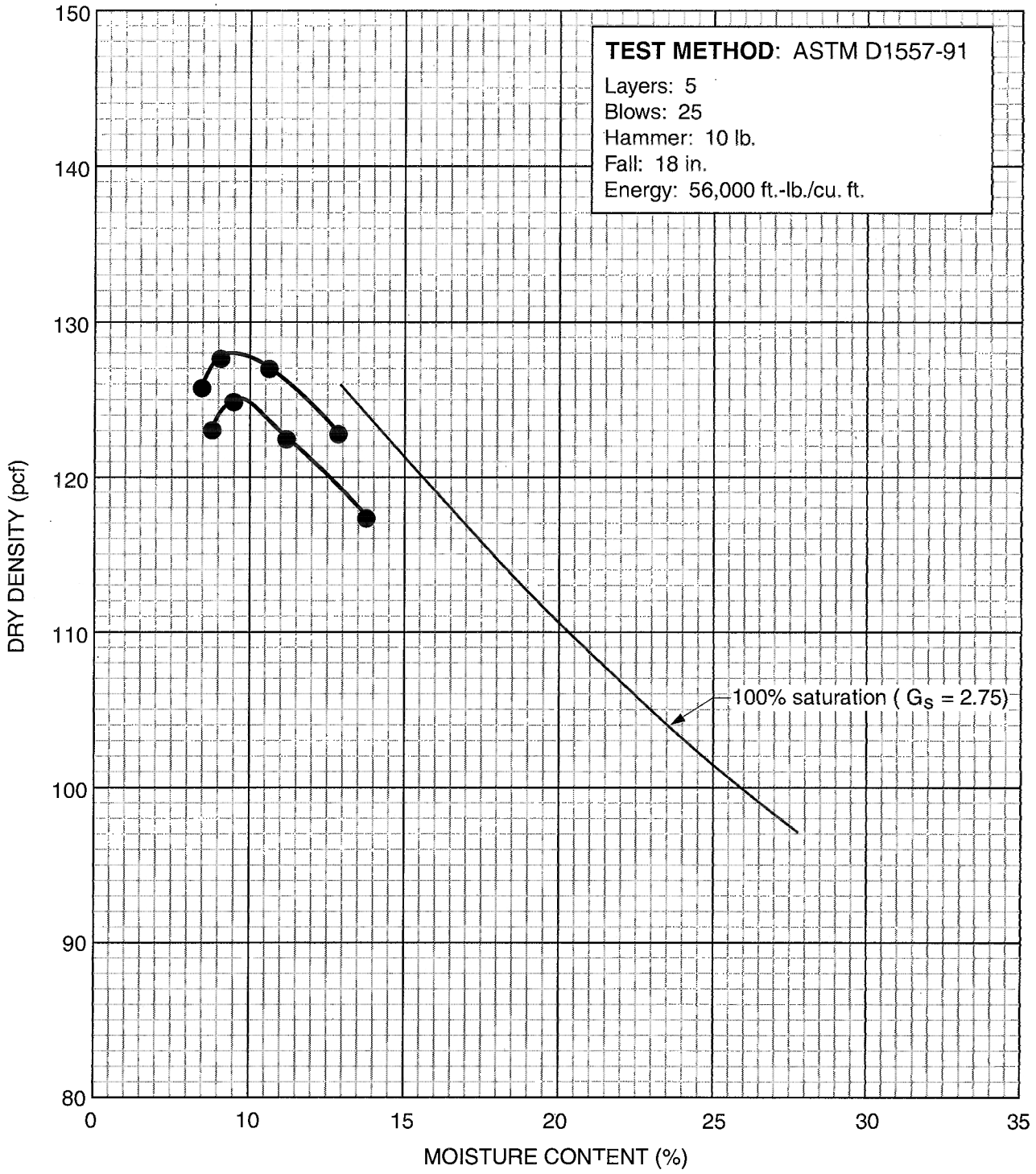
Symbol	Sample Source	Classification
●	CPT-24 at 0 to 1 feet	SAND (SP), gray

HARBOR PARK
Pittsburg, California

PARTICLE SIZE ANALYSIS

Treadwell&Rollo

Date 05/02/06 | Project No. 4245.02 | Figure C-25



Symbol	Sample Source	Description of Sample	Optimum Water Content (%)	Maximum Dry Density (pcf)
●	B-7 at 0.1 feet	CLAY (CL), brown	8.9	128.7

HARBOR PARK
Pittsburg, California

COMPACTION TEST DATA

Treadwell&Rollo

Project No. 4245.02 | Figure C-26

APPENDIX D
Analytical Test Results
(on CD ROM)

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

ANALYTICAL REPORT

Prepared for:

Treadwell & Rollo
777 Campus Commons Rd.
Suite 200
Sacramento, CA 95825

Date: 07-MAR-06
Lab Job Number: 185059
Project ID: STANDARD
Location: Harbor Bay, Pittsburg

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Reviewed by: _____
Project Manager

Reviewed by: _____
Operations Manager

This package may be reproduced only in its entirety.

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	185059
Client:	Treadwell & Rollo
Location:	Harbor Bay, Pittsburg
Request Date:	02/21/06
Samples Received:	02/21/06

This hardcopy data package contains sample and QC results for two three-point soil composites and one two-point soil composite, requested for the above referenced project on 02/21/06. The samples were received cold and intact.

TPH-Purgeables and/or BTXE by GC (EPA 8015B):
Low recoveries were observed for gasoline C7-C12 in the MS/MSD for batch 110641; the parent sample was not a project sample, the LCS was within limits, and the associated RPD was within limits. 185059-009, 185059-010, and 185059-011 were received outside of hold time; affected data were qualified with "b". No other analytical problems were encountered.

TPH-Extractables by GC (EPA 8015B):
Low recoveries were observed for diesel C10-C24 in the MS/MSD for batch 110713; the parent sample was not a project sample, the LCS was within limits, and the associated RPD was within limits. 185059-009, 185059-010, and 185059-011 were received outside of hold time; affected data was qualified with "b". No other analytical problems were encountered.

Metals (EPA 6010B):
High recovery was observed for chromium in the MSD for batch 110682; the parent sample was not a project sample, and the BS/BSD were within limits. High RPD was also observed for chromium in the MS/MSD for batch 110682; the RPD was acceptable in the BS/BSD. No other analytical problems were encountered.

185059

Treadwell&Rollo
Environmental and Geotechnical Consultant

CHAIN OF CUSTODY RECORD

☐ 555 Montgomery Street, Suite 1300, San Francisco, CA 94111 Ph: 415-955-9040 / Fax: 415-955-9041
☐ 2 Theatre Square, Suite 216, Orinda CA 94563 Ph: 925-253-4980 / Fax: 925-253-4985
☒ 501 14th Street, 3rd Floor, Oakland, CA 94612 Ph: 510-874-4500 / Fax: 510-874-4507

Site Name: Harbor Bay, Pittsburg
Job Number: 4245.01
Project Manager\Contact: Haze Rodgers
Samplers: 2"x6" Stainless Steel
Recorder (Signature Required):

Turnaround Time: Standard

Field Sample Identification No.	Date	Time	Lab Sample No.	Matrix: Soil	Matrix: Water	Matrix: Other	No. Containers & Preservative: HCL	H_2SO_4	HNO_3	Ice	Other	Analysis Requested: TPH-G, D, MO	LUFT 5 Metals	Silica gel clean-up	Hold	Remarks
B-5 Drum	12/20/05	12:00 pm	5,6,8 Comp.	X	X					1						Composite B-5, B-6, B-8
B-6 Drum	12/20/05	4:00 pm	5,6,8 Comp.	X	X					1						Composite B-5, B-6, B-8
B-7 Drum	12/21/05	12:00 pm	7,11,12 Comp.	X	X					1						Composite B-7, B-11, B-12
B-8 Drum	12/21/05	2:00 pm	5,6,8 Comp.	X	X					1						Composite B-5, B-6, B-8
B-11 Drum	2/6/06	4:00 pm	7,11,12 Comp.	X	X					1						Composite B-7, B-11, B-12
B-12 Drum	2/6/06	4:00 pm	7,11,12 Comp.	X	X					1						Composite B-7, B-11, B-12
B-10 Drum	2/7/06	4:00 pm	10,13 Comp.	X	X					1						Composite B-10, B-13
B-13 Drum	2/7/06	4:00 pm	10,13 Comp.	X	X					1						Composite B-10, B-13
												X	X			Composite B-5, B-6, B-8
												X	X			Composite B-7, B-11, B-12
												X	X			Composite B-10, B-13

Relinquished by: (Signature)	Date 12/22/05	Time 1:00 pm	Received by: (Signature)	Date 12/22/05 Time 1:00 pm
Relinquished by: (Signature)	Date 2/21/06	Time 12:00	Received by: (Signature)	Date 2/21/06 Time 12:00
Relinquished by: (Signature)	Date	Time	Received by Lab: (Signature)	Date Time

Sent to Laboratory (Name): Curtis & Tompkins
Laboratory Comments/Notes:

Method of Shipment: ☐ Lab courier ☐ Fed Ex ☐ Airborne ☐ UPS ☐ Hand Carried ☐ Private Courier (Co. Name)

White Copy - Original Yellow Copy - Laboratory Pink Copy - Field

COC Number: 002525

intact cold RC

Curtis & Tompkins, Ltd.

COOLER RECEIPT CHECKLIST

Login#: 165059 Date Received: 2-21-96 Number of Coolers: 1
Client: Treadwell & Rollo Project: 4245.01

A. Preliminary Examination Phase
Date Opened: 2-21-96 By (print): Troy Windsor (sign) Troy Windsor

1. Did cooler come with a shipping slip (airbill, etc.)? ..... YES (NO)
If YES, enter carrier name and airbill number: _____
2. Were custody seals on outside of cooler? ..... YES (NO)
How many and where? _____ Seal date: _____ Seal name: _____
3. Were custody seals unbroken and intact at the date and time of arrival? ..... YES NO N/A
4. Were custody papers dry and intact when received? ..... (YES) NO
5. Were custody papers filled out properly (ink, signed, etc.)? ..... (YES) NO
6. Did you sign the custody papers in the appropriate place? ..... (YES) NO
7. Was project identifiable from custody papers? ..... (YES) NO
If YES, enter project name at the top of this form.
8. If required, was sufficient ice used? Samples should be 2-6 degrees C. ..... (YES) NO
Type of ice: wet Temperature: Cold - no temp blank

B. Login Phase
Date Logged In: 2-21-96 By (print): Troy Windsor (sign) Troy Windsor

1. Describe type of packing in cooler: In ziploc type bags
2. Did all bottles arrive unbroken? ..... (YES) NO
3. Were labels in good condition and complete (ID, date, time, signature, etc.)? ..... (YES) NO
4. Did bottle labels agree with custody papers? ..... (YES) NO
5. Were appropriate containers used for the tests indicated? ..... (YES) NO
6. Were correct preservatives added to samples? ..... YES NO N/A
7. Was sufficient amount of sample sent for tests indicated? ..... (YES) NO
8. Were bubbles absent in VOA samples? If NO, list sample Ids below ..... YES NO N/A
9. Was the client contacted concerning this sample delivery? ..... YES NO
If YES, give details below.
Who was called? _____ By whom? _____ Date: _____

Additional Comments:

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	185059	Location:	Harbor Bay, Pittsburg
Client:	Treadwell & Rollo	Prep:	EPA 5030B
Project#:	4245	Analysis:	EPA 8015B
Matrix:	Soil	Batch#:	110641
Units:	mg/Kg	Received:	02/21/06
Basis:	as received	Analyzed:	02/22/06
Diln Fac:	1.000		

Field ID: COMP B-5,6,8 — Lab ID: 185059-009
Type: SAMPLE — Sampled: 12/21/05

Analyte	Result	RL
Gasoline C7-C12	ND b	0.95

Surrogate	%REC	Limits
Trifluorotoluene (FID)	96 b	59-140
Bromofluorobenzene (FID)	99 b	62-149

Field ID: COMP B-7,11,12 — Lab ID: 185059-010
Type: SAMPLE — Sampled: 02/21/05

Analyte	Result	RL
Gasoline C7-C12	ND b	1.1

Surrogate	%REC	Limits
Trifluorotoluene (FID)	101 b	59-140
Bromofluorobenzene (FID)	109 b	62-149

Field ID: COMP B-10,13 — Lab ID: 185059-011
Type: SAMPLE — Sampled: 02/07/05

Analyte	Result	RL
Gasoline C7-C12	ND b	1.0

Surrogate	%REC	Limits
Trifluorotoluene (FID)	100 b	59-140
Bromofluorobenzene (FID)	104 b	62-149

Type: BLANK — Lab ID: QC328780

Analyte	Result	RL
Gasoline C7-C12	ND	0.20

Surrogate	%REC	Limits
Trifluorotoluene (FID)	90	59-140
Bromofluorobenzene (FID)	95	62-149

b= See narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	185059	Location:	Harbor Bay, Pittsburg
Client:	Treadwell & Rollo	Prep:	EPA 5030B
Project#:	4245	Analysis:	EPA 8015B
Type:	LCS	Basis:	as received
Lab ID:	QC328782	Diln Fac:	1.000
Matrix:	Soil	Batch#:	110641
Units:	mg/Kg	Analyzed:	02/22/06

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	10.00	9.494	95	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	108	59-140
Bromofluorobenzene (FID)	104	62-149

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	185059	Location:	Harbor Bay, Pittsburg
Client:	Treadwell & Rollo	Prep:	EPA 5030B
Project#:	4245	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
MSS Lab ID:	185049-001	Batch#:	110641
Matrix:	Soil	Sampled:	02/21/06
Units:	mg/Kg	Received:	02/21/06
Basis:	as received	Analyzed:	02/23/06

Type: MS Lab ID: QC328917

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	<0.1240	10.10	3.488	35 *	44-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	97	59-140
Bromofluorobenzene (FID)	97	62-149

Type: MSD Lab ID: QC328918

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	9.259	3.548	38 *	44-120	10	23

Surrogate	%REC	Limits
Trifluorotoluene (FID)	97	59-140
Bromofluorobenzene (FID)	97	62-149

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	185059	Location:	Harbor Bay, Pittsburg
Client:	Treadwell & Rollo	Prep:	SHAKER TABLE
Project#:	STANDARD	Analysis:	EPA 8015B
Matrix:	Soil	Diln Fac:	1.000
Units:	mg/Kg	Received:	02/21/06
Basis:	as received		

Field ID:	COMP B-5,6,8	Sampled:	12/21/05
Type:	SAMPLE	Prepared:	02/23/06
Lab ID:	185059-009	Analyzed:	02/27/06
Batch#:	110713		

Analyte	Result	RL
Diesel C10-C24	23 H Y b	0.99
Motor Oil C24-C36	50 b	5.0

Surrogate	%REC	Limits
Hexacosane	77 b	48-132

Field ID:	COMP B-7,11,12	Sampled:	02/21/05
Type:	SAMPLE	Prepared:	02/24/06
Lab ID:	185059-010	Analyzed:	02/24/06
Batch#:	110742		

Analyte	Result	RL
Diesel C10-C24	3.0 H L Y b	0.99
Motor Oil C24-C36	8.2 b	5.0

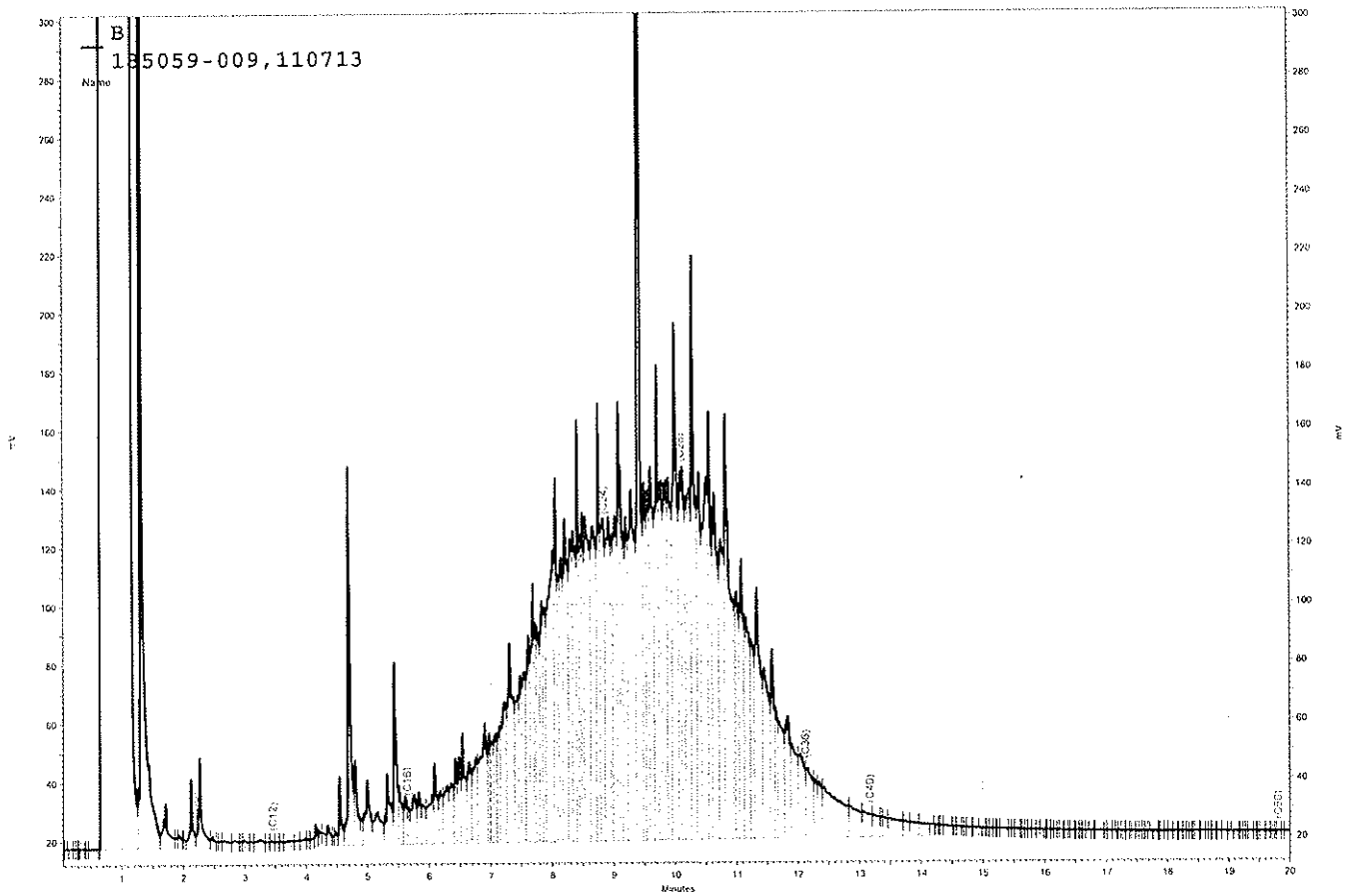
Surrogate	%REC	Limits
Hexacosane	79 b	48-132

Field ID:	COMP B-10,13	Sampled:	02/07/05
Type:	SAMPLE	Prepared:	02/24/06
Lab ID:	185059-011	Analyzed:	02/24/06
Batch#:	110742		

Analyte	Result	RL
Diesel C10-C24	2.8 H L Y b	1.0
Motor Oil C24-C36	9.5 b	5.0

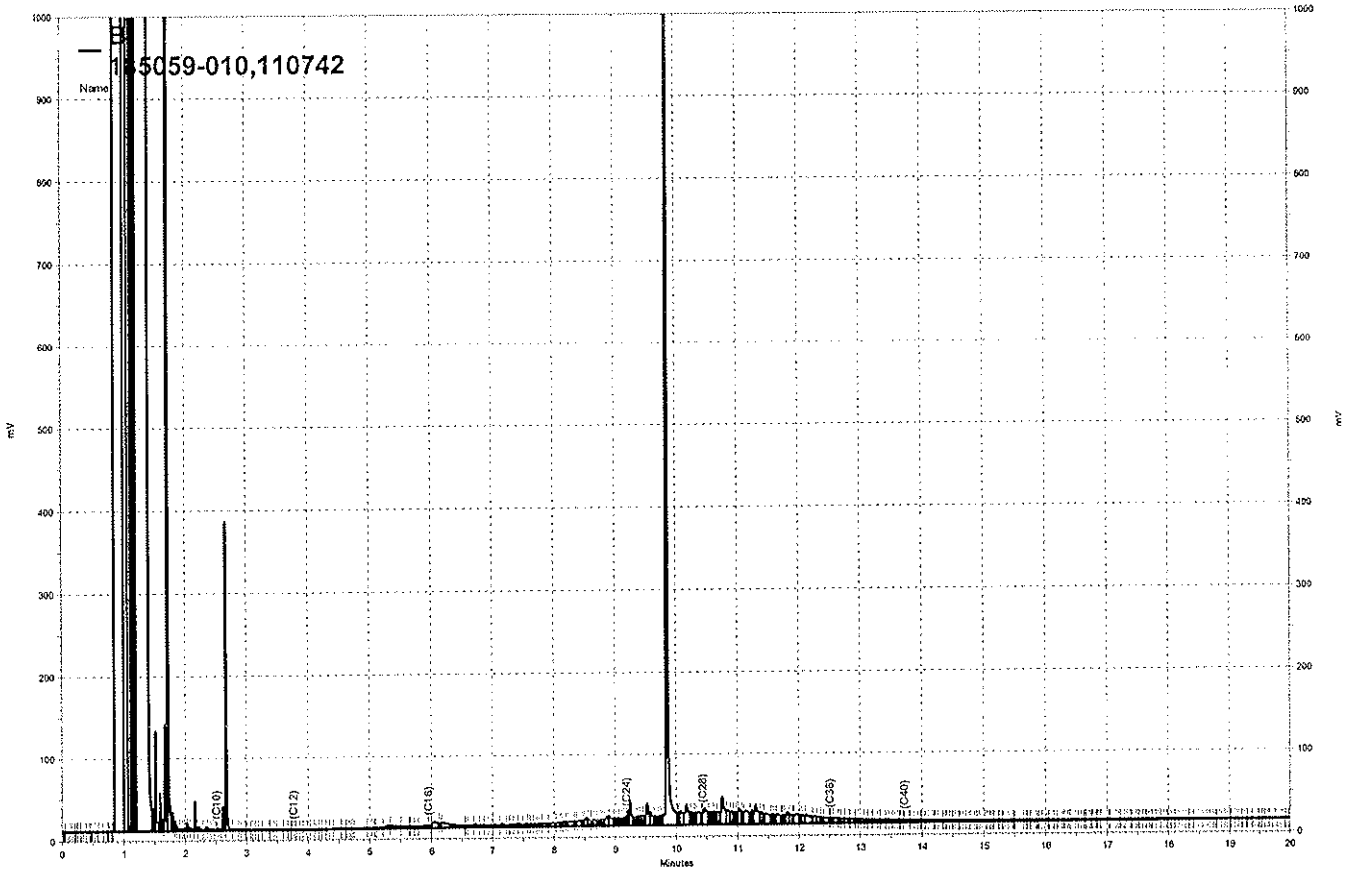
Surrogate	%REC	Limits
Hexacosane	77 b	48-132

H= Heavier hydrocarbons contributed to the quantitation
L= Lighter hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
b= See narrative
ND= Not Detected
RL= Reporting Limit



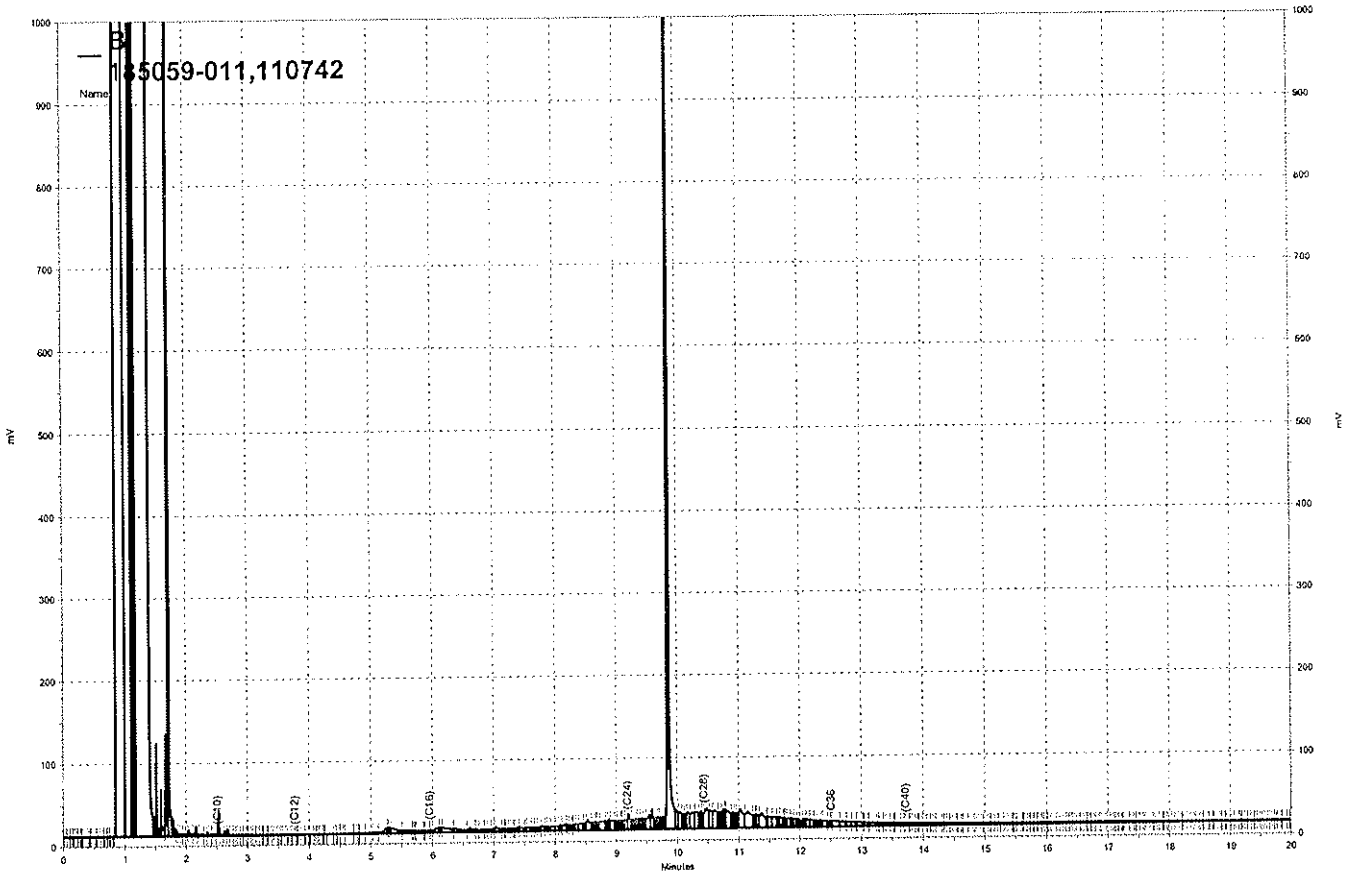
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COMP. B-5, 6, 8



\\Lims\gdrive\ezchrom\Projects\GC15B\Data\055b019, B

COMP B-7, 11, 12



\\Lims\gdrive\ezchrom\Projects\GC15B\Data\055b020, B

COMP B-10, 13

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	185059	Location:	Harbor Bay, Pittsburg
Client:	Treadwell & Rollo	Prep:	SHAKER TABLE
Project#:	STANDARD	Analysis:	EPA 8015B
Matrix:	Soil	Diln Fac:	1.000
Units:	mg/Kg	Received:	02/21/06
Basis:	as received		

Type:	BLANK	Prepared:	02/23/06
Lab ID:	QC329080	Analyzed:	02/27/06
Batch#:	110713	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Diesel C10-C24	ND	1.0
Motor Oil C24-C36	ND	5.0

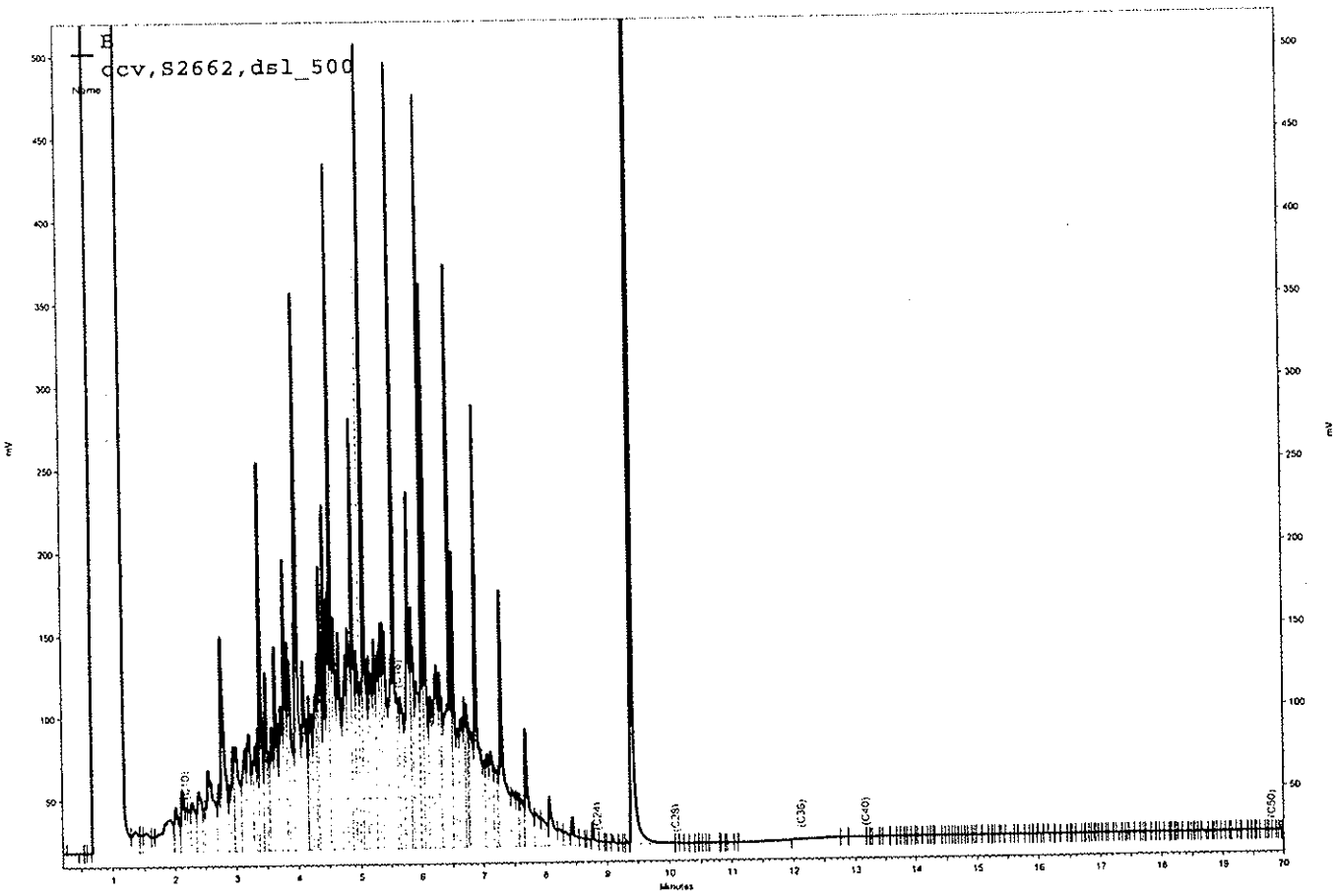
Surrogate	%REC	Limits
Hexacosane	97	48-132

Type:	BLANK	Prepared:	02/24/06
Lab ID:	QC329190	Analyzed:	02/24/06
Batch#:	110742	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Diesel C10-C24	ND	1.0
Motor Oil C24-C36	ND	5.0

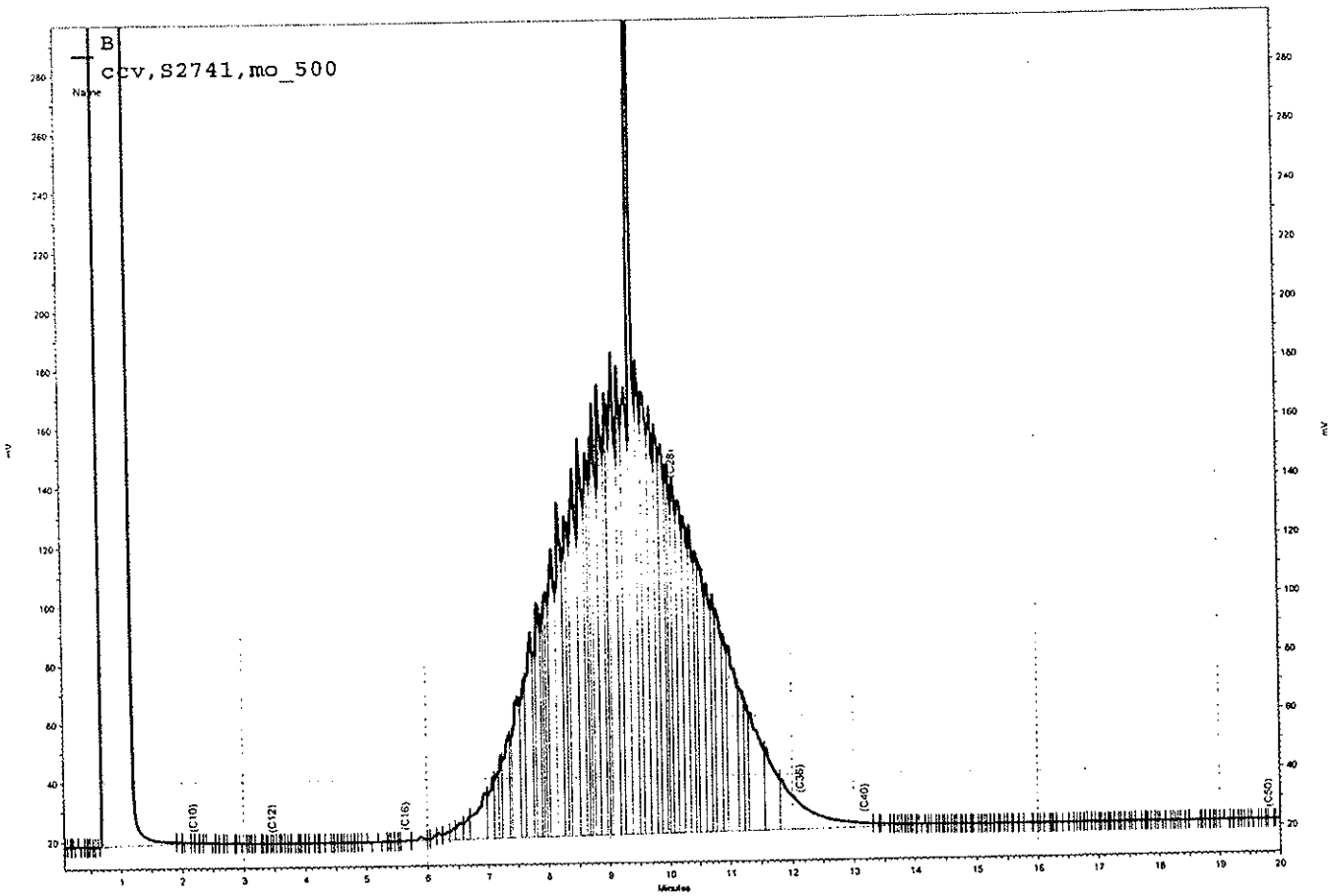
Surrogate	%REC	Limits
Hexacosane	78	48-132

H= Heavier hydrocarbons contributed to the quantitation
L= Lighter hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
b= See narrative
ND= Not Detected
RL= Reporting Limit



——— \\Lims\gdrive\ezchrom\Projects\GC13B\Data\058b003, B

Diesel



\\Lims\gdrive\ezchrom\Projects\GC13B\Data\058b004, B

Motor Oil

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	185059	Location:	Harbor Bay, Pittsburg
Client:	Treadwell & Rollo	Prep:	SHAKER TABLE
Project#:	STANDARD	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC329081	Batch#:	110713
Matrix:	Soil	Prepared:	02/23/06
Units:	mg/Kg	Analyzed:	02/27/06
Basis:	as received		

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.80	57.26	115	54-137

Surrogate	%REC	Limits
Hexacosane	113	48-132

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	185059	Location:	Harbor Bay, Pittsburg
Client:	Treadwell & Rollo	Prep:	SHAKER TABLE
Project#:	STANDARD	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC329191	Batch#:	110742
Matrix:	Soil	Prepared:	02/24/06
Units:	mg/Kg	Analyzed:	02/24/06
Basis:	as received		

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.78	46.85	94	54-137

Surrogate	%REC	Limits
Hexacosane	93	48-132

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	185059	Location:	Harbor Bay, Pittsburg
Client:	Treadwell & Rollo	Prep:	SHAKER TABLE
Project#:	STANDARD	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	110713
MSS Lab ID:	184945-012	Sampled:	02/10/06
Matrix:	Soil	Received:	02/15/06
Units:	mg/Kg	Prepared:	02/23/06
Basis:	as received	Analyzed:	02/27/06
Diln Fac:	5.000		

Type: MS
Lab ID: QC329082

Cleanup Method: EPA 3630C

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	72.62	50.30	71.32	-3 *	28-163

Surrogate	%REC	Limits
Hexacosane	90	48-132

Type: MSD
Lab ID: QC329083

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	50.32	75.61	6 *	28-163	6	46

Surrogate	%REC	Limits
Hexacosane	94	48-132

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	185059	Location:	Harbor Bay, Pittsburg
Client:	Treadwell & Rollo	Prep:	SHAKER TABLE
Project#:	STANDARD	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	110742
MSS Lab ID:	184968-005	Sampled:	02/15/06
Matrix:	Soil	Received:	02/16/06
Units:	mg/Kg	Prepared:	02/24/06
Basis:	as received	Analyzed:	02/25/06
Diln Fac:	1.000		

Type: MS Lab ID: QC329192

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	74.42	49.77	126.0	104	28-163

Surrogate	%REC	Limits
Hexacosane	90	48-132

Type: MSD Lab ID: QC329193

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	49.64	119.9	92	28-163	5	46

Surrogate	%REC	Limits
Hexacosane	96	48-132

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

California LUFT Metals

Lab #:	185059	Location:	Harbor Bay, Pittsburg
Client:	Treadwell & Rollo	Prep:	EPA 3050B
Project#:	STANDARD	Analysis:	EPA 6010B
Matrix:	Soil	Batch#:	110682
Units:	mg/Kg	Received:	02/21/06
Basis:	as received	Prepared:	02/23/06
Diln Fac:	1.000	Analyzed:	02/23/06

Field ID: COMP B-5,6,8 Lab ID: 185059-009
Type: SAMPLE Sampled: 12/21/05

Analyte	Result	RL
Cadmium	ND	0.16
Chromium	29	0.32
Lead	3.9	0.096
Nickel	32	0.64
Zinc	31	0.64

Field ID: COMP B-7,11,12 Lab ID: 185059-010
Type: SAMPLE Sampled: 02/21/05

Analyte	Result	RL
Cadmium	ND	0.22
Chromium	21	0.43
Lead	5.7	0.13
Nickel	20	0.86
Zinc	40	0.86

Field ID: COMP B-10,13 Lab ID: 185059-011
Type: SAMPLE Sampled: 02/07/05

Analyte	Result	RL
Cadmium	ND	0.27
Chromium	37	0.55
Lead	2.1	0.16
Nickel	52	1.1
Zinc	25	1.1

Type: BLANK Lab ID: QC328961

Analyte	Result	RL
Cadmium	ND	0.25
Chromium	ND	0.50
Lead	ND	0.15
Nickel	ND	1.0
Zinc	ND	1.0

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

California LUFT Metals

Lab #:	185059	Location:	Harbor Bay, Pittsburg
Client:	Treadwell & Rollo	Prep:	EPA 3050B
Project#:	STANDARD	Analysis:	EPA 6010B
Matrix:	Soil	Batch#:	110682
Units:	mg/Kg	Prepared:	02/23/06
Basis:	as received	Analyzed:	02/23/06
Diln Fac:	1.000		

Type: BS Lab ID: QC328962

Analyte	Spiked	Result	%REC	Limits
Cadmium	10.00	10.72	107	80-120
Chromium	100.0	104.6	105	80-120
Lead	100.0	102.6	103	80-120
Nickel	25.00	26.01	104	80-120
Zinc	25.00	26.43	106	80-120

Type: BSD Lab ID: QC328963

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Cadmium	10.00	10.40	104	80-120	3	20
Chromium	100.0	102.1	102	80-120	2	20
Lead	100.0	99.71	100	80-120	3	20
Nickel	25.00	25.25	101	80-120	3	20
Zinc	25.00	25.64	103	80-120	3	20

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

California LUFT Metals

Lab #:	185059	Location:	Harbor Bay, Pittsburg
Client:	Treadwell & Rollo	Prep:	EPA 3050B
Project#:	STANDARD	Analysis:	EPA 6010B
Field ID:	ZZZZZZZZZZ	Batch#:	110682
MSS Lab ID:	184945-002	Sampled:	02/14/06
Matrix:	Soil	Received:	02/15/06
Units:	mg/Kg	Prepared:	02/23/06
Basis:	as received	Analyzed:	02/23/06

Type: MS Lab ID: QC328964

Analyte	MSS Result	Spiked	Result	%REC	Limits	Diln Fac
Cadmium	0.7207	7.299	7.506	93	72-120	1.000
Chromium	21.80	72.99	101.1	109	65-120	10.00
Lead	31.88	72.99	94.48	86	57-125	1.000
Nickel	487.9	18.25	700.9 >LR	1168 NM	47-135	1.000
Zinc	139.0	18.25	115.3	-130 NM	43-141	1.000

Type: MSD Lab ID: QC328965

Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Diln Fac
Cadmium	9.434	9.728	95	72-120	2	20	1.000
Chromium	94.34	533.2	542 *	65-120	125 *	20	10.00
Lead	94.34	113.4	86	57-125	0	20	1.000
Nickel	23.58	804.9 >LR	1344 NM	47-135	NC	20	1.000
Zinc	23.58	115.2	-101 NM	43-141	3	20	1.000

*= Value outside of QC limits; see narrative
NC= Not Calculated
NM= Not Meaningful: Sample concentration > 4X spike concentration
>LR= Response exceeds instrument's linear range
RPD= Relative Percent Difference

DISTRIBUTION

4 copies: Mr. Chris Nelson
c/o Pittsburg River Park
55 Hawthorne Street, Suite 555
San Francisco, California 94105

QUALITY CONTROL REVIEWER:

For Richard D. Rodgers
Geotechnical Engineer

Appendix C
Treadwell & Rollo
Supplemental Geotechnical
Consultation Letter Report

Treadwell&Rollo

13 June 2006
Project No. 4245.02

Mr. Barry J. Shotts, Esq.
Holme, Roberts & Owen, LLP
560 Mission Street, 25th Floor
San Francisco, California 94105

Subject: Supplemental Geotechnical Consultation
Settlement of the Proposed Earthen Embankment
Proposed Harbor Park Development
Pittsburg, California

Dear Mr. Shotts:

This letter presents the results of our supplemental settlement analyses for the proposed earthen embankment at the Harbor Park development in Pittsburg, California. The development site is southwest of the intersection of East 3rd and Harbor Streets, as indicated on Figure 1. The proposed earthen embankment will be located within an "open space" area along the eastern edge of the Harbor Park site as indicated on Figure 2.

The proposed Harbor Park development will consist of 2- to 3-story residential units and open space areas. We understand the project will also include site improvements, such as underground utilities, landscaping, sidewalks and walkways, and new pavements. Preliminary design loads, proposed grading, and new underground utility locations were not available at the time this report was prepared.

SITE CONDITIONS AND BACKGROUND

The existing ground surface at the development site ranges in elevation from approximately 12 feet above mean sea level (MSL) near the intersection of East 3rd and Harbor Streets to approximately 32 feet MSL at the top of the slope at the southwest corner of the site. An ALTA Land Title survey performed by Renner Group, dated 20 May 2005, indicates that the site grades at these two locations correspond to about Elevation 100 and 120 feet[1], respectively. Within the proposed earthen embankment alignment, site grades vary between approximately Elevation 107 feet at the southern end of the earthen embankment and about Elevation 100 feet at the northern end.

The site was previously occupied by the Johns Manville Pittsburg Manufacturing Facility. At the time this letter was prepared, the structures associated with the manufacturing facility had been demolished and the majority of the building footings had been removed. The approximate locations of the former buildings associated with the Johns Manville facility are shown on the

[1] All elevations described in this Letter are based on the vertical datum as described on the ALTA Land Title survey prepared by Renner Group, dated 20 May 2005, unless otherwise noted.

Site Plan, Figure 2. We understand some of the building footings were encountered at depths greater that five feet below the existing ground surface (bgs). After the footings were removed, we understand the resulting excavations were backfilled with loose soil.

Site development plans include environmental remediation of on-site soil. ERM is the environmental consultant for the project. We understand ERM is in the process of assessing the environmental quality of the soil and groundwater at the site and evaluating disposal and/or remediation options. As a potential option, we understand ERM is evaluating whether on-site soil impacted with chemical contaminants can be placed and encapsulated within the proposed earthen embankment along the eastern edge of the site.

PROPOSED EARTHEN EMBANKMENT

Our supplemental analyses were performed to provide settlement behavior information to ERM for use in the design of the proposed earthen embankment. As part of the environmental remediation of the site, we understand on-site soil impacted with chemical contaminants will be used as fill within the proposed earthen embankment along Harbor Street. Due to the estimated quantity of impacted soil, we understand a below-grade excavation will be created, chemically impacted soil will be placed beneath and within the proposed earthen embankment, and the embankment will be covered by a layer of clean soil.

Based on our recent discussions with ERM, we understand the earthen embankment will have:

- an above-grade portion that is approximately 10 feet high and 69 feet wide at the base (between the toe of the side slopes); 3-foot-wide drainage swales are planned along the eastern and western edges of the embankment

- a below-grade portion that is approximately 10 feet deep and 75 feet wide; the lower portion of the fill will extend below the existing groundwater level during certain times of the year

- side slopes at inclinations of approximately 2.25:1 (horizontal to vertical).

PREVIOUS INVESTIGATIONS AND SUBSURFACE CONDITIONS

We previously performed subsurface investigations at the Harbor Park site and presented our findings and recommendations in a report titled *Preliminary Geotechnical Investigation, Proposed Harbor Bay Development, Pittsburg, California*, dated 17 October 2005, and a report titled *Geotechnical Investigation, Proposed Harbor Park Development, Pittsburg, California*, dated 13 June 2006. As part of these investigations, we performed a total of 13 soil borings, 61 cone penetration tests (CPTs), and various laboratory tests, including strength and consolidation tests. The approximate locations of the borings and CPTs are shown on Figure 2. For our supplemental settlement analyses, we used the subsurface data associated with five borings (B-4,

B-7, B-8, B-11, and B12) and nine CPTs (CPT-11, CPT-12, CPT-13, CPT-21, CPT-33, CPT-36, CPT-39, CPT-40, and CPT-41). Logs of the test borings and CPTs, as well as the laboratory test results, are presented in our report dated 13 June 2006.

The results of our previous investigations indicate the proposed earthen embankment alignment is blanketed by about 3.5 to 8 feet of fill. The fill is highly variable in soil type and strength. It is composed of very loose to dense sand and gravel with varying amounts of silt and clay, soft to stiff clay and sandy clay with varying amounts of silt, sand, gravel, and construction debris. Specific soil types and engineering characteristics are presented on the boring logs, CPT logs, and laboratory test results presented in our geotechnical report dated 13 June 2006.

The fill along the southern half of the earthen embankment alignment is underlain by deposits of compressible soft to medium stiff clay that vary between 8 to 43 feet in thickness. Between CPT-39 and B-12, the compressible clay deposits become thinner and are no longer present at B-4, B-12, CPT-40, and CPT-41.

Beneath the fill at the northern half of the alignment and below the compressible clay deposits at the southern portion of the alignment, we generally encountered medium stiff to very stiff clay, sandy clay, silt, and sandy silt and loose to very dense sand, silty sand, and clayey sand to the maximum depths explored of about 51 feet.

Groundwater was encountered at depths of 4.5 to 15.5 feet bgs in the borings and CPTs during or immediately following drilling or CPT advancement. These depths to groundwater correspond to elevations between 92.5 and 97.5 feet. The groundwater level has been previously measured and reported in the environmental reports by others at elevations between approximately 91 to 93 feet. However, due to the close proximity of the project site to the Sacramento-San Joaquin River Delta (New York Slough), we conclude the groundwater elevation will likely fluctuate with changes in the water level of the slough.

SCOPE OF SERVICES

The scope of services for our supplemental settlement analyses was outlined in our request for additional budget dated 13 April 2006, and a subsequent additional budget request dated 13 June 2006. The objective of our additional studies is to provide information to ERM for use in the design of the proposed earthen embankment. Specific items that were included in our scope of services are listed below.

- performing consolidation analyses to estimate the amount of total and differential settlement along the centerline and transverse direction of the proposed earthen embankment

- estimate the rate at which the anticipated consolidation settlements will occur along the centerline of the proposed earthen embankment

- provide design criteria and prepare a preliminary cost estimate for the installation of wick drains to accelerate the consolidation of the compressible clay deposits beneath the proposed earthen embankment.

DISCUSSION AND CONCLUSIONS

The primary geotechnical concerns to be addressed during design and construction of the proposed earthen embankment are:

- highly variable subsurface soil conditions
- presence of soft compressible clay deposits
- relatively large estimated total and differential settlements along the centerline of the proposed earthen embankment and in the transverse direction of the earthen embankment
- variable settlement rate along the alignment of the proposed earthen embankment
- relatively shallow groundwater table.

These and other geotechnical issues as they pertain to the design and construction of the proposed earthen embankment are discussed in the remainder of this letter.

Estimated Settlements

We estimated total and differential settlements associated with the primary consolidation of compressible clay deposits under the weight of the proposed earthen embankment, and the immediate settlement of native soils that were encountered beneath the northern half of the alignment and beneath the compressible deposits at the southern portion of the earthen embankment site.

The results of these analyses were used to create upper and lower bound settlement contour maps which are presented on Figures 3 and 4. Based on the results of our studies, we conclude the earthen embankment may experience up to 22 inches of settlement with the largest settlements occurring near B-7, CPT-13, and CPT-36, which coincides with the areas underlain by the thickest and most compressible materials.

Settlements Along the Centerline of the Proposed Earthen Embankment

The estimated settlements along the centerline of the earthen embankment are presented in Table 1. The settlement analysis considered cross-sections at approximate boring and CPT locations along the embankment alignment. The embankment fill material was assumed to be incompressible and approximately the same weight as the native soil that will be removed from

the excavation. The values presented in Table 1 are estimates of the anticipated settlement based on our interpolation and/or extrapolation of subsurface conditions encountered at the boring and CPT locations closest to each embankment cross-section. As shown on Figures 3 and 4, differential settlements of about 1 to 13 inches across a 50-foot horizontal distance should be anticipated along the centerline of the earthen embankment.

TABLE 1

Estimated Consolidation Settlement Along Alignment of the Proposed Earthen Embankment

Approximate Cross-Section Location	Estimated Settlement (inches)
CPT-11	4-1/4 to 9
B-8/CPT-21	4 to 8-1/2
CPT-12	1/2 to 1
CPT-33	≤1/4
CPT-36	10-1/4 to 21-1/2
B-7/CPT-13	8-1/2 to 18
B-11	2-1/2 to 5-1/4
CPT-39/B-12/CPT-40/ CPT-41/B-4	3/4 to 1-2/3

Settlement Perpendicular to the Centerline of the Proposed Earthen Embankment

As shown in Figures 3 and 4, we estimate that settlements will decrease with increasing distances from the centerline of the earthen embankment. Heaving of the ground surface adjacent to the embankment is not anticipated, although some heaving of the soft saturated soil at the bottom of the embankment excavation may occur. The maximum influence of the proposed earthen embankment is in the area of B-7, CPT-13, and CPT-36, which as discussed above has the thickest observed deposits of soft compressible clay material. Existing and proposed improvements (buildings, roadways, hardscape, and underground utilities) located near the earthen embankment may experience significant total and differential settlement and could be damaged.

Rate of Settlement

The rate of consolidation settlement is dependant upon the compressibility, stress history, thickness of the compressible deposit, drainage paths, and presence of granular soil layers or

lenses. Upper and lower bound estimates for the rate in which consolidation settlements will occur along the centerline of the proposed earthen embankment are presented in Figures 5 through 12. As shown in these figures, the time required to reach approximately 90 percent of the estimated consolidation settlement ranges from less than ½ to more than 25 years. We estimate the areas that are not underlain by compressible material will achieve about 90 percent of the estimated settlement within 1 to 1-1/2 years after the completion of the proposed earthen embankment.

In general, we conclude that thick layers of compressible deposits will settle slowly over time. This behavior may result in damage or continued maintenance of site improvements. Soil modification techniques are available to reduce the potential for damage to new improvements caused by slow consolidation-related settlement.

One option is to accelerate the settlement rate so that a majority of the estimated settlement occurs prior to constructing the new site improvements. Acceleration of the settlement rate can be achieved by installing prefabricated vertical drains (wick drains) through the compressible clay deposits. Based on our experience, we believe that using a combination of wick drains and surcharge fill can accelerate the settlement rate so that 90 percent of the consolidation-related settlement is completed in approximately 4 to 6 months. Subsequently, the surcharge fill would be removed and the new improvements constructed. The wick drains would remain embedded in the clay deposits.

RECOMMENDATIONS

Recommendations for design, construction, and maintenance of the proposed earthen embankment are presented in the following sections.

Site Grading

General grading and landscaping recommendations for the project site were provided in the geotechnical investigation report dated 13 June 2006. This letter presents more specific recommendations concerning the construction and maintenance of the earthen embankment. The amount of settlement is dependant upon the weight of the earthen embankment. If the height of the earthen embankment is raised, additional settlement may occur. Maintenance of the earthen embankment may include minor re-grading to maintain drainage and site grades. Care should be exercised that additional fill is not added to make the earthen embankment taller than originally planned as this will result in a larger amount of settlement than estimated in Table 1 or shown on Figures 3 and 4.

Material placed to construct the earthen embankment should be properly moisture-conditioned and compacted to prevent additional settlement of the earthen embankment fill material, or shrinking and swelling due to seasonal moisture fluctuations. Poorly compacted fill material will increase the estimated settlements of the proposed earthen embankment by as much as

approximately 1 to 2 percent of the height of poorly compacted fill material. In general, water should not be allowed to pond on the earthen embankment or in the proposed adjacent drainage swales.

As discussed above the soil near the bottom of the proposed earthen embankment excavation is anticipated to be saturated and soft. Some areas may experience pumping or localized heaving during the placement of the earthen embankment fill material. Upon completion of the proposed earthen embankment, heaving of the adjacent ground surface is not anticipated.

Acceleration of Settlement Rate

It has been our experience that the installation of prefabricated vertical drains (wick drains) are an effective means to accelerate the rate of settlement. Acceleration of settlement by the use of wick drains is dependent on the permeability of the soil, thickness of the compressible deposit, and spacing of the wick drains. We performed a wick drain analysis to determine the spacing and depth necessary to reach 90 percent of consolidation settlements within 4 and 6 months for an area within the southern half of the earthen embankment alignment which is underlain by compressible clay deposits. We estimate an approximately 51,000-square-foot portion of the earthen embankment alignment could be wicked.

Wick Drain Spacing

By using the subsurface data developed from our previous investigations, we estimated the spacing necessary to achieve 90 percent of the consolidation-related settlement for areas underlain by compressible clay deposits. Our analysis considered wick drains spaced 3 and 4 feet apart in a triangle configuration to achieve 90 percent of the consolidation settlement within 4 and 6 months, respectively.

Surcharging

Typically, in areas where settlement sensitive structures are planned (buildings, utilities, and other structures), a surcharge fill that has a weight greater than the anticipated weight of the proposed improvements is applied to reduce the amount of post-construction settlement. The height of the surcharge and the length of time the surcharge fill needs to in remain in place is dependant upon the anticipated weight of new structures, settlement tolerance of the planned improvements, and project schedule. At the time this letter was prepared, the planned alignment of underground utilities, location of the proposed structures, and schedule were not available to determine the affects that the proposed earthen embankment will have upon adjacent and nearby settlement sensitive improvements. For preliminary cost estimating purposes, we recommend using at least a 5-foot-thick layer of surcharge fill for improving areas to be underlain by new utilities, roadways, and other near-surface improvements in the areas adjacent to the proposed earthen embankment. For proposed earthen embankment alignment, and building locations near the embankment, we recommend using at least a 15-foot-thick layer of surcharge fill.

If it is determined that wick drains and surcharging will be used to accelerate the settlement at various portions of the site, we should be provided with more detailed design information, and subsequently have the opportunity to re-evaluate and optimize the wick drain spacing and surcharge fill heights.

Preliminary Wick Drain Cost Estimate

Based on conversations with a contractor experienced with wick drain installation, we have prepared a preliminary cost estimate for the installation of wick drains at the project site. Our preliminary cost estimate includes mobilization costs and a cost per linear foot of wick. A breakdown of the estimate ed cost is presented in Table 3. We based our cost estimate on the 3- and 4-foot wick spacing and a wicked area of approximately 51,000 square feet, which represents the portion of the earthen embankment alignment that is underlain by compressible clay deposits.

TABLE 3

Preliminary Wick Drain Cost Estimate For Planning Purposes

Item	Unit Cost	Estimated Total Units	
		4 Months to Achieve 90% Consolidation	6 Months to Achieve 90% Consolidation
Mobilization	$25,000	$25,000	$25,000
Wick Drain	$1.00 per ft	$1.00 x 163,500 ft = $163,500	$1.00 x 92,400 ft = $92,400
Total		$188,500	$117,400

The estimate above does not include the cost for surcharge placement and removal, settlement and pore pressure monitoring (used to determine if surcharging is complete), architectural/engineering fees, and construction monitoring and testing fees. A contractor experienced with the installation of wick drains should be contacted to provide a more accurate estimate of the construction cost and schedule.

GEOTECHNICAL SERVICES DURING CONSTRUCTION

We should review the grading plans to check that they are in general conformance with the intent of our recommendations. During construction, we should observe the soil exposed during excavation, and observe the placement and compaction of the earthen embankment fill soil.

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These observations will allow us to compare actual with anticipated soil conditions and check that the contractor's work conforms to the geotechnical aspects of the plans and specifications.

LIMITATIONS

The conclusions and recommendations presented in this letter apply to the site and the existing conditions, as we have described them in this letter. The conclusions and recommendations are the result of engineering studies and our interpretations of the existing geotechnical conditions.

We trust this provides the information you require at this time. If you have any questions, please call.

Sincerely yours,
TREADWELL & ROLLO, INC.

Haze Rodgers
Civil Engineer

REGISTERED PROFESSIONAL ENGINEER
HAZE M. RODGERS
No. 66161
Exp. 6/30/06
CIVIL
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Dean H. Iwasa
Geotechnical Engineer

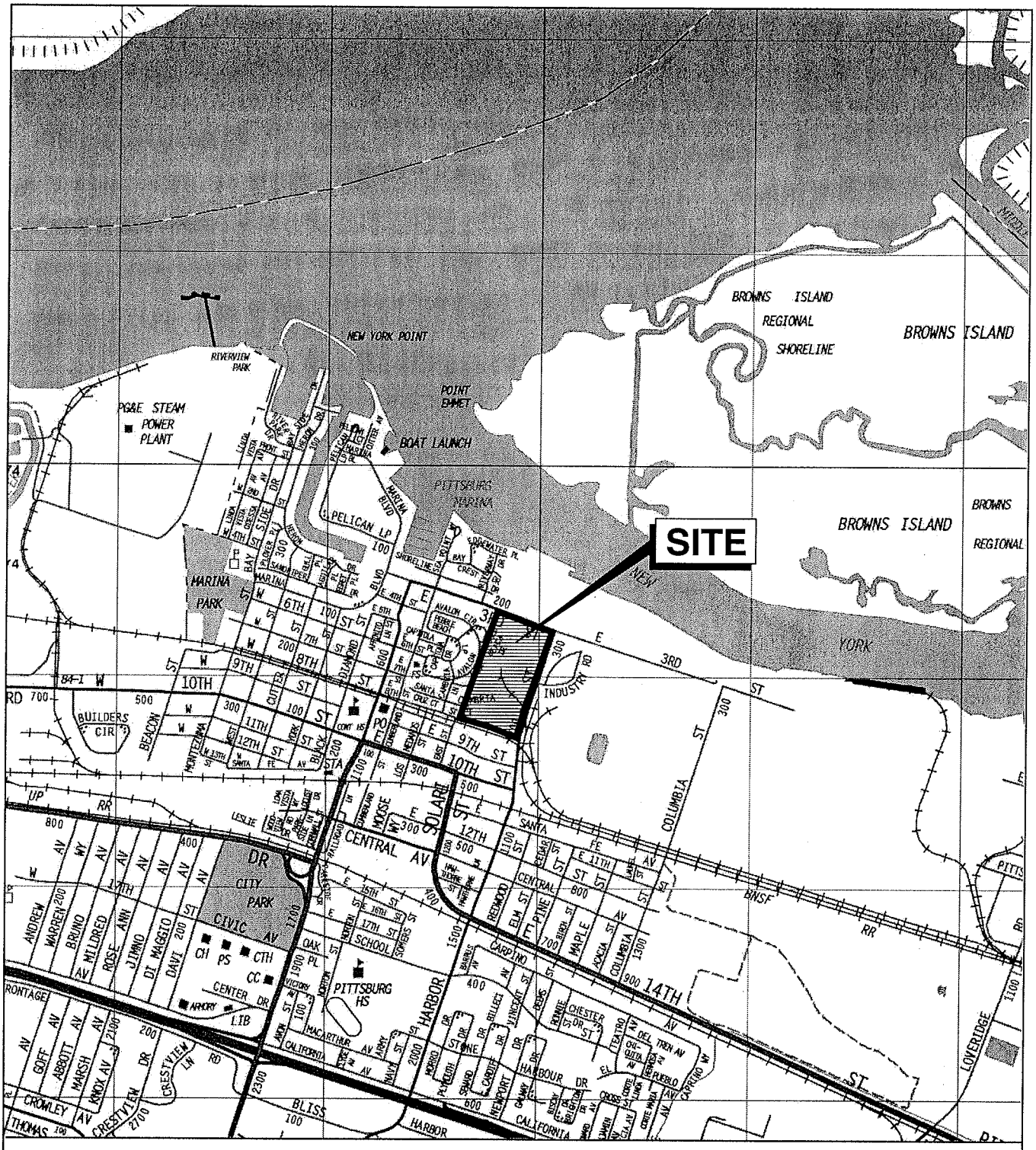
REGISTERED PROFESSIONAL ENGINEER
DEAN H. IWASA
GE 2285
Exp. 3/31/08
GEOTECHNICAL
STATE OF CALIFORNIA

42450202.OAK

Attachments:
Figure 1 – Site Location Map
Figure 2 – Geotechnical Investigation Site Plan
Figure 3 – Upper Bound Estimated Settlement Contour Map
Figure 4 – Lower Bound Estimated Settlement Contour Map
Figure 5 – Estimated Rate of Consolidation along Centerline of Proposed Earthen Embankment near CPT-11
Figure 6 – Estimated Rate of Consolidation along Centerline of Proposed Earthen Embankment near B-8 and CPT-21
Figure 7 – Estimated Rate of Consolidation along Centerline of Proposed Earthen Embankment near CPT-12
Figure 8 – Estimated Rate of Consolidation along Centerline of Proposed Earthen Embankment near CPT-33
Figure 9 – Estimated Rate of Consolidation along Centerline of Proposed Earthen Embankment near CPT-36
Figure 10 – Estimated Rate of Consolidation along Centerline of Proposed Earthen Embankment near B-7 and CPT-13
Figure 11 – Estimated Rate of Consolidation along Centerline of Proposed Earthen Embankment near B-11
Figure 12 – Estimated Rate of Consolidation along Centerline of Proposed Earthen Embankment near B-12, CPT-40, CPT-41, and B-4

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FIGURES



Base map: The Thomas Guide
Contra Costa County
1999

0 1/4 1/2 Mile

Approximate scale

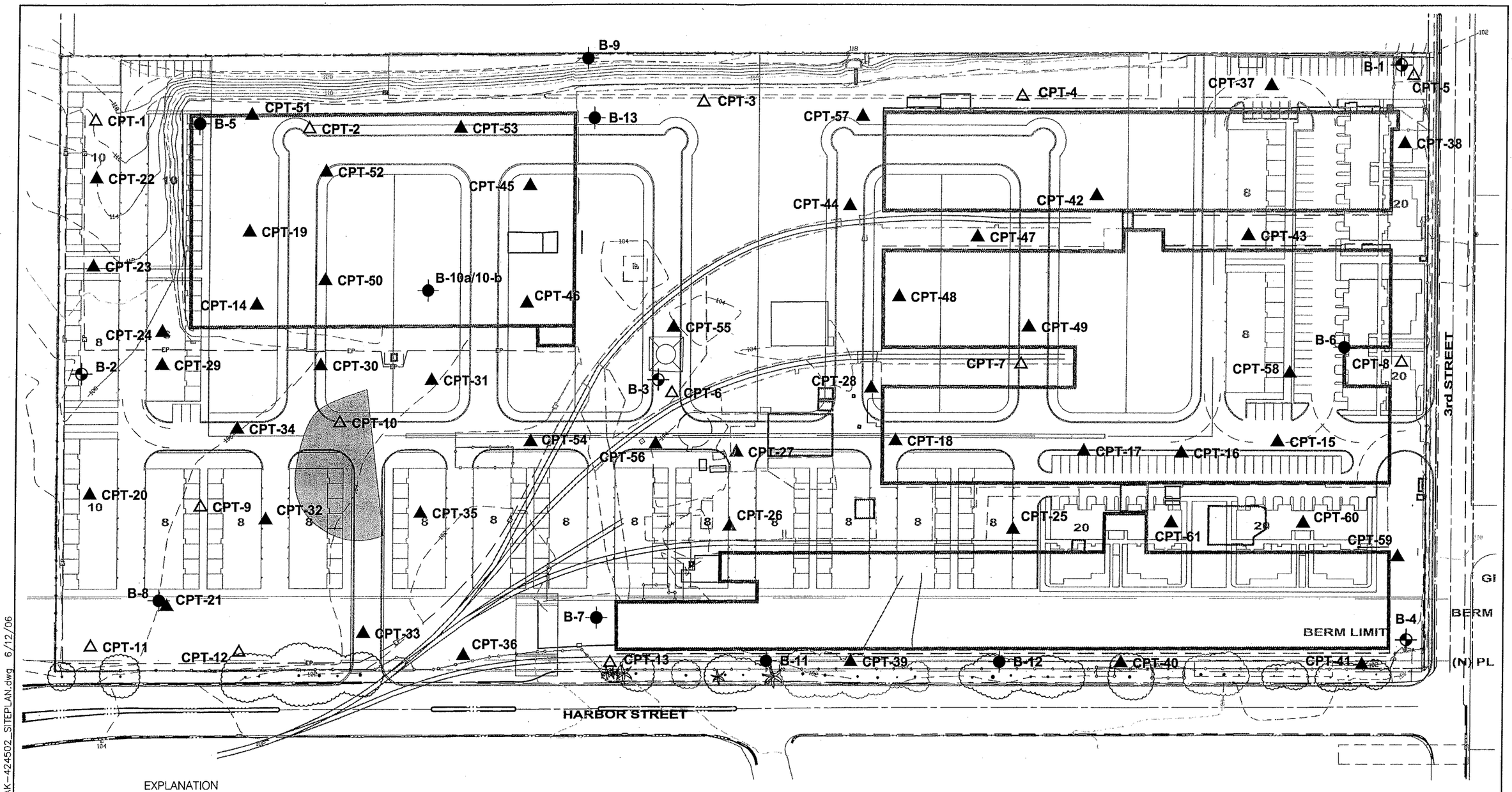
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Pittsburg, California

SITE LOCATION MAP

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Date 04/17/06	Project No. 4245.02	Figure 1



EXPLANATION

- Approximate location of boring performed by Treadwell & Rollo, Inc., in December 2005 and February 2006
- Approximate location of cone penetration test (CPT) performed by Treadwell & Rollo, Inc., in December 2005 and February 2006
- B-1 Approximate location of boring performed by Treadwell & Rollo, Inc., in August 2005
- CPT-1 Approximate location of cone penetration test (CPT) performed by Treadwell & Rollo, Inc., in August 2005
- Former building outlines
- Filled in evaporation pond

0 100 Feet
Approximate scale

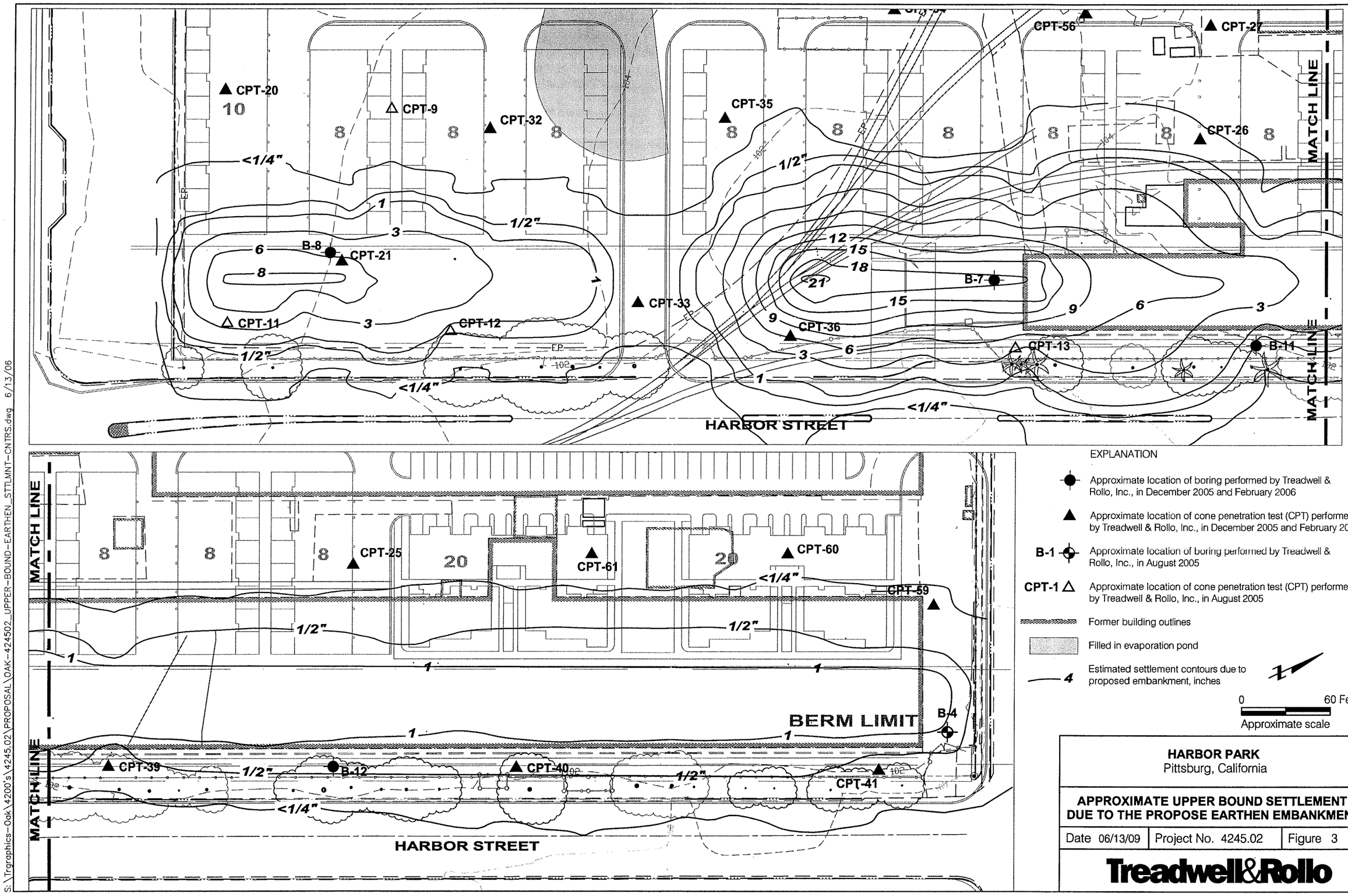
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GEOTECHNICAL INVESTIGATION
SITE PLAN

Date 05/09/06	Project No. 4245.02	Figure 2

Treadwell&Rollo

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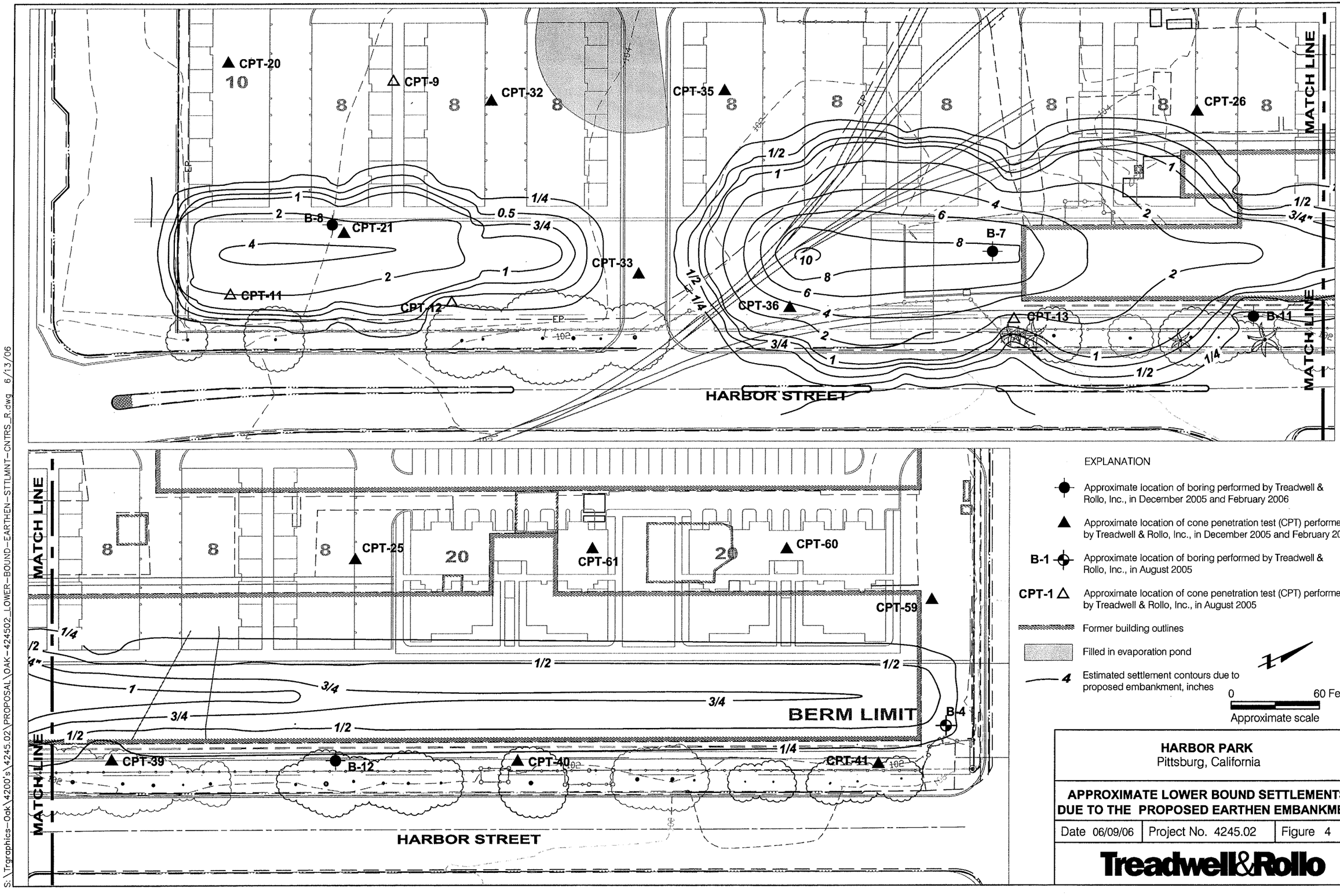
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APPROXIMATE UPPER BOUND SETTLEMENT DUE TO THE PROPOSE EARTHEN EMBANKMENT

Date 06/13/09	Project No. 4245.02	Figure 3

Treadwell&Rollo

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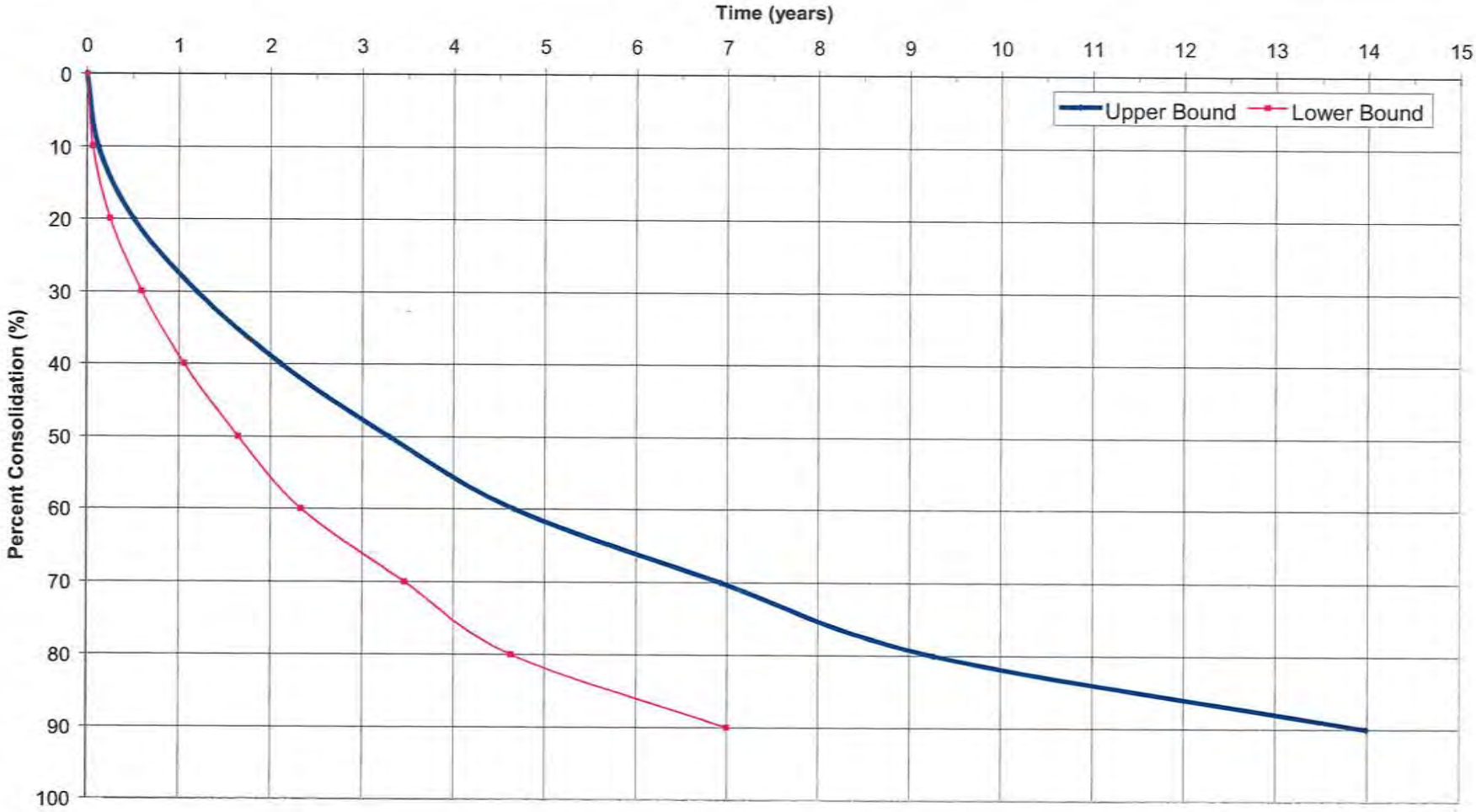
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APPROXIMATE LOWER BOUND SETTLEMENTS DUE TO THE PROPOSED EARTHEN EMBANKMENT

Date 06/09/06	Project No. 4245.02	Figure 4

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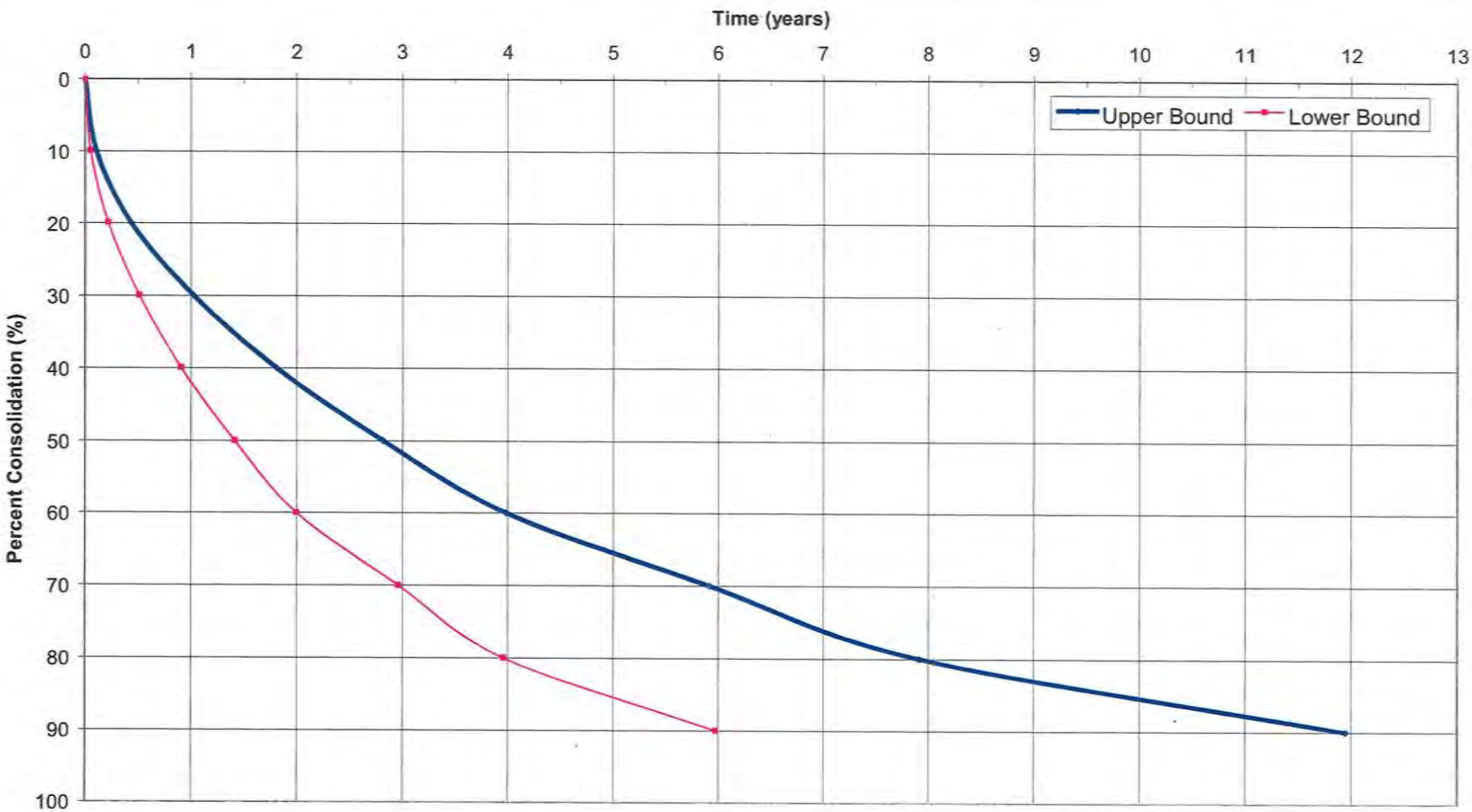


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ESTIMATED RATE OF CONSOLIDATION ALONG CENTERLINE OF PROPOSED EMBANKMENT NEAR CPT-11

Date 05/11/06	Project No. 4245.02	Figure 5

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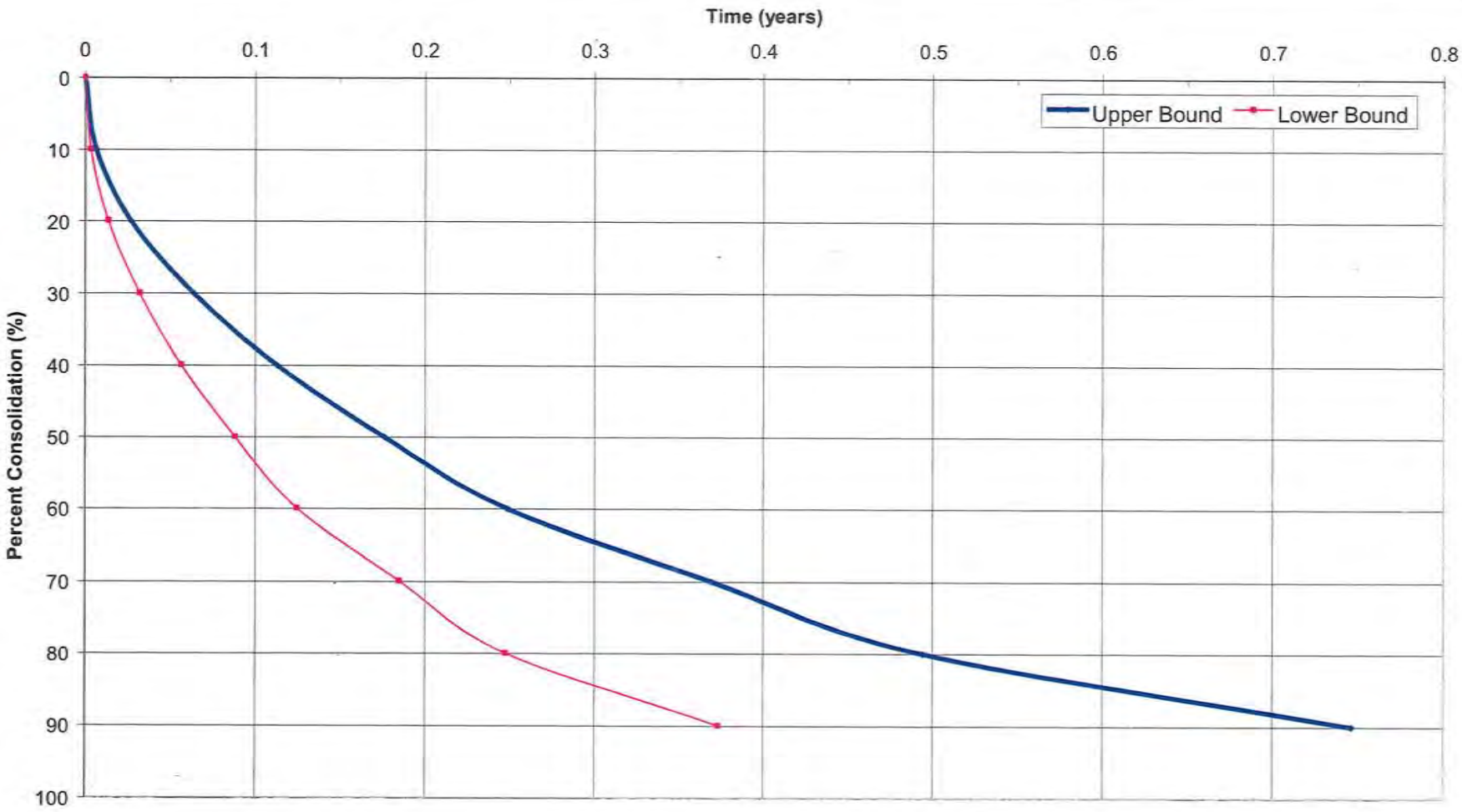


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ESTIMATED RATE OF CONSOLIDATION ALONG CENTERLINE OF PROPOSED EMBANKMENT NEAR B-8 AND CPT-21

Date 05/11/06	Project No. 4245.02	Figure 6

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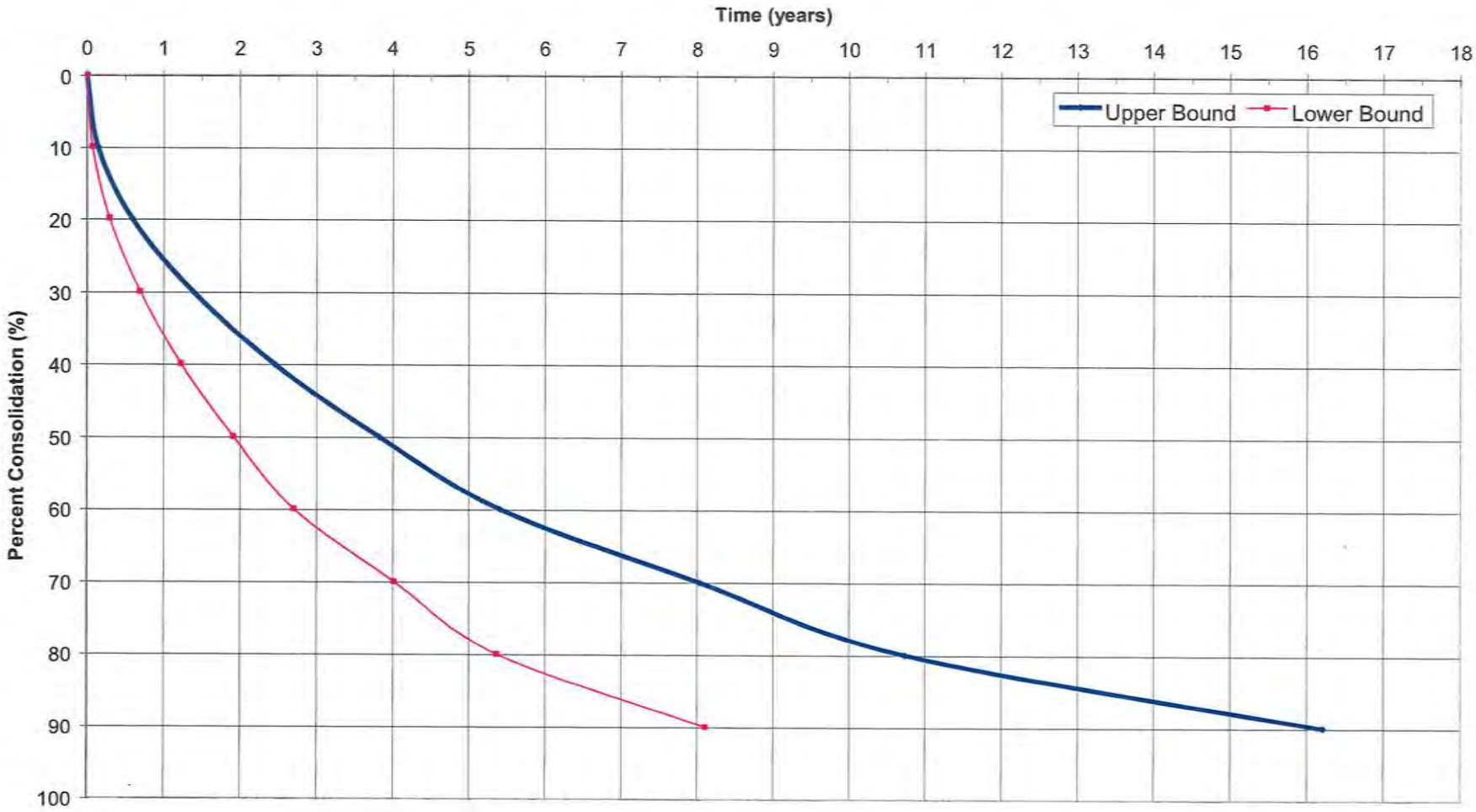


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ESTIMATED RATE OF CONSOLIDATION ALONG CENTERLINE OF PROPOSED EMBANKMENT NEAR CPT-12

Date 05/11/06	Project No. 4245.02	Figure 7

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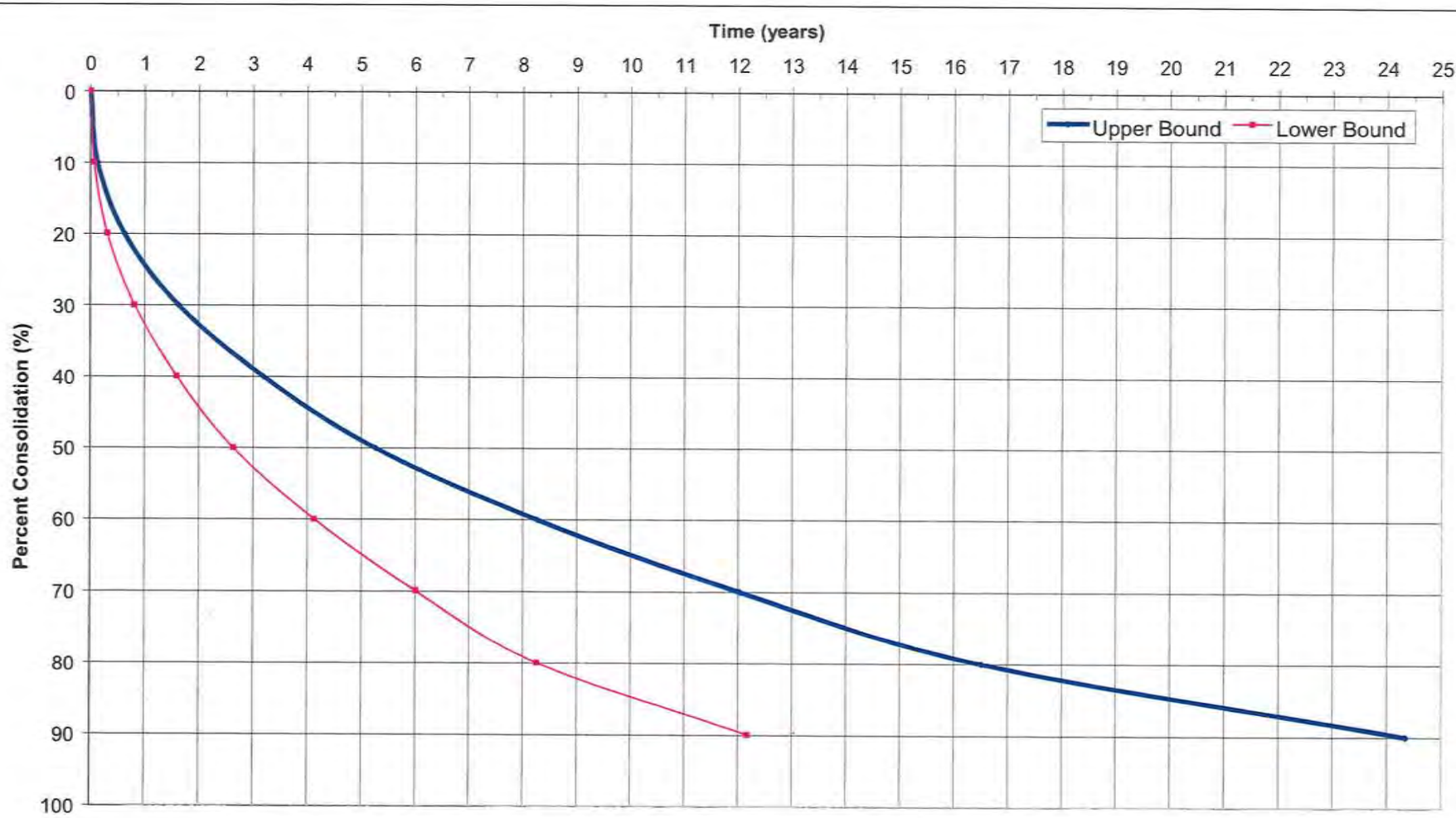


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ESTIMATED RATE OF CONSOLIDATION ALONG CENTERLINE OF PROPOSED EMBANKMENT NEAR CPT-33

Date 05/11/06	Project No. 4245.02	Figure 8

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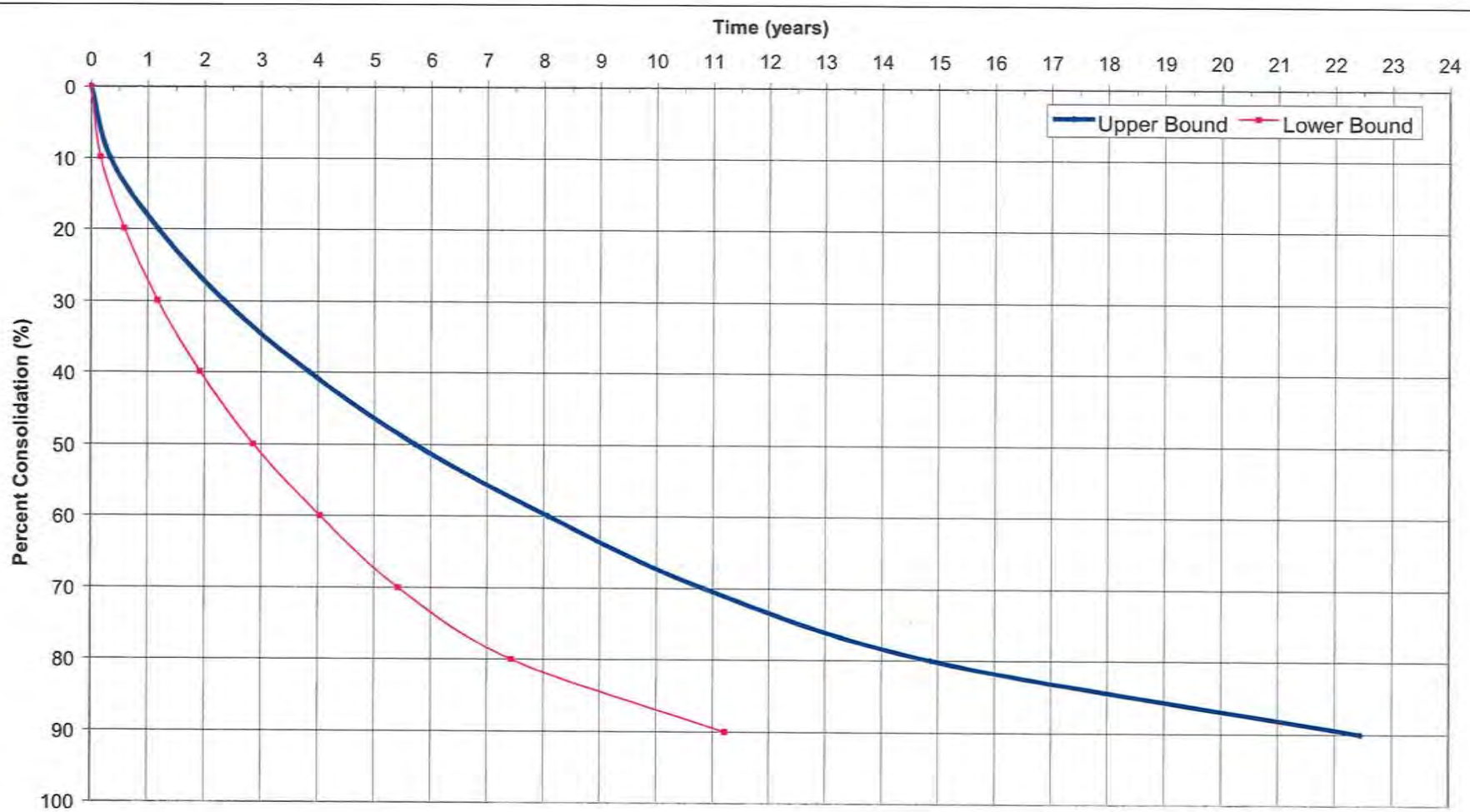


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ESTIMATED RATE OF CONSOLIDATION ALONG CENTERLINE OF PROPOSED EMBANKMENT NEAR CPT-36

Date 05/11/06	Project No. 4245.02	Figure 9

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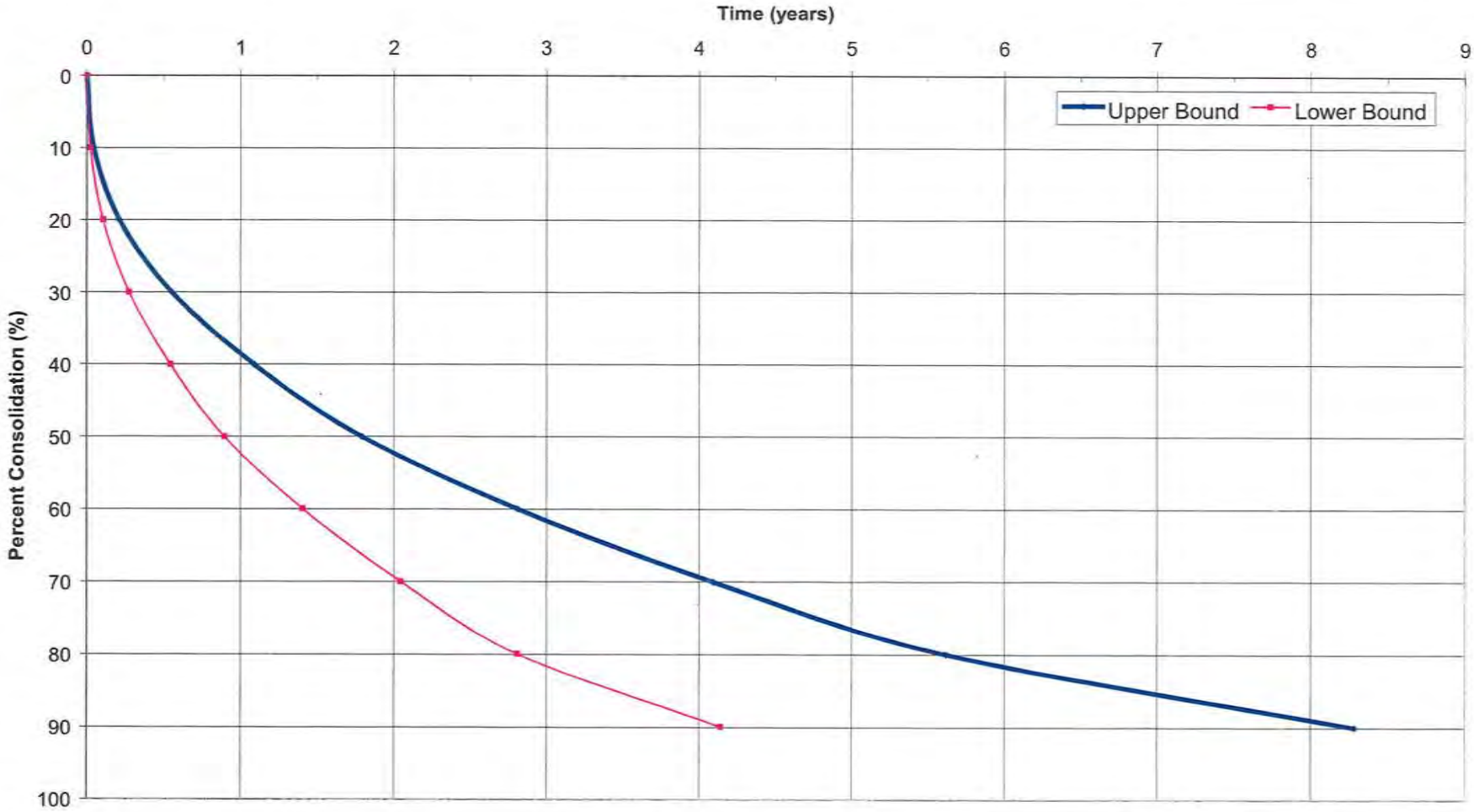


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ESTIMATED RATE OF CONSOLIDATION ALONG CENTERLINE OF PROPOSED EMBANKMENT NEAR B-7 AND CPT-13

Date 05/11/06	Project No. 4245.02	Figure 10

Treadwell&Rollo

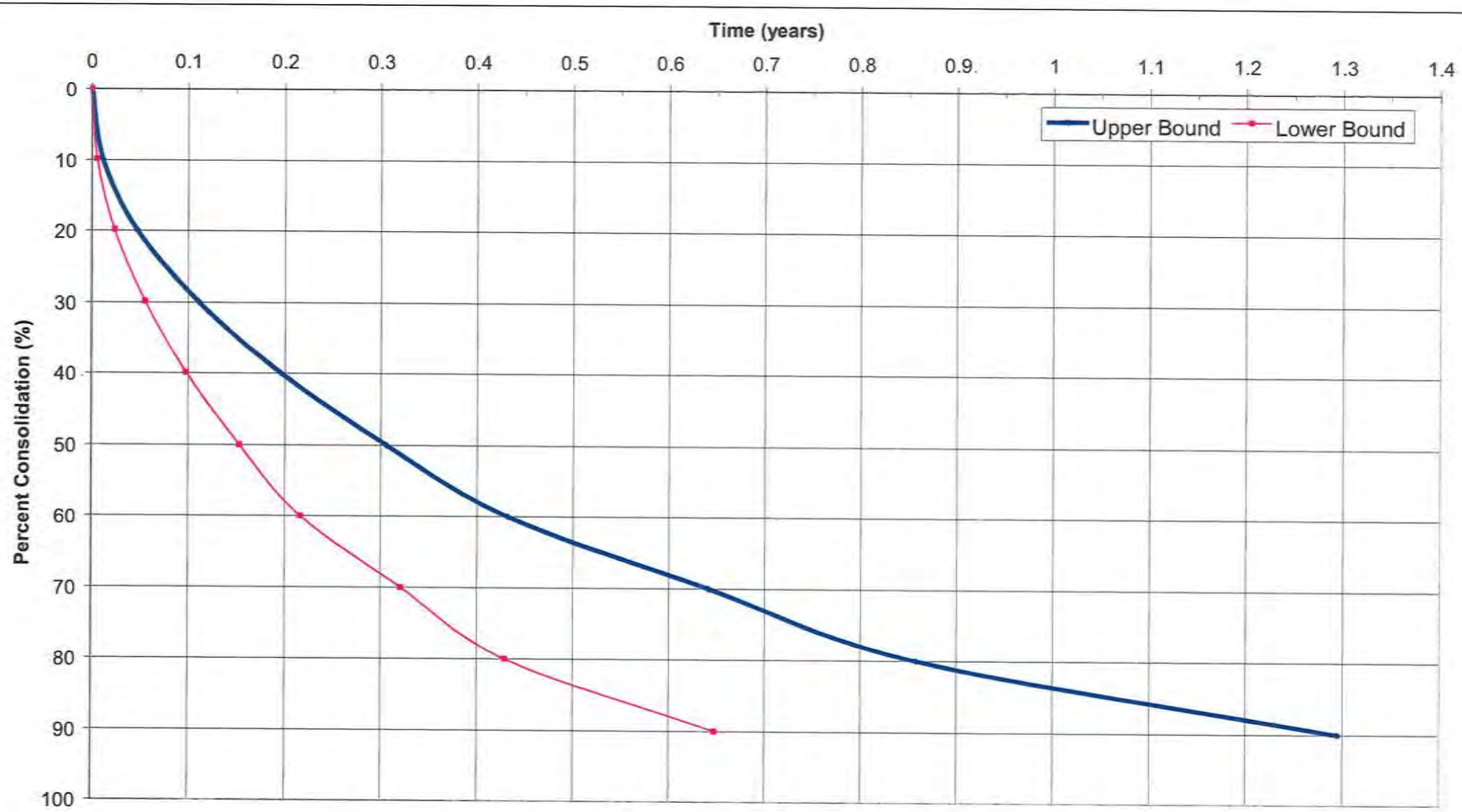


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ESTIMATED RATE OF CONSOLIDATION ALONG CENTERLINE OF PROPOSED EMBANKMENT NEAR B-11

Date 05/11/06	Project No. 4245.02	Figure 11

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ESTIMATED RATE OF CONSOLIDATION ALONG CENTERLINE OF PROPOSED EMBANKMENT NEAR B-12, CPT-40, CPT-41 AND B-4

Date 05/11/06	Project No. 4245.02	Figure 12

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Addendum to the Remedial Design and Implementation Plan
Harbor Park Development
(Former Johns Manville Facility)
420 East 3rd Street
Pittsburg, California

August 1, 2007
001-09587-01-001

Prepared for
Pittsburg River Park LLC
55 Hawthorne Street, Suite 555
San Francisco, California 94105

LFR ENVIRONMENTAL MANAGEMENT & CONSULTING ENGINEERING

August 1, 2007 001-09587-01-001

Ms. Barbara Cook, P.E.
Department of Toxic Substances Control
700 Heinz Avenue
Berkeley, California 94710-2721

Attention: Mr. Mark Piros and Mr. Patrick Lee

Subject: Addendum to the Remedial Design and Implementation Plan, Harbor Park Development (Former Johns Manville Facility), 420 East 3rd Street, Pittsburg, California

Dear Mr. Piros and Mr. Lee:

On behalf of Pittsburg River Park LLC (PRPLLC), LFR Inc. (LFR) has prepared this revised Addendum to the Remedial Design and Implementation Plan (ARDIP) for the Harbor Park Development located at 420 East 3rd Street in Pittsburg, California ("the Site"; Figures 1 and 2). This document incorporates comments obtained from the Department of Toxic Substances Control (DTSC) in e-mails from Mr. Mark Piros on April 6 and May 7, 2007, and the issues discussed during our meetings on February 23 and July 24, 2007.

As we discussed during the July 24, 2007 meeting, a topographic survey was completed at the Site by Winzler and Kelly Consulting Engineers, a licensed land surveyor. In addition, LFR supervised the excavation of eight test trenches to assess the lateral and vertical extent of affected soil near the former evaporation pond and one test trench located near a smaller open excavation at the Site. This document also presents the analytical results of soil samples collected from the trenches and the observations made regarding groundwater occurrence at the Site during the trenching project.

The purpose of the ARDIP is to slightly revise and clarify portions of the Remedial Design and Implementation Plan (RDIP), dated August 2006. The revisions are necessary based on field conditions that were encountered at the Site. The majority of the RDIP will remain as the guiding document for this project. The proposed scope of the ARDIP was transmitted to the DTSC in a letter dated March 7, 2007. As presented in that letter, the ARDIP will include the following tasks, which will clarify the scope of work necessary to complete the remediation of soil containing asbestos-containing material and soil affected by total petroleum hydrocarbons (TPH):

- expand the western extent of the On-Site Eastern Boundary Berm
- complete the excavation of TPH-affected soil in accordance with the RDIP; the total depth of future excavations will not extend below groundwater or the sediments that are within the seasonal fluctuation of groundwater

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- collect confirmation soil samples on 100-foot linear intervals from the northern and western areas of the excavation of TPH-affected soil associated with the former evaporation pond
- conduct a soil-vapor survey at the Site

Other than these tasks, the scope of the RDIP will remain intact and in force for the completion of this project. The geotechnical issues related to the expansion of the berm and the revised procedures pertaining to Section 3.2.2 Geotechnical Settlement Issues of the RDIP have been addressed by a letter report that was prepared by Treadwell and Rollo (T&R), the site geotechnical engineer. T&R's report is included as an appendix to this document.

PRPLLC and LFR appreciate your help with regards to moving this project forward in a timely manner. If you have any comments or questions or need any additional information regarding the ARDIP or the project in general, please call either of the undersigned at LFR (510-652-4500) or Mr. Mike McMullen or Mr. Chris Nelson at PRPLLC (415-438-8155).

Sincerely,

Ron Goloubow
Senior Associate Geologist

Randolph C. Brandt, P.G. #6105
Vice President and Principal Geologist

Enclosure

cc: Mr. Mike McMullen, PRPLLC
Mr. Chris Nelson, PRPLLC
Mr. Mike Singer, PRPLLC
Ms. Ligia Kearney, AIG

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1 Site Vicinity Map

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A Treadwell and Rollo Geotechnical Letter Report, Harbor Park Development, Pittsburg, California, July 31, 2007

B Curtis & Tompkins Laboratory Reports for Soil Samples Collected from Test Trenches

C TEG Soil-Vapor Survey Methodology

CERTIFICATION

All hydrogeologic and geologic information, conclusions, and recommendations in this document have been prepared under the supervision of and reviewed by an LFR Inc. California Professional Geologist.

Randolph C. Brandt, P.G. #6105
California Professional Geologist

July 31, 2007
Date

All engineering information, conclusions, and recommendations in this document have been prepared under the supervision of and reviewed by an LFR Inc. Professional Engineer.

Jeffery Raines
California Geotechnical Engineer #2762

July 31, 2007
Date



1.0 INTRODUCTION

On behalf of Pittsburg River Park LLC (PRPLLC), LFR Inc. (LFR) has prepared this Addendum to the Remedial Design and Implementation Plan (ARDIP) for the Harbor Park Development located at 420 East 3rd Street in Pittsburg, California ("the Site"; Figures 1, 2, and 3). The purpose of this document is to provide a description and clarification of the tasks that are necessary to complete the remediation of soil containing total petroleum hydrocarbons (TPH) and asbestos-containing material (ACM) at the Site. The existing Remedial Design and Implementation Plan (RDIP; ERM 2006) along with this ARDIP will be the guiding documents for the project.

1.1 Scope of Work

The tasks necessary to complete the remediation project were discussed during meetings held between representatives of LFR, PRPLLC, and the Department of Toxic Substances Control (DTSC) on February 23 and July 24, 2007. A letter summarizing the contents of the proposed ARDIP was transmitted to the DTSC on March 6, 2007. Based on the results of the meetings, the letter, and telephone conversations, the ARDIP will include the following tasks, which will clarify the scope of work necessary to complete the remediation of soil containing ACM and affected by TPH:

- expand the western extent of the On-Site Eastern Boundary Berm ("the Berm") and install an interim final landscaped cover on the Berm
- complete the excavation of TPH-affected soil in accordance with the RDIP; the total depth of future excavations will not extend below the established groundwater elevation for the Site of 3.0 feet National Geodetic Vertical Datum of 1929 (NGVD29). Excavation activities will also stay above the upper boundary of the sediments that are within the seasonal limits of the fluctuation of groundwater measured at 4.0 feet
- collect confirmation soil samples from the northern and western areas of the current excavation of TPH-affected soil
- conduct a soil-vapor survey at the Site

As discussed during the July 24, 2007 meeting, a topographic survey was completed across the Site by Winzler and Kelly Consulting Engineers (W&K), a licensed land surveyor located in San Francisco, California. The survey was completed relative to datum NGVD29, a surveyed elevation surface established by the U.S. Coast and Geodetic Survey in 1929. NGVD29 is based on the mean sea level in the contiguous United States.

In addition, LFR supervised the excavation of eight test trenches (trenches T1 through T8) located approximately 50 liner feet apart. The purpose of these trenches was to provide data to assess the lateral and vertical extent of affected soil on the western and northern sides of the open excavation located near the former evaporation pond and the

groundwater elevation at the Site (see Figure 2). One other test trench (trench T9) was excavated near the open excavation that was conducted for the removal of some underground piping that was associated with the former operations at the Site. The analytical results of soil samples collected from the trenches and the observations made regarding groundwater occurrence at the Site during the trenching project are also presented in this document.

2.0 EXPAND THE WESTERN EXTENT OF THE BERM

As discussed during the February 23, 2007 meeting, a larger volume of ACM was encountered at the Site than was originally estimated. Approximately 53,000 cubic yards (cy) of ACM has been excavated and placed into the Berm from several areas located across the Site. Additionally, 17,600 cy of ACM has been transported off site and disposed of at the Forward Landfill in Manteca, California. Based on estimates and observations made at the Site, the results of the W&K survey, and the review of existing data, LFR estimates that approximately 5,500 cy of ACM remains on site and requires excavation. The majority of this material is to be excavated in the upper 2 feet of soil in the area near former Buildings 3 and 4 (see Figures 2 and 3).

To accommodate the additional volume of ACM noted above, LFR and PRPLLC plan to expand the western perimeter of the Berm by approximately 10 feet to the west. The height and northern, southern, and eastern dimensions of the Berm will not be modified. While we expect to excavate approximately 5,500 cy of ACM-affected soil and approximately 5,900 cy of TPH-affected soil, the expanded Berm will accommodate an additional estimated 13,900 cy of soil.

Revised conceptual plans illustrating the design modifications for the expansion of the Berm are included as Figures 4 and 5. As discussed in the July 24 meeting, the indicator layer that will be placed between the affected soil and the 24 inches of clean cover soil in the Berm will be changed to a "Tensar Product," which is used for the reinforcement of soils in construction of structures such as embankments. The other specifications for the design and construction of the Berm that were presented in the RDIP (ERM 2006) do not require modifications and will be implemented.

The expansion of the Berm has resulted in some geotechnical requirements with respect to tying in (keying in) the existing Berm to the berm expansion. Treadwell and Rollo (T&R), the site geotechnical engineer, has assessed the geotechnical requirements posed by the berm expansion and has prepared a letter report (presented in Appendix A). In addition, T&R has prepared a letter report summarizing its geotechnical recommendations, which will be submitted with the grading plans to the City of Pittsburg to obtain the grading permit for the Site.

2.1 Berm Landscaping Features

A temporary vegetative cover will be installed on 24 inches of clean soil cover placed on the Berm. The vegetative cover will reduce the potential for the erosion of the soil cover materials. The permanent landscaping will be installed concurrently with site redevelopment so that landscaping styles and plants can be coordinated throughout the development of the remainder of the site and to reduce the potential damage to the more delicate and expensive permanent landscaping during the construction of the new development. The interim and the final landscaping will be consistent with the RDIP and City of Pittsburg requirements.

2.2 Berm Secondary Structures and Aesthetic Details

A chain-link fence matching the existing site fencing will be installed around the entire berm perimeter to deter access to the berm area. As discussed with and agreed upon by the City of Pittsburg, the temporary fence will consist of 6-foot-high chain link on the northern, southern, and western sides, and a new chain-link fence section (vinyl-coated black) will be placed along the existing property line on the eastern side of the berm. The permanent fence described in the RDIP (or a modification thereof as required by the City of Pittsburg) will be installed concurrently with site redevelopment so that fencing styles can be coordinated throughout the development and to prevent damage to the more expensive permanent fencing during site buildout. The final fence will be consistent with the RDIP and City of Pittsburg requirements.

2.3 Geotechnical Considerations During Remedial Construction

T&R prepared a detailed letter report (Appendix A) to address geotechnical considerations for backfilling the pond and the berm completion work. This detailed report was prepared as a summary of recommendations specifically addressing dewatering the pond, backfilling the former oil evaporation pond and other open excavations, and widening and completing the berm.

3.0 COMPLETE THE EXCAVATION OF TPH-AFFECTED SOIL

As a result of the implementation of the RDIP, to date the Site has undergone extensive excavation, filling, and grading. Currently, three excavations where TPH-affected soil has been removed remain open and contain water (see Figure 2).

As discussed in the February 23 and July 24, 2007 meetings, additional excavation of TPH-affected soil will be completed as described in the RDIP. The total depth of future excavations will not extend below the depth of groundwater or beneath the depth of the seasonal fluctuation of groundwater as presented below.

3.1 Depth to Groundwater

As part of the survey conducted in June 2007, W&K surveyed the surface of groundwater where it intersected the sidewalls of the excavations in the three excavations where TPH-affected soil has been removed (see Figure 2). Based on this survey data provided by W&K, the elevation of surface water in the area of the former evaporation pond at the Site is approximately 1.9 feet NGVD29. The W&K survey is based on a vertical datum established by the NGVD29.

LFR supervised the excavation of eight test trenches to assess the lateral and vertical extent of affected soil near the former evaporation pond; and one test trench (test trench T-9) located near an open excavation that was conducted to remove TPH-affected soil near some underground piping that was associated with the former operations at the Site. The groundwater elevation in the test trenches ranged from approximately 2.2 to 4.0 feet NGVD29 (see Table 1). Depth-to-water measurements made by LFR during the excavation of test trenches, along with historical groundwater elevation data collected at the Site, were used to assess the groundwater elevation at the Site. LFR has calculated the average groundwater elevation at each test trench using ground surface elevation near test trenches and the depth to water measured at each trench. These data are summarized on Table 1. As presented in Table 1, the average groundwater elevation at the Site is approximately 3.0 feet NGVD29. This groundwater elevation is consistent with groundwater elevations of approximately 4 feet mean sea level reported for the Site by Harding ESE, Inc. (“Harding”) and Roux Associates (“Roux”) in 2003 and 1991, respectively (Harding 2003 and Roux 1991). Based on our review of the data, it is our understanding that the Harding and Roux data are based on the NGVD29 datum.

The average groundwater elevation near the former evaporation pond was calculated by LFR using water level data measured in test trenches excavated in June 2007. In June, groundwater levels are typically at their lowest in the yearly fluctuation (representative of dry season conditions). Evidence of the seasonal fluctuation in groundwater elevations was visible in the test trenches supervised by LFR as a “smear zone” overlain by several feet of overburden not visibly affected with petroleum hydrocarbons. As discussed in the July 24 meeting, for the purpose of proceeding with the excavation project, the average groundwater elevation is considered to be at 4.0 feet NGVD29. As such, future excavations of TPH-affected soil at this Site will not extend deeper than 4.0 feet NGVD29.

3.2 Test Trenches

Soil samples were collected from eight tests trenches that were excavated from the western and northern portion of the large area of excavation at the approximate location of the former evaporation pond (Figure 2). One additional trench (trench T-9) was located on the southern side of the open excavation associated with the removal of TPH-affected soil near some underground piping that was associated with the former operations at the Site. The test trenches were excavated by NRC Environmental, Inc.,

("NRC") a state licensed subcontractor located in Alameda, California. NRC provided a backhoe and an experienced operator with California Occupational Safety and Health Administration (Cal/OSHA) HAZWOPER training to excavate the trenches. The trenches were backfilled to the existing grade with soil excavated from the trenches.

The soil samples were collected from above the saturated sediments and from the sediments that are within the zone of seasonal groundwater fluctuation. The soil samples were collected from the backhoe bucket into laboratory-supplied containers and labeled with the sample identification, the time and date of collection, the analyses requested, and the initials of the sampler. The samples were stored in an ice-chilled cooler and submitted to the laboratory under strict chain-of-custody protocols.

The soil samples were submitted to Curtis & Tomkins, Ltd., a state-certified laboratory located in Berkeley, California. The samples were analyzed for TPH as diesel (TPHd) and TPH as motor oil (TPHmo) using EPA Test Method 8015, modified. Analytical results of the soil samples are presented in Table 2; the laboratory reports are included as Appendix B. Analytical results of the soil samples and observations made at each trench are discussed below.

3.2.1 Test Trench T-1

The observed depth to groundwater in this trench was measured at approximately 6.5 feet below ground surface (bgs) or 3.1 feet NGVD29 (see Table 1). A total of three soil samples were collected from this trench and submitted for analysis (see Table 2). The soil sample collected at approximately 3 feet bgs (6.75 NGVD29) and approximately 15 feet from the eastern side of the test trench did not contain TPHd or TPHmo at concentrations above laboratory reporting limits. Therefore, the location of this sample will be used to define the lateral extent of TPH-affected soil in this portion of the Site (see Figure 2).

3.2.2 Test Trench T-2

The observed depth to groundwater in this trench was measured at approximately 5 feet bgs or 2.5 feet NGVD29 (see Table 1). Two soil samples were collected from this trench and submitted for analysis (see Table 2). The soil sample collected approximately 4 feet bgs (3.5 feet NGVD29) and 20 feet from the eastern side of the test trench did not contain TPHd or TPHmo at concentrations above the site cleanup criteria of 500 milligrams per kilogram (mg/kg). Therefore, the location of this sample will be used to define the lateral extent of affected soil in this portion of the Site (see Figure 2).

3.2.3 Test Trench T-3

The observed depth to groundwater in this trench was measured at approximately 7 feet bgs or 3.6 feet NGVD29 (see Table 1). Two soil samples were collected from this trench and submitted for analysis (see Table 2). The soil sample collected

approximately 5 feet bgs (4.5 feet NGVD29) and 6 feet from the eastern side of the test trench did not contain TPHd or TPHmo at concentrations above the site cleanup criteria of 500 mg/kg. Therefore, the location of this sample will be used to define the lateral extent of affected soil in this portion of the Site (see Figure 2).

3.2.4 Test Trench T-4

The observed depth to groundwater in this trench was measured at approximately 6.5 feet bgs or 4.0 feet NGVD29 (see Table 1). Four soil samples were collected from this trench and submitted for analysis (see Table 2). The soil sample collected approximately 5 feet bgs (5.75 feet NGVD29) and 40 feet from the eastern side of the test trench did not contain TPHd or TPHmo at concentrations above the site cleanup criteria of 500 mg/kg. Therefore, the location of this sample will be used to define the lateral extent of affected soil in this portion of the Site (see Figure 2).

3.2.5 Test Trench T-5

The observed depth to groundwater in this trench was measured at approximately 6.5 feet bgs or 2.8 feet NGVD29 (see Table 1). Two soil samples were collected from this trench and submitted for analysis. The soil sample collected approximately 5 feet bgs (4.75 feet NGVD29) and 15 feet from the eastern side of the test trench did not contain TPHd or TPHmo at concentrations above the site cleanup criteria of 500 mg/kg. Therefore, the location of this sample will be used to define the lateral extent of affected soil in this portion of the Site (see Figure 2).

3.2.6 Test Trench T-6

Groundwater was not encountered in Test Trench T-6, which was excavated to a depth of approximately 8 feet bgs or -1.4 feet NGVD29. The soil at this trench location was predominantly comprised clay. Two soil samples were collected from this trench and submitted for analysis. The soil samples collected at approximately 5 and 4.5 feet bgs (1.5 and 2.75 feet NGVD29) and 3 feet and 15 feet from the eastern end of the trench did contain elevated TPH concentrations. Additional soil samples will be collected in this portion of the Site to further assess the lateral extent of TPH-affected soil. The data obtained during the further assessment of TPH-affected soil will be used to identify that the extent of the excavation of TPH-affected soil is adequate to meet the RDIP criteria.

3.2.7 Test Trench T-7

Groundwater was not observed at this trench even though the trench extended to a maximum depth of approximately 7 bgs or 2.5 feet NGVD29 due to the fact that the observed soil was predominantly comprised clay. One soil sample was collected approximately 5 feet bgs (4.5 feet NGVD29) and 5 feet from the eastern side of the test trench did not contain TPHd or TPHmo at concentrations above laboratory reporting

limits. Therefore, the excavation will not be expanded in this portion of the Site (see Figure 2).

3.2.8 Test Trench T-8

Groundwater was not observed at this trench even though the trench extended to a maximum depth of approximately 7 bgs or -0.1 foot NGVD29, due to the fact that the observed soil was predominantly comprised clay. One soil sample was collected approximately 5 feet bgs (2.5 feet NGVD29) and 5 feet from the eastern side of the test trench did not contain TPHd or TPHmo at concentrations above the site cleanup criteria of 500 mg/kg (see Table 2). Therefore, the excavation will not be expanded in this portion of the Site (see Figure 2).

3.2.9 Test Trench T-9

The observed depth to groundwater in this trench was measured at approximately 8.0 feet bgs or 2.2 feet NGVD29 (see Table 1). Three soil samples were collected from this trench and submitted for analysis. The soil sample collected approximately 4 feet bgs (6.25 NGVD29) and 40 feet from the eastern side of the test trench did not contain TPHd or TPHmo at concentrations above laboratory reporting limits (see Table 2). Two other soil samples collected approximately 8 feet bgs (2.25 feet NGVD29) at 25 and 40 feet from the eastern end of the excavation contained concentrations of TPHd and TPHmo in excess of the cleanup criteria for the Site. As with the area near Test Trench T-6, additional characterization of soil quality will take place to assess the lateral extent of TPH-affected soil in this portion of the Site (see Table 2). The data obtained during the further assessment of TPH-affected soil will be used to identify that the extent of the excavation of TPH-affected soil is adequate to meet the RDIP criteria.

3.3 Extent of Excavation

As described in Section 3.2, only soil that contains TPHd or TPHmo at concentrations above 500 mg/kg, and that is located above the established groundwater elevation of 4 feet NGVD29, will be excavated. Figure 2 presents the approximate lateral extent of the excavation of soil near the former evaporation pond, based on the analytical results for the soil samples collected from the test trenches. Soil quality near Test Trenches T-6 and T-9 will be further assessed before the excavation of affected soil resumes. The affected soil excavated at the Site will be placed in the Berm or transported off site for disposal.

3.3.1 Confirmation Soil Samples

Figure 3 illustrates the locations of the confirmation soil samples collected by ERM from the excavations to date. Analytical results of these samples that were submitted for TPH analyses are summarized in Table 3. As illustrated, 23 confirmation soil samples have been collected and analyzed from the southern portion of the excavation

of TPH-affected soil near the former evaporation pond. Analytical results for 5 of these 23 confirmation samples, collected within the excavation and below groundwater, exceeded the 500 mg/kg cleanup goal for TPHmo and/or TPHd (see Table 3). Based on observations made at the Site in February 2007, it is LFR's understanding that all of these confirmation samples were collected within the excavation and below groundwater. Therefore, additional excavation of soil near the five confirmation samples that contained concentrations greater than the 500 mg/kg cleanup goal for TPHd and/or TPHmo is not warranted.

Based on the results of the soil samples collected from the test trenches and our meeting on July 24 it is our understanding that the sampling requirements provided in the RDIP (Section 3.1.3.1; page 11) can be modified for this proposed area of additional excavation. As discussed, PRPLLC is proposing the collection and analysis of confirmation samples from along the western and northern walls of the future excavation (see Figure 2) at an elevation of approximately 5 feet NGVD29 at an interval of approximately 100 linear feet around the excavation perimeter (a maximum of five soil samples). These samples will be collected and analyzed in accordance with the procedures presented in the RDIP. The analytical results of these samples will be used to assess whether additional excavation is warranted in the vicinity of the former evaporation pond.

3.3.2 Excavated Soil

Soil that is above an elevation of 4 feet NGVD29 and that contains greater than 500 mg/kg of TPHd or TPHmo will be excavated and either placed in the expanded berm or transported off site to an appropriate landfill permitted to accept TPH-affected soil for disposal. The analytical results for the confirmation samples collected from the excavated areas will be used to assess if additional excavation is required. In accordance with the RDIP, if the confirmation samples collected above the depth to groundwater contain greater than 500 mg/kg TPHd or TPHmo, additional soil will be excavated. The TPH-affected soil requiring additional excavation will be stockpiled on site and placed in the expanded berm or transported and disposed of at an appropriate off-site landfill. ACM material excavated from this Site will continue to be managed in accordance with the RDIP.

The estimated volume of TPH-affected soil that may be present at the Site is approximately 5,900 cy. This volume of soil is based on the removal of soil to an elevation of 4 feet NGVD29 within an area of approximately 25,250 square feet as illustrated on Figure 2. The actual volume excavated may vary due to the uncertainty of subsurface conditions.

4.0 CONDUCT SOIL-VAPOR SURVEY

A soil-vapor survey will be conducted at the Site after the completion of remediation of the TPH-affected soil located near the former evaporation pond. The survey will be

focused of the survey will be on the area in the vicinity of the former evaporation pond. Exact survey sample locations will be determined in the field based on accessibility and previous site usage.

The purpose of the soil-vapor survey is to provide data to identify whether the Site contains areas where volatile organic compounds (VOCs) or TPHd are "off-gassing" from the groundwater or from areas of residual affected soil.

A human health risk assessment (HHRA) will be performed if the 95 percent Upper Concentration Limit (UCL) of the detected soil-vapor concentrations are above their respective California Human Health Screening Level (CHHSL) criteria. The 95 percent UCL will be calculated using the U.S. Environmental Protection Agency (U.S. EPA) software PROUCL version 4.0.

If an HHRA is required, the soil-vapor data will be used to evaluate the potential adverse health affects to a future hypothetical residential population associated with exposure to VOCs in the subsurface. Based on the proposed site redevelopment into high-density housing, inhalation is assumed to be the only complete exposure pathway to a future population. Potential adverse health affects will be quantitatively estimated using the guidelines presented in the following documents:

- "Human Health Evaluation Manual, Part A, Risk Assessment Guidance under Superfund" United States Environmental Protection Agency, 1989
- "Supplemental Guidance for Human Health Multimedia Risk Assessments of Hazardous Waste Sites and Permitted Facilities," State of California, Environmental Protection Agency, Department of Toxic Substances Control, 1996
- Guidance for the Evaluation and Migration of Subsurface Vapor Intrusion into Indoor Air." State of California, Environmental Protection Agency, Department of Toxic Substances Control, February 2005.

The HHRA will include the following specific tasks:

- Data Evaluation
- Exposure Assessment
- Toxicity Assessment
- Risk Characterization

The exposure assessment task requires estimating indoor air concentrations into hypothetical buildings. The indoor air concentration will be estimated using a fate and transport model (DTSC 2005 version of the Johnson and Ettinger vapor transport model). The model is conservative and uses default values to represent soil parameters, building specifications, foundation cracks, and air exchange rates.

If necessary, engineering controls such as vapor barriers or foundation venting may be required for the future housing development proposed at the Site following completion of the remedial actions.

4.1 Soil-Vapor Sample Collection

Soil-vapor samples will be collected from temporary probes driven to approximately 5 feet bgs at a maximum of 12 sample locations. LFR is planning to retain TEG-Northern California, Inc. (TEG), a licensed drilling subcontractor located in Rancho Cordova, California, to conduct the soil-vapor sampling and on-site chemical analysis. TEG's sample collection and analysis procedures are presented in Appendix C. TEG's low-dead-volume soil-vapor sampling system has been inspected and is favored by the regulatory agencies that have observed it, including the U.S. EPA and DTSC. TEG's soil-vapor sample collection and analytical procedures are consistent with DTSC guidance on soil-gas sample collection (DTSC 2003).

4.2 Soil-Vapor Sample Chemical Analysis

The target sample depths at each proposed location are at least 5 feet bgs to minimize barometric pumping effects. If groundwater is encountered at or above 5 feet bgs, the soil-vapor samples will be collected from the unsaturated zone above the groundwater level encountered. The proposed soil-vapor sample locations are illustrated on Figure 6. The samples will be analyzed using TEG's on-site lab for TPHd, TPH as gasoline, and VOCs. The analyses will be completed using U.S. EPA-approved analytical methodology outlined in Methods 8260B and 8015M. As requested by DTSC, a minimum of 10 percent of the soil-vapor samples (2 samples, assuming a total of 12 samples) will be collected in Summa Canisters and submitted to a state-certified analytical laboratory for TO-14 or TO-15 analysis. However, to augment the dataset, LFR proposed that 25 percent of the soil-vapor samples (3 samples per survey, assuming a total of 12 samples) will be collected in Summa Canisters and submitted to a state-certified analytical laboratory for TO-14 or TO-15 analysis.

4.3 Soil-Vapor Data Evaluation and Reporting

The data will be used to assess the potential for VOCs or TPHd that could "off-gas" from shallow groundwater, or from residual affected soil within the unsaturated zone.

LFR will summarize the analytical data from the soil-vapor survey and compare the data to the CHHSLs for VOCs. Since the CHHSLs do not address TPHd (or other TPH compounds), the analytical data from the soil-vapor survey will also be compared to the Regional Water Quality Control Board (RWQCB) document entitled "Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater" (RWQCB 2005). This document is a technical report prepared by RWQCB staff and presents environmental screening levels (ESLs) for different VOCs under different site condition scenarios. Also, the results of the Method 8260 analyses may not provide the

detection levels appropriate to compare the data to CHHSLs. As stated in Section 4.2, approximately 25 percent of the soil-vapor samples (three samples) will be submitted to a state-certified analytical laboratory for TO-14 or TO-15 analysis. The results of these analyses will provide data that will confirm the analyses obtained from the on-site mobile laboratory and will provide reporting limits appropriate for a comparison to CHHSLs.

Within limits noted by the DTSC and RWQCB, risks to human health and the environment can be considered to be insignificant at sites where concentrations of chemicals of concern do not exceed their respective CHHSLs or ESLs. The presence of chemicals at concentrations above the CHHSLs or ESLs does not necessarily indicate that a significant risk exists at the Site. It does, however, generally indicate that evaluation of potential environmental concerns may be warranted.

After review of the analytical results of the initial soil-vapor survey, LFR will prepare a summary table and figure and will discuss the results of the soil-vapor survey with representatives of PRPLLC and the DTSC. LFR will prepare a draft summary report that will describe the fieldwork, present the soil-vapor sampling results, and summarize the findings and conclusions of the soil-vapor survey. The report will include figures and tables summarizing the laboratory results, and a map of the sampling locations. The draft report will be submitted to the DTSC for review and comments. The report will be finalized after LFR receives comments from the DTSC.

5.0 REFERENCES

Department of Toxic Substances Control (DTSC). 2003. Advisory – Active Soil Gas Investigations. January 28.

ERM. 2006. Final Remedial Design and Implementation Plan, Harbor Park Development (Former Johns Manville Plant), Pittsburg, California. August.

Harding ESE, Inc. 2003. Feasibility Study and Removal Action Work Plan Johns Manville – Plant Site Pittsburg, CA January 2.

Roux Associates Inc.,1991. Literature Information Review and Continuance of Subsurface Investigation May 23.

RWQCB. 2005. Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater. February.

Table 1
Groundwater Elevation Calculations
From Test Trenches
Former Johns Manville Site
420 East 3rd Street, Pittsburg, CA

Trench Identification	Average Ground Surface Elevation (feet NGVD29)	Depth to groundwater (feet bgs)	Average Groundwater Elevation (feet NGVD29)
Trench 1	9.6	6.5	3.1
Trench 2	7.5	5.0	2.5
Trench 3	10.6	7.0	3.6
Trench 4	10.5	6.5	4.0
Trench 5	9.3	6.5	2.8
Trench 6	6.6	no groundwater	not measured
Trench 7	9.5	no groundwater	not measured
Trench 8	6.9	no groundwater	not measured
Trench 9	10.2	8.0	2.2
Average groundwater elevation in feet NGVD29:			**3.0**

Notes:
Ground surface elevations are based on survey data provided by Winzler & Kelly - June 2007.

Depth to groundwater measurements were made on June 9 and 10, 2007.

NGVD29 denotes a surveyed elevation surface established by the U.S. Coast and Geodetic Survey in 1929 as the datum to which elevation data were referenced. It is based on the mean sea level in the conterminous United States.
bgs denotes below ground surface

Table 2
Total Petroleum Hydrocarbon Analytical Results
Soil Samples Collected from Test Trenches
Former Johns Manville Site
420 East 3rd Street, Pittsburg, CA
Concentrations are in milligrams per kilograms

Sample Location	Date Collected	Soil Sample Depth (feet below ground surface)	Ground Surface Elevation at Soil Sample Location (feet NGVD29)	Soil Sample Elevation (feet NGVD29)	TPH-d	TPH-mo
T-1-3-4.0	7/9/2007	4.0	9.25	5.25	**3,100 HY**	**3,000 L**
T-1-15-3.0	7/9/2007	3.0	9.75	6.75	<1.0	<5.0
T-1-15-3.0	7/9/2007	6.0	9.75	3.75	**2,500 HY**	**2,700 L**
T-2-20-4.0	7/9/2007	4.0	7.50	3.50	16 HY	14 L
T-2-30-5.5	7/9/2007	5.5	8.50	3.00	**600 HY**	**1,300 L**
T-3-6-5.0	7/9/2007	5.0	9.50	4.50	6.8 HY	16 L
T-3-13-7.5	7/9/2007	7.5	10.00	2.50	**11,000 HY**	**9,500 L**
T-4-5-5.0	7/9/2007	5.0	9.50	4.50	**9,100 HY**	**5,200 L**
T-4-13-5.5	7/9/2007	5.5	10.25	4.75	**13,000 HY**	**8,400 L**
T-4-30-5.0	7/9/2007	5.0	10.00	5.00	**9,700 HY**	**5,900 L**
T-4-40-5.0	7/9/2007	5.0	10.75	5.75	3.1 HY	<5.0
T-5-4-5.0	7/9/2007	5.0	9.25	4.25	**1,600 HY**	**620 L**
T-5-15-5.0	7/9/2007	5.0	9.75	4.75	82 HY	48 L
T-6-3-5.0	7/9/2007	5.0	6.50	1.50	**1,000 HY**	**360 L**
T-6-15-4.5	7/9/2007	4.5	7.25	2.75	**1,600 HY**	**1,100 L**
T-7-5-5.0	7/9/2007	5.0	9.50	4.50	<1.0	<5.0
T-8-5-5.0	7/10/2007	5.0	7.50	2.50	1.6 HY	<5.0
T-9-25-8.0	7/10/2007	8.0	10.25	2.25	**2,800 HLY**	**3,500 L**
T-9-40-8.0	7/10/2007	8.0	10.25	2.25	**14,000 H**	**4,500 L**
T-9-45-4.0	7/10/2007	4.0	10.25	6.25	<0.99	<5.0
Screening Criteria					500	500

Notes:
Bold entries exceed the established screening criteria
H denotes heavier hydrocarbons contributed to the quantification.
L denotes lighter hydrocarbons contributed to the quantification.
Y denotes sample exhibits chromatographic pattern that does not resemble standard.
Sample collected by LFR were analyzed by Curtis & Tompkins, Ltd.
TPHd = total petroleum hydrocarbons as diesel
TPHmo = total petroleum hydrocarbons as motor oil
Sample Name Designation: T-7-5-5.0
T-7 denotes trench identification
5 denotes the lateral distance of the sample location from the eastern end of the test trench
5.0 denotes the depth below ground surface that the sample was collected

Table 3
Total Petroleum Hydrocarbon Analytical Results
Confirmation Soil Samples
Former Johns Manville Facility
Located at 420 3rd Street Pittsburg, CA
concentrations in milligrams per kilogram

Sample Location	Sample Date	Total Petroleum Hydrocarbons		
		Diesel	Motor Oil	Gasoline
Confirmation Soil Samples Collected in Association with the Removal of Underground Storage Tanks				
72006-T1 W	7/20/2006	<2.5	<10	1.0
080206-T1 B	8/2/2006	<2.5	<10	<0.1
080206-T1 N	8/2/2006	<10	<10	**1,100**
082506-T1N	8/25/2006	<2.5	<10	<100
082506-T1W	8/25/2006	<2.5	<10	<100
72006-T1 BOT	7/20/2006	<50	<200	**1,200**
72006-T1 E	7/20/2006	<2.5	<10	0.25
72006-T2 BOT	7/20/2006	<2.5	<10	<0.1
72006-T2 E	7/20/2006	<2.5	<10	<0.1
72006-T2 W	7/20/2006	<2.5	<10	0.61
Tank3-b-E	10/19/2006	NA	NA	32
Tank3-b-W	10/19/2006	NA	NA	29
Tank3-s-NE	10/19/2006	NA	NA	<0.1
Tank3-s-NW	10/19/2006	NA	NA	<0.1
Tank3-s-SE	10/19/2006	NA	NA	<0.1
Tank3-s-SW	10/19/2006	NA	NA	<0.1
Trench-B	12/19/2006	<2.5	<10	<0.1
Trench-S	12/19/2006	<2.5	18	<0.1
Confirmation Soil Samples Collected in Association with the Removal of TPH-Affected Soil				
CONF-106	8/15/2006	NA	NA	<0.1
CONF-110	8/15/2006	NA	NA	NA
CONF-112	8/15/2006	<2.5	<10	NA
CONF-122	11/10/2006	<2.5	<10	NA
CONF-125	11/10/2006	NA	NA	<0.1
CONF-404	8/22/2006	<2.5	<10	NA
CONF-408	8/22/2006	<2.5	<10	<0.1
CONF-410	8/22/2006	<2.5	<10	NA
CONF-417	8/29/2006	<2.5	53	NA
CONF-419	8/29/2006	<500	**11,000**	0.6
CONF-419	9/12/2006	<2.5	56	<0.1
CONF-421	8/29/2006	<2.5	24	NA
CONF-424	8/30/2006	**790**	<200	NA
CONF-427	8/30/2006	<2.5	<10	NA
CONF-428	9/11/2006	<250	**2,500**	NA
CONF-430	9/11/2006	<50	**540**	NA
CONF-431	9/12/2006	NA	NA	<0.1
CONF-432	9/12/2006	<1,200	**7,800**	NA

Table 3
Total Petroleum Hydrocarbon Analytical Results
Confirmation Soil Samples
Former Johns Manville Facility
Located at 420 3rd Street Pittsburg, CA
concentrations in milligrams per kilogram

Sample Location	Sample Date	Total Petroleum Hydrocarbons		
		Diesel	Motor Oil	Gasoline
CONF-439	10/7/2006	<2.5	<10	NA
CONF-442	10/7/2006	<12	140	0.33
CONF-443	10/7/2006	<250	**3,800**	NA
CONF-444	10/7/2006	<2.5	<10	NA
CONF-445	10/7/2006	<120	**2,300**	NA
CONF-446	10/13/2006	<5	160	<0.1
CONF-447	10/13/2006	<2.5	<10	<0.1
CONF-448	10/13/2006	<2.5	35	<0.1
CONF-449	10/16/2006	<2.5	14	NA
CONF-450	10/16/2006	<120	**1,400**	NA
CONF-450 B	10/20/2006	13	<10	<0.1
CONF-451	10/16/2006	<120	**1,200**	NA
CONF-451 B	10/20/2006	<2.5	<10	<0.1
CONF-452	10/16/2006	<1,200	**1,600**	NA
CONF-452 B	10/20/2006	390	<100	<0.5
CONF-453	10/16/2006	<2.5	15	NA
CONF-454	10/16/2006	<2.5	24	NA
CONF-455	10/16/2006	<50	410	NA
CONF-457	11/7/2006	<2.5	<10	NA
CONF-458	11/7/2006	<2.5	<10	NA
CONF-459	11/7/2006	<2.5	<10	NA
CONF-460	11/7/2006	<2.5	<10	NA
CONF-461	11/7/2006	<2.5	<10	NA
CONF-462	11/7/2006	<2.5	<10	NA
CONF-463	11/7/2006	<2.5	<10	<0.1
CONF-464 (GW)	11/21/2006	**840**	<200	NA
CONF-464-BS	11/14/2006	<2.5	38	0.22
CONF-465	11/16/2006	<2.5	<10	NA
CONF-466	11/7/2006	<2.5	<10	NA
CONF-467	11/16/2006	<2.5	<10	<0.1
CONF-468	11/16/2006	<2.5	<10	NA
CONF-469	11/18/2006	<2.5	<10	NA
CONF-470	11/18/2006	270	<50	NA
CONF-471	11/18/2006	**6,900**	<1,000	NA
CONF-472	11/18/2006	**1,000**	<200	NA
CONF-473	11/29/2006	<2.5	22	NA
CONF-474	11/29/2006	92	<10	NA
CONF-475	12/7/2006	<2.5	<10	NA
CONF-476	12/7/2006	<2.5	<10	NA
CONF-477	12/8/2006	**10,000**	<2,500	NA
CONF-478	12/12/2006	<2.5	<10	NA
CONF-479	12/12/2006	<10	160	0.33
CONF-480	12/12/2006	<2.5	<10	NA
CONF-481	12/15/2006	180	<50	NA

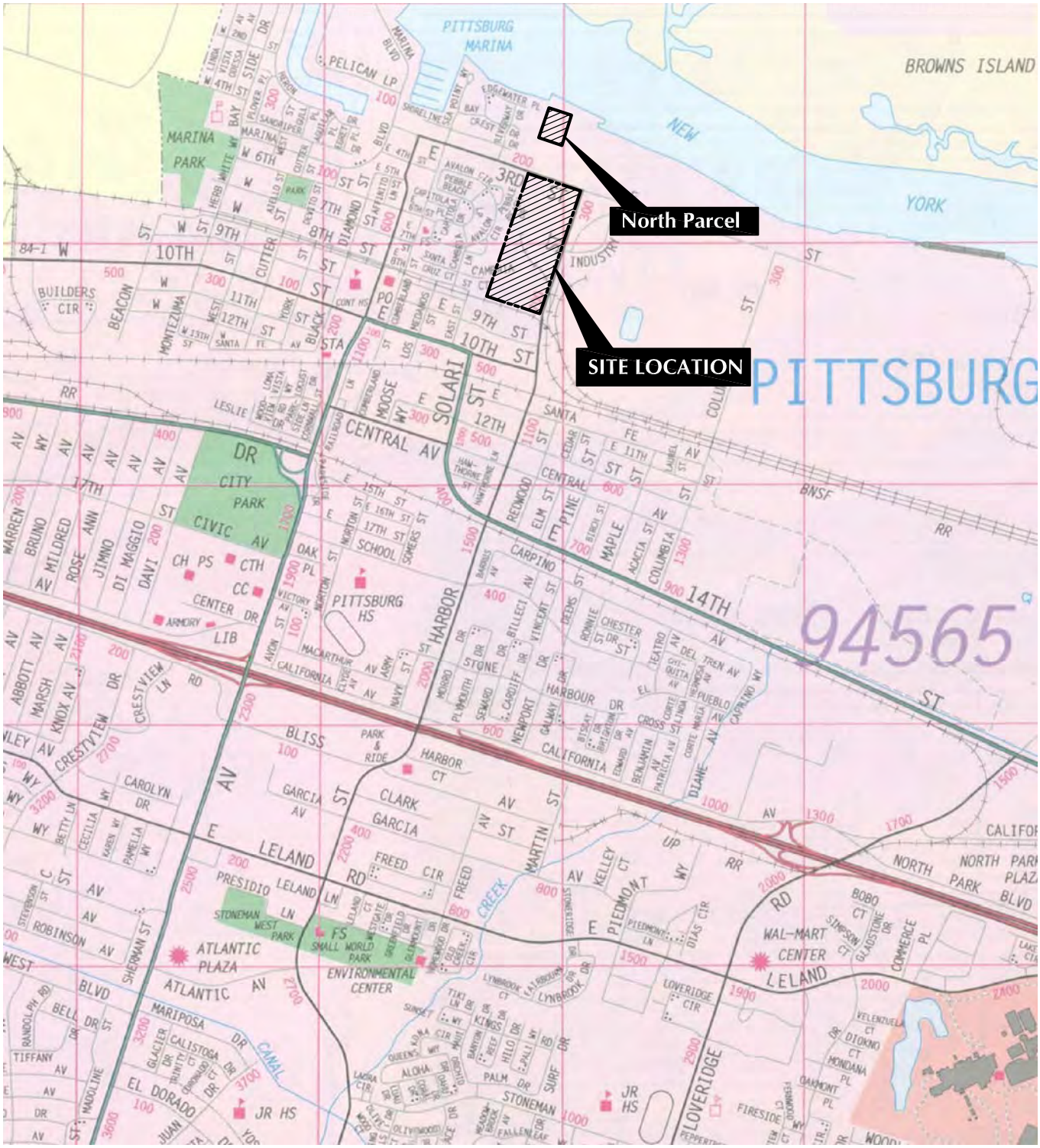
Table 3
Total Petroleum Hydrocarbon Analytical Results
Confirmation Soil Samples
Former Johns Manville Facility
Located at 420 3rd Street Pittsburg, CA
concentrations in milligrams per kilogram

Sample Location	Sample Date	Total Petroleum Hydrocarbons		
		Diesel	Motor Oil	Gasoline
CONF-513	9/18/2006	<2.5	<10	<0.1
CONF-517	12/4/2006	<250	**2,800**	4
CONF-518	12/4/2006	<120	**2,100**	NA
CONF-519	12/4/2006	<50	500	NA
CONF-527	12/6/2006	210	<100	NA
CONF-612	8/25/2006	<2.5	<10	<0.1
CONF-625	9/11/2006	<25	0.16	<0.1
CONF-654	12/15/2006	<62	390	NA
E Wall-1	10/13/2006	<12	480	<0.1
E Wall-2	10/13/2006	<2.5	17	<0.1
E Wall-3	10/13/2006	<250	**2,300**	<0.1
Pond INSITU	9/26/2006	**8,100**	<2,000	65
Soil Samples Collected in from Stockpiled Soil Excavated at the Site				
SP-01	9/26/2006	<2.5	<10	3.9
SP-02	9/26/2006	<2.5	<10	**540**
SP-03	9/26/2006	<12	<50	**920**
SP-04	10/7/2006	<120	**1,200**	1.6
SP-05	10/7/2006	<50	**770**	0.28
SP-06	10/7/2006	NA	NA	60
SP-07	10/7/2006	NA	NA	3.5
SP-08	10/7/2006	NA	NA	<0.1
SP-09	10/7/2006	NA	NA	1.2
SP-10	10/7/2006	NA	NA	0.27
SP-11	10/13/2006	<50	**800**	<0.1
SP-12	10/13/2006	<50	**1,000**	<0.25
SP-13	10/31/2006	<100	**2,400**	33
SP-14	10/31/2006	**620**	<100	37
SP-15	10/31/2006	**13,000**	<2,000	73
SP-16	10/31/2006	<250	**4,800**	39
SP-17	10/31/2006	<25	270	0.35
SP-18	11/14/2006	<10	190	<0.1
SP-19	11/14/2006	<120	**2,200**	7
SP-20	11/14/2006	280	<99	3.3
SP-21	11/14/2006	**12,000**	<2,000	75
SP-22	11/14/2006	**10,000**	<2,000	51
SP-23	11/14/2006	**6,800**	<1,000	0.41
SP-24	11/14/2006	**4,000**	<1,000	28
SP-25	11/14/2006	<1,200	**11,000**	60
SP-26	11/14/2006	**14,000**	<5,000	120

Table 3
Total Petroleum Hydrocarbon Analytical Results
Confirmation Soil Samples
Former Johns Manville Facility
Located at 420 3rd Street Pittsburg, CA
concentrations in milligrams per kilogram

Sample Location	Sample Date	Total Petroleum Hydrocarbons		
		Diesel	Motor Oil	Gasoline
SP-27	11/14/2006	< 2.5	**500**	< 0.1
SP-28	11/14/2006	**8,000**	< 2,000	44
SP-29	12/4/2006	< 12	280	0.57
SP-30	12/4/2006	< 250	**4,200**	2.5
SP-31	12/4/2006	< 120	**1,800**	< 0.5
SP-32	12/4/2006	< 1,200	**11,000**	2.6
SP-33	12/6/2006	**1,300**	< 500	< 0.5
SP-34	12/6/2006	**6,700**	< 2,000	NA
Proposed Cleanup Goal				
CRWQCB ESLs		500	500	400

Notes:
Bold entries denote than the analytical results exceed the proposed cleanup goal
NA denotes parameter not analyzed
Analyses provided by Entech Analytical Labs, Inc. located in Santa Clara, CA
Samples collected by ERM.
CRWQCB ESLs denotes California Regional Water Quality Control Board;
Environmental Screening Levels
"SP" sample designation denotes sample collected from a stockpile of soil excavated at the Site
"Conf" sample designation denotes the sample was collected as a confirmation soil sample from the base or sidewall of an excavation at the Site.



0 800

SCALE IN FEET

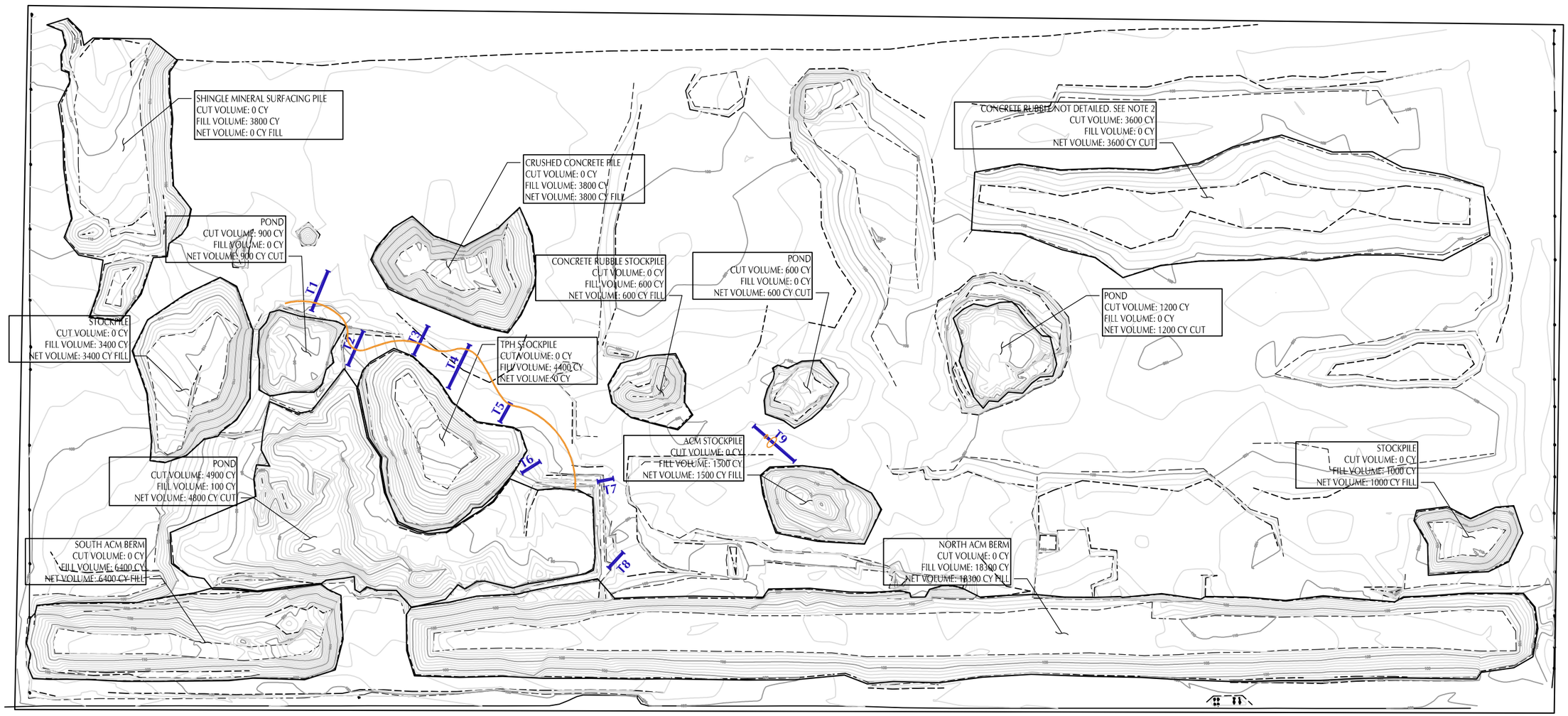
Site Vicinity Map

Former Johns Manville Plant, 420 East 3rd Street, Pittsburg, CA

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Figure 1

I:\Design\001\09587\00\DWG\Johns Manville Site Sampling Plan.dwg 1/31/07



NOTE:

1. VOLUME ESTIMATES ARE CALCULATED BY USING THE SURVEY PERFORMED BY WINZLER & KELLY IN JUNE 2007.
2. NON-UNIFORM RUBBLE IS INCLUDED IN THE ON-SITE PILE, BUT THIS MATERIAL VOLUME IS NOT INCLUDED IN THE VOLUME ESTIMATE BECAUSE OF HIGHLY IRREGULAR SHAPES AND DENSITIES OF THE RUBBLE.

EXPLANATION:

T1 TEST TRENCH LOCATION

PROPOSED EXTENT OF EXCAVATION

0 100

Approx. Scale (feet)

SOURCE: WINZLER&KELLY

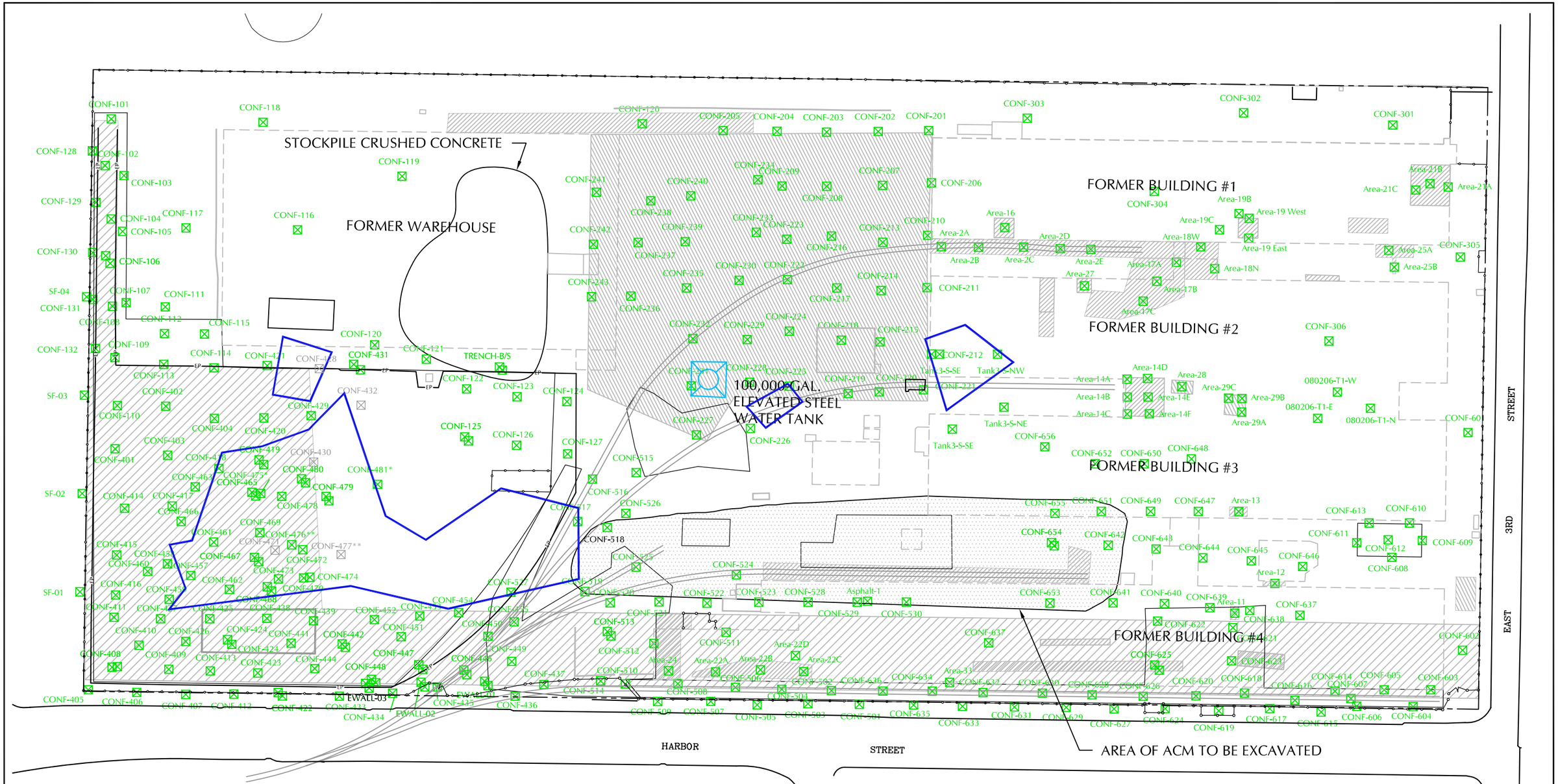
Site Survey with Volume Calculations and Test Trench Locations Pittsburg River Park LLC

Former Johns Manville Plant, 420 East 3rd Street, Pittsburg, California

LFR

Figure 2

I:\Design\001\09587\00\DWG\Lateral Extent.dwg Jul 25,2007-9:50am



LEGEND

- Confirmation Soil Sample
- Samples that have Exceeded Clean Up Criteria
- Areas of ACM Impacts Already Excavated 2006
- Approximate Limit of Excavations 12/06

Note:
Samples in green indicate analytical results are below site clean-up goals
*Sample taken below groundwater
**Sample taken below groundwater, oil present in groundwater

0 100
Approx. Scale (feet)

SOURCE: ERM 01/07

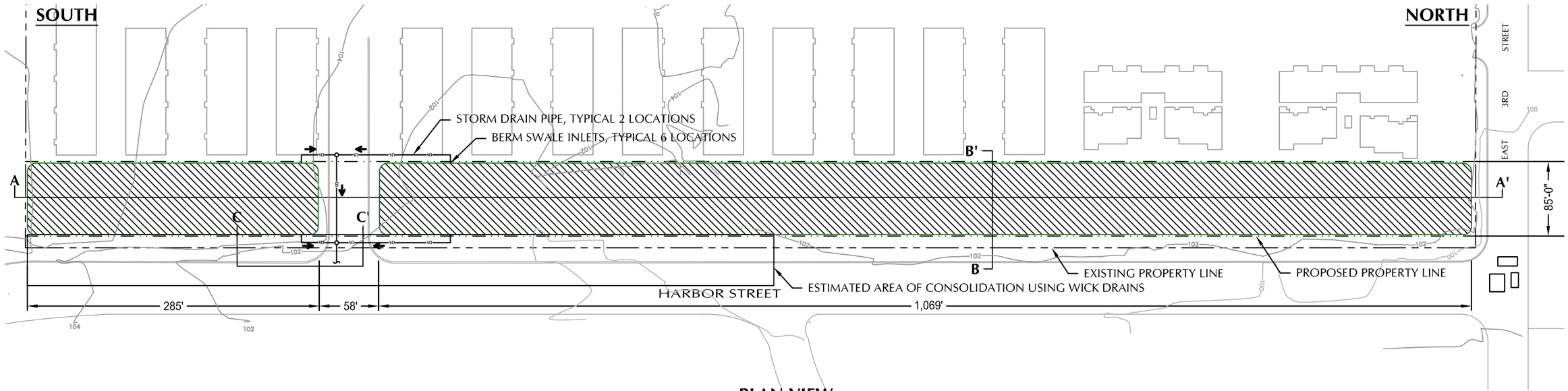
Areas of Excavation and Confirmation Sample Locations
Pittsburg River Park LLC

Former Johns Manville Plant, 420 East 3rd Street, Pittsburg, California

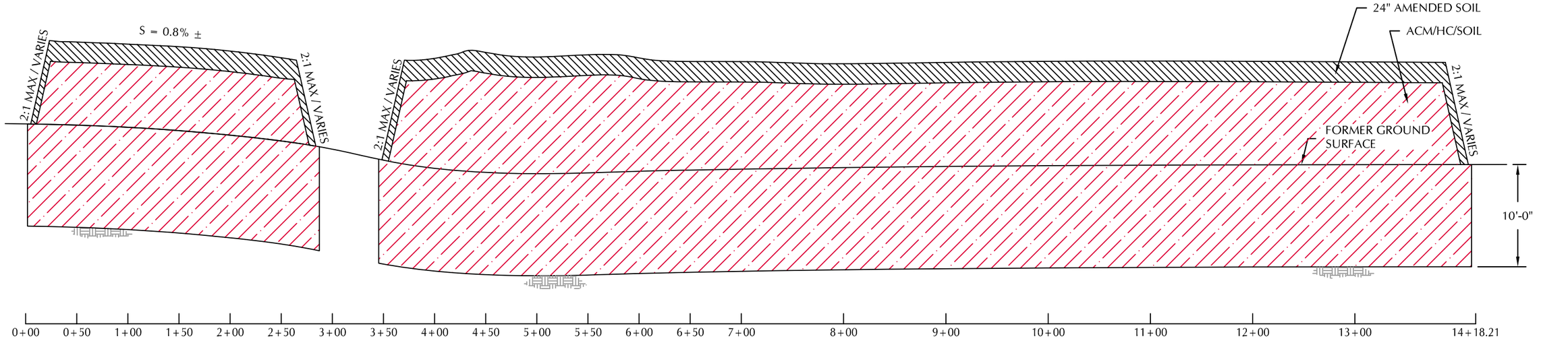
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Figure 3

I:\Design\001\09587\00\DWG\Johns Manville Site Sampling Plan.dwg 1/31/07



PLAN VIEW



PROFILE VIEW A-A'

VERTICAL EXAGGERATION 10X

LEGEND

- A — A' Line of Section
- Line of Section
- Amended Soil
- ACM and Hydrocarbon Contaminated Fill
- Native Soil

Note: Final location and dimension of berm, swales, and Harbor Street Entrance to be determined by City of Pittsburg Grading Permit.

0 100 FEET

SOURCE: ERM 08/06

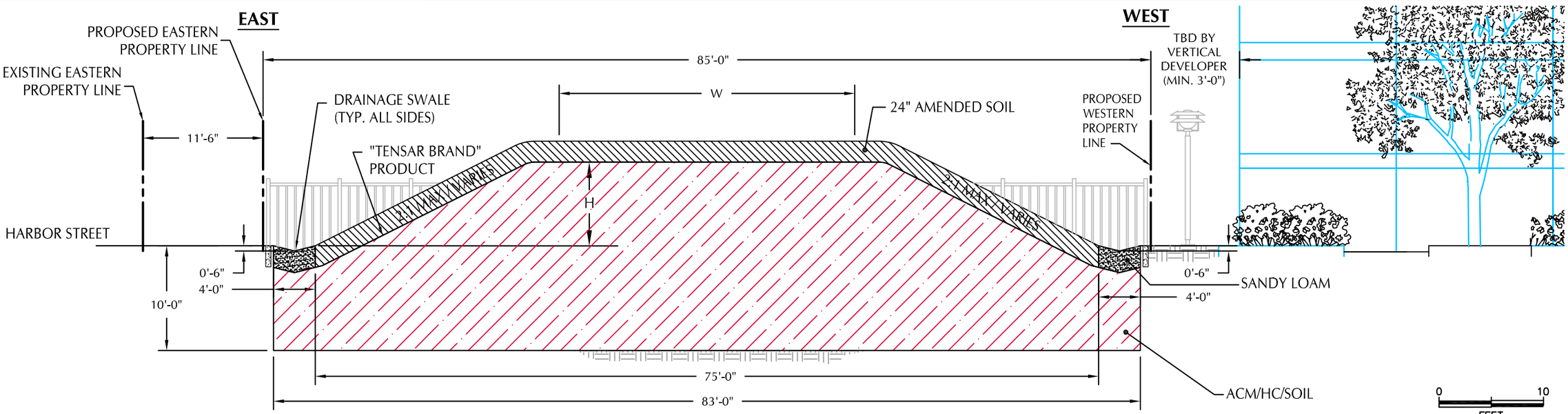
Conceptual Eastern Boundary Berm Layout
Pittsburg River Park LLC

Former Johns Manville Plant, 420 East 3rd Street, Pittsburg, California

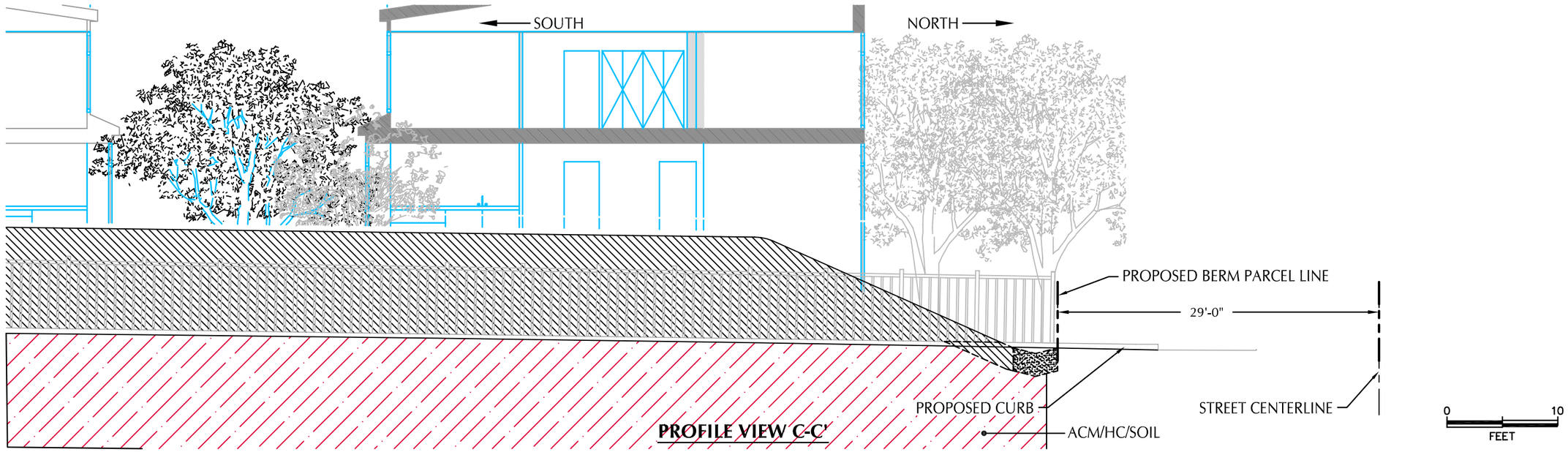
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Figure 4

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CROSS SECTION B-B'



PROFILE VIEW C-C'

LEGEND

- A — A' Line of Section
- Amended Soil
- ACM and Hydrocarbon Contaminated Fill
- Native Soil

Note: Final location and dimension of berm, swales, and Harbor Street Entrance to be determined by City of Pittsburg Grading Permit.

SOURCE: ERM 08/06

Conceptual Eastern Boundary Berm Sections
Pittsburg River Park LLC

Former Johns Manville Plant, 420 East 3rd Street, Pittsburg, California

LFR

Figure 5

I:\Design\001\09587\00\DWG\Johns Manville Berm Expansion.dwg Jul 26,2007-9:43am

STOCKPILE CRUSHED CONCRETE

FORMER WAREHOUSE

FORMER BUILDING #1

FORMER BUILDING #2

FORMER BUILDING #3

FORMER BUILDING #4

100,000-GAL. ELEVATED STEEL WATER TANK

1 2 3 4 5 6 7 8 9 10 11 12

EP

STREET

3RD

EAST

HARBOR

STREET

AREA OF ACM TO BE EXCAVATED

LEGEND

1 Proposed Soil Vapor Sample Location

Areas of ACM Impacts Already Excavated 2006

Approximate Limit of Excavations 12/06

0 100

Approx. Scale (feet)

SOURCE: ERM 01/07

Proposed Soil Vapor Sample Locations - Post Excavation Pittsburg River Park LLC

Former Johns Manville Plant, 420 East 3rd Street, Pittsburg, California

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Figure 6

I:\Design\001\09587\00\DWG\Johns Manville Site Sampling Plan.dwg 1/31/07

APPENDIX A

Treadwell and Rollo Geotechnical Letter Report, Harbor Park Development, Pittsburg, California, July 31, 2007

Treadwell&Rollo

31 July 2007
Project 4245.02

Mr. Chris Nelson
c/o Pittsburg River Park LLC
55 Hawthorne Street, Suite 555
San Francisco, California 94105

Subject: Geotechnical Consultation
Selected Approach for Remedial Mass Grading and
Revised Earthen Embankment Construction
Harbor Park Development
Pittsburg, California

Dear Mr. Nelson

This letter presents our recommendations for the remedial mass grading, construction of the revised earthen embankment, and repair of the embankment failure that occurred during the environmental excavation of the former evaporation pond. This letter is a summary of the approach that has been selected by the project team, and is based on our recommendations previously presented in the following documents:

- Geotechnical Investigation, Proposed Harbor Park Development, Pittsburg, California, dated 13 June 2006
- Supplemental Geotechnical Consultation, Settlement of the Proposed Earthen Embankment, Proposed Harbor Park Development, Pittsburg, California, dated 13 June 2006
- Slope Stability of Proposed Earthen Embankment, Harbor Park Development, Pittsburg, California, dated 3 August 2006
- Embankment Repair, Harbor Park Development, Pittsburg California, dated 5 December 2006

We have also discussed the project site conditions and our recommendations with you and prospective contractors during the project team meeting held on 18 July 2007, and reviewed the Site Survey with Volume Calculations prepared by Winzler and Kelly Consulting Engineers, dated July 2007.

PROJECT BACKGROUND AND SITE CONDITIONS

The development site is southwest of the intersection of East 3rd and Harbor Streets. The development will consist of 2- to 3-story single family detached houses and open space areas. We understand the project will also include site improvements, such as underground utilities, landscaping, sidewalks and walkways, new pavements, and an earthen embankment. Preliminary structural design loads, proposed grading for the development, and new underground utility locations were not available at the time this letter was prepared.

Construction activities at the site have been stopped since December 2006. Multiple stockpiles of concrete debris, clean fill, and soil containing petroleum hydrocarbons and asbestos contaminants are onsite. Also, multiple open excavations are present at the site. In particular, one large excavation is present in the area of the former evaporation pond; this excavation is currently filled with groundwater to approximately Elevation +3 feet NGVD29 (which corresponds to the previous ALTA Survey elevation of

94 feet). Prior to stopping work at the site, a portion of the earthen embankment along Harbor Street had failed into the large excavation near the former evaporation pond. The earthen embankment was designed to contain environmentally impacted soil. The impacted soil was placed beneath and within the embankment. The below-grade portion was placed to a depth of about 10 feet below finish grade. The impacted soil within the embankment had a trapezoidal configuration with 2.25:1 (horizontal to vertical) side slopes. The current configuration of the earthen embankment is presented on the site survey prepared by Winzler and Kelly. In general, the embankment was approximately 10 to 14 feet high and approximately 25 to 30 feet wide at the top. At the time of failure, the clean soil cover had not yet been placed over the environmentally impacted soil. Treadwell and Rollo did not observe the placement and compaction of the material in the existing embankment.

PROPOSED APPROACH FOR COMPLETION OF REMEDIAL MASS GRADING

Based on our conversations with you, we understand the current plan is to fill the existing excavation in the area of the former evaporation pond with a combination of clean crushed concrete and geotextile tensile fabric, stockpiled soil containing petroleum hydrocarbon contaminants, and native soil and/or other suitable "clean" backfill material. We understand the soil containing petroleum hydrocarbons must be placed below the groundwater level, which corresponds to about Elevation +3 feet NGVD29. Prior to backfilling, the evaporation pond excavation will be dewatered and allowed to dry. The existing stockpile(s) adjacent to the excavation will not be moved or sloped back prior to dewatering the excavation.

Also, we understand the existing earthen embankment will be enlarged by widening the above and below ground portions of the embankment by 10 feet to the west. The purpose for enlarging the embankment is to accommodate on-site material containing asbestos and petroleum hydrocarbon contaminants. The widening of the earthen embankment is planned to start on the north end near the intersection of East 3rd and Harbor Streets, and proceed south.

SCOPE OF SERVICES

In general, this letter presents our earthwork and grading recommendations for the completion of the remedial mass grading activities, widening of the existing earthen embankment, repair of the failed portion of the earthen embankment, and our recommendations for the use of various backfill materials, including concrete rubble, crushed concrete, soil containing asbestos and petroleum hydrocarbon contaminants, native soil, granular roofing sand, and import soil in accordance with the project approach selected by you and discussed with the potential contractors. The proposed wick drain design and settlement estimates associated with the proposed enlarged earthen embankment configuration will be provided in separate letters.

DISCUSSION AND CONCLUSIONS

From a geotechnical standpoint, we conclude that it is feasible to complete the remedial mass grading at the site, provided the geotechnical recommendations presented in this letter, our geotechnical report, and the supplemental geotechnical consultation letters are incorporated into the project plans and

specifications, and implemented during construction. The primary geotechnical issues associated with the planned remedial mass grading activities are:

- relatively shallow groundwater
- highly variable subsurface conditions
- dewatering of the existing evaporation pond excavation
- preparation and stabilization of the evaporation pond excavation bottom so it will support the weight of construction equipment and new fill
- use of soil containing petroleum hydrocarbons as fill below the groundwater table, which corresponds to about Elevation 3 feet
- differential settlement of the ground surface in the vicinity of the evaporation pond excavation due to varying thickness of fill and natural compressible deposits
- presence of undocumented fill placed as part of the remedial grading activities
- repair of the earthen embankment failure
- widening of the earthen embankment adjacent to the existing earthen embankment
- surficial stability of the clean soil cap on the earthen embankment
- construction considerations.

These and other geotechnical issues as they pertain to the completion of the remedial mass grading and potential future developments at the site are discussed below.

Subsurface Conditions and Groundwater

The subsurface conditions are described in our geotechnical report dated 13 June 2006, and are summarized below. The subsurface at the project site is highly variable with respect to the soil types, and relative densities. In general the southeastern portion of the site is underlain by highly compressible soft to medium stiff clay, the western portion of the site is underlain by loose to dense sand and non-plastic silts, and the northeastern and north portion of the site is underlain by stiff to very stiff clays and silts.

Groundwater was encountered during our subsurface investigations at depths ranging from four to 30 feet below the ground surface. These groundwater depths corresponded to elevations of approximately 1 to 6 feet NGVD29. The groundwater elevation has been previously measured and reported in the environmental reports by others at elevations between approximately 0 to 2 feet NGVD29. Most recently the water level in the former evaporation pond excavation was measured at an elevation of approximately

3 feet NGVD29. However due to the close proximity of the project site to the Sacramento-San Joaquin River Delta (i.e. New York Slough), we conclude that the groundwater elevation will likely fluctuate with changes in the water level of the slough.

Soil Containing Petroleum Hydrocarbon

Based on our discussions with you and our review of the site survey and volume calculations performed by Winzler and Kelly, we understand there is approximately 4,400 cubic yards of soil at the site that contains petroleum hydrocarbon contaminants. The soil is stockpiled along the northwestern edge of the large evaporation pond excavation. We understand the petroleum impacted soil may be placed and compacted as engineered fill below the groundwater table which corresponds to Elevation 3 feet NGVD29. This material was originally excavated from the former evaporation pond excavation and generally consists of medium to highly expansive clays and silts. We expect that the majority of the stockpiled soil has a relatively high moisture content. Typically, clayey and silty soil with a high moisture content is difficult to spread and compact. Prior to re-use as compacted fill, this material may require moisture conditioning or mixing with other drier material to decrease the moisture content and improve the workability of the material. Recommendations for improving the compactibility of this material are presented below.

The presence of hydrocarbons in soil typically complicates compaction testing of the soil if a nuclear moisture density gauge is used. Periodic moisture tests will be required to verify and calibrate the moisture content reading from the nuclear gauge. These tests will need to be performed on the in-place soil being tested during grading. As an alternative to using a nuclear moisture density gauge, the in-place density of the soil can be determined by using a sand cone; however, sand cone tests will take more time to perform than nuclear gauge tests and will require minimal ground vibrations while the tests are being conducted.

Earthen Embankment Failure

Based on our discussions with you and our observations during site visits on 21 and 30 November 2006, we conclude a portion of the western edge of the southern embankment failed during the environmental remedial excavation of the former evaporation pond. We understand the former site remediation and grading contractor made a 15- to 24-foot-deep vertical cut within a horizontal distance of about 10 feet from the toe of the embankment slope.

Observations made by on-site personnel indicate that the unsupported wall of the excavation translated into the open excavation, and then a progressive failure of the embankment material followed. The failure consisted of a progressive formation of tension cracks and translation of soil blocks towards the excavation. At the time of our visit, some grading along the toe of the failed slope had occurred; however, we did not observe any evidence of a deep rotational failure of the embankment material. We did observe significant horizontal displacement of the embankment material as indicated by the offset of slope stakes for the earthen embankment, indicating that the displaced material had sheared and moved horizontally.

The portion of the embankment that failed is approximately 90 feet wide, 85 feet long, and extends to within about five feet of the eastern crest of the embankment.

Differential Settlement

The potential for differential ground settlement was discussed in our geotechnical report dated 13 June 2006. In our report, we concluded that compressible deposits of varying thickness are present beneath the southeastern portion of the project site. Also, we concluded that the excavation and filling of the former evaporation pond will result in a reduction of the thickness of compressible material within the pond area. According to the site survey prepared by Winzler and Kelly, the existing evaporation pond excavation currently varies in depth from approximately 13 to 24 feet below the original site grades. The deepest portion of the excavation appears to be near the eastern edge of the excavation, which is adjacent to the northwestern corner of the southern earthen embankment. In general the average depth of the excavation appears to be approximately 12 to 14 feet deep below the existing ground surface. Upon completion of the remedial grading activities, a summary report that describes the observations and test results of the excavation and backfilling operations should be provided.

Surficial Stability of the Earthen Embankment

The stability of the proposed two-foot-thick topsoil cap was evaluated in our letter dated 3 August 2006 titled *Slope Stability of Proposed Earthen Embankment, Harbor Park development, Pittsburg, California.* It is our understanding that a tensile geogrid will be used as a separator between the clean soil cap and the waste material in the embankment, and the contact between the clean soil cap and waste material will not be stair stepped, nor will a cellular anchorage system used. We anticipate that there may be a potential for minor downhill movement of the surficial soil layer due to gravity. This potential for movement would be increased during periods of wet weather when the surficial soil layer is near saturation or during a strong seismic event. Proper drainage and/or routine maintenance will decrease the likelihood of the downhill movement of the surficial soil layer. This is considered acceptable from a geotechnical standpoint provided that periodic maintenance and repair of the surficial soil layer be included in the operation and maintenance budget for the earthen embankment.

Construction Considerations

Existing and planned excavations may extend below the groundwater table. Soil removed from these excavations may be wet and require significant moisture-conditioning (drying) prior to re-use as compacted fill. Also, if site grading is performed during wet weather, the exposed soil subgrade may become wet and difficult to compact. The grading contractor should be prepared to repair weak and wet subgrade, if required. The existing excavations at the site are likely to have soft or loose soil at the bottoms of the excavations. This weak soil will need to be removed and the bottoms of the excavations will need to be stabilized prior to the placement of additional fill.

Stockpiled soil may have a high moisture content and may require moisture-conditioning (drying) prior to being re-used as compacted fill. The dry soil may be blended with wet material to lower the moisture content of the proposed fill material.

Currently, relatively deep excavations (15 to greater than 20 feet deep) exist at the site. Portions of these excavations are located adjacent to the existing earthen embankment and/or stockpiles. We previously recommended flattening the side slopes of the existing earthen embankment and of the below-grade portions of the excavations, however based on discussions with you and the contractor, not all excavations need to be accessible to personnel, and we understand the contractor prefers to use temporary vertical cuts and temporary shoring (if necessary) to facilitate to planned grading. Vertical

cuts in soft clays could destabilize the edges of excavations and the toe of the existing embankment slope. The stability of unsupported vertical cuts is dependant upon the strength of the soil, and length of time the excavation is left open. Variable soil conditions in the existing earthen embankment should be anticipated. As discussed above Treadwell and Rollo did not observe the placement and compaction of the material in the existing earthen embankment. Therefore, our analysis of the stability of the embankment materials is based on parameters back-calculated from the embankment failure, and our experience with similar soil conditions.

RECOMMENDATIONS

Recommendations for grading, backfill compaction, widening the existing earthen embankment, and repair of the failed portion of the embankment and other geotechnical aspects of the project are presented below. The recommendations presented below are specific to the selected project approach, and do not cover every possible situation that may be encountered during grading. If conditions differ from those described in this letter or if the project approach changes, modifications to the recommendations presented in this letter may be necessary.

General Site Preparation and Grading

Recommendations for general use during site grading are presented below. Recommendations for the existing pond excavation and earthen embankment are discussed separately due to special geotechnical considerations in these areas.

Site Demolition and Preparation

The majority of the previous site improvements have been removed from the site, although some underground utilities may still exist at the site. Demolition in areas to be developed should include removal of existing pavement and underground obstructions, including foundations of existing structures. Any vegetation and organic topsoil should be stripped in areas to receive new site improvements. Stripped organic soil can be stockpiled for later use in landscaped areas, if approved by the owner and architect; organic topsoil should not be used as compacted fill. Demolished asphalt and concrete at the site may be crushed to provide recycled construction materials, including sand, free-draining crushed rock, and Class 2 aggregate base (AB). The use of recycled construction materials will be discussed separately below.

Existing underground utilities beneath areas to receive new improvements should be removed or abandoned in-place by filling them with grout. The procedure for in-place abandonment of utilities should be evaluated on a case-by-case basis, and will depend on location of utilities relative to new improvements. However, in general, existing utilities within four feet of final grades should be excavated and removed, and the resulting excavation should be properly backfilled.

Subgrade Preparation

The subgrade exposed at the bottom of the excavations, as well as other portions of the site that will receive new fill or site improvements, should be scarified to a depth of at least eight inches, moisture-conditioned to at least three percent above the optimum moisture content, and compacted to at least

90 percent relative compaction[1] where the exposed material consists of moderately expansive soil. Where lean clay or sandy soil are encountered during grading, the scarified surface should be moisture-conditioned to above the optimum moisture content and compacted to at least 90 percent relative compaction. If areas of weak soil are encountered during subgrade preparation, the weak subgrade should be repaired as described in a subsequent section of this report. The soil subgrade should be kept moist during construction to prevent desiccation cracks.

Any select fill placed during grading should meet the following criteria:

- be in conformance with the approved Remedial Design and Implementation Plan (RDIP), and the amended RDIP
- be free of organic matter
- contain no rocks or lumps larger than three inches in greatest dimension (except as discussed below)
- have a low expansion potential (defined by a liquid limit of less than 40 and plasticity index lower than 12)
- have a low corrosion potential[2]
- be approved by the geotechnical engineer.

All select fill should be moisture-conditioned to above optimum moisture content, placed in horizontal lifts not exceeding eight inches in loose thickness, and compacted to at least 90 percent relative compaction, except if the fill is placed within the proposed pavement areas. It is our understanding that no permanent pavements are planned as part of the remedial mass grading. If permanent pavements are constructed as part of the remedial mass grading, the appropriate recommendation presented in 13 June 2006 geotechnical report are considered to be appropriate. Where used, sand containing less than 10 percent fines (particles passing the No. 200 sieve) should be compacted to at least 95 percent relative compaction.

Samples of on-site and proposed import fill materials should be submitted to the geotechnical engineer for approval at least three business days prior to use at the site. The grading subcontractor should also provide analytical test results or other suitable environmental documentation to the project environmental consultant (LFR, Inc.) for approval prior to importing fill to the site.

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1 Relative compaction refers to the in-place dry density of soil expressed as a percentage of the maximum dry density of the same material, as determined by the ASTM D1557-00 laboratory compaction procedure.

2 Low corrosion potential is defined as a minimum resistivity of 2,000 ohms-cm and maximum sulfate and chloride concentrations of 250 parts per million.

Subgrade Repair – Not Impacted by Groundwater

Based on the selected project approach that was discussed with you and the prospective contractors, if weak soil subgrade is encountered during grading and it is not impacted by groundwater, we recommend the following subgrade repair procedure:

- scarify the exposed subgrade to a depth of 8 to 12 inches
- moisture-condition (wetting or drying) the soil to near the optimum moisture content
- compact the soil to at least 90 percent relative compaction.

Typically, this option is the least expensive to implement, but it requires several days to weeks of dry warm weather to facilitate the moisture-conditioning process. This option may not be available if the excavation extends to within a few feet of the groundwater table. Our field representative will need to assess the site conditions on case-by-case basis.

Subgrade Repair - Near or Below the Groundwater Table

There are existing excavations and anticipated future excavations will extend near or below the groundwater. The soil at the bottom of these excavations is anticipated to be wet, soft, and weak. To stabilize the bottoms of excavations that are near or below the groundwater table will require the following:

- Dewatering the excavation to a depth below the bottom of the excavation.
- Excavating and removing loose material that may have sloughed into the excavation or been disturbed due to grading activities. A layer of geotextile tensile fabric (Mirafi 500X or equivalent) should then be placed over the sides and bottom of the excavation and the excavation backfilled with crushed rock, crushed concrete, or gravel. If imported crushed rock or gravel is used as fill, we recommend selecting an open graded material with a maximum particle size of 1/2 to 3/4 inch. If crushed concrete is used as fill, we recommend using the particle size criteria discussed in a subsequent section of this report.
- Placing a layer of geotextile filter fabric (Mirafi 140 N or equivalent) over the surface of the rock or concrete fill.
- Placing and compacting consecutive layers of select fill, as described in a previous section of this letter, to fill the remainder of the excavation.

Prior to the filling any excavation, we should given the opportunity to confirm that the site conditions and the stability of the existing side slopes have not changed. If changes have occurred, we may need to modify our recommendation on a case-by-case basis.

Compaction Recommendations for Recycled Construction Materials

Crushed concrete, asphalt, and other non-deleterious building materials generated from the site demolition may used as backfill materials provided that the placement and compaction recommendations presented below are incorporated into the project plans and specifications. All recycled material should be checked and verified by LFR that it is acceptable from an environmental standpoint for use prior to placement.

Recycled Class 2 Aggregate Base

Concrete, asphalt, brick and other non-deleterious construction materials may be crushed and mixed to a gradation meeting Caltrans Class 2 AB. If acceptable to the owner, this material may be used as general backfill material. If used, we recommend that it be placed and moisture-conditioned, as described for select fill; however, we recommend recycled Class 2 AB be compacted to a minimum of 90 percent relative compaction.

Crushed Concrete Rubble

Crushed concrete rubble may be used at certain locations as backfill material or to help stabilize the base of soft weak excavations. We recommend that any concrete rubble or aggregate material be crushed to a size not to exceed eight inches in maximum dimension, and be placed a minimum of five feet below the proposed finished grade. Geotextile filter fabric should be used to separate this material from the adjacent finer grained soil. Also, this material may be mixed with finer self-compacting cohesionless material, such as the shingle mineral surface material (i.e. sand) to reduce the potential for fines migration into the voids between larger crushed rubble pieces. If used to stabilize the bottoms of excavations, material should be underlain by geotextile tensile fabric, compacted by track rolling, and overlain by filter fabric. The mixture should be compacted so that it is unyielding beneath standard equipment loads.

Shingle Mineral Surface Material

A large stockpile of shingle mineral surface material is located on-site. As part of our geotechnical investigation, we collected one sample of this material for laboratory testing. The sample was collected in the top foot at CPT-24. According to our laboratory testing this material is a poorly graded non-plastic sand with approximately 50 and 1 percent finer than #40 and #200 sieves respectively. From a geotechnical standpoint, this material is considered acceptable for use as general backfill, and/or mixing with concrete rubble, or wet fine grained material. This material should be placed and compacted in accordance with the recommendations discussed above.

It is important to note that our characterization of the shingle mineral surface material is based on one sample, and may not be representative of the general characteristics of the material. However, we anticipate that this material will still be acceptable for use as sandy fill, as described above.

Compaction Recommendations for Soil Containing Petroleum Hydrocarbons

If soil containing petroleum hydrocarbon contaminants is re-used as backfill in the evaporation pond excavation(s), we recommend that it be placed and compacted, as previously described for select fill, with the exception that it should be moisture conditioned to at least three percent above the optimum

moisture content. We understand this material can only be used as engineered fill within portions of excavations that are at or below the groundwater table, which corresponds to Elevation 3 feet NGVD29.

Recommendations for Moisture Conditioning and Improving Soil Compactability

The compactibility (ease of compaction) of fill soil is related to the soil type, moisture content, and loose thickness of the fill. Wet fine grained cohesive soil is the most difficult soil to compact. Typically the most critical characteristic of soil to be compacted is the moisture content. Soil that has a high moisture content will not be easy to compact regardless of the fill thickness or the compactive effort. To reduce the moisture content of soil to be used as fill, the soil should be either:

- scarified in place and allowed to dry
- spread and allowed to dry out
- windrowed and allowed to dry
- thoroughly mixed with drier material to lower the overall moisture content
- add either fly ash, lime, or other cementitious material.

Multiple passes or spreading may be necessary to remove enough moisture from highly plastic clayey or silty soil. Sandy soil generally dries relatively quickly. Typically mixing in 4 to 5 percent quicklime is adequate to reduce the moisture content of the soil; however the actual amount of lime may vary, depending upon the soil characteristics. Certain chemical and/or contaminants in soil such as petroleum hydrocarbons and sulfates can reduce the efficiency of cementitious admixtures such as lime and fly ash. Prior to using soil treatment by admixtures on a large scale, we recommend that a study be performed to assess the efficiency of the proposed admixtures on reducing the moisture content of the soil.

Backfilling of the Former Evaporation Pond Excavation

The bottom of the existing evaporation pond excavation extends to plan elevations ranging from -1 to 3 feet, corresponding to depths of 15 to 20 feet. The evaporation pond excavation is currently filled with water to an elevation of approximately 3 feet, and the bottom of the excavation is anticipated to be weak and soft. To stabilize the bottom of the excavation, we recommend the following procedure:

- dewater the excavation
- remove any loose material at the bottom that has sloughed into the excavation or been disturbed due to previous grading activities (including disturbed material form the embankment failure that is beneath proposed future improvements
- place a layer of geotextile tensile fabric (Mirafi 500X or equivalent) over the sides and bottom of the excavation
- place and compact an 18- to 24-inch-thick layer of crushed concrete that meets Caltrans Class 2 aggregate base gradation
- place fill over the compacted crushed concrete and compact the fill in horizontal lifts not exceeding eight inches in loose thickness.

To improve the safety of the excavations, we recommend that existing stockpiles adjacent to the edges of the excavation should be safely sloped or moved back at least 20 feet away from the edge of the evaporation pond excavation prior to personnel working in or around the excavation.

It is important to note that this is the selected option for stabilizing the bottom of the existing evaporation pond excavation, and other subgrade repair options (as previously discussed with you) are still considered acceptable alternatives at this time. If the excavation can not be dewatered adequately, then a drainage layer consisting of open graded ¾-inch crushed rock or open graded crushed concrete rubble with maximum dimensions of less than eight inches may be used in lieu of the gravel or crushed rock; however, we recommend blending the crushed concrete pieces with sand or small gravel to reduce the potential for fines migration into the voids within the large crushed concrete pieces. If crushed concrete rubble is used, care will need to be exercised to select a suitable material for blending with the crushed concrete pieces so that the voids are filled, but the granular material is still permeable enough to allow the sump pump system to dewater the excavation. A layer of geotextile filter fabric (Mirafi 140N or equivalent) should be placed over the surface of the rock or concrete fill to prevent the migration of fines in to the drainage layer. The compacted fill should be placed and compacted on top of the filter fabric.

Temporary Excavation Dewatering

The groundwater level at the site will fluctuate due to seasonal conditions and will vary with the tide level in the nearby Sacramento-San Joaquin River Delta. Dewatering of the excavations is anticipated. We recommend the groundwater within proposed excavations be drawn down below the bottom of the excavation until sufficient fill has been placed and compacted to raise the working surface above the groundwater table.

Either active or passive dewatering systems can be used at the site. During conversations with the project design team, we understand a passive dewatering system such as sump pumps within the excavations is the preferred option. The dewatering system should be designed and implemented by an experienced dewatering contractor.

Widening of the Earthen Embankment

The project plans are to widen the existing earthen embankment by 10 feet to the west both above and below the final site grades and to steepen the side slopes to an inclination of 2:1 (horizontal to vertical). In order to construct the below grade portion of the revised embankment configuration, an approximately 10-foot-wide excavation at the toe of the existing embankment will be required. The proposed excavation at the toe of the existing embankment will need to be performed in narrow sections. We understand that no equipment or personnel will be allowed in the excavations and that due to project considerations, it is preferable to excavate the sections with vertical sides. Since personnel will not be allowed in the excavations, and the excavations are not located near existing structures, there is no life safety concern if a small portion of the embankment were to fail. However, it is our opinion that if small sections are excavated and immediately backfilled to the design toe grade, the earthen embankment may be constructed as described above. Due to the unknown characteristics of the existing earthen embankment, we recommend that the proposed excavation proceed on a trial basis to determine the maximum length of the sections that can be excavated and backfilled in a timely manner, and that temporary shoring be available for use onsite in the event that weak conditions are encountered during the embankment widening process. Also, we recommend that prior to widening the embankment in the vicinity of the existing evaporation pond excavation, the existing excavation should be properly backfilled,

as previously discussed. The lower portion of the proposed excavation is anticipated to be below the groundwater level, and temporary dewatering of the excavation will likely be required. The selected procedure for widening the embankment is presented on Figure 1 and discussed below.

- Fill adjacent excavations to at least the elevation of the bottom of the below grade embankment.
- Excavate the first section of the below grade portion of the widened embankment. The section should not be greater than 20 feet wide at the base of the excavation, although due to the unknown characteristics of the existing embankment material, the actual sections may need to be narrower than 20 feet to prevent failure of the existing embankment into the excavation.
- Immediately backfill and properly compact the excavated section to the finished grade at the toe of the embankment. Each section should be filled as soon as practical and in no case should a section remain open overnight.
- Once the section is backfilled to the final grades at the toe of the embankment, the next section may be excavated and backfilled, and this procedure may be repeated.
- The above grade portion of the embankment should not be filled until the below grade portion has advanced at least one full section, which corresponds to about 20 feet ahead of the section to receive fill. For example the above grade portion for section 1 should not be constructed until the below grade portion of section 2 has been filled to the final toe grades. The fill for widened embankment should be benched into the existing well-compacted undisturbed embankment material. As a minimum a 3-foot-wide horizontal bench should be placed every 3 vertical feet. The benches may be cut into the existing embankment as the above grade portion of the widened embankment is constructed.

If temporary shoring is required, shields or temporary bracing may be used. If temporary shoring is used, the shoring should be designed to support the lateral earth pressures shown on Figure 2. The use of temporary shoring will increase the potential for bottom heave of the excavation. Based on our calculations, we estimate the above ground portion of existing embankment may need to be cut back at an inclination no steeper than 2:1 to avoid bottom heave. If extremely soft soil conditions are encountered during excavation, it may be necessary to cut the existing embankment to an inclination flatter than 2:1. The above grade portion of the embankment should not be constructed until the below grade portion has been filled to the final toe grade.

As discussed above Treadwell and Rollo was not present during the placement and compaction of the existing earthen embankment, and if conditions different from those assumed are encountered these recommendations may need to be modified based on the actual conditions.

Proposed Embankment Repair

Due to the significant horizontal displacement and weakened condition of the material, we recommend that the disturbed material below future improvements, within the proposed embankment widening area, and the portion of the embankment above the proposed finished toe elevation be removed and re-compacted. The stability of the earthen embankment is dependant upon the strength of the material at the toe of the embankment slope. Areas underlain by disturbed material are susceptible to increased

settlements as air voids, and fractures compress. A proposed step-by-step sequence for the embankment repair is presented on Figure 3 and discussed below.

- Remove the disturbed soil exposing undisturbed compacted embankment material or undisturbed native soil in areas to receive new improvements, widened portion of the embankment, and the above grade portion of the embankment. The disturbed material removed is considered acceptable for re-use as compacted fill for the repair of the embankment. The disturbed material should not be stockpiled on adjacent portions of the embankment, near the top of existing cut slopes, or if the existing evaporation pond excavation has not been backfilled within 20 feet of the edge of the existing evaporation pond excavation. The proposed temporary stockpile locations should be discussed with T&R prior to the start of grading.

- Temporary cut slopes in the asbestos impacted fill material should be no steeper than about 2:1 (horizontal to vertical).

- The former evaporation pond excavation should be filled at a minimum to the proposed finished toe elevation of the earthen embankment prior to repairing the failed portion of the embankment or widening the embankment. The evaporation pond excavation fill will act as a soil buttress and should be constructed at the toe of the proposed embankment repair. The slopes of clean soil buttress should be constructed by placing and compacting fill in accordance with the recommendations presented in this letter and the project geotechnical report, with the exception that the fill on the slope should be over-built then trimmed back to construct the appropriate sidewall configuration.

- Place and compact the material for the proposed 10 foot embankment widening, and for the remaining portion of the pond excavation to the proposed finished toe grade.

- Place and compact the impacted fill placed within the embankment failure area in accordance with the recommendations presented in this letter and the project geotechnical report. The contaminated material placed in the earthen embankment should be proof-rolled and be non-yielding under the proof load.

- The above grade portion of the embankment fill should be benched into the existing well-compacted undisturbed embankment material. As a minimum a 3-foot-wide horizontal bench should be placed every 3 vertical feet. The benches may be cut into the existing embankment as the above grade portion of the widened embankment is constructed.

Temporary excavations should be sloped in accordance with OSHA regulations and temporary slopes may be required depending upon the characteristics of the soil encountered.

Surficial Stability of the Earthen Embankment

It is our understanding that the separation material between the waste and the two foot thick cap material may consist of either filter fabric or geogrid. If a geogrid is determined to be acceptable, we recommend that either a uniaxial or biaxial geogrid be used. The geogrid should have a minimum long-term tensile strength greater than 200 pounds per foot (lb/ft). Mirafi Miragrid 2XT or equivalent and Tensar BX1100 or equivalent are examples of acceptable uniaxial and biaxial geogrids, respectively. The

proposed separation material should be installed with the strongest direction and roll length perpendicular to the embankment alignment so that there are no horizontal seams on the side slopes of the embankment. Sections of the separation material should be adequately anchored to the earthen embankment or overlapped with adjacent sections to prevent sliding of the separation material and cap soil. The cap material should be well compacted against the earthen embankment and separation material. The use of jute mesh or coconut fiber rolls will help reduce the potential for surficial erosion of the cap material. The finished slopes should be planted with draught tolerant plants as soon as practical. Heavy watering of the landscaping on the slopes should be avoided, and proper drainage of the slopes should be provided. As discussed previously due to the potential for downhill movement of the surficial soil layer the cost for periodic maintenance and repair of the surficial soil layer should be included in the operation and maintenance budget for the earthen embankment.

Temporary Slopes

All excavations that will be entered by construction, testing, and/or inspection personnel, should be properly shored or sloped back in accordance with OSHA regulations. When an excavation is located near existing stockpiles, structures, settlement sensitive improvements, or the earthen embankment, we should evaluate the stability of the slope on a case by case basis.

Future Excavation Setback from the Earthen Embankment

The stability of the earthen embankment is dependant upon the strength and stability of the soil at the toe of the embankment slopes. We recommend that a qualified professional engineer evaluate the temporary stability of any future excavations that are planned at or near the toe of the completed earthen embankment.

SERVICES DURING REMEDIAL MASS GRADING

Geotechnical observations and testing during construction should be performed in accordance with the recommendations in the project geotechnical documents listed above. These observations will allow us to confirm that the actual soil conditions are consistent with the assumptions used during the preparation of this letter. Upon completion of the remedial mass grading, revised geotechnical recommendations for future site developments may be necessary to reflect changes in the site subsurface due to the remedial mass grading activities.

We trust this letter provides the information you require at this time. If you have any questions, please call.

Sincerely yours,
TREADWELL & ROLLO, INC.

REGISTERED PROFESSIONAL ENGINEER
HAZE M. RODGERS
No. 66161
Exp. 6/30/08
CIVIL
STATE OF CALIFORNIA

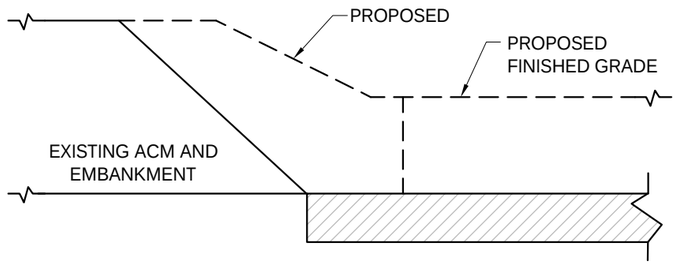
Haze Rodgers
Civil Engineer

Dean H. Iwasa
Geotechnical Engineer

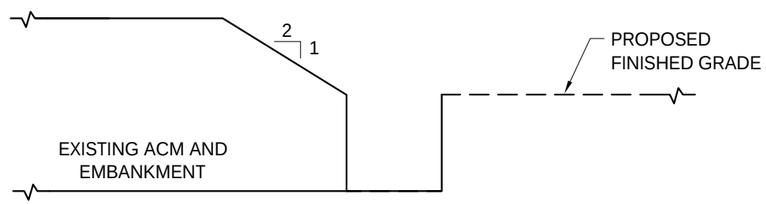
Attachments: Figure 1 – Embankment Widening Schematic
Figure 2 – Temporary Shoring Parameters
Figure 3 – Embankment Repair Schematic

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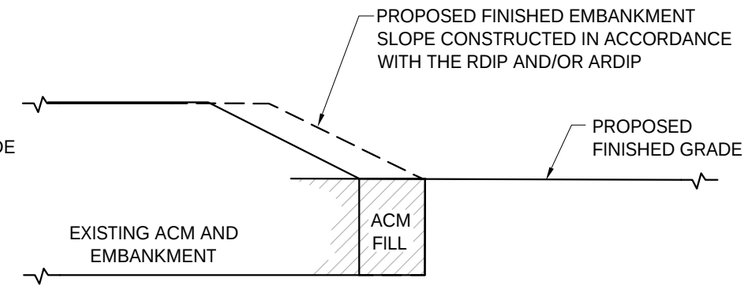
STEP NO. 1 (IF NECESSARY)
FILL TO BOTTOM OF ACM ELEVATION



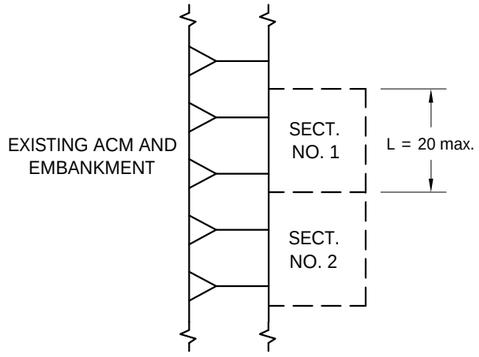
STEP NOS. 2 & 3
EXCAVATE TEMPORARY SLOPES AND EXCAVATION



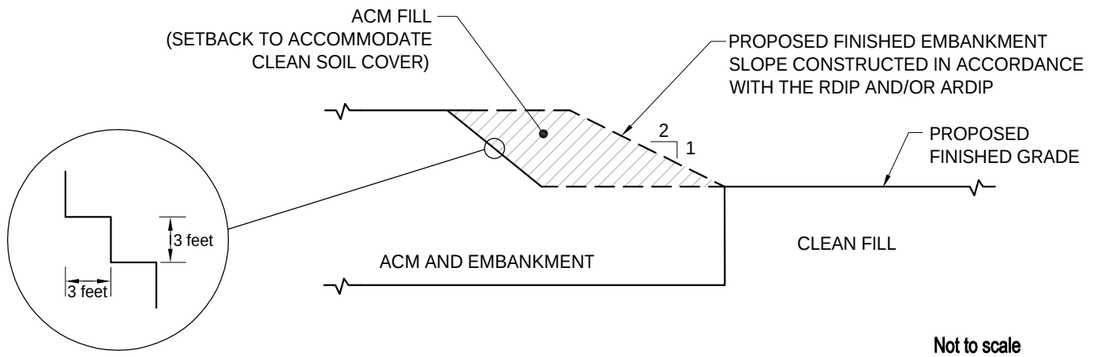
STEP NO. 4
FILL TO PROPOSED TOE GRADE



STEP NO. 5



STEP NO. 6
COMPLETE CONSTRUCTION/RECONSTRUCTION
OF EMBANKMENT



DETAIL OF BENCHING

Not to scale

NOTES:
1.) DO NOT EXCAVATE SECTION NO. 2 UNTIL SECTION NO. 1 IS BACKFILLED TO FINISHED GRADE.
2.) SECTIONS TO BE BACKFILLED IMMEDIATELY AND NO CASE SHALL REMAIN OPEN OVERNIGHT.
3.) ACTUAL SECTION LENGTHS MAY BE SHORTER DEPENDING UPON THE ACTUAL SOIL CONDITIONS.

HARBOR PARK
Pittsburg, California

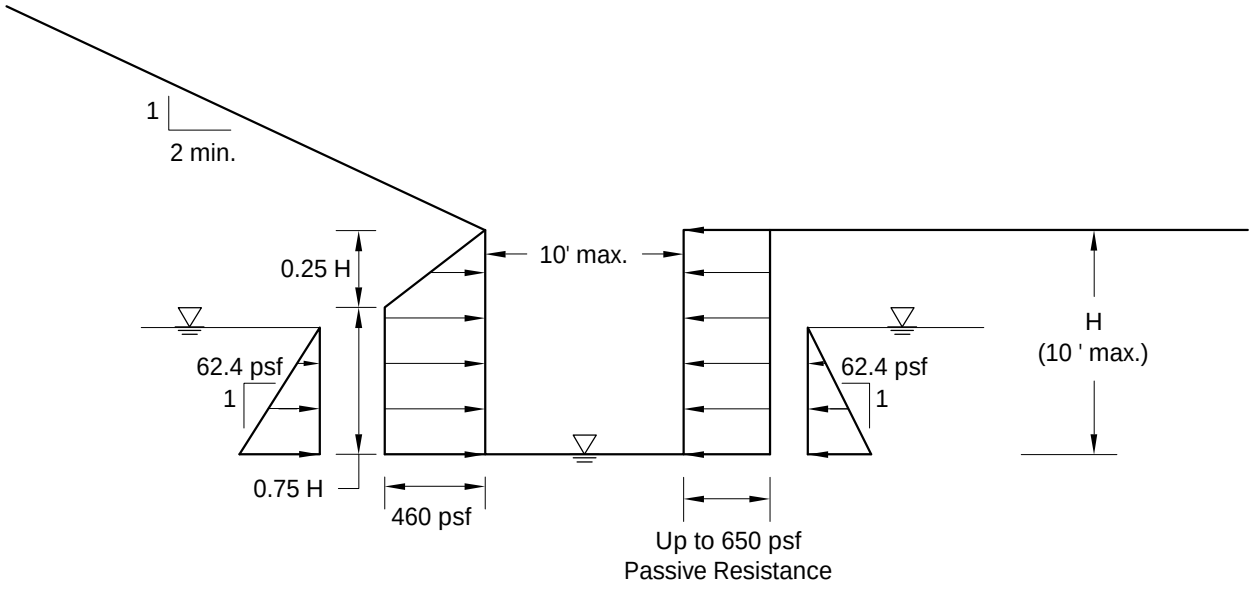
EMBANKMENT WIDENING SCHEMATIC

Date 07/31/07	Project No. 4245.02	Figure 1

Treadwell&Rollo

S:\Trgraphics-Oak\4200's\4245.02\FIGURES_HARBER VIEW-01-2007\4245.02 Schematic Figures.dwg 7/31/07

LATERAL EARTH PRESSURES FOR SHIELD SHORING
(RIGID BOX)



Not to scale

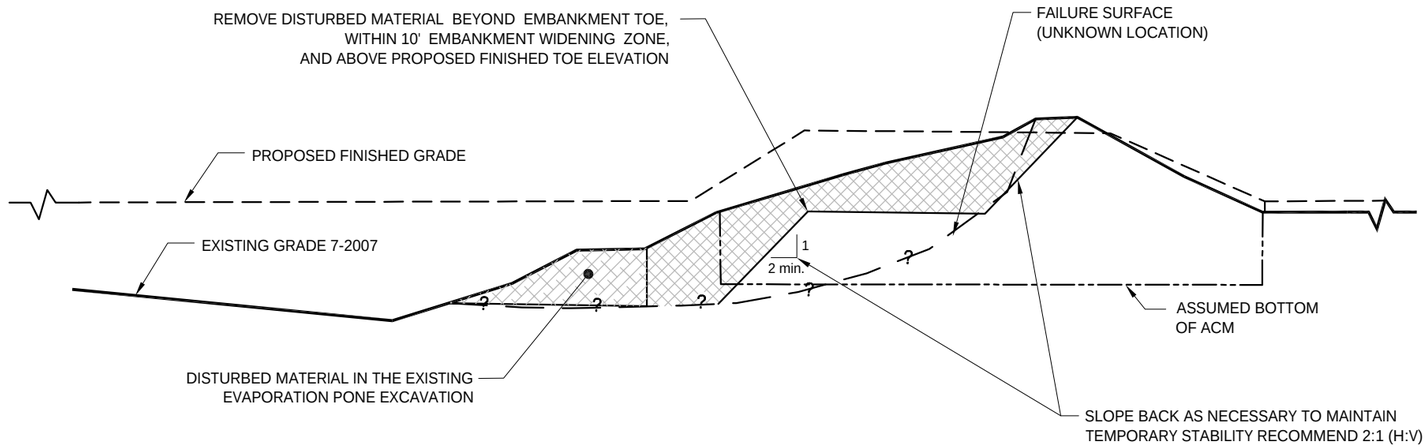
HARBOR PARK
Pittsburg, California

TEMPORARY SHORING PARAMETERS

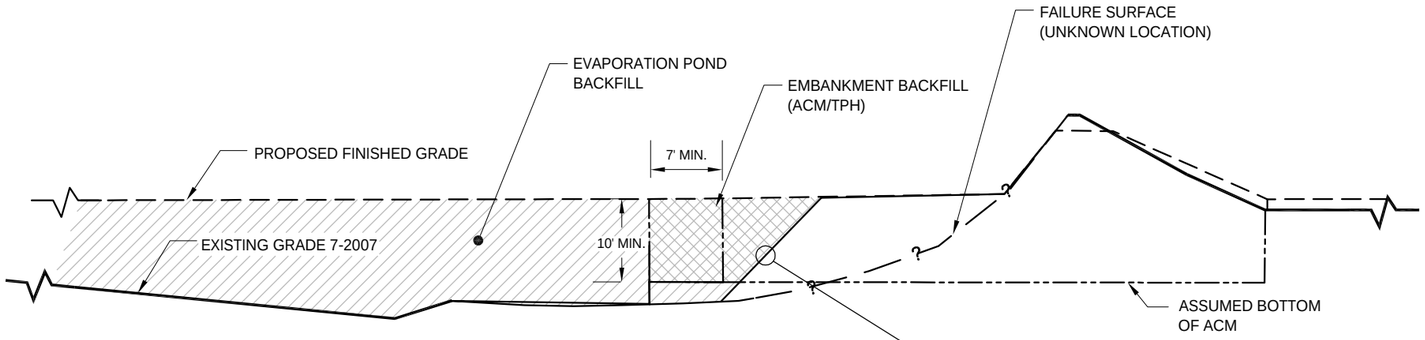
Treadwell&Rollo

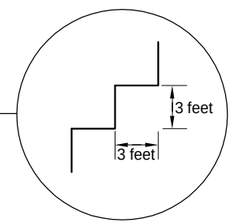
Date 07/16/07	Project No. 4245.02	Figure 2

STEP NO. 1



STEP NO. 2

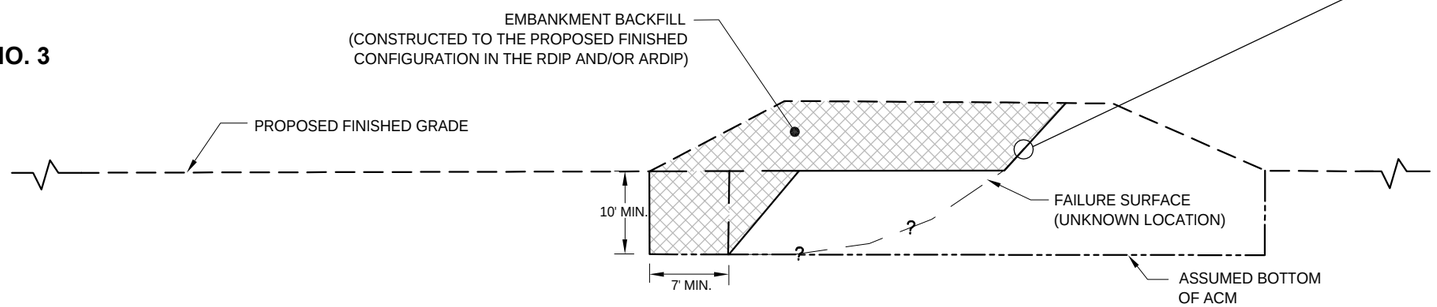




DETAIL OF BENCHING

Not to scale

STEP NO. 3



HARBOR PARK
Pittsburg, California

EMBANKMENT REPAIR SCHEMATIC

Date 07/25/07	Project No. 4245.02	Figure 3

Treadwell&Rollo

S:\Trgraphics-Oak\4200's\4245.02\FIGURES_HARBER VIEW-01-2007\4245.02 Schematic Figures.dwg 7/31/07

APPENDIX B

Curtis & Tompkins Laboratory Reports for Soil Samples Collected from Test Trenches

Curtis & Tompkins, Ltd.
Analytical Laboratory Since 1878
2323 Fifth Street
Berkeley, CA 94710
(510) 486-0900 Phone
(510) 486-0532 Fax

CHAIN OF CUSTODY

C & T LOGIN #: 95842

Sampler: James Gonzalez

Project No.: 001-09587-04 | Report To: Ron Goldbaum

Project Name: Pittsburg River Park | Company: LFR Inc.

Project P.O.: 001-09587-04 | Telephone: 510-652-4500

Turnaround Time: Standard | Fax: 510-652-2246

Lab No.	Sample ID.	Sampling Date Time	Matrix: Soil	Water	Waste	# of Containers	Preservative: HCL	H_2SO_4	HNO_3	ICE	Ø	Analysis: 8015 (Tphd & Tphmo)
-1	T-1-3-4.0	7/9/07 1145	X			1				X	X	X
-2	T-1-15-3.0	7/9/07 0930	X			1				X	X	X
-3	T-1-15-6.0	7/9/07 0845	X			1				X	X	X
-4	T-2-30-4.0	7/9/07 1025	X			1				X	X	X
-5	T-2-30-5.5	7/9/07 1050	X			1				X	X	X
-6	T-3-6-5.0	7/9/07 1120	X			1				X	X	X
-7	T-3-13-7.5	7/9/07 1130	X			1				X	X	X
-8	T-4-5-5.0	7/9/07 1200	X			1				X	X	X
-9	T-4-13-5.5	7/9/07 1220	X			1				X	X	X
-10	T-4-40-5.0	7/9/07 1300	X			1				X	X	X
-11	T-5-4-5.0	7/9/07 1315	X			1				X	X	X
-12	T-6-3-5.0	7/9/07 1345	X			1				X	X	X
-13	T-7-5-5.0	7/9/07 1415	X			1				X	X	X

Notes:
all samples on this page standard turnaround time

SAMPLE RECEIPT
☐ Intact ☐ Cold
☒ On Ice ☐ Ambient
Preservative Correct?
☐ Yes ☐ No ☐ N/A

RELINQUISHED BY:
SIGNATURE — 7/9/07 1653 DATE / TIME
DATE / TIME
DATE / TIME

RECEIVED BY:
DATE / TIME — 7/9/07 16:53
DATE / TIME
DATE / TIME

Curtis & Tompkins, Ltd.
Analytical Laboratory Since 1878
2323 Fifth Street
Berkeley, CA 94710
(510) 486-0900 Phone
(510) 486-0532 Fax

CHAIN OF CUSTODY

C & T LOGIN #: 195842

Project No.: 001-09587-01
Project Name: Pittsburg River Park
Project P.O.: 001-09587-01
Turnaround Time: Standard & hold

Sampler: James Gonzales
Report To: Ron Goldbaum
Company: LFR Inc.
Telephone: 510-652-4500
Fax: 510-652-2246

Lab No.	Sample ID.	Sampling Date Time	Matrix: Soil	Water	Waste	# of Containers	Preservative: HCL	H_2SO_4	HNO_3	ICE	ϕ	Analysis: 8015 (TPHd & TPH mo)
-14	T-4-30-5.0	7/9/07 1245	X			1				X	X	X Standard
-15	T-1-25-6.0	7/9/07 0910	X			1				X	X	X Hold
-16	T-1-35-7.0	7/9/07 0925	X			1				X	X	X Hold
-17	T-5-15-5.0	7/9/07 1335	X			1				X	X	X Hold
-18	T-6-15-4.5	7/9/07 1400	X			1				X	X	X Hold

Notes:
T-4-30-5.0 is standard turnaround time, all others put on hold

SAMPLE RECEIPT
☐ Intact ☐ Cold
☒ On Ice ☐ Ambient
Preservative Correct?
☐ Yes ☐ No ☐ N/A

RELINQUISHED BY:
SIGNATURE — 7/9/07 1653 DATE / TIME
DATE / TIME
DATE / TIME

RECEIVED BY:
SIGNATURE — 7/9/07 4:53pm DATE / TIME
DATE / TIME
DATE / TIME

Curtis & Tompkins, Ltd.

COOLER RECEIPT CHECKLIST

Login#: 195842 Date Received: 7/9/07 Number of Coolers: 1
Client: LFR Project: Pittsburg River Park

A. Preliminary Examination Phase
Date Opened: 7/9/07 By (print): S. Martecchini (sign)
1. Did cooler come with a shipping slip (airbill, etc.)? ..... YES (NO)
If YES, enter carrier name and airbill number:
2. Were custody seals on outside of cooler? ..... YES (NO)
How many and where? Seal date: Seal name:
3. Were custody seals unbroken and intact at the date and time of arrival? ..... YES NO n/a
4. Were custody papers dry and intact when received? ..... (YES) NO
5. Were custody papers filled out properly (ink, signed, etc.)? ..... (YES) NO
6. Did you sign the custody papers in the appropriate place? ..... (YES) NO
7. Was project identifiable from custody papers? ..... (YES) NO
If YES, enter project name at the top of this form.
8. If required, was sufficient ice used? Samples should be <=6 degrees C. ..... YES NO
Type of ice: Wet Temperature: no temp blank) samples cold

B. Login Phase
Date Logged In: 7/9/07 By (print): S. Martecchini (sign)
1. Describe type of packing in cooler: 2 plastic bags
2. Did all bottles arrive unbroken? ..... (YES) NO
3. Were labels in good condition and complete (ID, date, time, signature, etc.)? ..... (YES) NO
4. Did bottle labels agree with custody papers? ..... (YES) NO
5. Were appropriate containers used for the tests indicated? ..... (YES) NO
6. Were correct preservatives added to samples? ..... YES NO n/a
7. Was sufficient amount of sample sent for tests indicated? ..... (YES) NO
8. Were bubbles absent in VOA samples? If NO, list sample Ids below ..... YES NO n/a
9. Was the client contacted concerning this sample delivery? ..... YES NO
If YES, give details below.
Who was called? By whom? Date:

Additional Comments:

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 195842

LFR Levine Fricke
1900 Powell Street
Emeryville, CA 94608

Project : 001-09587-01
Location : Pittsburg River Park
Level : II

Sample ID	Lab ID
T-1-3-4.0	195842-001
T-1-15-3.0	195842-002
T-1-15-6.0	195842-003
T-2-20-4.0	195842-004
T-2-30-5.5	195842-005
T-3-6-5.0	195842-006
T-3-13-7.5	195842-007
T-4-5-5.0	195842-008
T-4-13-5.5	195842-009
T-4-40-5.0	195842-010
T-5-4-5.0	195842-011
T-6-3-5.0	195842-012
T-7-5-5.0	195842-013
T-4-30-5.0	195842-014
T-1-25-6.0	195842-015
T-1-35-7.0	195842-016
T-5-15-5.0	195842-017
T-6-15-4.5	195842-018

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Signature: _____ Date: 07/14/2007
Project Manager

Signature: _____ Date: 07/16/2007
Operations Manager

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**195842**
Client:	**LFR Levine Fricke**
Project:	**001-09587-01**
Location:	**Pittsburg River Park**
Request Date:	**07/09/07**
Samples Received:	**07/09/07**

This hardcopy data package contains sample and QC results for fourteen soil samples, requested for the above referenced project on 07/09/07. The samples were received cold and intact. All data were e-mailed to Ron Goloubow on 07/14/07.

TPH-Extractables by GC (EPA 8015B):

No analytical problems were encountered.

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	195842	Location:	Pittsburg River Park
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE
Project#:	001-09587-01	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	07/09/07
Units:	mg/Kg	Received:	07/09/07
Basis:	as received	Prepared:	07/10/07
Batch#:	127091		

Field ID: T-1-3-4.0 Diln Fac: 10.00
Type: SAMPLE Analyzed: 07/12/07
Lab ID: 195842-001

Analyte	Result	RL
Diesel C10-C24	3,100 H Y	10
Motor Oil C24-C36	3,000 L	50

Surrogate	%REC	Limits
Hexacosane	DO	40-127

Field ID: T-1-15-3.0 Diln Fac: 1.000
Type: SAMPLE Analyzed: 07/10/07
Lab ID: 195842-002

Analyte	Result	RL
Diesel C10-C24	ND	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
Hexacosane	59	40-127

Field ID: T-1-15-6.0 Diln Fac: 10.00
Type: SAMPLE Analyzed: 07/12/07
Lab ID: 195842-003

Analyte	Result	RL
Diesel C10-C24	2,500 H Y	10
Motor Oil C24-C36	2,700 L	50

Surrogate	%REC	Limits
Hexacosane	DO	40-127

Field ID: T-2-20-4.0 Diln Fac: 1.000
Type: SAMPLE Analyzed: 07/10/07
Lab ID: 195842-004

Analyte	Result	RL
Diesel C10-C24	16 H Y	1.0
Motor Oil C24-C36	14 L	5.0

Surrogate	%REC	Limits
Hexacosane	61	40-127

H= Heavier hydrocarbons contributed to the quantitation
L= Lighter hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	195842	Location:	Pittsburg River Park
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE
Project#:	001-09587-01	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	07/09/07
Units:	mg/Kg	Received:	07/09/07
Basis:	as received	Prepared:	07/10/07
Batch#:	127091		

Field ID: T-2-30-5.5
Type: SAMPLE
Lab ID: 195842-005

Diln Fac: 3.000
Analyzed: 07/10/07

Analyte	Result	RL
Diesel C10-C24	600 H Y	3.0
Motor Oil C24-C36	1,300 L	15

Surrogate	%REC	Limits
Hexacosane	79	40-127

Field ID: T-3-6-5.0
Type: SAMPLE
Lab ID: 195842-006

Diln Fac: 1.000
Analyzed: 07/10/07

Analyte	Result	RL
Diesel C10-C24	6.8 H Y	0.99
Motor Oil C24-C36	16 L	5.0

Surrogate	%REC	Limits
Hexacosane	81	40-127

Field ID: T-3-13-7.5
Type: SAMPLE
Lab ID: 195842-007

Diln Fac: 40.00
Analyzed: 07/12/07

Analyte	Result	RL
Diesel C10-C24	11,000 H Y	40
Motor Oil C24-C36	9,500 L	200

Surrogate	%REC	Limits
Hexacosane	DO	40-127

Field ID: T-4-5-5.0
Type: SAMPLE
Lab ID: 195842-008

Diln Fac: 20.00
Analyzed: 07/12/07

Analyte	Result	RL
Diesel C10-C24	9,100 H Y	20
Motor Oil C24-C36	5,200 L	100

Surrogate	%REC	Limits
Hexacosane	DO	40-127

H= Heavier hydrocarbons contributed to the quantitation
L= Lighter hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	195842	Location:	Pittsburg River Park
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE
Project#:	001-09587-01	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	07/09/07
Units:	mg/Kg	Received:	07/09/07
Basis:	as received	Prepared:	07/10/07
Batch#:	127091		

Field ID: T-4-13-5.5 Diln Fac: 40.00
Type: SAMPLE Analyzed: 07/12/07
Lab ID: 195842-009

Analyte	Result	RL
Diesel C10-C24	13,000 H Y	40
Motor Oil C24-C36	8,400 L	200

Surrogate	%REC	Limits
Hexacosane	DO	40-127

Field ID: T-4-40-5.0 Diln Fac: 1.000
Type: SAMPLE Analyzed: 07/10/07
Lab ID: 195842-010

Analyte	Result	RL
Diesel C10-C24	3.1 H Y	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
Hexacosane	84	40-127

Field ID: T-5-4-5.0 Diln Fac: 5.000
Type: SAMPLE Analyzed: 07/12/07
Lab ID: 195842-011

Analyte	Result	RL
Diesel C10-C24	1,600 H Y	5.0
Motor Oil C24-C36	620 L	25

Surrogate	%REC	Limits
Hexacosane	90	40-127

Field ID: T-6-3-5.0 Diln Fac: 3.000
Type: SAMPLE Analyzed: 07/12/07
Lab ID: 195842-012

Analyte	Result	RL
Diesel C10-C24	1,000 H Y	3.0
Motor Oil C24-C36	360 L	15

Surrogate	%REC	Limits
Hexacosane	98	40-127

H= Heavier hydrocarbons contributed to the quantitation
L= Lighter hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	195842	Location:	Pittsburg River Park
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE
Project#:	001-09587-01	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	07/09/07
Units:	mg/Kg	Received:	07/09/07
Basis:	as received	Prepared:	07/10/07
Batch#:	127091		

Field ID:	T-7-5-5.0	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	07/10/07
Lab ID:	195842-013		

Analyte	Result	RL
Diesel C10-C24	ND	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
Hexacosane	88	40-127

Field ID:	T-4-30-5.0	Diln Fac:	20.00
Type:	SAMPLE	Analyzed:	07/12/07
Lab ID:	195842-014		

Analyte	Result	RL
Diesel C10-C24	9,700 H Y	20
Motor Oil C24-C36	5,900 L	100

Surrogate	%REC	Limits
Hexacosane	DO	40-127

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC395561	Analyzed:	07/10/07

Analyte	Result	RL
Diesel C10-C24	ND	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
Hexacosane	95	40-127

H= Heavier hydrocarbons contributed to the quantitation
L= Lighter hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	195842	Location:	Pittsburg River Park
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE
Project#:	001-09587-01	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC395562	Batch#:	127091
Matrix:	Soil	Prepared:	07/10/07
Units:	mg/Kg	Analyzed:	07/10/07
Basis:	as received		

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.88	44.04	88	58-127

Surrogate	%REC	Limits
Hexacosane	92	40-127

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	195842	Location:	Pittsburg River Park
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE
Project#:	001-09587-01	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	127091
MSS Lab ID:	195833-004	Sampled:	07/09/07
Matrix:	Soil	Received:	07/09/07
Units:	mg/Kg	Prepared:	07/10/07
Basis:	as received	Analyzed:	07/10/07
Diln Fac:	1.000		

Type: MS Lab ID: QC395563

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	2.150	49.82	43.45	83	29-147

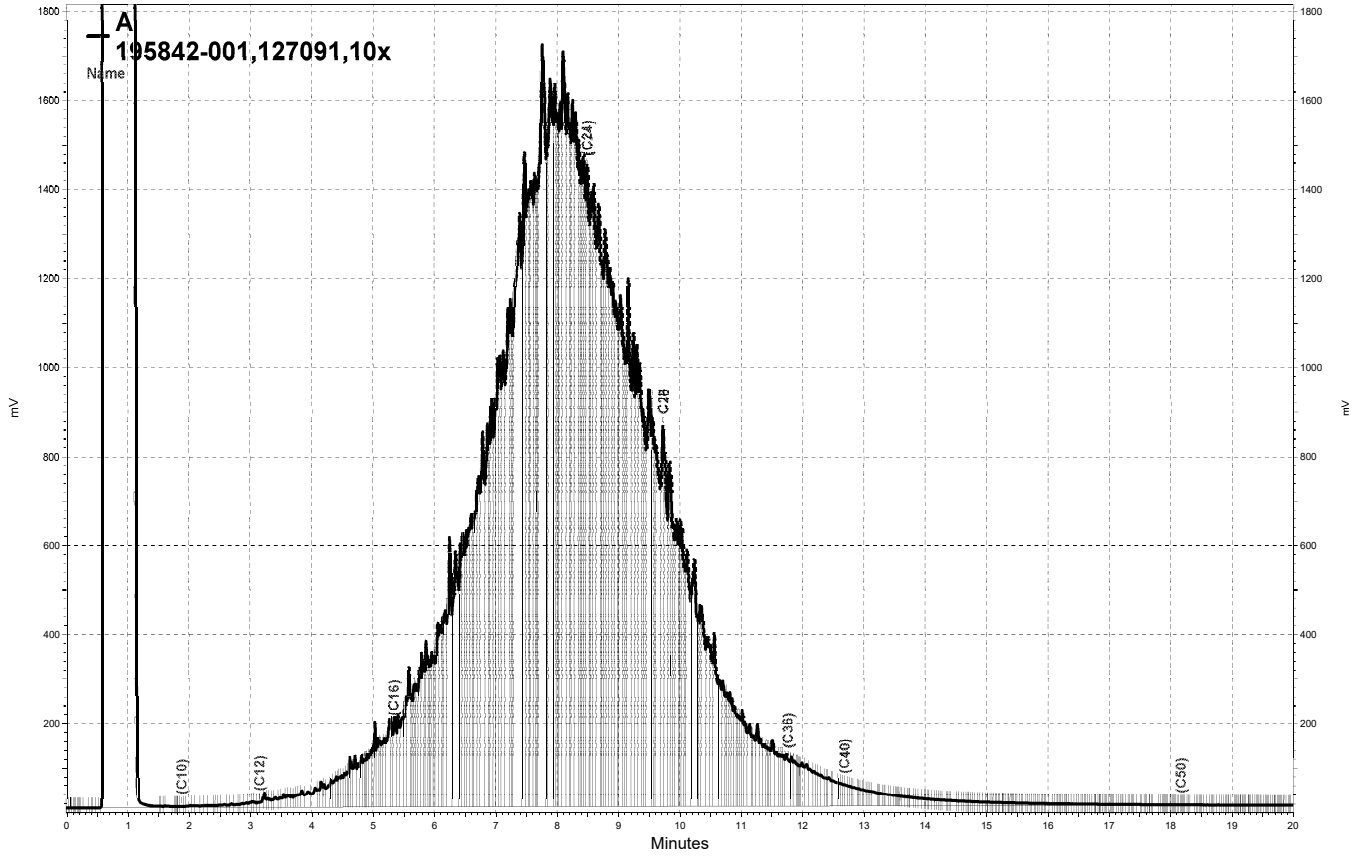
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Hexacosane	92	40-127

Type: MSD Lab ID: QC395564

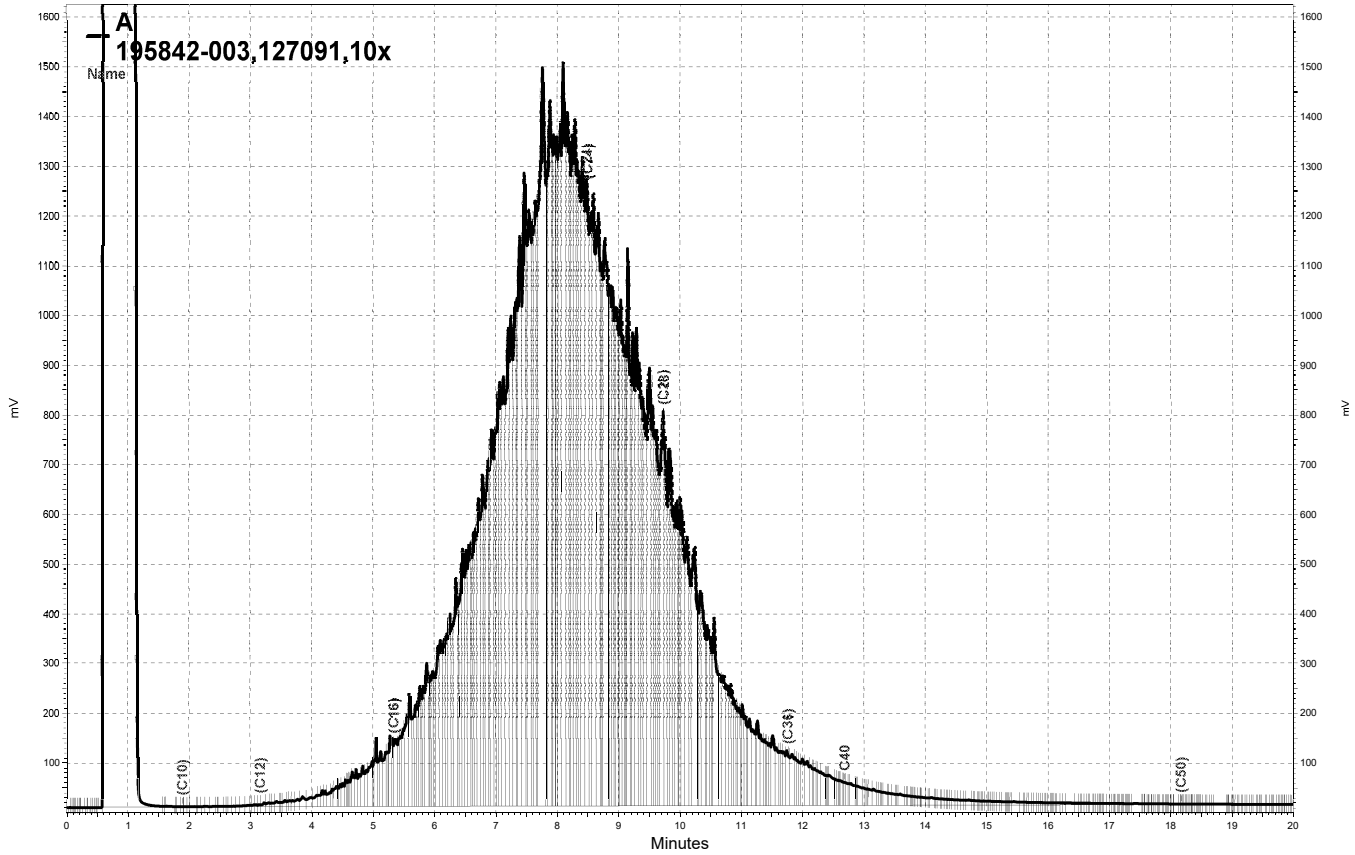
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	49.83	49.61	95	29-147	13	46

Surrogate	%REC	Limits
Hexacosane	103	40-127

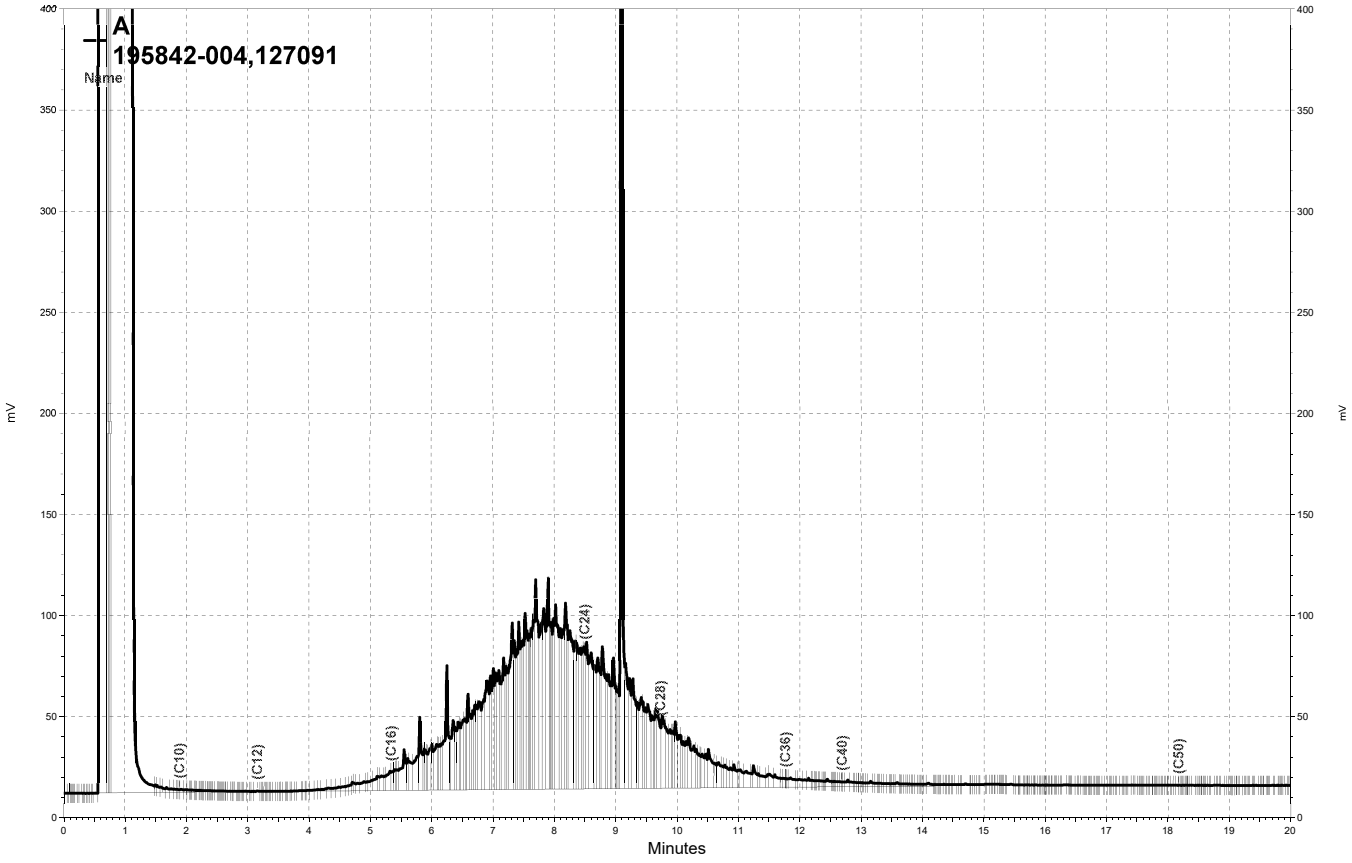
RPD= Relative Percent Difference



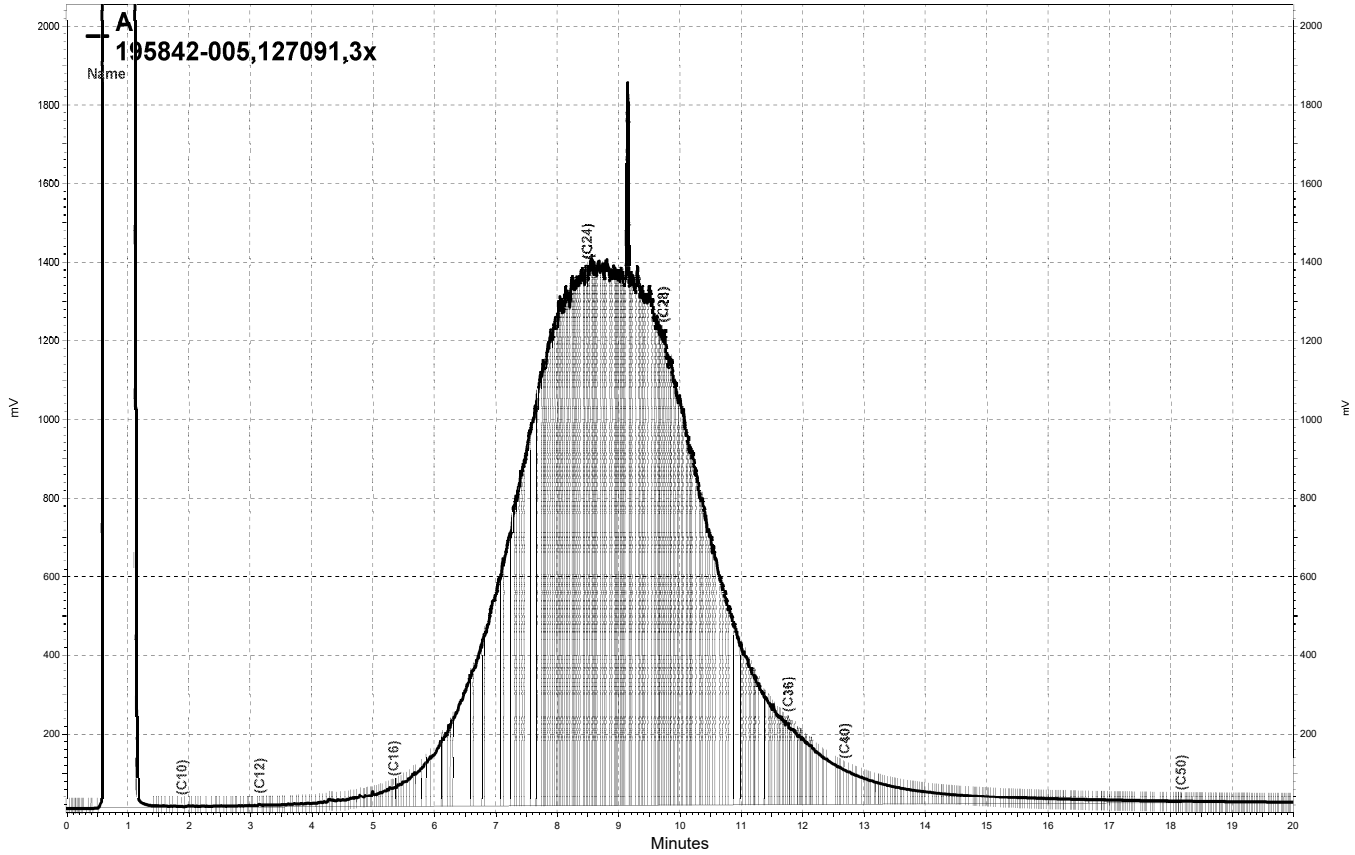
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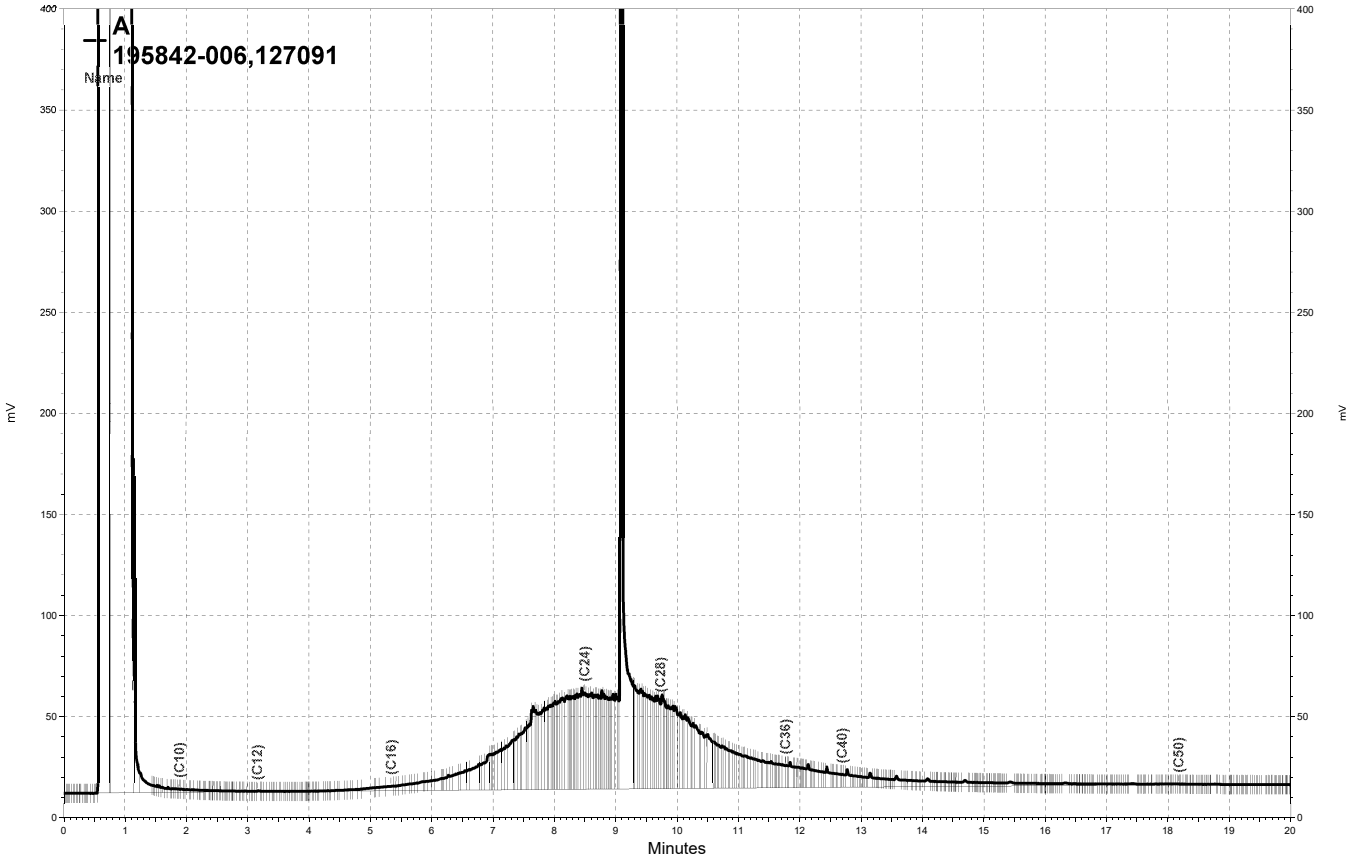
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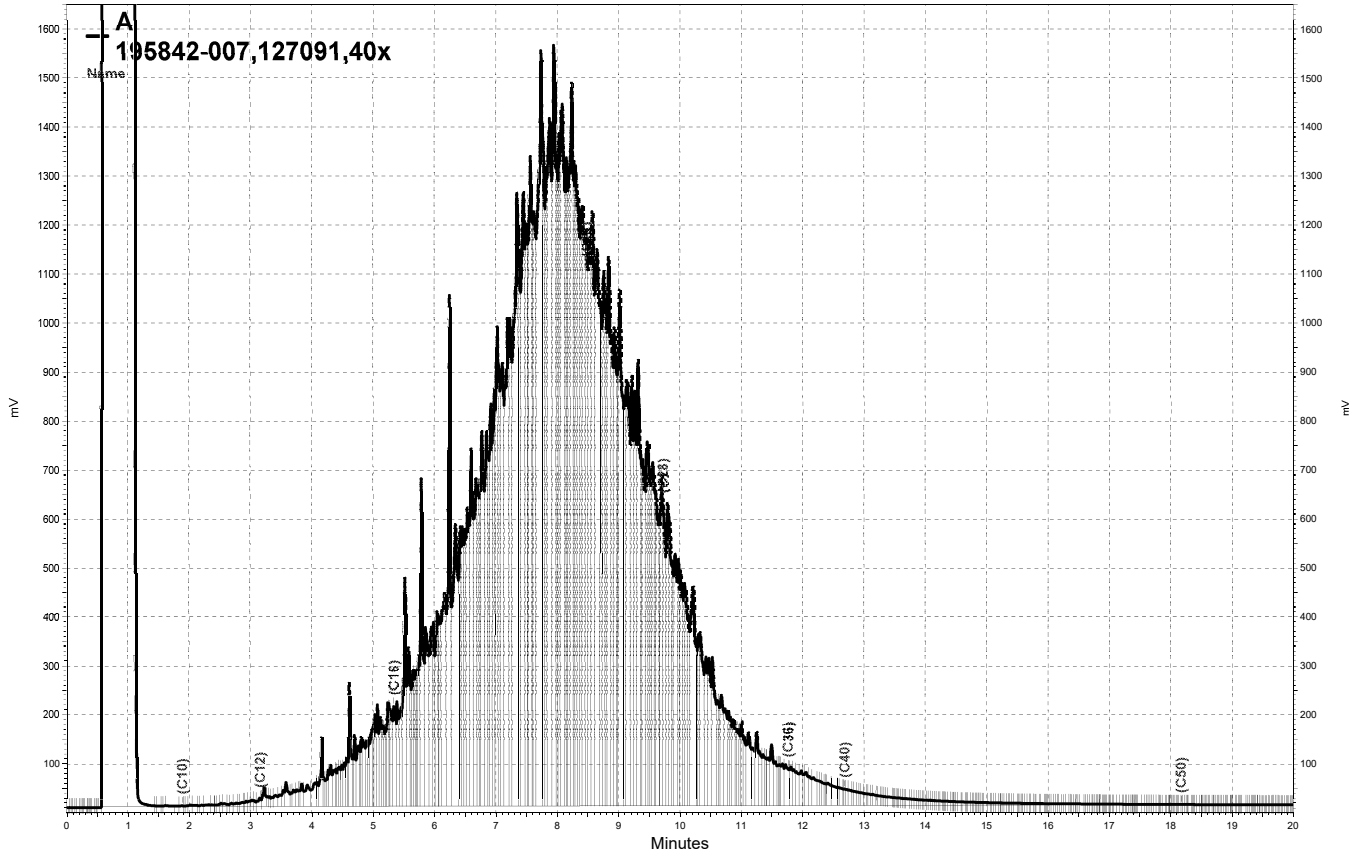
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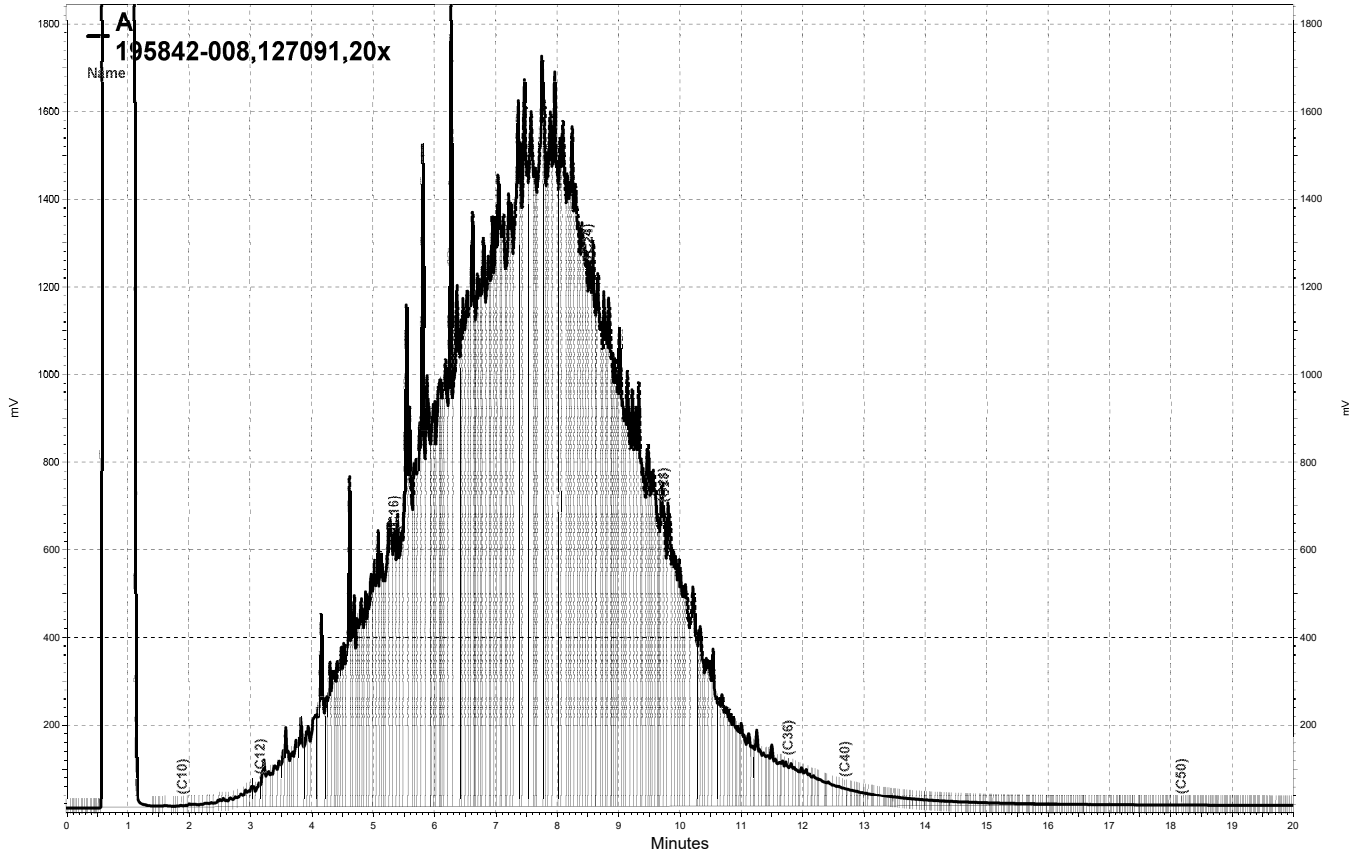
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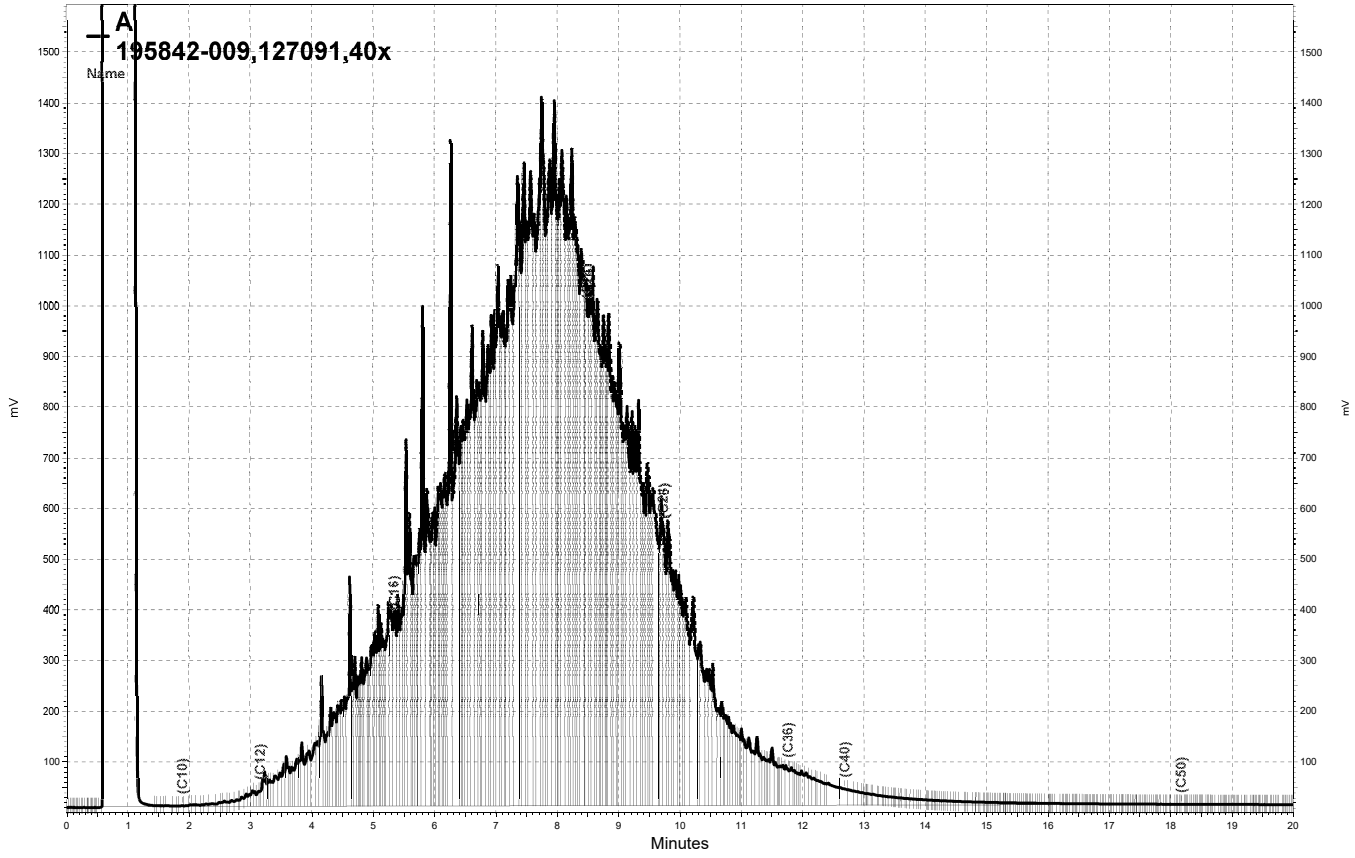
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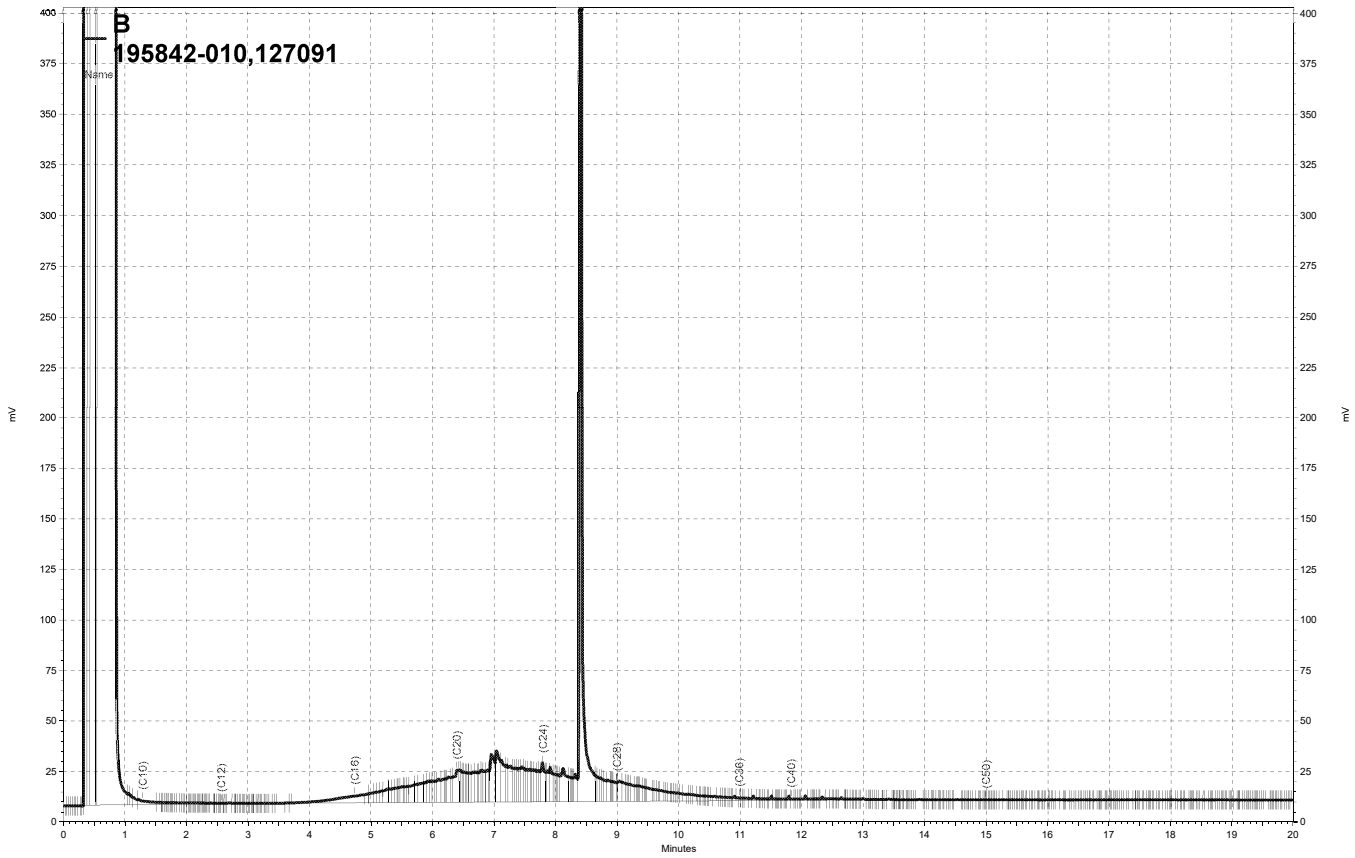
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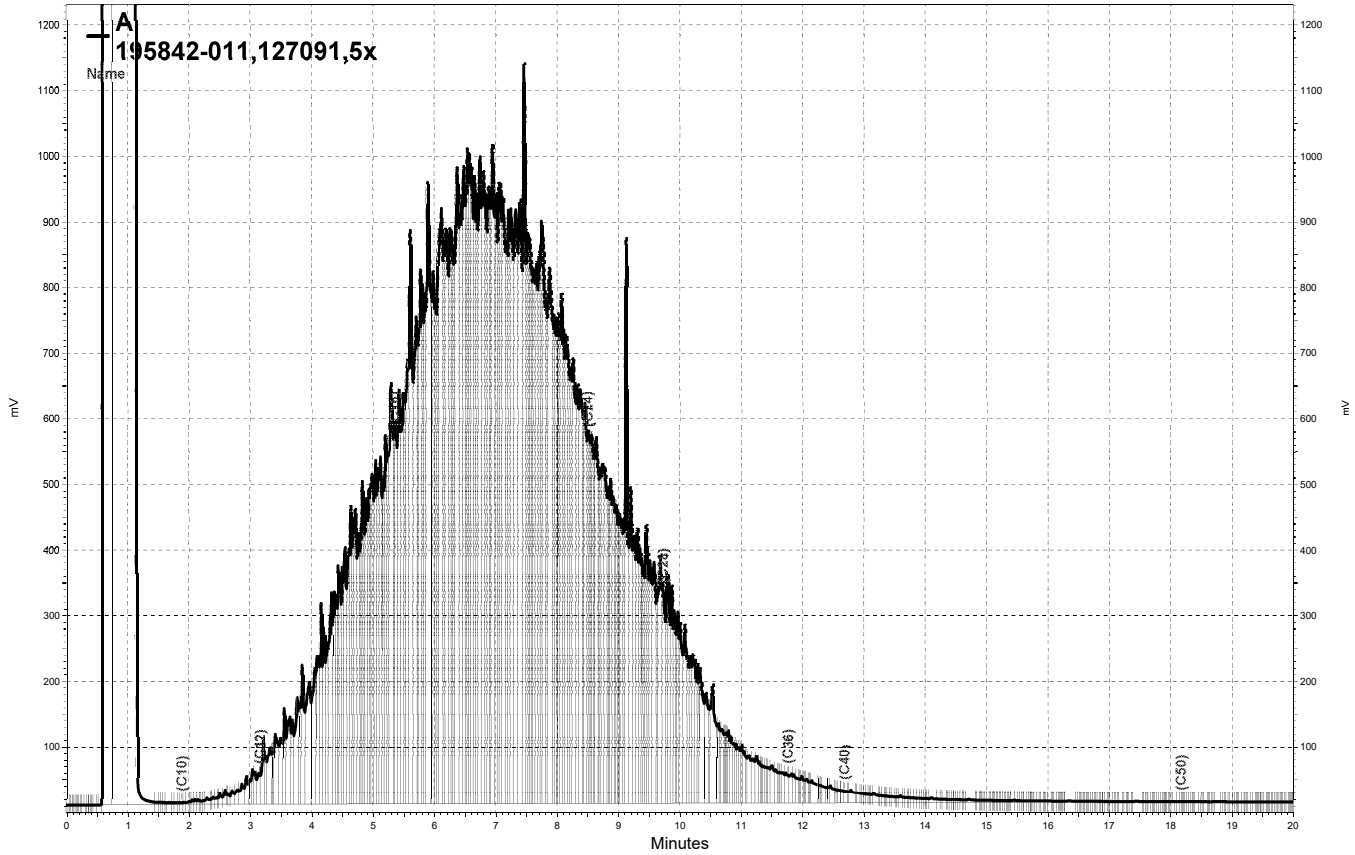
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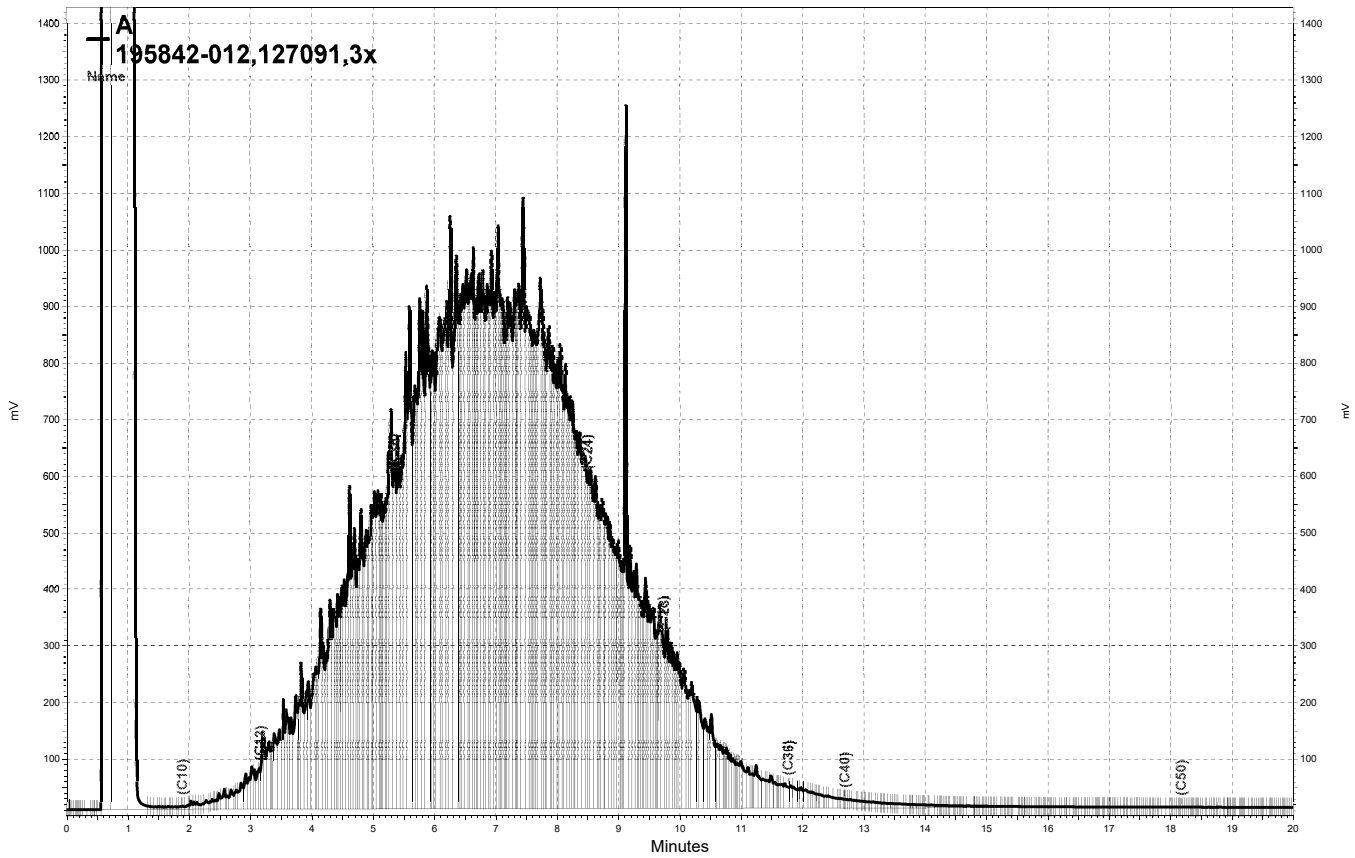
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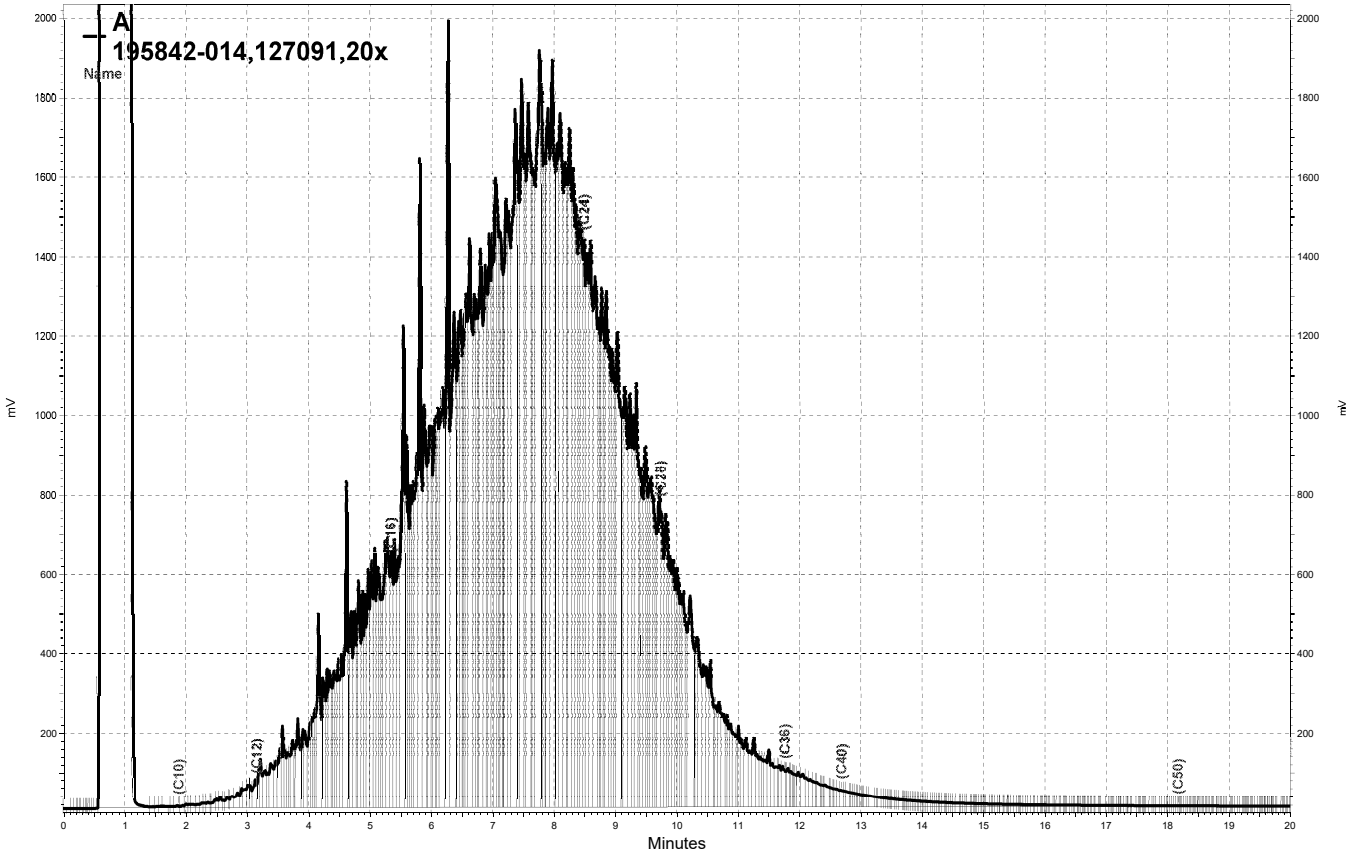
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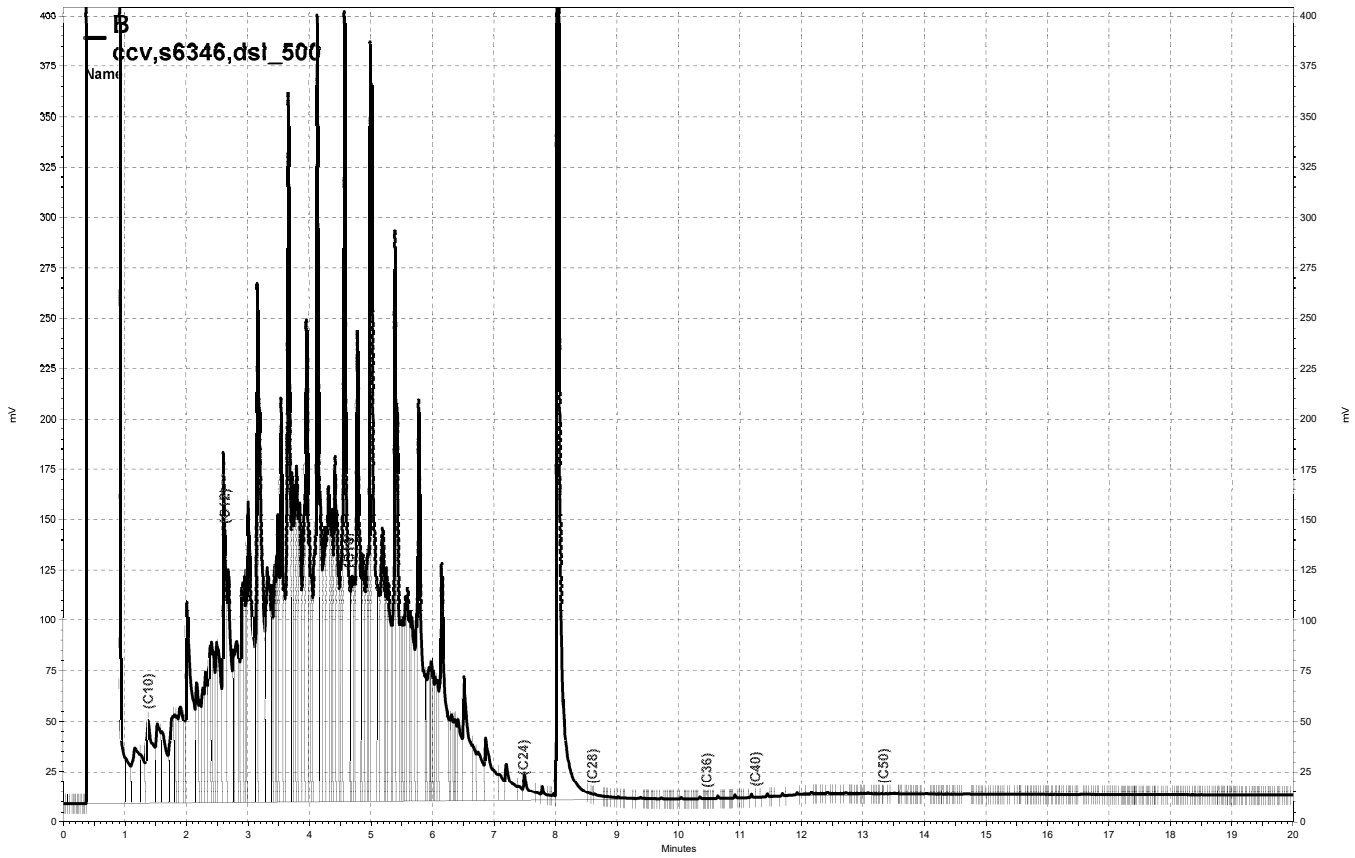
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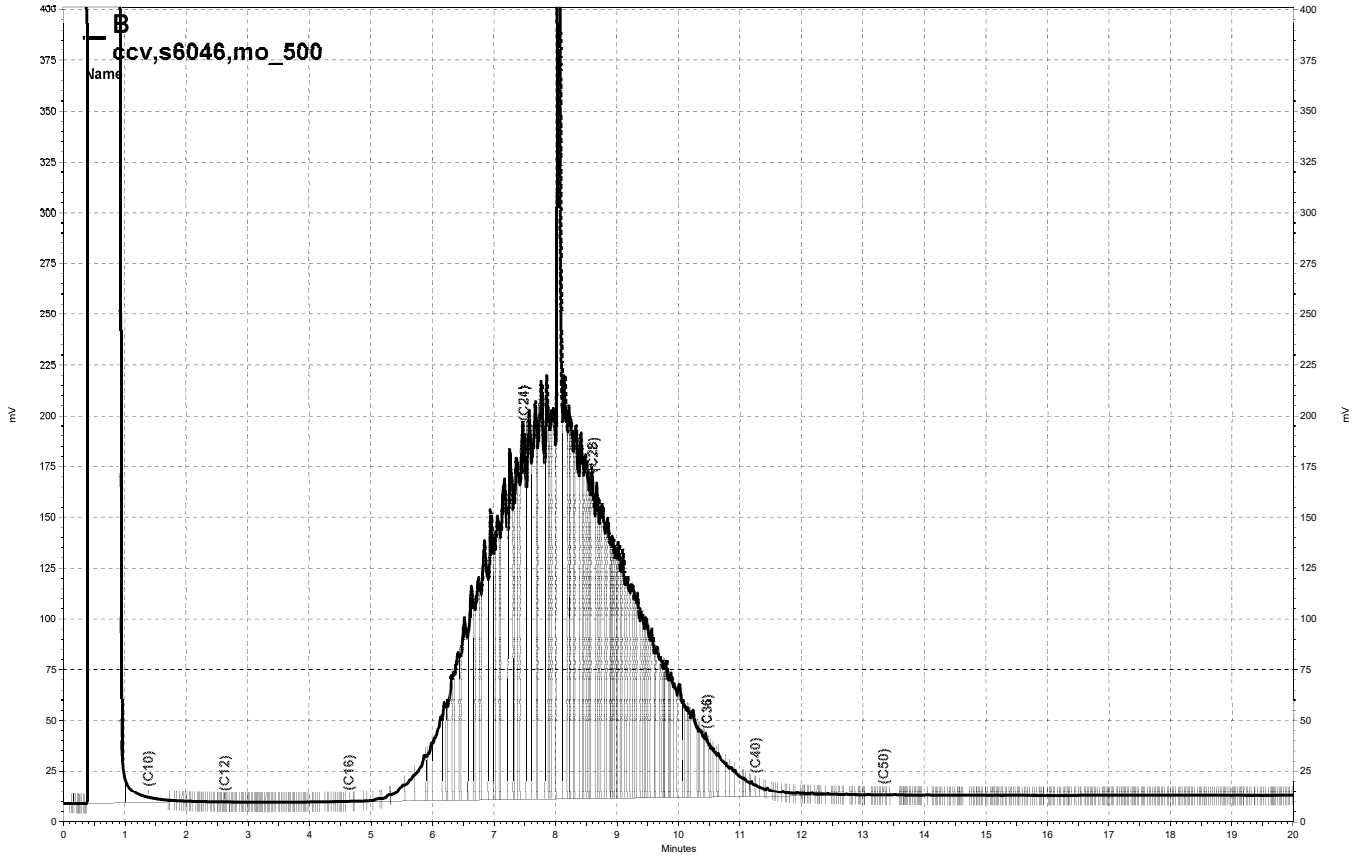
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\\Lims\gdrive\ezchrom\Projects\GC15B\Data\191b011, B

195871

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

SAMPLE COLLECTOR:
LFR LEVINE•FRICKE
1900 Powell Street, 12th Floor
Emeryville, California 94608-1827
(510) 652-4500 Fax: (510) 652-2246

PROJECT NO.:	SECTION NO.:	DATE:	SAMPLER'S INITIALS:	SERIAL NO.:
001-09587-01		7/10/07	JAG	Nº 202121
PROJECT NAME: Pittsburg River Park		**SAMPLER (Signature):**		

SAMPLE						ANALYSES											REMARKS
					TYPE									TAT			
SAMPLE ID.	DATE	TIME	Lab Sample No.	No. of Containers	Soil	Water	TPHd (EPA 8015M)	TPHmo (EPA 8015M)	TPHg (EPA 8015M)	BTEX (EPA 8021/602)	VOCs (EPA 8260/624)	Metals (EPA 6010/7000)			Standard	RUSH:	HOLD	*VOCs: ☐ 8260 List ☐ 8240 List ☐ 8010 List ☐ 624 List **Metals: ☐ CAM17 ☐ RCRA ☐ LUFT
-1 T-8-5-5.0	7/10/07	0825		1	X		X	X							X			
-2 T-9-45-4.0	7/10/07	0955		1	X		X	X							X			
-3 T-9-25-8.0	7/10/07	0945		1	X		X	X							X			
-4 T-9-40-8.0	7/10/07	1005		1	X		X	X							X			
-5 T-8-15-6.0	7/10/07	0835		1	X		X	X									X	

Note:
T-8-15-6.0 is to be on hold

SAMPLE RECEIPT:	Cooler Temp:	METHOD OF SHIPMENT:	RELINQUISHED BY: 1	RELINQUISHED BY: 2	RELINQUISHED BY: 3
☒ Intact ☐ Cold ☒ On Ice ☐ Ambient	Cooler No:	Hand Deliver	(SIGNATURE) 7/10/07 (DATE)	(SIGNATURE) (DATE)	(SIGNATURE) (DATE)
Preservative Correct? ☐ Yes ☐ No ☐ N/A		LAB REPORT NO.:	James Gonzalez 1735 (PRINTED NAME) (TIME)	(PRINTED NAME) (TIME)	(PRINTED NAME) (TIME)
		FAX COC CONFIRMATION TO: Ron Goldman	LFR Inc (COMPANY)	(COMPANY)	(COMPANY)
ANALYTICAL LABORATORY:		FAX RESULTS TO: " "	**RECEIVED BY:** 1	**RECEIVED BY:** 2	**RECEIVED BY (LABORATORY):** 3
		SEND HARDCOPY TO: " "	(SIGNATURE) 7/10/07 (DATE)	(SIGNATURE) (DATE)	(SIGNATURE) (DATE)
		SEND EDD TO: EMV.LABEDDS.COM	LISA BROOKER 1735 (PRINTED NAME) (TIME)	(PRINTED NAME) (TIME)	(PRINTED NAME) (TIME)
			Curtis + Tompkins (COMPANY)	(COMPANY)	(COMPANY)

Shipping Copy (White) File Copy (Yellow) Field Copy (Pink)

Curtis & Tompkins, Ltd.

COOLER RECEIPT CHECKLIST

Login#: 195871 Date Received: 7/10/07 Number of Coolers: 1
Client: LFR Project: Pittsburg River Park

A. Preliminary Examination Phase
Date Opened: 7/10/07 By (print): SMartedaro (sign)
1. Did cooler come with a shipping slip (airbill, etc.)? ..... YES (NO)
If YES, enter carrier name and airbill number:
2. Were custody seals on outside of cooler? ..... YES (NO)
How many and where? Seal date: Seal name:
3. Were custody seals unbroken and intact at the date and time of arrival? ..... YES NO n/a
4. Were custody papers dry and intact when received? ..... (YES) NO
5. Were custody papers filled out properly (ink, signed, etc.)? ..... (YES) NO
6. Did you sign the custody papers in the appropriate place? ..... (YES) NO
7. Was project identifiable from custody papers? ..... (YES) NO
If YES, enter project name at the top of this form.
8. If required, was sufficient ice used? Samples should be <=6 degrees C. ..... YES NO
Type of ice: Wet Temperature: no temp blank; samples cold

B. Login Phase
Date Logged In: 7/10/07 By (print): SMartedaro (sign)
1. Describe type of packing in cooler: Ziplock bags
2. Did all bottles arrive unbroken? ..... (YES) NO
3. Were labels in good condition and complete (ID, date, time, signature, etc.)? ..... (YES) NO
4. Did bottle labels agree with custody papers? ..... (YES) NO
5. Were appropriate containers used for the tests indicated? ..... (YES) NO
6. Were correct preservatives added to samples? ..... YES NO n/a
7. Was sufficient amount of sample sent for tests indicated? ..... (YES) NO
8. Were bubbles absent in VOA samples? If NO, list sample Ids below. ..... YES NO n/a
9. Was the client contacted concerning this sample delivery? ..... YES NO
If YES, give details below.
Who was called? By whom? Date:

Additional Comments:

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 195871

LFR Levine Fricke	Project : 001-09587-01
1900 Powell Street	Location : Pittsburg River Park
Emeryville, CA 94608	Level : II

Sample ID	Lab ID
T-8-5-5.0	195871-001
T-9-45-4.0	195871-002
T-9-25-8.0	195871-003
T-9-40-8.0	195871-004
T-8-15-6.0	195871-005

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Signature: _____ Date: 07/17/2007
Project Manager

Signature: _____ Date: 07/17/2007
Operations Manager

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**195871**
Client:	**LFR Levine Fricke**
Project:	**001-09587-01**
Location:	**Pittsburg River Park**
Request Date:	**07/11/07**
Samples Received:	**07/11/07**

This hardcopy data package contains sample and QC results for four soil samples, requested for the above referenced project on 07/11/07. The samples were received cold and intact. All data were e-mailed to Ron Goloubow on 07/17/07.

TPH-Extractables by GC (EPA 8015B):

No analytical problems were encountered.

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	195871	Location:	Pittsburg River Park
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE
Project#:	001-09587-01	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	07/10/07
Units:	mg/Kg	Received:	07/11/07
Basis:	as received	Prepared:	07/11/07
Batch#:	127148		

Field ID: T-8-5-5.0
Type: SAMPLE
Lab ID: 195871-001
Diln Fac: 1.000
Analyzed: 07/12/07

Analyte	Result	RL
Diesel C10-C24	1.6 H Y	0.99
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
Hexacosane	84	40-127

Field ID: T-9-45-4.0
Type: SAMPLE
Lab ID: 195871-002
Diln Fac: 1.000
Analyzed: 07/12/07

Analyte	Result	RL
Diesel C10-C24	ND	0.99
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
Hexacosane	84	40-127

Field ID: T-9-25-8.0
Type: SAMPLE
Lab ID: 195871-003
Diln Fac: 5.000
Analyzed: 07/12/07

Analyte	Result	RL
Diesel C10-C24	2,800 H L Y	5.0
Motor Oil C24-C36	3,500 L	25

Surrogate	%REC	Limits
Hexacosane	65	40-127

Field ID: T-9-40-8.0
Type: SAMPLE
Lab ID: 195871-004
Diln Fac: 40.00
Analyzed: 07/16/07

Analyte	Result	RL
Diesel C10-C24	14,000 H	40
Motor Oil C24-C36	4,500 L	200

Surrogate	%REC	Limits
Hexacosane	DO	40-127

H= Heavier hydrocarbons contributed to the quantitation
L= Lighter hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	195871	Location:	Pittsburg River Park
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE
Project#:	001-09587-01	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	07/10/07
Units:	mg/Kg	Received:	07/11/07
Basis:	as received	Prepared:	07/11/07
Batch#:	127148		

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC395818	Analyzed:	07/12/07

Analyte	Result	RL
Diesel C10-C24	ND	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
Hexacosane	72	40-127

H= Heavier hydrocarbons contributed to the quantitation
L= Lighter hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	195871	Location:	Pittsburg River Park
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE
Project#:	001-09587-01	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC395819	Batch#:	127148
Matrix:	Soil	Prepared:	07/11/07
Units:	mg/Kg	Analyzed:	07/12/07
Basis:	as received		

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.87	41.34	83	58-127

Surrogate	%REC	Limits
Hexacosane	79	40-127

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	195871	Location:	Pittsburg River Park
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE
Project#:	001-09587-01	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	127148
MSS Lab ID:	195852-010	Sampled:	07/09/07
Matrix:	Soil	Received:	07/10/07
Units:	mg/Kg	Prepared:	07/11/07
Basis:	as received	Analyzed:	07/12/07
Diln Fac:	1.000		

Type: MS Cleanup Method: EPA 3630C
Lab ID: QC395820

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	16.52	49.86	58.87	85	29-147

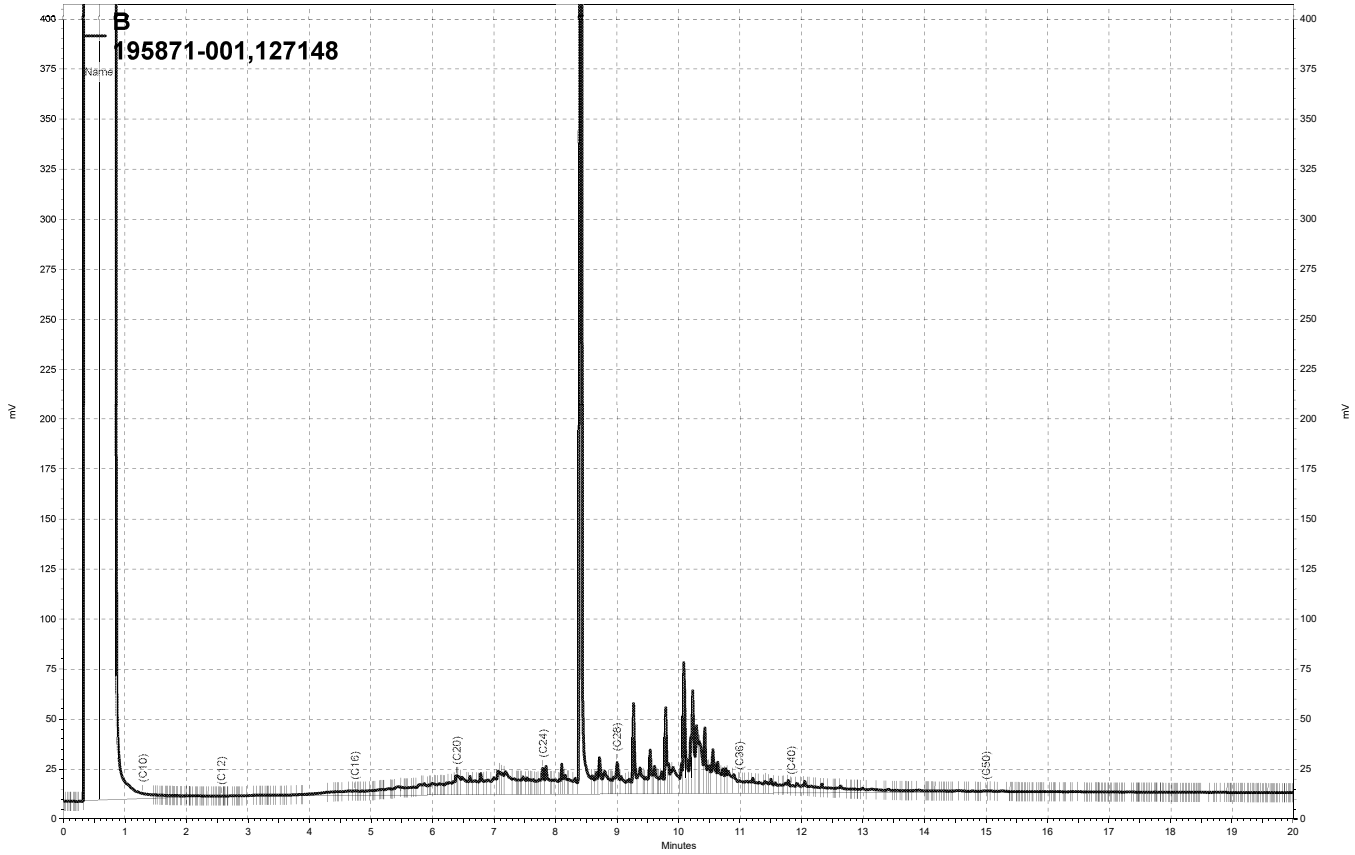
Surrogate	%REC	Limits
Hexacosane	83	40-127

Type: MSD Cleanup Method: EPA 3630C
Lab ID: QC395821

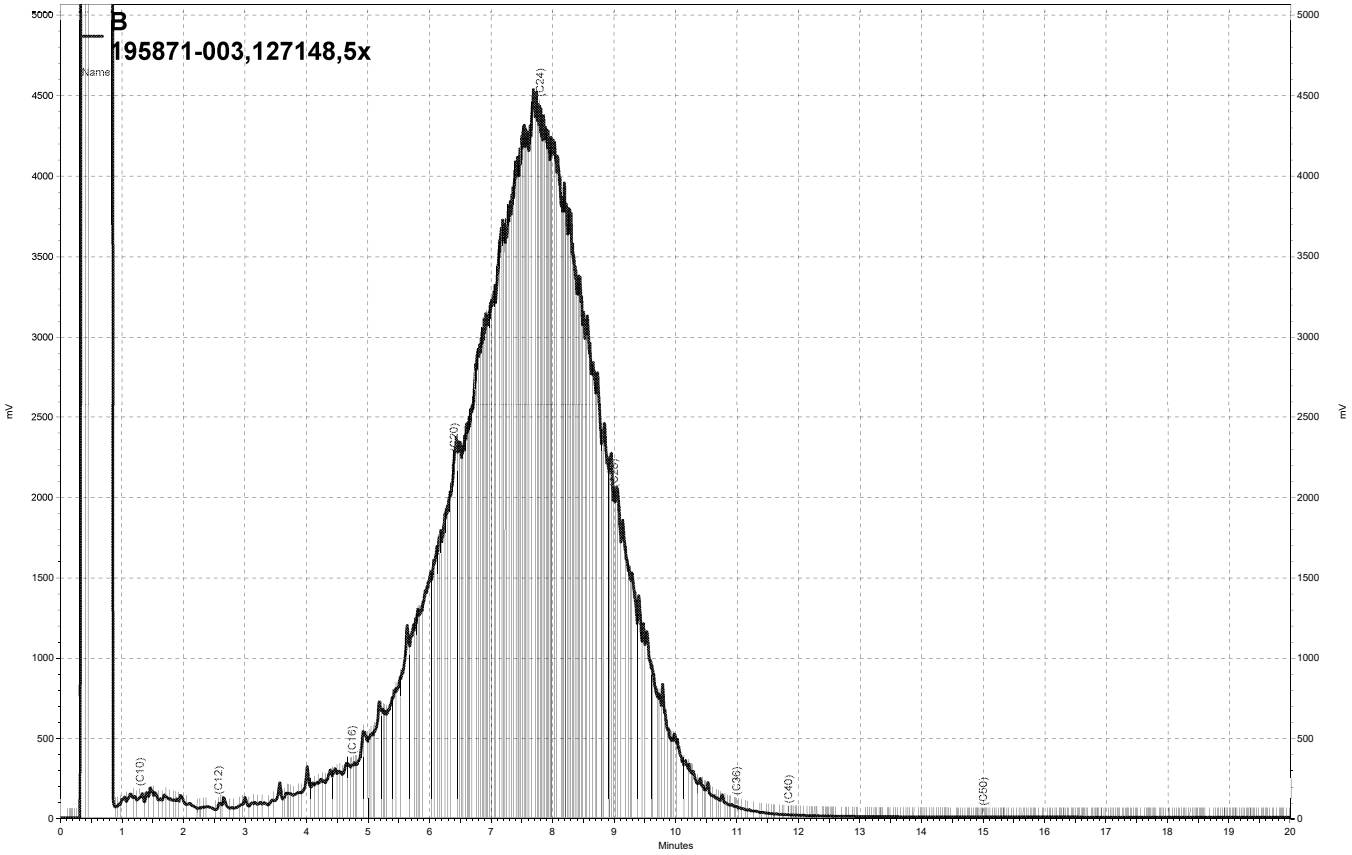
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	49.81	47.18	62	29-147	22	46

Surrogate	%REC	Limits
Hexacosane	71	40-127

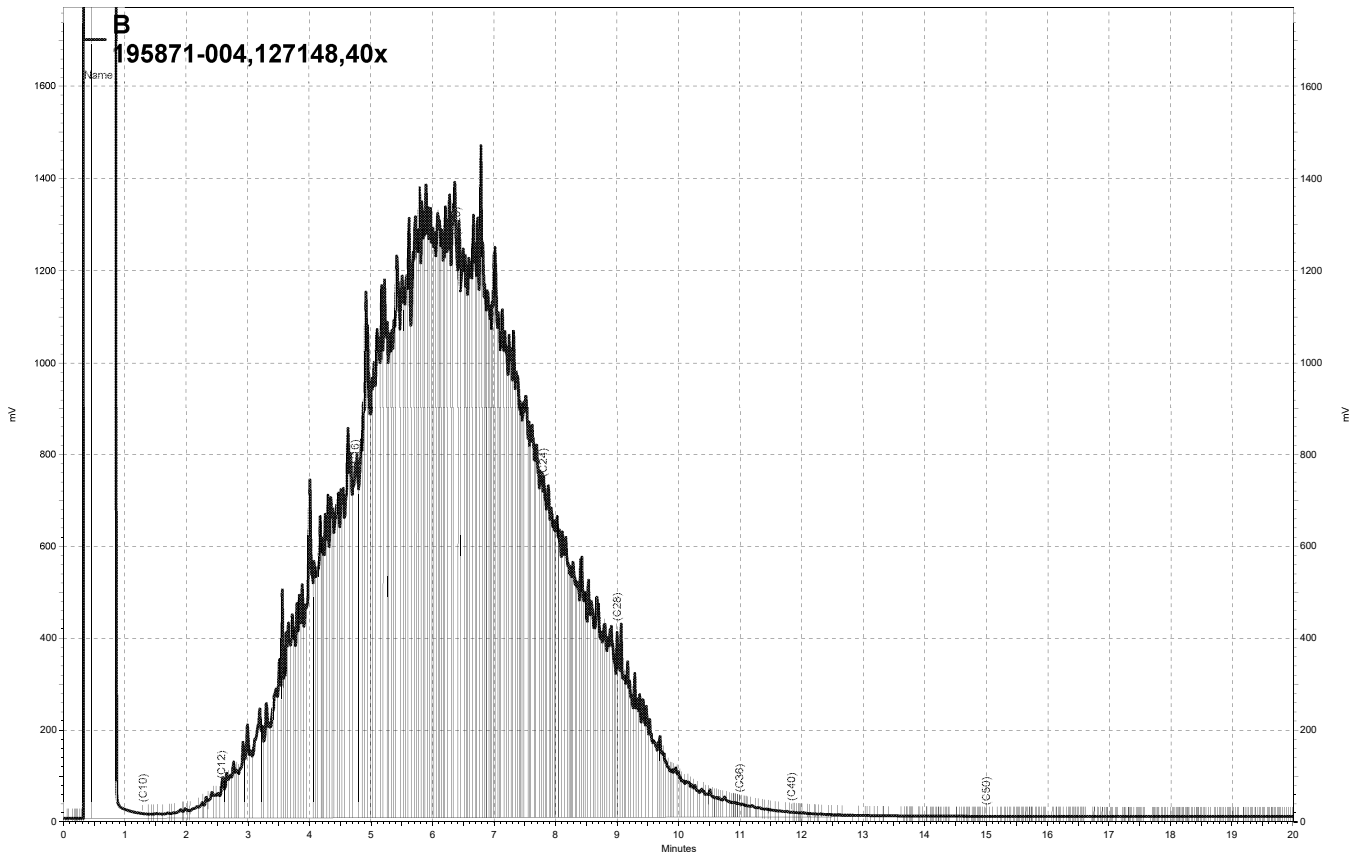
RPD= Relative Percent Difference



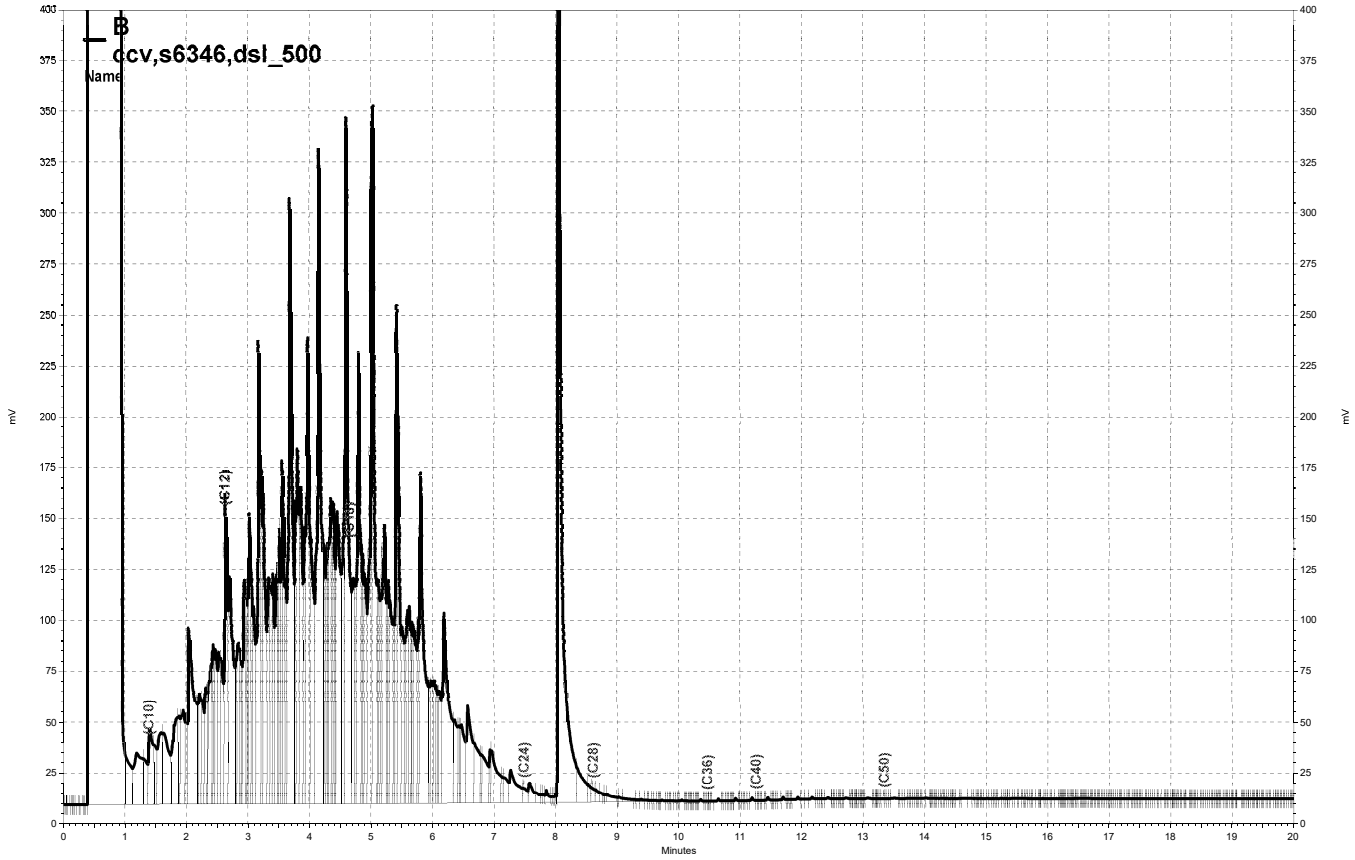
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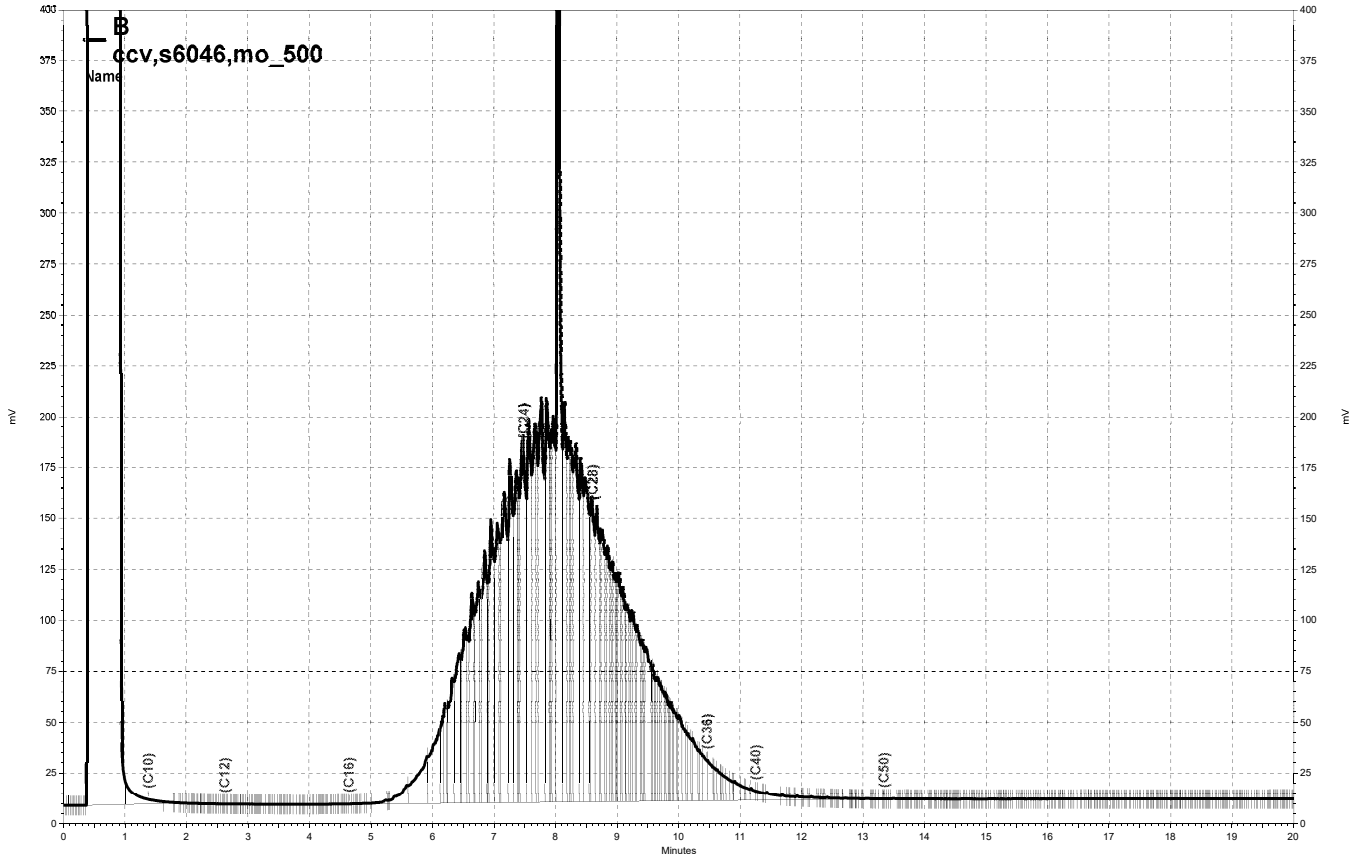
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CURTIS & TOMPKINS, LTD. BERKELEY LOGIN CHANGE FORM

Reason for change: X Client Request: By: Ron. G Date/Time: 7-16-07 Initials: TD Level: II
____ Login Review ____ Data Review Client/Acct: LFR

Current Lab ID	Previous Lab ID	Client ID	Matrix	Add/Cancel/ Change	Analysis	Holddate	Duedate
196016 -001	195842 -017	T-5-5-S.C	Soil	Add	TEHM w/Silica Gel		
-002	-018	T-6-15-4	Soil	Add	TEHM w/Silica Gel		

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 196016

LFR Levine Fricke	Project : 001-09587-01
1900 Powell Street	Location : Pittsburg River Park
Emeryville, CA 94608	Level : II

Sample ID	Lab ID
T-5-15-5.0	196016-001
T-6-15-4.5	196016-002

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Signature: _____ Date: 07/24/2007
Project Manager

Signature: _____ Date: 07/24/2007
Operations Manager

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**196016**
Client:	**LFR Levine Fricke**
Project:	**001-09587-01**
Location:	**Pittsburg River Park**
Request Date:	**07/16/07**
Samples Received:	**07/09/07**

This hardcopy data package contains sample and QC results for two soil samples, requested for the above referenced project on 07/16/07. The samples were received cold and intact. All data were e-mailed to Ron Goloubow on 07/20/07.

TPH-Extractables by GC (EPA 8015B):

No analytical problems were encountered.

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	196016	Location:	Pittsburg River Park
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE
Project#:	001-09587-01	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	07/09/07
Units:	mg/Kg	Received:	07/09/07
Basis:	as received	Prepared:	07/17/07
Batch#:	127346		

Field ID:	T-5-15-5.0	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	07/18/07
Lab ID:	196016-001	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Diesel C10-C24	82 H Y	1.0
Motor Oil C24-C36	48 L	5.0

Surrogate	%REC	Limits
Hexacosane	71	40-127

Field ID:	T-6-15-4.5	Diln Fac:	5.000
Type:	SAMPLE	Analyzed:	07/19/07
Lab ID:	196016-002	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Diesel C10-C24	1,600 H Y	5.0
Motor Oil C24-C36	1,100 L	25

Surrogate	%REC	Limits
Hexacosane	96	40-127

Type:	BLANK	Analyzed:	07/18/07
Lab ID:	QC396685	Cleanup Method:	EPA 3630C
Diln Fac:	1.000		

Analyte	Result	RL
Diesel C10-C24	ND	0.99
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
Hexacosane	97	40-127

H= Heavier hydrocarbons contributed to the quantitation
L= Lighter hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	196016	Location:	Pittsburg River Park
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE
Project#:	001-09587-01	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC396686	Batch#:	127346
Matrix:	Soil	Prepared:	07/17/07
Units:	mg/Kg	Analyzed:	07/18/07
Basis:	as received		

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.87	47.98	96	58-127

Surrogate	%REC	Limits
Hexacosane	100	40-127

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	196016	Location:	Pittsburg River Park
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE
Project#:	001-09587-01	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	127346
MSS Lab ID:	195992-005	Sampled:	07/13/07
Matrix:	Soil	Received:	07/16/07
Units:	mg/Kg	Prepared:	07/17/07
Basis:	as received	Analyzed:	07/18/07
Diln Fac:	5.000		

Type: MS Cleanup Method: EPA 3630C
Lab ID: QC396687

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	1,389	49.95	1,631	485 NM	29-147

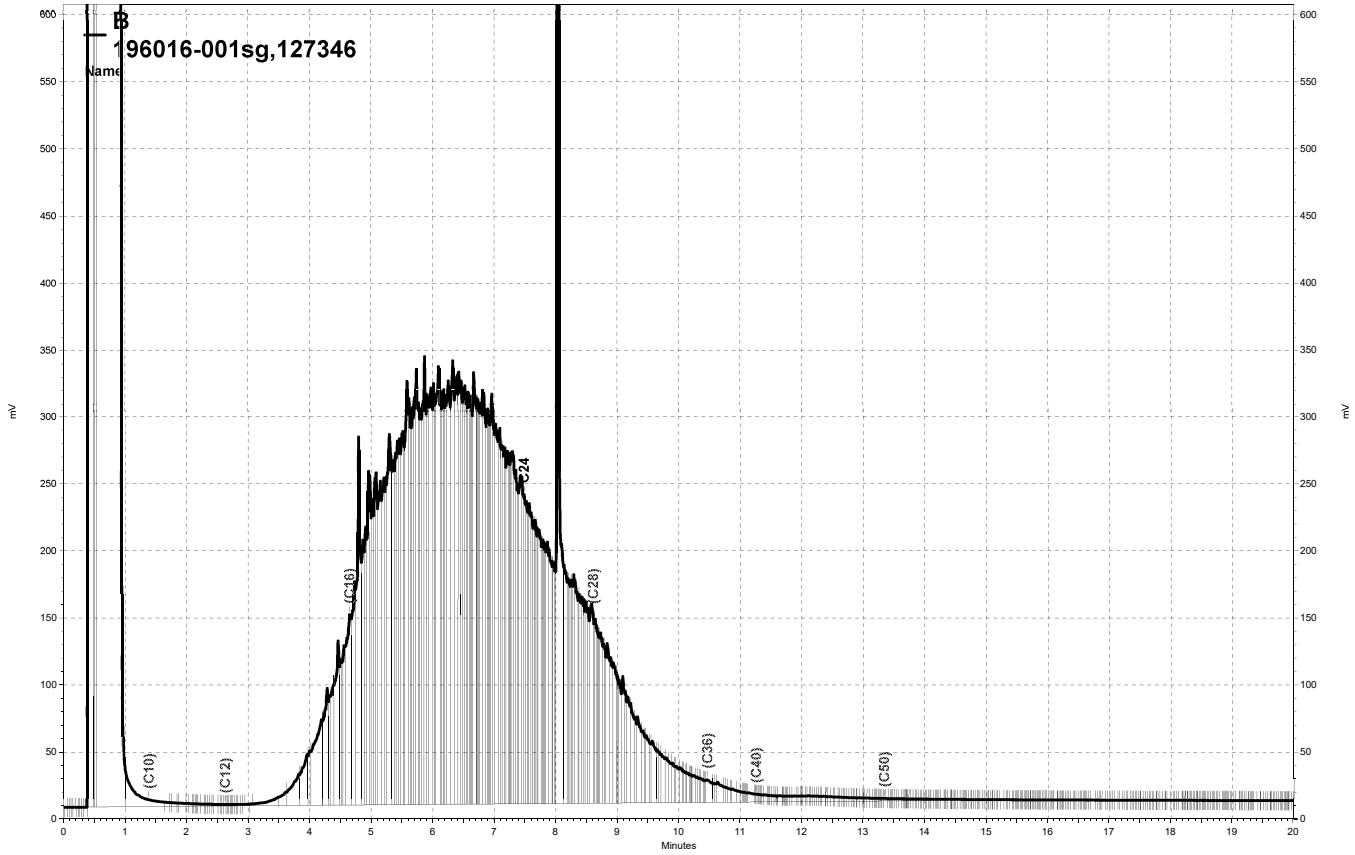
Surrogate	%REC	Limits
Hexacosane	51	40-127

Type: MSD Cleanup Method: EPA 3630C
Lab ID: QC396688

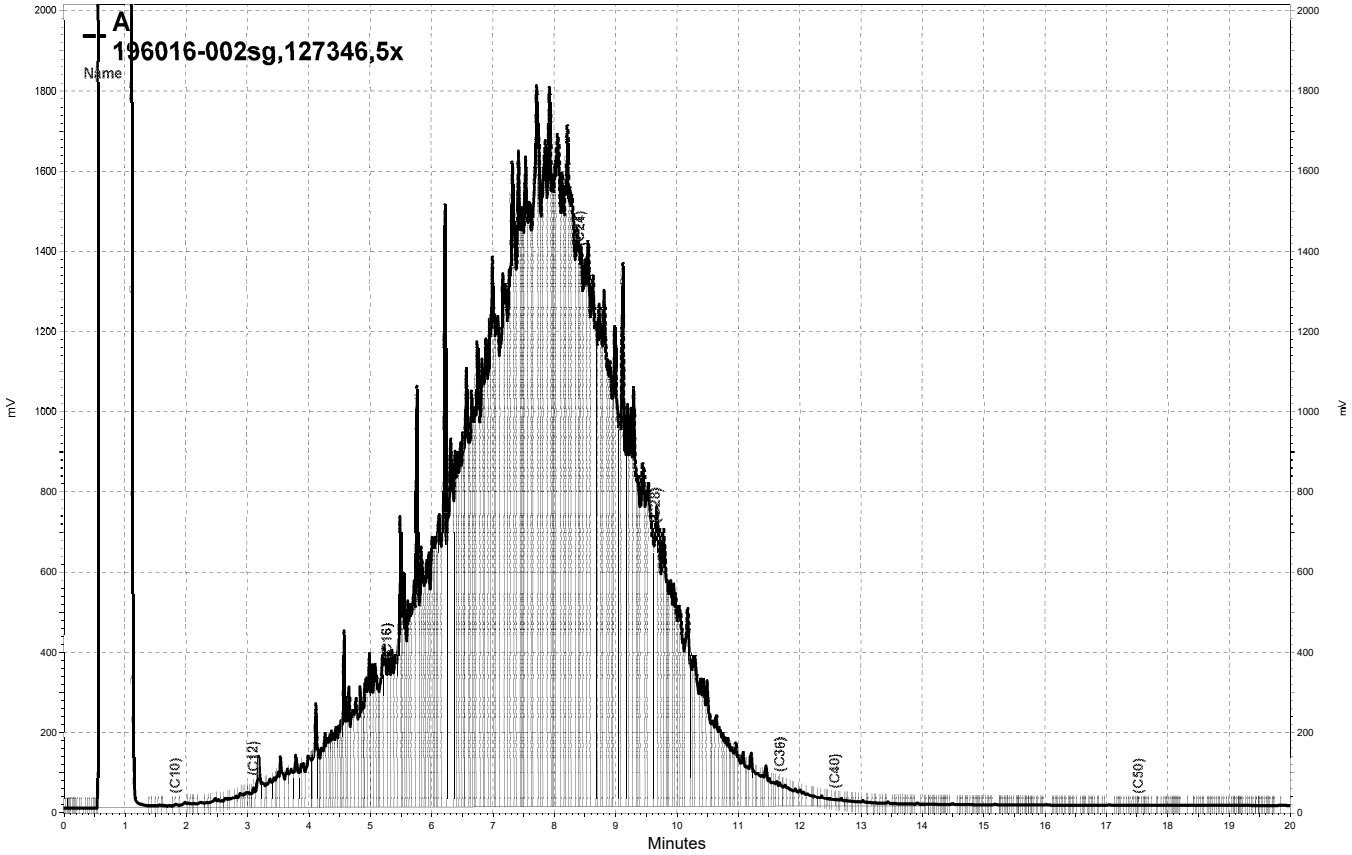
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	49.90	1,650	524 NM	29-147	1	46

Surrogate	%REC	Limits
Hexacosane	115	40-127

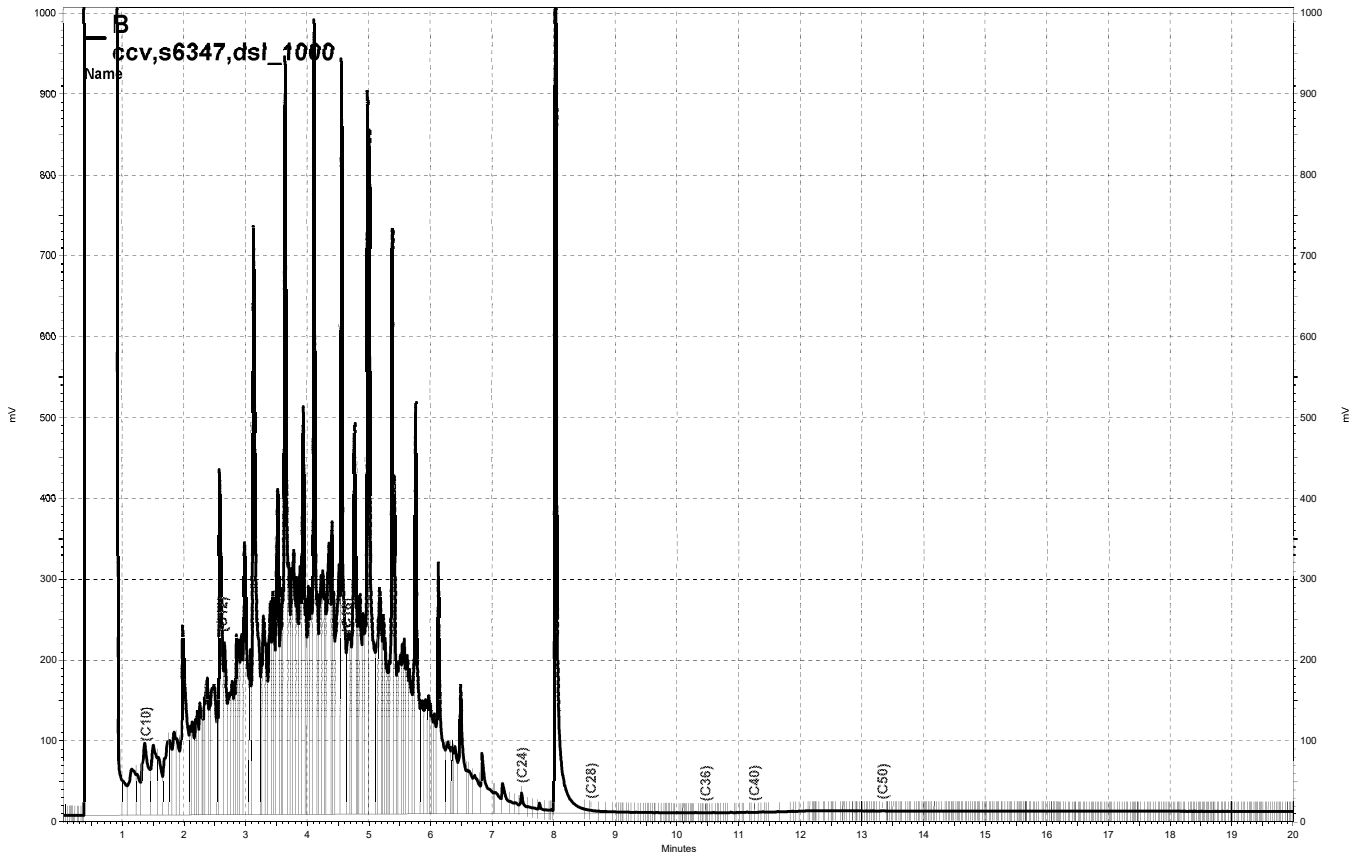
NM= Not Meaningful: Sample concentration > 4X spike concentration
RPD= Relative Percent Difference



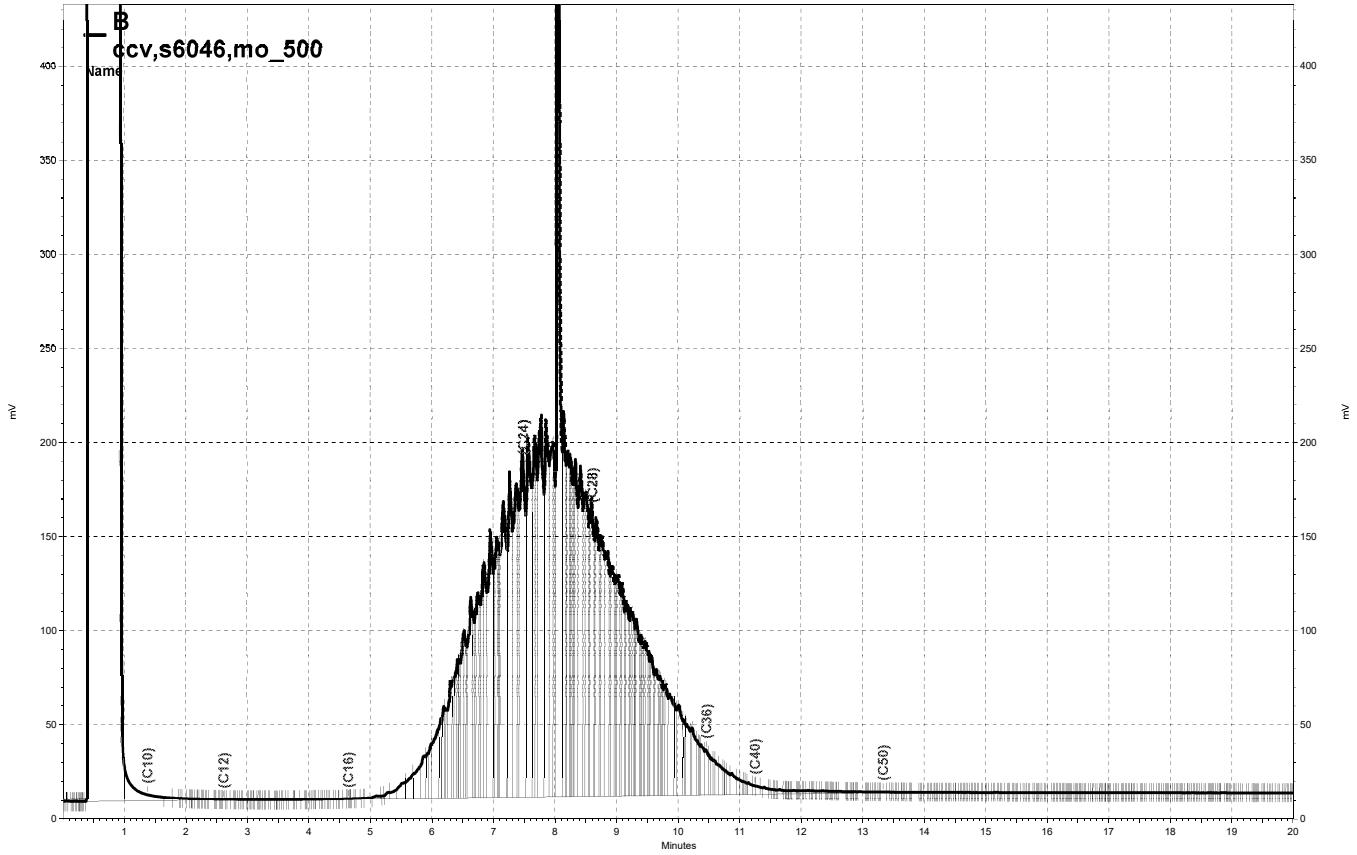
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APPENDIX C

TEG Soil-Vapor Survey Methodology

TEG SOIL-VAPOR SURVEY METHODOLOGY

TEG-Northern California, Inc. (TEG) will provide the soil-vapor sample collection and analysis required to complete the soil-vapor survey as discussed in Appendix A. The following text provides a description of the sample and analytical methods to be used by TEG.

Active Soil-Vapor Sampling System

TEG's low-dead volume soil-vapor sampling system has been inspected, endorsed, and is favored by all regulatory agencies who have seen it, including the U.S. EPA and DTSC. The design eliminates the risk of air leakage down the soil-vapor probe, ensures sample collection from the tip, and greatly facilitates decontamination procedures.

Probe Construction

TEG's soil-vapor probes are constructed of 1-inch-outer-diameter chrom-moly steel, equipped with a steel drop-off tip. The TEG drilling rig (the "Strataprobe") can use a larger-diameter probe if needed. Nominal lengths are 4 feet and additional lengths may be added to one another to achieve the required sampling depth. An inert 1/8-inch tube runs through the center of the probe and is attached to the sampling port with a stainless steel post run fitting.

Probe Insertion

The probe is driven into the ground with an electric rotary hammer, or with the Strataprobe. After inserted to the desired depth, the probe is retracted slightly, which opens the tip and exposes the vapor sampling port. This design prevents clogging of the sampling port and cross-contamination from soils during insertion. Once the probe rod is placed, the sample can be collected after twenty minutes have elapsed for equilibration.

Soil-Vapor Sampling

Soil vapor is withdrawn from the inert tubing using a calibrated syringe connected via an on-off valve. A purge volume test is conducted by sampling at the first soil-vapor location three times after sequentially collecting and discarding one, three, and seven dead volumes of soil vapor to flush the sample tubing and fill it with in situ soil vapor. The purge volume used prior to the sample yielding the highest analytical value is used for all subsequent sampling. After purging, the next 20 cubic centimeters (cc) to 50 cc of soil vapor are withdrawn in the syringe, plugged, and immediately transferred to the mobile lab for analysis within the required holding time. During sampling, a leak check gas is used to confirm that the sample train and probe rod is tight and leak-free. Additional soil vapor may be collected and stored in gas-tight containers (e.g., Summa Canisters) as desired.

Flushing and Decontamination Procedures

To minimize the potential for cross-contamination between sites, all external probe parts are cleaned of excess dirt and moisture prior to insertion. The internal inert tubing and sampling syringes are flushed with large volumes of ambient air between samples or discarded as required. If water, dirt, or any material is observed in the tubing, the tubing is discarded and replaced with fresh tubing.

Analytical Methodology

Soil-vapor samples collected from each probe will be transferred directly to the on-site mobile laboratory and analyzed immediately. There will be minimal lag time between sample collection and analysis, ensuring that the integrity of the sample is maintained.

Samples will be analyzed on a gas chromatograph equipped with capillary columns and a combination of mass spectrometer, thermal conductivity detector, and flame ionization detector as needed. This combination of columns and detectors ensures compound separation, recognition, and detection at the required levels.

These detectors enable on-site analysis for petroleum hydrocarbons, volatile aromatics (benzene, toluene, ethylbenzene, and total xylenes), and VOCs (e.g., dichloroethene, trichloroethene, tetrachloroethene, and vinyl chloride) using U.S. EPA-approved analytical methodology outlined in methods 8260B and 8015M. Output signals from each detector are processed by computer chromatography software and the results entered into a laboratory computer for on-site processing.

Daily Instrument Calibration

Daily continuing calibration is performed at the start of each day by injecting and analyzing a mid-range calibration standard. Acceptable continuing calibration agreement: +/- 15 percent to 25 percent to the calibration curve, depending on the compound.

Blanks and Duplicates

Blanks are analyzed at the start of each day and more often as appropriate depending upon the measured concentrations. Typically, when high sample values are encountered, additional blanks may be analyzed. Duplicate samples are analyzed as needed or as requested by the client or regulatory agency.

Compound Confirmation

A mass spectrometer detector is used for absolute compound identification of VOCs. Also, a surrogate compound is added to each sample during analysis to confirm that the chromatographic retention times have not shifted during the course of the day and that surrogate recovery is adequate.

Remedial Action Completion Report
Former Johns Manville Facility
420 East 3rd Street
Pittsburg, California

October 21, 2008
001-09587-02

Prepared for
Pittsburg River Park, LLC
36 Washington Street, Suite 390
Wellesley, Massachusetts 02481

LFR ENVIRONMENTAL MANAGEMENT & CONSULTING ENGINEERING

October 21, 2008 001-09587-02

Ms. Barbara Cook, P.E.
Department of Toxic Substances Control
700 Heinz Avenue
Berkeley, California 94710-2721

Subject: Remedial Action Completion Report, Former Johns Manville Facility, 420 East 3rd Street, Pittsburg, California

Dear Ms. Cook:

On behalf of Pittsburg River Park, LLC (PRPLLC), LFR Inc. (LFR) has prepared the enclosed Remedial Action Completion Report for the former Johns Manville Facility located at 420 East 3rd Street in Pittsburg, California ("the Site"). This report incorporates the comments provided by the Department of Toxic Substances Control on June 9, 2008, and provides a summary of site history and environmental investigations, a description of the remedial activities recently completed at the Site, and the results and conclusions of a site closure evaluation.

PRPLLC and LFR appreciate your help with regards to moving this project forward in a timely manner. If you have any comments or questions or need any additional information regarding the project in general, please call the undersigned at LFR (510-652-4500) or Mr. Mike Singer of PRPLLC (860-216-2293).

Sincerely,

Ron Goloubow
Senior Associate Geologist

William L. Carson, P.E. (C60735)
Principal Engineer

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LIST OF ACRONYMS

μg/L	micrograms per liter
ACM	asbestos-containing material
ARDIP	Addendum to the RDIP
Aurora	Aurora Industrial Hygiene, Inc.
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
CCCDEH	Contra Costa County Department of Environmental Health
CHHSLs	California Human Health Screening Levels
Cooper	Cooper Geotechnical Laboratory
DCE	dichloroethene
DDSD	Delta Diablo Sanitation District
DTSC	Department of Toxic Substances Control
EMSL	EMSL Analytical, Inc.
ERM	ERM-West, Inc.
Forensic	Forensic Analytical Laboratories
FS	Feasibility Study
g/cm^3	grams per cubic centimeter
Harding	Harding ESE, Inc.
HLA	Harding Lawson Associates
HSP	Health and Safety Plan
JM	Johns Manville
LFR	LFR Inc.
LUC	land use covenant
MCLs	Maximum Contaminant Levels
mg/kg	milligrams per kilogram
NAPL	non-aqueous-phase liquid
NGVD	National Geodetic Vertical Datum
O&M	Operations and Maintenance
PAHs	polyaromatic hydrocarbons
PCBs	polychlorinated biphenyls

PCE	tetrachloroethene
PEA	Preliminary Endangerment Assessment
PRPLLC	Pittsburg River Park, LLC
RAP	Remedial Action Plan
RAW	Removal Action Work Plan
RDIP	Remedial Design and Implementation Plan
ROUX	ROUX Associates Inc.
SVOCs	semivolatile organic compounds
T&R	Treadwell & Rollo, Inc.
TCE	trichloroethene
TEM	transmission electron microscopy
TPH	total petroleum hydrocarbons
TPHd	total petroleum hydrocarbons as diesel
TPHg	total petroleum hydrocarbons as gasoline
TPHmo	total petroleum hydrocarbons as motor oil
UCL	upper confidence limit
U.S. EPA	United States Environmental Protection Agency
UST	underground storage tank
VCA	voluntary cleanup agreement
VOCs	volatile organic compounds
W&K	Winzler & Kelly Consulting Engineers

CERTIFICATION

All engineering information, conclusions, and recommendations in this document have been prepared under the supervision of and reviewed by an LFR Inc. Professional Engineer.

10/23/08

William L. Carson, P.E. Date
California Civil Engineer # C60735



LIMITATIONS STATEMENT

The opinions and recommendations presented in this report are based upon the scope of services, information obtained through the performance of the services, and the schedule as agreed upon by LFR Inc. (LFR) and the party for whom this report was originally prepared. This report is an instrument of professional service and was prepared in accordance with the generally accepted standards and level of skill and care under similar conditions and circumstances established by the environmental consulting industry. No representation, warranty, or guarantee, express or implied, is intended or given. To the extent that LFR relied upon any information prepared by other parties not under contract to LFR, LFR makes no representation as to the accuracy or completeness of such information. This report is expressly for the sole and exclusive use of the party for whom this report was originally prepared for a particular purpose. Only the party for whom this report was originally prepared and/or other specifically named parties have the right to make use of and rely upon this report. Reuse of this report or any portion thereof for other than its intended purpose, or if modified, or if used by third parties, shall be at the user's sole risk.

This report includes data and information provided by ERM-West, Inc. (ERM) for work conducted at the Site prior to LFR's involvement. To the best of our knowledge ERM provided accurate and reliable information and data; however, LFR is unable to substantiate the accuracy of the ERM information and data. LFR has included all the information and data provided by ERM as they provided such information and data and we do not certify the accuracy or completeness of the ERM data and information nor how it was collected. Results of any investigation or testing and any findings presented in this report apply solely to site conditions existing at the time when LFR's investigative work was performed. It must be recognized, however, that an environmental site assessment is intended for the purpose of determining the potential for contamination through limited research and investigative activities and in no way represents a conclusive or complete site characterization. Conditions in other parts of the project site may vary from those at the locations where data were collected. LFR's ability to interpret investigation results is related to the availability of the data and the extent of the investigation activities. As such, 100% confidence in conclusions regarding the nature and extent of affected soil and groundwater cannot reasonably be achieved.

LFR, therefore, does not provide any guarantees, certifications, or warranties that a property is free from environmental contamination. Furthermore, nothing contained in this document shall relieve any other party of its responsibility to abide by contract documents and applicable laws, codes, regulations, or standards.

1.0 INTRODUCTION

LFR Inc. (LFR) has prepared this Remedial Action Completion Report on behalf of Pittsburg River Park, LLC (PRPLLC) for the former Johns Manville Facility located at 420 East 3rd Street in Pittsburg, California ("the Site"; Figures 1, 2, and 3). This report describes the remedial activities completed at the Site to address residual asbestos-containing material (ACM) and total petroleum hydrocarbon (TPH) concentrations observed in soil. The results of grab groundwater and soil-vapor samples collected at the Site after the remedial activities were completed are also presented in this report.

Remedial alternatives were evaluated for the Site and the results of the evaluation were presented in the "Final Remedial Action Plan" (RAP) prepared by ERM-West, Inc. (ERM) and approved by the Department of Toxic Substance Controls (DTSC) on June 22, 2006. For affected soil, the RAP recommended on-site consolidation of ACM and soil containing TPH into a containment berm to be constructed along the eastern boundary of the property. This portion of the Site has been designated as a separate parcel of the Site (Parcel D; Figure 3) and will be subject to a land use covenant (LUC) limiting access and restricting the future land use of this area.

Implementation of the selected remedial alternatives was conducted in accordance with the "Remedial Design and Implementation Plan" (RDIP), prepared by ERM in August 2006 (ERM 2006b), and the "Addendum to the RDIP" (ARDIP), prepared by LFR and submitted to the DTSC on August 1, 2007 (LFR 2007). DTSC approved the ARDIP on November 2, 2007 (DTSC 2007). Building demolition and abatement of ACM began in October 2005. Remedial activities including, but not limited to, the excavation of ACM and placement of the material into the containment berm and removal of TPH-affected soil began in August 2006 under the supervision of ERM, after approval of the Final RAP and RDIP, but were halted in December 2006. Following a reevaluation of the site data, remedial activities at the Site were re-initiated in November 2007 under the supervision of LFR and completed in February 2008. Post-remediation grab groundwater sampling and soil-vapor sampling took place in February 2008.

As expected, the analytical results of groundwater samples collected after the remedial measures were conducted at the Site indicate that TPH-affected groundwater remains at the Site. To protect future inhabitants at this Site, an LUC will also be placed on the deed for the parcels that comprise this portion of the Site (Parcels A, B, and C; Figure 3). The LUC will prohibit the use of groundwater across the entire Site and intrusive work (excavation of soil) to elevations at or below 4 feet National Geodetic Vertical Datum (NGVD) near the former evaporation pond (an area of the Site defined as the "Soil Management Area" in the LUC).

In accordance with the LUC, activities that will disturb the soil at or below 4 feet NGVD or which encounter groundwater if it occurs at a shallower depth (e.g., excavation, grading, removal, trenching, filling, earth movement, mining, or drilling), without a Soil Management Plan and Health and Safety Plan (HSP) approved by the

DTSC in advance, are prohibited. At the time the remediation was completed there was approximately 5 feet of clean soil above 4 feet NGVD.

This report summarizes the demolition and remedial activities completed at the Site since work began at the Site in October 2005. Specifically, this report includes a summary and description of:

- Excavation activities conducted at the Site including ACM-affected soil and/or debris excavation, TPH-affected soil from the former evaporation pond, and other smaller TPH-affected soil excavations conducted at the Site
- Laboratory analytical results for confirmation soil samples collected from the Site
- Containment berm construction
- Laboratory analytical results for soil samples collected from imported soil
- Off-site disposal activities of soil including analytical results for waste characterization samples
- Dewatering, water treatment, and disposal activities
- Asbestos and dust air monitoring
- Analytical results of groundwater samples
- Analytical results of the soil-vapor survey
- Topographic survey map of the extent and elevation of the excavation and berm areas

It is LFR's opinion that the conditions specified in the RAP, RDIP, and the ARDIP have been satisfied and that no further action is required with regard to investigation and remediation of soil at the Site. For affected groundwater (concentrations less than maximum contaminant levels [MCLs]), the RAP identified natural attenuation with no additional groundwater monitoring as the preferred remedial alternative. Based on the concentrations of TPH detected in the shallow groundwater at the Site, LFR believes that natural attenuation is the appropriate remedy and that an LUC prohibiting use of groundwater at the Site should be implemented.

1.1 Site Description

The former Johns Manville (JM) facility consists of two distinct properties, the North Parcel and the former Plant Site, located at the approximate intersection of East 3rd Street and Harbor Street in Pittsburg, California. These properties are shown on Figure 1. The proposed Harbor Park Development Site is to be located at the former Plant Site.

The North Parcel is an approximately 4.2-acre parcel located between (and bounded by) New York Slough to the north and the Plant Site to the south, north of East 3rd Street. The North Parcel was formerly used for storage of asbestos-containing products

prior to shipment. As a result of this practice, a significant amount of ACM was deposited onto the ground. To prevent future exposure to ACM a soil cap was constructed over the contaminated soil. Remedial activities have been conducted on the North Parcel under a separate voluntary cleanup agreement (VCA) and the DTSC has determined that other than the periodic monitoring and reporting with respect to the integrity of the containment cap, no further investigation or remediation is necessary at the North Parcel (ERM 2006a). DTSC and PRPLLC have entered into a LUC, which restricts the use of the North Parcel and will enter into an Operation and Maintenance Agreement, which will ensure ongoing inspection and maintenance of the soil cap.

The former Plant Site, located approximately 1,000 feet south of New York Slough, was the subject of remedial actions addressed in this Completion Report. This 21-acre parcel is bounded to the north by the North Parcel, 3rd Street, and a Tesoro coke facility; to the east by Harbor Street, several small light-industrial businesses, and USS Posco Corporation; to the south by a City of Pittsburg Park; and to the west by residential properties. Most recently, until the JM facility terminated operations in 2003, the facility was used for the manufacturing of commercial roofing materials.

A review of JM's historical operations, as well as the analytical results of soil and groundwater samples collected at the Site as part of site-wide investigations, indicated the former evaporation pond and several additional locations contained TPH- or ACM-affected soil. Many of these affected areas, discovered while conducting abatement and demolition activities at the Site, were the areas of potential environmental concern at the Site. ERM, on behalf of PRPLLC, assessed the remediation alternatives, documented in the RAP (ERM 2006a), and recommended the primary remedial action for the Site as construction of an engineered containment berm for consolidation of ACM- and TPH-affected soil along the eastern boundary of the Site. The details of the construction of the containment berm were described in the RDIP prepared by ERM (ERM 2006b) and the ARDIP prepared by LFR (LFR 2007).

Currently, chain-link fencing surrounds the vacant Site and a separate chain-link fence surrounds the containment berm. The ground surface at the Site has been graded to allow for drainage and erosion control. The redevelopment plan proposed for the Site is a mix of commercial buildings and residential homes.

1.2 Project Objective and General Scope of Work

As described in the RAP, RDIP, and ARDIP, the objectives of this remedial project were to excavate ACM- and TPH-affected soil above the groundwater and consolidate the material in a containment berm. The soil removal actions were conducted to limit the potential for future site inhabitants to encounter ACM- or TPH-affected soil.

To achieve these objectives, the following general scope of work was completed by PRPLLC:

1) Site Preparation Activities

- Contractor and vendor procurement
- Permits and notifications
- Temporary facilities and site security
- Utility and monitoring well demolition
- Pre-excavation survey

2) Soil Remediation Activities

- Site maintenance and housekeeping
- Excavation of ACM-affected soil/fill materials and debris
- Excavation of TPH-affected soil/fill material
- Excavation dewatering and treatment
- Confirmation soil sample collection and analysis
- On-site consolidation of excavated ACM- and TPH-affected soil and containment berm construction
- Transportation and off-site disposal of affected soil/fill materials and debris
- Excavation backfilling and site restoration
- Air monitoring

3) Post-Remediation Activities

- Groundwater sampling
- Soil-vapor survey
- Installation of fencing around the containment berm
- Installation of landscaping over the berm cover
- Preparation and implementation of an Operations and Maintenance (O&M) Plan for the containment berm
- Preparation of "As-Built Drawings" for the containment berm

2.0 BACKGROUND

2.1 Site Use History

Figure 2 shows the layout of the Site prior to demolition and remedial activities. The primary manufacturing plant buildings (Buildings #1 through #4) were built sometime between 1925 and 1928. In 1957, a large warehouse was constructed south of the main manufacturing facility. Asbestos-cement products, asphalt roofing materials, and

asbestos-containing pipe covering were the primary products produced prior to termination of asbestos-containing product manufacturing in 1980.

A series of four asphalt stills located along the southwestern corner of Building #4 were used to convert oil into asphalt. The stills were powered by fuel oil and later by natural gas. In the process of converting the oil to asphalt, off-gas vapors were collected, condensed, and mixed with water to form an oil-water slurry that was transported via an underground pipe to an evaporation pond located in the southeastern section of the Site. The residual oil in the evaporation pond was reportedly burned approximately twice a year. Use of the evaporation pond began in 1946. It remained relatively constant in size until 1959, when discharge of effluent was discontinued, and it was subsequently filled with scrap and construction debris. The size of the pond at the time of closure was approximately 150 feet long by 75 feet wide with a maximum depth of 10 feet below ground surface (bgs). The size and location of this pond was based on a review of historical aerial photographs.

Subsequently, and until the plant's closure in approximately 2003, JM manufactured commercial roofing materials using fiberglass mat, asphalt, sand, and limestone. Petroleum-based resins and solvents were also used on site. Classes of chemicals associated with these historical site operations are primarily asbestos and TPH. Additional related chemical classes are as follows:

- Metals (as constituents of TPH mixtures)
- Polychlorinated biphenyls (PCBs; as constituents of TPH mixtures)
- Semivolatile organic compounds (SVOCs; as constituents of TPH mixtures and as TPH combustion byproducts)
- Volatile organic compounds (VOCs; as constituents of TPH mixtures)

2.2 Previous Subsurface Investigations

Subsurface investigations have been conducted at the Site over an approximately 20-year period prior to remediation by various environmental and engineering consulting companies. The initial investigations were conducted on behalf of JM and, more recently, on behalf of PRPLLC, and have resulted in more than 100 soil sampling locations and 28 groundwater sampling locations throughout the Site. The results of the previous site investigations identified areas of soil and groundwater at the Site that had been affected by the historical operations. Specifically, the areas of concern identified were the location of the former evaporation pond; the former asbestos product storage area north of the warehouse; and groundwater found to contain chemical constituents underlying the former evaporation pond. The following sections describe each of these investigations.

2.2.1 Harding Lawson Associates 1986 Investigation

Based on information provided by PRPLLC, the first soil and groundwater samples were collected at the Site in July and August 1986. Harding Lawson Associates (HLA) performed the initial site investigation(s) that resulted in the collection of surface soil samples, drilling five shallow test borings, drilling 15 probe borings, installing one piezometer and nine groundwater monitoring wells (MW-1 through MW-9), and also excavating 14 test pits. HLA did not generate a formal report for this work; however, the data were presented in a "Data Transmittal Report" (HLA 1986). The results of this investigation indicated that TPH-affected soil and groundwater were present at this Site and that shallow groundwater was encountered between approximately 5 and 15 feet bgs. ACM was also detected in soil samples at the Site.

2.2.2 ROUX Associates Inc. 1991 – 1994 Investigations

ROUX Associates Inc. (ROUX) conducted a site investigation in 1991 that included the installation of groundwater monitoring wells MW-10 through MW-15 (ROUX 1991). The key findings from this investigation indicated that analytical results of groundwater samples collected from 14 wells contained TPH, oil and grease, benzene, toluene, ethylbenzene, and VOCs in varying concentrations. The groundwater flow direction at the Site was reported from the south to the north with a slight mound near the former evaporation pond that caused groundwater to flow towards the east and northeast near the former pond. Tetrachloroethene (PCE) and trichloroethene (TCE) were detected in samples collected from a well located outside the property boundary (MW-1), a well located in the southwestern corner (former well MW-11), and from wells formerly located along the western boundary of the Site (wells MW-12 and MW-13; ROUX 1991 and HLA 1986).

Between 1992 and 1994 ROUX conducted groundwater monitoring and concluded that the concentrations of contaminants had decreased enough that future groundwater monitoring was not necessary. In 1992, ROUX observed that approximately 11 feet of fill material consisting of "wood-fiber and asbestos roofing products, roofing paper, asbestos cement, materials, bricks, wood, bottles, roofing asphalt and sand" was present near the former boring B-17 located approximately 200 feet south of the former evaporation pond (ROUX 1992). ROUX concluded that based on the fill material and former evaporation pond being contained (paved over), the viscous nature of the petroleum product observed at the Site, and the current site usage, groundwater remediation was not warranted at this Site (ROUX 1992).

2.2.3 Harding ESE, Inc. Preliminary Endangerment Assessment 2001

In 2001, Harding ESE, Inc. ("Harding") completed a Preliminary Endangerment Assessment (PEA) to estimate the threat to public health from the former JM facility. The report concluded that migrating vapors from TPH were not a threat to neighboring communities or future site tenants (Harding 2001).

Between January 2001 and February 2002, Harding sampled selected wells for asbestos and TPH. Harding removed free product from MW-4 and abandoned MW-3. After the removal of free product from well MW-4, Harding concluded that natural attenuation was the preferred alternative to remediate groundwater. A document entitled "Work Plan, Treatability Study for ORC Injection, Johns Manville Plant Site, Pittsburg, California" was submitted to the DTSC by MACTEC (formerly Harding) in August 2003, although the specific treatability study was never implemented at the Site.

2.2.4 ERM Investigations and Treatability Study

In July of 2004, ERM conducted additional field investigations including the collection and analysis of soil and groundwater samples for TPH as gasoline (TPHg), TPH as diesel (TPHd), TPH as motor oil (TPHmo), benzene, toluene, ethylbenzene, and xylenes (BTEX), polyaromatic hydrocarbons (PAHs), and asbestos, and excavation of test pits at the Site. The results of ERM's investigation generally confirmed the results of the previous investigations conducted at the Site and provided some estimates of the volume of TPH-affected soil that was present at the Site (ERM 2004).

Based on the presence of the measurable amount of non-aqueous-phase liquid (NAPL) at wells MW-2 and MW-4 located within or adjacent to the former evaporation pond, ERM prepared and implemented the "Final Treatability Study Work Plan," dated May 18, 2005. The details regarding the scope and results of the Treatability Study were presented in the RAP (ERM 2006a). The scope of the treatability study was to remove the NAPL using vacuum-enhanced recovery by applying a vacuum to a series of 39 vapor extraction wells installed 20 to 25 feet bgs within or adjacent to the former evaporation pond. The plan was to collect and filter the vapors through granular activated carbon.

The treatability study started on June 15, 2005 and operated intermittently due to the "excessive accumulation" of liquid in the knock-out vessel. The treatability study operated during daytime business hours from June 24 to August 26, 2005. Operation of the treatment system removed approximately 14,120 gallons of total fluids, including 201.7 gallons of NAPL, and removed approximately 104.3 gallons of NAPL through the dissolved phase (ERM 2006a). The largest amount of NAPL measured in a vapor extraction well during the treatability study was 5.59 feet at well SVE-21 located within the former evaporation pond.

Following completion of the treatability study, the asbestos abatement and the demolition of the structures on the Site took place as described in Section 4.0 of this report. In addition, other components of the RAP were implemented as described in Section 5.0.

2.3 Summary of Regulatory History

In May 1999, the DTSC requested information from JM regarding site use and the results of sampling conducted at the Site to date. JM submitted the requested information and entered into a VCA with the DTSC in November 2000.

2.3.1 Voluntary Cleanup Agreement between JM and DTSC

The VCA between JM and the DTSC was finalized in November 2000. In August 2001, there was an amendment to the VCA. The VCA between JM and DTSC outlined the procedures and agreement of how the DTSC would regulate the characterization and remediation activities at the Site. The VCA identified the reporting protocol and outlined the contents of the reports to be prepared and submitted. The reporting requirements included the preparation of an HSP, a Feasibility Study and Removal Action Work Plan (FS/RAW), an RDIP, a Quality Assurance/Quality Control Plan, and an O&M Plan for the Site.

Only a few of the tasks outlined in the VCA were completed by JM prior to sale of the property in 2004. The draft FS/RAW was completed for the Site in 2003. The draft FS/RAW reported that, in general, environmental conditions at the Site did not pose unacceptable risks to human health or the environment under a commercial/industrial land use scenario.

2.3.2 Voluntary Cleanup Agreement between PRPLLC and DTSC

In September 2004, PRPLLC purchased the Site. In March 2005, PRPLLC entered into a new VCA with the DTSC. The VCA between PRPLLC and DTSC outlined the procedures and agreement of how DTSC would regulate the characterization and remediation activities at the Site and how PRPLLC would reimburse the DTSC for its oversight of the project. The VCA identified the reporting protocol and outlined the contents of the reports to be prepared and submitted. The reporting requirements included the preparation of a site HSP, RAP, RDIP, treatability study for groundwater, and an O&M Plan for the Site.

2.3.3 Remedial Action Plan

The Draft Removal Action Work Plan (RAW) was prepared by ERM in 2006, and the DTSC held a 30-day public comment period for the Draft RAW and the proposed California Environmental Quality Act Negative Declaration and Initial Study for the Harbor Park Development. The RAW was finalized as a RAP due to the estimated cost associated with the completion of the remediation project. The Final RAP was submitted by ERM to the DTSC in June 2006 (ERM 2006a). The RAP was approved by DTSC on June 22, 2006 (DTSC 2006). The remedial plan for affected soil presented in the RAP was to excavate the ACM at the Site and excavate the TPH-affected soil at the former evaporation pond and consolidate the affected soil in a

containment berm along the eastern boundary of the Site. The remedial plan for affected groundwater that contains concentrations of chemicals greater than the MCL presented in the RAP was natural attenuation with no groundwater monitoring. The RAP also described the results of the treatability study implemented at the Site by ERM (on behalf of PRPLLC) in 2005.

2.3.3.1 Remedial Action Plan Objective

The objective of the RAP was to outline the remedial actions necessary to receive regulatory approval from the DTSC to allow for commercial and/or residential uses at the Site and included the following:

- Prevent exposure (i.e., via incidental inhalation, dermal contact, inhalation of fugitive dust, and inhalation of volatile emissions) to soil/fill materials that are affected with TPH at concentrations in excess of the cleanup goals established for the Site
- Ensure that asbestos is not present in soil/fill materials at detectable levels in any portions of the Plant Site in which residences are to be constructed (analysis by transmission electron microscopy per United States Environmental Protection Agency [U.S. EPA] Method 600/R-93/116 or equivalent)
- Prevent exposure (i.e., via incidental ingestion, dermal contact, inhalation of fugitive dust, and inhalation of volatile emissions) to soil/fill materials that are affected with site-related chemicals at concentrations in excess of health-risk-based cleanup goals established for the Site (i.e., PCBs, SVOCs, and VOCs)
- Prevent migration of constituents in soil/fill materials that would result in groundwater contamination in excess of California MCLs or other applicable water-quality standards
- Prevent exposure (i.e., incidental ingestion, dermal contact, and inhalation of VOCs) to groundwater within the footprint of the former evaporation pond
- Reduce the concentrations of TPH-related constituents in groundwater (i.e., BTEX) to below their respective MCLs (ERM 2006a)

To achieve these objectives, the remedial alternative selected for affected soil was to excavate and encapsulate the ACM- and TPH-affected soil into a berm to be located along the eastern boundary of the Site. The selected remedy for groundwater was natural attenuation with no groundwater monitoring if the analytical results of post-remediation grab groundwater samples were below the regulatory criteria that were presented in the RAP. Subsequently, ERM prepared the RDIP and LFR prepared the ARDIP to describe the specific details to implement the selected remedial alternatives. The implementation of the RDIP and ARDIP is summarized below.

2.3.3.2 Remedial Goals for Soil and Groundwater

The RAP provided the following cleanup goals for organic compounds in soil (ERM 2006a):

Table C-6
Proposed Soil Cleanup Goals
Pittsburg River Park LLC
Former Johns Manville Plant
California

Class	Compound	EPA Region IX PRG (mg/kg) [1]	Cal EPA CHHSLs (mg/kg) [2]	CRWQCB ESLs (mg/kg) [3]	Proposed Cleanup Goal (mg/kg) [4]
PCBs	PCBs (unspeciated mixture, high risk, e.g. Aroclor 1254)	0.22	0.089	6.300	0.089
	PCBs (unspeciated mixture, low risk, e.g. Aroclor 1016)	3.9	0.089	6.300	3.9
SVOCs	2-Chloronaphthalene	4,900	--	--	4,900
	Acenaphthene	3,700	--	19.00	3,700
	Anthracene	22,000	--	2.80	22,000
	Benzo(a)anthracene	0.62	--	12.00	0.62
	Chrysene	62	--	23.00	62
	Fluoranthene	2,300	--	32.00	2,300
	Fluorene	2,700	--	8.90	2,700
	Naphthalene	1.7	--	0.46	1.7
	Pyrene	2,300	--	85.00	2,300
TPH	Gasoline range C6-C10	--	--	400	400
	Diesel range C10-C28	--	--	500	500
	Motor Oil range C28-C40	--	--	500	500
VOCs	Benzene	0.64	--	0.18	0.64
	Ethylbenzene	400	--	32.00	400
	Toluene	520	--	9.30	520
	Xylenes	270	--	--	270

Notes:

1) USEPA Region 9, Preliminary Remediation Goals, October 2004, residential land use; these values do not factor in the indoor air emissions exposure pathway and additional evaluation of the protectiveness of these values may be warranted after emplacement of clean engineered backfill following remedial activities.

2) California EPA California Human Health Screening Levels, January 2005, residential land use

3) California Regional Water Quality Control Board Environmental Screening Levels, February 2005, residential land use; deep soil

(greater than 3 meters below ground surface, water is not a current or potential source of drinking water

4) As noted previously in this RAW, risks associated with site chemicals are outside the acceptable range when considered on a site-wide basis. However, if it is assumed that impacted soils within the former evaporation pond and asbestos storage areas are to be removed in association with site remedial actions, the resultant carcinogenic and noncarcinogenic (hazard index) risks are less than 10-6 and 1, respectively, which represent the acceptable range for residential reuse. For removal actions associated with the former evaporation pond and asbestos storage areas, the more stringent value of the PRG or CHHSL for a given constituent is to be used as the project-specific cleanup goal. It should be noted that CHHSLs have not been established for a number of the COCs.

For PCBs, the CHHSL does not differentiate between the different levels of risk posed by the various congeners. Therefore, for the "low risk" congeners, the proposed cleanup goal is the PRG established for this class of compounds.

In the case of TPH, for which neither PRGs nor CHHSLs have been established, the proposed cleanup goals are not risk based; these reflect standard practice. The risk-based cleanup goals for specific constituents of TPH mixtures (e.g., BTEX) will provide adequate risk protection associated with TPH in soil.

2.3.4 Remedial Design and Implementation Plan

Implementation of the selected remedial alternative presented in the RAP was conducted in accordance with the RDIP prepared by ERM in August 2006. The RDIP is a document that provided specific details regarding the locations of anticipated excavations of ACM- and TPH-affected soil; confirmation soil sample collection frequency and analyses; detailed construction plans for the containment berm; air monitoring requirements; provisions for construction dewatering and storm-water management; provisions for the off-site disposal of surplus affected materials in the event that a greater amount of contaminated materials were encountered; and a description of post-construction groundwater sampling and provisions for a long-term groundwater monitoring program, if required.

During the implementation of the RAP the ACM-affected soil and debris from the demolition of the on-site structures were placed into the containment berm along with other ACM- or TPH-affected soil that was excavated from the subsurface at locations across the Site. TPH-affected soil in the area of the former evaporation pond was excavated to elevations below the groundwater table. TPH-affected soil extended deeper than anticipated (in places more than 10 feet below the groundwater table), which resulted in the excavation of a much larger volume of soil than anticipated. Due to the unexpected volume of TPH-affected soil excavated, the remedial activities were halted in December 2006 to assess the best way to proceed. At the time the work was stopped, the containment berm was approaching its design capacity (as originally described in the RDIP), several large open excavations remained at the Site, and a large stockpile of soil excavated from below the water table beneath the former evaporation pond remained on site.

2.3.5 Addendum to Remedial Design and Implementation Plan

In January 2007 representatives of PRPLLC contacted DTSC directly to discuss the need to excavate TPH-affected soil from depths below the groundwater table. It was PRPLLC's opinion that due to the nature of the TPH there would be no aboveground health risks associated with TPH-affected soil existing below the groundwater table. The DTSC agreed with this opinion and subsequently, issued a letter on March 14, 2007 that described DTSC's expectations concerning the depth of the excavation as it related to the depth to groundwater. However, DTSC specified in the letter that soil-gas sampling should be performed after backfilling to assess the potential human health risk from vapor intrusion into future buildings constructed on the Site. In addition, the DTSC letter of March 14, 2007 provided PRPLLC approval to use soil previously excavated from below the water table that was stockpiled on site as backfill material below the groundwater table (4 feet NGVD) within the open excavation. A copy of this letter is provided in Appendix A.

In February and March 2007, discussions between LFR, PRPLLC, and the DTSC were held to clarify the scope of the excavation of TPH-affected soil near the former evaporation pond. The key subject of these discussions was the depth of groundwater at

the Site and how that related to the depth of the excavation within the former evaporation pond. Based on observations conducted during the excavation of TPH-affected soil near the former evaporation pond, it was evident that the excavation extended well below shallow groundwater. Each party agreed that TPH-affected soil would not be excavated from beneath the groundwater. Additional meetings between LFR, PRPLLC, and the DTSC on February 23 and July 24, 2007, further assessed the future excavations in relation to the depth of groundwater at the Site. As a result of these meetings, LFR, PRPLLC, and the DTSC agreed to excavate trenches T-1 through T-8 along the northern and western boundaries of the existing excavation to assess the lateral extent of TPH-affected soil in this portion of the excavation. The locations of the trenches are illustrated on Figure 6.

In June 2007, LFR collected additional site soil data to better define the lateral extent of TPH-affected soils at the Site along the northern and western edge of the open excavation and to assess the depth to groundwater at the Site. This data was used to augment a reevaluation of the site conditions and was presented in the ARDIP prepared by LFR in August 2007. The details of the ARDIP are summarized below (LFR 2007).

The purpose of the ARDIP was to provide a description and clarification of the tasks that were necessary to complete the remediation of soil containing TPH and ACM at the Site (LFR 2007). The key components of the ARDIP are as follows:

- Expand the western extent of the on-site containment berm by 10 feet to accommodate additional TPH-affected soil present above the groundwater table and the remaining ACM-affected soils at the Site
- Establish the elevation of the groundwater table at the Site as 4 feet NGVD based on recent field data and historical groundwater elevation measurements
- Establish that TPH-affected soil will not be excavated below the groundwater table elevation set at 4 feet NGVD
- Collect confirmation soil samples on 100-foot linear intervals from the northern and western areas of the excavation to define the limits of the TPH-affected soil associated with the former evaporation pond
- Conduct a soil-vapor survey at the Site after completing the implementation of the RAP

Other than these tasks, the scope of the August 2006 RDIP remained intact and in force for the completion of this project. Following the DTSC's approval of the ARDIP (DTSC 2007), remedial activities were re-initiated at the Site in November 2007 and completed in February 2008.

2.3.5.1 Confirmation Soil Samples

Based on the analytical results of the soil samples collected from Trenches 1 through 8, LFR collected soil samples from a continuous trench that was excavated along the western and northern boundaries of the excavation in the vicinity of the former

evaporation pond (Figure 6). The soil samples were collected and analyzed in accordance with the "Work Plan to Conduct Confirmation Soil Sampling at the Pittsburg River Park Development (Former Johns Manville Facility), 420 East 3rd Street, Pittsburg, California," dated July 27, 2007 ("the Work Plan"; LFR 2007b).

On August 9, 2007, LFR collected a total of five soil samples (S-1 through S-5) from the trench excavated along the western and northern boundaries of the excavation in the vicinity of the former evaporation pond (Figure 6). Per the Work Plan, the soil samples were collected at approximately 4 feet NGVD, which correlated to between 2.5 and 5 feet bgs. The analytical results of these samples are presented in Tables 2 through 6. As indicated in Table 3, concentrations of TPHd and TPHmo detected in the five soil samples (S-1 through S-5) were below 500 milligrams per kilogram (mg/kg), the cleanup goal for both TPHd and TPHmo. Therefore, the trench was set as the lateral extent of excavation for TPH-affected soil near the former evaporation pond.

3.0 PROPOSED REDEVELOPMENT

3.1 Proposed Redevelopment Plan

The proposed development plan for the Site is designed to blend with the existing single-family residential neighborhood that abuts the Site to the west, and provide a gradual transition to the Harbor Street transportation corridor and the more industrial uses to the east of the Site. PRPLLC is currently considering development plans that include a mixed-use community of residences and commercial buildings on the former Plant Site.

The containment berm constructed on the eastern side of the Site along Harbor Street provides both a visual barrier and a sound barrier between the traffic on Harbor Street and the proposed adjacent future housing lots. The earthen berm is considered open space and is consistent with the City of Pittsburg's desire to create a strong edge within the city between residential and industrial development.

At this time, the development plan described herein for the Harbor Park Development is only conceptual. The conceptual development plan demonstrates how the property might be revised in the future in accordance with the City's amended General Plan. PRPLLC has not submitted a formal development application, nor has the development been granted approvals from the City of Pittsburg Planning Commission or City Council beyond the Minor Subdivision of the property in order to create the four distinct parcels. The layouts of the parcels are illustrated on Figure 3.

4.0 PRE-EXCAVATION ACTIVITIES

Asbestos abatement and demolition activities commenced at the Site on October 10, 2005. PRPLLC retained Plant Reclamation to decommission and demolish the former

plant facilities. During demolition activities, demolition debris was segregated for off-site recycling, off-site disposal, or on-site encapsulation into the containment berm. ACM was observed in many different forms including but not limited to concrete, wall board, roofing material, pipes, concrete, and debris. According to field notes maintained by ERM, a total of approximately 3,987 cubic yards of ACM associated with building demolition were disposed of off site to Allied Waste's Forward Landfill (Forward Landfill) located in Manteca, California. Approximately 60,600 cubic yards (103,020 tons) of ACM-affected soil and demolition debris were excavated from the Site and placed in the containment berm.

Although previous investigations had identified areas of soil affected with ACM, additional areas of ACM-affected soil and ACM debris were encountered by Plant Reclamation during demolition. In order not to delay demolition activities, some of this ACM-affected soil and debris was excavated and stockpiled on site for eventual placement into the on-site encapsulation berm.

4.1 Permits and Notifications

Permitting activities included securing the following permits:

- Grading permit from the City of Pittsburg
- Excavation permit from California Occupational Safety and Health Administration
- Traffic control permit from the City of Pittsburg;
- Discharge permit from the Delta Diablo Sanitation District (Permit #SDP-0607-817)
- Monitoring well abandonment permits from Contra Costa County
- Bay Area Air Quality Management District notification for the excavation, removal, and disposal of friable ACM

Proper notifications were made to these parties. Copies of the above-referenced permits are included in Appendices B and C.

4.2 Temporary Facilities and Site Security

Site security measures consisted of temporary fencing installed around the site perimeter. Access to the Site was gained through one of two gates established at the Site with one entrance off of East 3rd Street and the other off of Harbor Street. These gates were locked during nonworking hours.

4.3 Groundwater Monitoring Well and Water Supply Well Destruction

Groundwater monitoring wells were abandoned prior to the commencement of excavation activities. In accordance with local regulatory guidelines, ERM obtained

monitoring well abandonment permits from the Contra Costa County Department of Environmental Health (CCCDEH). The well abandonment activities were conducted in accordance with the permits approved by the CCCDEH under the oversight of ERM. Copies of the well abandonment permits obtained from the CCCDEH are provided in Appendix C.

During the demolition activities and implementation of the RAP, two water supply wells were identified at the Site. Each well was abandoned under permit from and in accordance with CCCDEH guidelines.

4.4 Pre-Excavation Survey/Establishment of Site Elevation Datum

Prior to the implementation of the RAP, the location of the containment berm was staked by Winzler & Kelly Consulting Engineers (W&K), a licensed engineering company located in San Francisco and Santa Rosa, California. W&K returned to the Site in November 2007 to re-stake the limits of the expanded berm as described in the ARDIP and to stake the location of the 4 feet NGVD elevation in the field to define the elevation to which the open TPH excavation could be backfilled with the existing stockpiles on site and the depth to which future excavations would be extended.

5.0 REMEDIATION ACTIVITIES - REMEDIAL ACTION PLAN IMPLEMENTATION

Entact was retained as the licensed remediation contractor to implement the RAP. Entact initially mobilized to the Site during the week of June 30, 2006. As mentioned above, work ceased at the Site in December 2006 due to unexpected conditions encountered in the field. Following a reevaluation of the site data, Entact remobilized to the Site in November 2007 to complete the implementation of the RAP.

From July to December 2006, ERM performed construction observation, field monitoring activities, confirmation soil sampling, and reporting. In November 2007, LFR took over these duties until the soil excavation and backfilling activities were completed in January 2008. Remedial activities were conducted in accordance with the guidelines presented in the RDIP and ARDIP documents. Geotechnical engineering observation was provided by Treadwell & Rollo, Inc. (T&R).

TPH-affected soil and ACM at the Site was excavated using track-mounted excavators and front end loaders. Excavation activities were performed in accordance with approved grading permit #E0700328 obtained from the City of Pittsburg. A copy of the grading permit is included in Appendix B. A daily field log was kept by the on-site construction manager during the remediation activities. Copies of the daily field logs are included in Appendix D. In addition, photographs were taken regularly during the remediation activities. A photographic log documenting the progress throughout the project is provided in Appendix E.

5.1 Site Maintenance and Housekeeping

Site maintenance and housekeeping were conducted on a daily basis during the remedial activities. These activities included, but were not limited to, wetting excavations and roadways to reduce dust generation, spraying soil stockpiles and open portions of the berm left overnight with Kuma® cover, and street sweeping. Filter fabric and sand bags were also installed to keep soil and foreign materials from entering the storm sewer catch basins in accordance with the Best Management Practices identified in the Storm-Water Pollution Prevention Plan included in the RDIP (ERM 2006b).

5.2 Excavation of Asbestos-Containing-Materials-Affected Soil/Fill Materials and Debris

Large areas of ACM debris and ACM-affected soil were identified during demolition activities that were being conducted on the Site in the winter of 2005 and spring of 2006. This material was excavated and segregated for placement into the encapsulation berm or transported off site for disposal at Forward Landfill. Excavation of known ACM-affected soil and/or debris as described in the RAP began at the Site in August 2006 and was completed in December 2007. In total, approximately 10,500 cubic yards (17,619 tons) of ACM were transported off site for disposal at Forward Landfill. In addition, approximately 60,600 cubic yards (103,020 tons) of ACM-affected soil and debris were excavated from the Site and placed in the containment berm.

The ACM excavation areas are shown on Figure 4. In general, the removal of ACM-affected materials continued at each area of excavation until the results of confirmation samples collected from the excavation indicated that asbestos was not detected above the method quantification limit. A discussion of the analytical results of the confirmation samples is presented in Section 5.4.

5.2.1 Limited Areas of Excavation of Asbestos-Containing Materials Conducted During Demolition

As described in the RAP, the asbestos product storage area located north of the warehouse was identified as an area of concern requiring remediation of ACM-affected soil and/or debris based upon the results of early site investigations. During the course of demolition activities at the Site that began in October 2005, numerous other areas containing ACM-affected soil and/or debris were identified during demolition and/or grading activities. In order not to impede demolition activities, certain areas of ACM-affected soil were excavated in May 2006 by the demolition contractor (Plant Reclamation) prior to the RAP approval by the DTSC. Based on ERM field notes, these areas were generally limited in extent and located on the northern half of the Site, between and under the former buildings and railroad tracks. The locations of these areas are illustrated on Figure 4 (shown as Areas 2, 14, 16, 17, 18, 19, 21, 25, and 27).

Materials from these excavations were placed into the containment berm. Representatives from ERM oversaw the excavation and collected confirmation soil samples from the bases and sidewalls of these excavation areas. The analytical results of the confirmation samples are discussed in Section 5.4.

5.2.2 Large Excavations of Asbestos-Containing Materials Conducted in Accordance with the Remedial Design and Implementation Plan and Addendum to the Remedial Design and Implementation Plan

Following the excavation of the localized areas of ACM that were identified during demolition activities, the remainder of the ACM-affected soil and debris excavation was conducted by Entact (under the supervision of ERM) beginning in August 2006. The largest areas of debris and ACM-affected soil were excavated from the asbestos product storage area north of the warehouse, along the eastern and southern property lines of the Site, and coinciding with the footprint of the former evaporation pond to a maximum depth of approximately 9.5 feet bgs (Figure 4).

By December 2006, the majority of ACM-affected soil and debris had been excavated and placed into the berm and confirmation samples had been collected by ERM. Because the berm had nearly reached its design capacity at that time, additional ACM-affected soil and debris totaling approximately 10,500 cubic yards (17,619 tons) was transported off site to Forward Landfill. At the time work was stopped in December 2006, an approximate 1,500-cubic-yard stockpile of ACM-affected soil and debris remained in the central portion of the Site overlying the final remaining area of ACM to be excavated. The volume of ACM-affected soil and debris was based on the topographic survey conducted by W&K in May and June 2007.

LFR observed Entact move the remaining 1,500-cubic-yard ACM stockpile into the expanded containment berm in December 2007. In addition, the area beneath and surrounding the stockpile location was excavated to a depth of approximately 1 foot bgs and this material was placed into the berm. LFR collected confirmation samples from this excavation in accordance with the procedures outlined in the RDIP (discussed in Section 5.4).

5.2.3 Sand Pile in Southwestern Corner of the Site

The southwestern corner of the Site contained a large stockpile of sandy material mixed with miscellaneous debris including wood, concrete, and metal. This material had been placed in the southwestern corner of the Site by JM during their site operations. The location of this stockpile coincided with the approximate southeastern and southern borders of the former warehouse buildings on site. As part of the site remediation activities, Entact excavated and placed the material through a mechanical screening device to segregate this material into two piles: a pile of larger miscellaneous debris and a pile of fine- to medium-grained sandy material. The miscellaneous debris was placed into the expanded berm without sampling.

The screening process resulted in approximately 8,000 cubic yards of fine- to medium-grained sandy material that was placed into a large stockpile. Twelve samples of the sandy material stockpile were collected and analyzed for asbestos. The results of these samples are summarized in Table 1 and laboratory analytical reports are provided in Appendix F. Asbestos was detected in one sample collected from the sandy material at a concentration 0.25% asbestos. Approximately 1,000 cubic yards of the sandy material from the area of the stockpile adjacent to the sample that contained asbestos at 0.25% was segregated and placed into the expanded berm. Asbestos fibers were not detected in 10 of the other 11 soil samples collected from the sandy material and one sample contained <0.25% asbestos fibers. Based on the analytical results of these samples, the portion of the sandy material other than what was associated with the sample that contained 0.25% asbestos was used on site to complete the site grading (see Table 1).

Confirmation samples were collected from the bottom (native soil) and the western and southern extents of the location of the former stockpile and submitted for asbestos analysis. Because the northern and eastern sides of the pile were removed and the bottom of the excavation was coincident with the finished site grade, samples were only collected from the southern and western sidewalls of the excavation where the edge of the Site sloped up to meet the adjacent property elevations. The analytical results of the confirmation samples are discussed in Section 5.4.

5.3 Excavation of Total-Petroleum-Hydrocarbon-Affected Soil/Fill Material

Excavation of TPH-affected soil at the Site began in August 2006 and was completed in December 2007. An estimated total of approximately 18,000 cubic yards (30,321 tons) of TPH-affected soil was excavated from the Site and disposed of off site to Norcal Waste System, Inc.'s Hay Road Landfill located in Vacaville, California. In addition, approximately 4,000 cubic yards of TPH-affected soil was excavated from the western portion of the former evaporation pond area and placed in the upper portion of the berm (above the seasonal high groundwater elevation) in December 2007. Except for those areas where confirmation samples were collected below the water table, excavation of TPH-affected soils continued until the results of confirmation samples collected from the excavation extents indicated that TPH was not detected above the site cleanup goals or until the excavation reached an elevation of 4 feet NGVD (the approximate depth of groundwater at this Site). The extent of TPH excavations conducted at the Site is shown on Figure 4. The analytical results of the confirmation samples are discussed in Section 5.4.

5.3.1 Former Evaporation Pond Excavation

The majority of the TPH-affected soil excavated at the Site was removed from within the footprint and the vicinity of the former evaporation pond. Most of the excavation of this area occurred under the oversight of ERM from August 2006 until December 2006. The depth of the excavation varied, but extended well below the observed water

table. According to a topographic survey conducted by W&K at the Site in May and June 2007 the elevation of the base of the excavation near the former evaporation pond was measured at approximately -12 feet NGDV (or approximately 22 feet bgs). Because the excavation extended below the water table, groundwater inundated the excavation and dewatering of the open excavation was required. Details regarding the dewatering of the excavation(s) are discussed in greater detail in Section 5.7.

At the time the work was stopped in December 2006, the southern and eastern extent and a portion of the northern extent of the former evaporation pond had been excavated, clean confirmation samples had been collected, and an estimated total of approximately 18,000 cubic yards (30,321 tons) had been transported and disposed of at the Hay Road Landfill. Further excavation of the former evaporation pond was still required to the west. The eastern and southernmost part of the excavation had been backfilled, but the central portion of the excavation remained open. Due to the depth of excavation, the excavation area was completely inundated with groundwater when the water table rose back to its static elevation.

In addition, the approximately 4,400-cubic-yard stockpile of soil that had been removed from below the water table within the footprint of the former evaporation pond was located adjacent to the open excavation. The volume of TPH-affected soil that had been removed from below the water table was based on the topographic survey conducted by W&K in May and June 2007.

In August 2007, LFR submitted the ARDIP, which provided a description and clarification of the tasks that were necessary to complete the remediation of soil at the Site; these tasks included:

- Backfilling a portion of the excavation using the 4,400 cubic yards of stockpiled soil previously excavated from below the water table
- Expanding the excavation in the vicinity of the former evaporation pond to the north and west at elevations above 4 feet NGDV as determined by LFR's trenching and sampling activities conducted in June and August 2007
- Conducting a smaller excavation of an area of elevated TPH concentrations observed in soil located to the north of the evaporation pond (See section 5.4 for a discussion of confirmation samples collected at this portion of the Site)

Site activities were re-initiated in November 2007. In accordance with the ARDIP, the former evaporation pond excavation was expanded to the north and west to the limits determined by confirmation samples collected by LFR in August 2007 (Section 2.3.5.1). Approximately 4,000 cubic yards of TPH-affected soil was excavated from the western portion of the excavation for the former evaporation pond and was placed in the containment berm in December 2007. As was approved by the DTSC, excavation of TPH-affected soils did not extend below the 4-foot-NGVD elevation (i.e., the excavation did not extend deeper than the observed groundwater table). The TPH-affected soil that was removed during this phase of the excavation was placed into

the containment berm. The lateral limits of the final former evaporation pond excavation are shown on Figure 4.

Following the removal of the TPH-affected soil and expansion of the excavation to the limits provided in the ARDIP, the excavation was backfilled under the direction of representatives of T&R to ensure proper geotechnical placement and compaction. The details regarding the backfilling of these excavations are presented in a separate report prepared by T&R.

5.3.2 Underground Storage Tank Excavations

During demolition and remediation activities, a total of 11 underground storage tanks (USTs) were encountered and removed from the Site. ERM data indicates that three of the eleven USTs had affected soil that required excavation. The approximate locations of the former USTs are illustrated on Figure 4.

One UST formerly located between Buildings #2 and #3 towards the northern side of these buildings was encountered during the demolition activities conducted in November 2005 (Figure 4). The UST remained in place until it was removed by Entact in August 2006. According to information provided by ERM, approximately 1,000 cubic yards of fuel-affected soil surrounding the tank were excavated and transported to the Hay Road Landfill. Confirmation samples (080206-T1-W, 080206-T1-E, and 080206-T1-N) were collected from the excavation sidewalls and are discussed in Section 5.4.

Two other USTs were located next to each other, at the southwestern corner of Building #3 (Figure 4). The soil from around these two tanks was excavated in October 2006 and confirmation samples were collected from the excavation bottom and sidewalls. The volume of soil removed from around these USTs and hauled to the Hay Road landfill was not reported, but is included in the total volume of soil sent to that landfill during remediation activities.

Two other USTs were removed from the central portion of the Site, north of the former evaporation pond and south of the former power plant (Figure 4). Based on information provided by ERM “one UST contained approximately 300 gallons of bunker fuel and one UST was full of sand” (Personal Communication 2008). In accordance with the ARDIP, Entact excavated approximately 150 cubic yards of TPH-affected soil from this area to a depth of 4 feet NGVD on December 5, 2007. The excavated soil was placed in the upper section of the containment berm. LFR collected seven confirmation soil samples from the sidewalls of the excavation for these USTs. The analytical results of the samples indicted that TPH was not present above the site-specific cleanup goals (Table 3). Based on the results of the confirmation soil samples the excavation was backfilled and compacted.

The other six USTs were removed from the following locations:

- Four USTs were located beneath the floor of former Building #4 that is currently located within the footprint of the containment berm.

  Observations made by ERM at the time of the removal of these four USTs indicated that the UST "contained solid asphalt emulsion" and that "approximately 100 cubic yards of soil affected with spilled asphalt emulsion - asphalt and steel removed to landfill during demolition" (Personal Communication 2008). Soil samples were not collected for the analysis of TPH (or TPH related compounds) during the removal of these four USTs because the USTs were located within the footprint of the containment berm.

- One UST was formerly located on the eastern side of former Building #1 (Figure 6).

  Observations made by ERM indicated that "at the time of the removal of this 10,000-gallon UST it was enclosed within a concrete vault under floor slab - tank did not leak product." Soil samples were not collected for the analysis of TPH (or related compounds) during the removal of this UST because the UST was encased in concrete and "the tank did not leak product" nor was stained soil observed at the time of tank removal (Personal Communication 2008).

- One UST was formerly located north of the northeastern corner of former Building #3.

  Observations made by ERM indicated that "at the time of the removal the UST was empty/soil was not contaminated" (Personal Communication 2008). Soil samples were not collected for the analysis of TPH (or related compounds) during the removal of this UST because "the tank was empty/soil was not contaminated" (Personal Communication 2008).

5.4 Confirmation Soil Sampling Results

5.4.1 Asbestos-Containing Materials Excavation Confirmation Sampling Results

In general, confirmation samples were collected from excavations for ACM on 50-foot centers. Confirmation samples of smaller excavations (less than 50 feet in length) were collected as necessary. Sidewall samples were collected from the ACM excavation along the eastern and southern boundaries of the Site and wherever excavations exceeded 2 feet in depth. In general, many of the smaller excavations to remove ACM debris or ACM-affected soil were shallow (less than 2 feet bgs) and therefore sidewall samples were not collected.

Samples were collected using a stainless steel trowel and placed into laboratory-supplied 4-ounce jars and labeled with the sample identification, the time and date of collection, the analysis requested, and the initials of the sampler. The samples were submitted to the laboratory under strict chain-of-custody protocol. ACM confirmation samples collected by ERM were submitted to Forensic Analytical Laboratories ("Forensic") in Hayward, California and samples collected by LFR were submitted to EMSL Analytical, Inc. (EMSL) in San Leandro, California for analysis of asbestos by

U.S. EPA Method 600/R-93-116. Both Forensic and EMSL are state-certified laboratories.

ACM-affected soils and debris were excavated at the Site until the cleanup goal for asbestos, established as the laboratory reporting limit for asbestos (ERM 2006a), was achieved. As indicated in Table 2, if the analytical result for the confirmation soil sample exceeded the cleanup goal, additional soil was removed from the area surrounding the initial sample and the additional confirmation samples were collected and analyzed to demonstrate that cleanup goals were achieved for that sample location.

As summarized in Table 2, the results of ACM confirmation samples that represent existing conditions at the Site (i.e., were not removed during further excavations) collected at the Site were less than the method quantification limits for Forensic and EMSL. These ACM confirmation sampling locations are shown on Figure 5. Laboratory analytical reports are provided in Appendix F.

5.4.2 Total Petroleum Hydrocarbons Excavations Confirmation Sampling Results

TPH confirmation samples were collected from the limits of excavation for the former evaporation pond, UST excavations, and several areas across the Site where petroleum odors were observed in soil. In general, TPH confirmation samples were collected using stainless steel or brass tubes labeled with the sample identification, the time and date of collection, the analysis requested, and the initials of the sampler. The samples were stored in an ice-chilled cooler and submitted to a certified California laboratory under strict chain-of-custody protocol for analysis of TPHg, TPHd, and TPHmo using U.S. EPA Method 8015, modified.

As presented in the RAP, the cleanup goals for TPHd, TPHmo, and TPHg were 500 mg/kg, 500 mg/kg, and 400 mg/kg, respectively. With the exception of samples collected below the groundwater table, excavation continued in lateral directions until the results of confirmation samples were below the cleanup goals. Figure 6 illustrates the locations of the TPH confirmation soil samples collected at the Site.

The analytical results for the confirmation samples analyzed for TPH are summarized in Table 3. Analytical data reports are provided in Appendix F. TPH confirmation sampling results of samples collected at the Site above the groundwater table are summarized as follows:

- TPHd concentrations ranged from <0.99 mg/kg to 390 mg/kg.
- TPHmo concentrations ranged from <5.0 mg/kg to 500 mg/kg.
- TPHg concentrations ranged from <0.1 mg/kg to 32 mg/kg.

The results of confirmation samples CONF-424, CONF-428, CONF-430, CONF-432, CONF-471, CONF-472, CONF-477, CONF-517, and CONF-518 collected by ERM from the base of the excavation below the groundwater table exceeded the cleanup criteria. However, since these samples were collected from well below 4 feet NGVD

(the established depth of the groundwater), additional excavation of soil near these confirmation samples was not completed.

5.4.3 Results of Additional Analyses

In accordance with the sampling plan outlined in the RDIP, selected samples were also submitted for VOC analysis via U.S. EPA Method 8260B, metals analysis via U.S. EPA Method 6010B and 7470, and SVOC analysis via U.S. EPA Method 8270C (ERM 2006b). These additional samples were collected because these compounds had historically been detected sporadically at the Site.

In total, 29 confirmation soil samples were submitted for the analysis of VOCs. Of these samples, seven soil samples were collected from across the Site and the remaining 22 soil samples were collected from the excavation associated with the former evaporation pond. A total of 15 samples were submitted for metals analysis. Of these samples, five were collected from across the Site and the remaining 10 were collected from the former evaporation pond excavation. A total of 14 soil samples were submitted for PAH analysis. Of these samples, three soil samples were collected from across the Site and the remaining 11 soil samples were collected from the former evaporation pond excavation. Soil sample locations are shown on Figures 5 and 6.

VOCs and PAHs were not detected above the cleanup goals in the samples collected at the Site. With the exception of arsenic, metals were not detected above the cleanup goals established in the RAP. Arsenic was detected above the cleanup goal of 5.5 mg/kg in two samples, CONF-420 and CONF-462, at concentrations of 7.6 mg/kg and 7.7 mg/kg, respectively. These detections are within arsenic concentrations typically present in soil in the San Francisco Bay Area (LBNL 2002).

These VOC, metals, and SVOC results are summarized in Tables 4, 5, and 6, respectively. Laboratory analytical reports are provided in Appendix F.

5.5 Eastern Boundary Berm Construction

The soil containment berm has been constructed along the eastern boundary of the Site and consists of two separate components: the north berm and the south berm (Figure 7). The various components and characteristics of the containment berm are detailed in the RDIP and ARDIP and summarized in this section. Based on calculations completed by W&K, approximately 64,600 cubic yards of ACM- and TPH-affected soil were transported and placed into the containment berm.

Project documents related to design, construction, and O&M of the berm are identified in the References section of this Report.

5.5.1 Construction Plans & Technical Specifications

The construction plans and technical specifications for the berm as described in the RDIP and the ARDIP include:

- Excavating a trench to approximately 10 feet bgs beneath the entire length of the berm to accommodate the placement of ACM below grade
- Backfilling the trench with affected material and constructing a berm above grade
- Capping the berm with a "Tensar Product" (a product commonly used for the reinforcement of soils in construction of structures such as embankments) and two feet of clean cover soil. In addition to providing additional structural integrity to the berm, the Tensar Product fabric will also serve as a visual demarcation liner between affected soils and the 2-foot-thick clean soil cap.
- Constructing perimeter fencing to prevent public access to the Site
- Construction of drainage swales adjacent to the berm and grading such that collected storm-water runoff will drain towards catch basins
- Installing an automated irrigation system
- Installing low maintenance landscaping in accordance with the City of Pittsburg requirements

As outlined in the ARDIP completed by LFR, the construction plans and technical specifications for the berm were modified slightly to accommodate a larger volume of ACM waste material encountered at the Site. Specifically, the ARDIP described plans for a western expansion of the berm by approximately 10 feet. The height and northern, southern, and eastern dimensions of the berm were not modified. In addition, the indicator layer to be placed between the affected soil and the 2-foot-thick clean soil cover was upgraded to a Tensar Product (from a Mirafi™ product called for in the RAP and RDIP). T&R recommended the substitution of the Tensar Product to increase adhesion between the waste material and the clean cover material.

In general, the berm was constructed in accordance with the plans outlined in the RDIP and ARDIP. The berm, constructed along the edge of the eastern boundary of the Site, is referred to as "south berm" and "north berm" (Figure 7). Initially a 10-foot-deep trench was excavated in sections along the entire length of the berm. The trench was filled with ACM along the length of both berm sections. The placement of the material into the berm was overseen by representatives of T&R and conducted in accordance with the revised procedures to place material in the berm as described in Appendices O and P of this report.

The material was placed in the trench and compacted using earth moving equipment. The relative compaction of the material placed and compacted into the berm was not tested due to the variability in moisture content and the overall size of the material that was placed into the containment berm. Air monitoring for dust and asbestos was conducted in accordance with the procedures presented in the RDIP. The results of the

air monitoring conducted at the Site are presented in Section 5.9 and in Appendices H and I of this report.

In order to provide access directly from Harbor Street, a 58-foot-wide access roadway was constructed between the two berm sections. The TPH-affected material was placed in the berm above the ACM material, which was placed up to the native grade elevations (i.e., TPH-affected soil was not placed in the trench). The south berm section is approximately 296 feet long, while the north berm section is approximately 1,072 feet long. Both berms are approximately 85 feet wide at the base and extend approximately 10 feet above the elevation of the adjacent sidewalk area of the City's Harbor Street Right of Way (8 feet of waste material and 2 feet of clean cover). A minimum buffer distance of 3 feet exists between the affected soils and public rights of way, private streets, or utilities (Figures 7, 8, and 9).

Access to the berm is restricted by a fence, with gates to provide access for inspection and routine maintenance. The fence and all signs posted meet the City of Pittsburg Municipal Code requirements.

5.5.2 Grading and Profile

The containment berm was constructed by Entact in accordance with the RDIP, ARDIP, and the grading permit issued by the City of Pittsburg prior to construction. The City of Pittsburg routinely monitored grading operations to verify that field operations complied with the approved grading permit. W&K provided locations and final grade control during and after the berm construction.

5.5.3 Surface Drainage Control

The runoff from the berm is collected in swales that flow to catch basins connected to the city storm-water system. The swales were designed by W&K and comply with the requirements set forth in the "Stormwater C.3 Guidebook" (ERM 2006a). The remainder of the Site is currently undeveloped and in rough grade condition. Surface water drains from the Site into structures installed to capture runoff that is not associated with the containment berm. The grading of the balance of the Site is in compliance with the City of Pittsburg-approved grading permit. All other storm-water utilities were removed from the Site during plant decommissioning-demolition. During soil remediation activities, storm-water management was performed such that the adjacent off-site storm-water collection system was not affected by site activities.

5.5.4 Slope Protection and Drainage Control

The slope of the berm caps is approximately 2.0 feet horizontal to 1.0 foot vertical (2H:1V) or less. The side slopes and the associated landscaping were designed to prevent erosion and provide adequate drainage. The vegetation used was determined by a Qualified Landscape Contractor and was approved by the City of Pittsburg prior to

construction. It is our understanding that the landscaping on the berm will be augmented as part of the future development plans for this Site.

5.5.5 Irrigation System

An irrigation system has been installed to provide water for vegetation support and maintenance. The system consists of an aboveground PVC irrigation system. The system includes timer-activated, battery-operated valves so that the system can be operated at night to minimize evaporation. The system is configured such that routine landscape maintenance can be performed with minimal affect to the irrigation system. It is our understanding that the irrigation system on the berm will also be upgraded as part of the future development plans for this Site.

5.5.6 Imported Soil Sampling

An estimated 16,000 cubic yards of soil were imported to the Site to be used as the 2-foot-thick berm cover. Some of this imported soil material was also used to grade the Site for drainage following completion of excavation and backfilling activities. Prior to being imported to the Site, samples of the soil were collected from each of the potential source sites. The number of samples and the constituents analyzed were based upon the volume of soil available for import, current and former uses of the property, and discussions with the DTSC. Results of analyses were compared to the cleanup goals presented in the RAP. If a cleanup goal did not previously exist for constituents, the results were compared to the California Human Health Screening Levels (CHHSLs) for residential soil; only soil with concentrations below the cleanup goals or the CHHSLs was imported to the Site. Sample results for each of the imported source areas are summarized in Tables 7, 8, 9, and 10. Laboratory analytical reports are provided in Appendix F.

Soil was imported to the Site from four different sources:

- Approximately 5,000 cubic yards of soil was imported from a construction site associated with the expansion of the California Avenue/Loveridge Road intersection adjacent to Highway 4. A total of eight composite soil samples were collected from this material for analyses. Analytical results for these samples are summarized in Table 7.
- Approximately 1,000 cubic yards of soil was imported from the construction site associated with the Pinole Middle School. A total of four composite soil samples were collected from this material for analyses. Analytical results for these samples are summarized in Table 8.
- Approximately 2,000 cubic yards of soil was imported from the construction site associated with an Antioch school site. A PEA had previously been performed at this Site and the results of the PEA and the results of one additional sample collected of the soil were used to evaluate the source material. The analytical results for the composite sample are summarized in Table 9.

- Approximately 8,000 cubic yards of soil was imported from a construction site associated with the JC Penny store in Antioch, California. A total of five composite soil samples were collected from this material for analyses. Analytical results for these samples are summarized in Table 10.

5.6 Off-Site Soil Disposal

In November 2006, the berm (as designed in the RDIP) had been filled to near its design capacity with ACM-affected soil and debris. As such, Entact began stockpiling the remaining ACM- and TPH-affected soils for eventual off-hauling to appropriate off-site disposal facilities.

Prior to disposal, stockpiles were sampled for waste characterization purposes. The results of the stockpile sampling are summarized in Table 11. Analytical data reports are included in Appendix F.

Affected soils were transported by Denbeste Transportation, Inc. following appropriate manifest procedures. Copies of the manifests were provided to the DTSC during the remedial activities. A summary of the loads received at each landfill is provided in Appendix G. According to information provided by Forward Landfill, a total of 17,619 tons of ACM-affected soil was transported to Forward Landfill from November to December 2006. According to information provided by Hay Road Landfill a total of 30,321 tons of TPH-affected soil was transported to Hay Road Landfill from October 2006 to December 2006.

As part of the ARDIP, the berm capacity was expanded as described above and ACM- and TPH-affected soils were placed in the berm. As a result, no additional affected soils were transported off site from November 2007 to January 2008.

5.7 Excavation Dewatering and Treatment

Due to the depth of the excavation within the former evaporation pond, excavation dewatering was required at the Site. From August 2006 to December 2006, Entact operated a dewatering system by pumping groundwater from the open excavations into a series of four aboveground fractionization tanks. The water was then discharged to the Delta Diablo Sanitation District (DDSD) in accordance with the DDSD discharge permit #SDP-0607-817. According to information provided by Entact, approximately 993,000 gallons of water were discharged to DDSD between August and December 2006.

In October 2007, the tanks were cleaned by KM Industrial and removed from the Site. As part of this cleaning approximately 46.63 tons of sludge material was transported and disposed of at Waste Management's Altamont Landfill located in Altamont, California.

When work was suspended in December 2006, groundwater filled the open excavations and resulted in several large "ponds" of standing water on site. In August 2007, LFR contracted Rain for Rent to install and maintain a groundwater dewatering and treatment system to remove the groundwater from the open excavations. Rain for Rent operated a dewatering system by pumping groundwater from the open excavations into a series of two aboveground weir tanks, a sand filter, and then discharging the water into the sanitary sewer in accordance with the DDSD discharge permit obtained directly by PRPLLC. Groundwater extraction began on August 29, 2007 and continued until November 2007 at which time the open excavations at the Site had been backfilled to a level above the groundwater table. From August 2007 to November 2007, approximately 12,472,000 gallons of water was pumped from excavations at the Site, treated, and discharged to the sewer.

Upon completion of the dewatering activities, the tanks and sand filter were cleaned by Controlled Environmental Services and removed from the Site. Liquids generated from the decontamination activities were disposed of off site. A total of approximately 5,485 gallons of oily water were transported to Alviso Independent Oil in Alviso, California. Approximately 130 cubic yards of wet soil from the weir tanks were dried on site by adding lime and placed into the containment berm. Copies of the waste manifests that accompanied the oily water are included in Appendix G.

5.8 Backfilling and Site Restoration

T&R, the geotechnical engineer, directed the backfilling of the excavations on site. In accordance with the RDIP and ARDIP, each open excavation was backfilled, compacted, and restored to rough-grade conditions for future development activities. In general, excavations were backfilled using surplus clean material from on site in 1-foot lifts and compacted using a sheep foot compactor roller. Once excavations were backfilled, additional soil was required to bring the Site to the final grade elevations required by the grading permit. The clean fill used at the Site came from the sources described in Section 5.5.6.

Compaction requirements for the Site were determined by T&R and were presented in a memorandum that T&R prepared that presented the recommended procedures for backfilling and compacting areas of the Site that were to be excavated or dewatered. The memorandum is included as Appendix O of this report. In addition, T&R was on site overseeing the backfill and compaction activities to ensure that the procedures provided in the memorandum (Appendix O) were properly implemented. T&R's report documenting the compaction testing and observations made by T&R personnel is provided in Appendix P.

In the former evaporation pond, soil excavated from below the water table was placed back into the dewatered excavation to an elevation no greater than 4 feet NGVD. Due to the high moisture content of the material being placed into the excavation, difficulties were encountered in achieving the appropriate compaction requirements as established by the geotechnical engineers. In accordance with the recommendations

made by the geotechnical engineers, lime was mixed with the backfill material and placed into the excavation. Once the soil was mixed with the lime, the appropriate compaction requirement was achieved.

5.9 Air Monitoring

Perimeter air monitoring was conducted on a daily basis whenever construction-related activities were occurring at the Site and weather permitted. Air monitoring began in October 2005 during demolition and abatement activities and continued until the Site was shut down in December 2006. During this period, air monitoring was conducted by Aurora Industrial Hygiene, Inc. ("Aurora"). Following the reactivation of remediation activities in November 2007, air monitoring was conducted by LFR from November 2007 until soil remediation activities were complete in January 2008.

Perimeter air monitoring at the Site was conducted in accordance with Aurora's Scope of Work and Air Monitoring Plan, presented in Appendix A of the RDIP (ERM 2006b). As part of the Scope of Work and Air Monitoring Plan, action levels were set for the perimeter air monitoring. According to Aurora's work plan, if the perimeter asbestos monitoring data indicated asbestos was detected in air at a concentration greater than 0.01 fibers/cubic centimeter and/or nuisance dust was detected at levels greater than 0.015 milligrams per cubic meter above background, work was to be suspended and mitigation measures implemented (ERM 2006b).

Aurora operated three air monitoring locations along the perimeter of the Site: the east fence-line, the south fence-line, and the west fence-line. During remedial activities, these locations were monitored for asbestos using transmission electron microscopy (TEM) and particulates using a PM10 monitor. The results of Aurora's asbestos air sampling are provided in Appendix H. Several exceedances of the asbestos action limit were noted throughout the duration of the project under Aurora's oversight. In general the exceedances were associated with the excavation or movement of dry soil creating elevated levels of dust. According to information provided in Aurora's and ERM's field notes, when exceedances were detected, mitigation measures were implemented, which included spraying additional water on the excavations to suppress the dust levels. Please see the air monitoring data provided in Appendix H for details regarding these exceedances.

From November 2007 to January 2008, TEM asbestos sampling and PM10 particulate monitoring was conducted by LFR in four locations at the Site: the east fence-line, the south fence-line, the west fence-line, and the north fence-line. A fifth TEM asbestos sampling location was set up in the northeastern corner of the Site at the request of the DTSC. Nuisance dust was not monitored at this northeastern corner location.

A summary of TEM asbestos air sampling results collected by LFR from November 2007 to January 2008 is provided in Table 12. Analytical laboratory reports are provided in Appendix I. As shown in Table 12, there were a few exceedances during the course of remedial work conducted from November 2007 to January 2008. The

initial exceedances detected on November 5 and November 6, 2007 may have been due to contaminated filter cartridges that had been stored in the construction trailer for several months prior to work beginning. As shown in Table 12, asbestos was detected in the field blank and during the first days of remobilization. In addition, there were no intrusive activities being performed at the Site during the first three days of remobilization (November 5 through November 7, 2007). The remaining exceedances were detected on November 10, 2007 (north center), November 16, 2007 (west center), December 10, 2007 (east center), January 16, 2008 (west center), and January 17, 2008 (west center). On days when the exceedances occurred, wetting of excavations, stockpiles, and the berms was increased.

6.0 POST-REMEDIATION ACTIVITIES

6.1 Post-Remediation Grab Groundwater Sampling

In accordance with the RDIP, post-remediation grab groundwater sampling was conducted at the Site on January 30, 2008. A total of ten grab groundwater samples (plus one duplicate sample) were collected from direct-push borings using a hydropunch sampling apparatus. Five of the sampling locations were located within the footprint of the former evaporation pond (identified as GGW-2, GGW-3, GGW-4, GGW-5, and GGW-6); the remaining five locations were located across the rest of the Site (GGW-1, GGW-7, GGW-8, GGW-9, and GGW-10). The locations of these samples are illustrated on Figure 10.

The ten borings were advanced by Gregg Drilling to a maximum depth of 15 feet bgs. Drilling activities were conducted in accordance with the drilling permit obtained from the CCCDEH (permit # 08B-1056). Upon reaching the depth of first encountered groundwater (approximately 8 to 10 feet bgs), the rods were retracted to expose the screen of the hydropunch sampler and groundwater samples were collected using a stainless steel bailer. Groundwater samples were submitted to Curtis & Tompkins, Ltd., a state-certified laboratory for the following analyses:

- TPHg, TPHd, and TPHmo by 8015
- VOCs by 8260B

6.1.1 Analytical Results of Grab Groundwater Samples

The results of the grab groundwater sampling are summarized in Table 13. Analytical data reports are provided in Appendix J. TPHd was detected in each of the ten grab groundwater samples collected at the Site at concentrations ranging from 190 micrograms per liter (μg/L) to 500,000 μg/L.

TPHmo was detected in eight of the ten samples at concentrations ranging from 460 μg/L to 540,000 μg/L. The highest concentrations of TPHd and TPHmo were detected

in the five samples collected within the footprint of the former evaporation pond. TPHg was detected in three of the samples at concentrations ranging from 140 µg/L to 770 µg/L.

It should be noted that while the lab reported elevated concentrations of TPHd, the chromatographic patterns did not resemble the laboratory standard for TPHd and was more consistent with oil comprised of longer chain hydrocarbons (approximately C16 to C36). The presence of groundwater affected by TPH consisting of longer chained hydrocarbons is consistent with previous site activities and the historical data collected at this Site.

VOC constituents detected in the groundwater samples included benzene, toluene, total xylenes, TCE, PCE, 1,1-dichloroethene (1,1-DCE), cis-1,2-dichloroethene (cis-1,2-DCE), and trans-1,2-dichloroethene (trans-1,2-DCE). Benzene was detected in two groundwater samples collected from locations GGW-4 and GGW-6 at concentrations of 0.7 µg/L and 1.3 µg/L, respectively. The California MCL for benzene is 1 µg/L and the detection of 1.3 µg/L of benzene is not considered a significant environmental concern considering it is an isolated occurrence and because of the deed restrictions that are proposed for this Site as discussed in Section 1. Toluene and total xylenes were detected at concentrations of 1.9 µg/L and 3.3 µg/L, respectively in the sample collected from GGW-6. The MCLs for toluene and total xylenes are 150 µg/L and 1,750 µg/L, respectively. Both the GGW-4 and the GGW-6 locations are within the footprint of the former evaporation pond.

The following VOCs were detected in the groundwater sample collected from most upgradient sample location GGW-1 located in the southwestern corner of the Site: TCE at a concentration of 7.9 µg/L; PCE at a concentration of 72 µg/L; 1,1-DCE at a concentration of 11 µg/L; cis-1,2-DCE at a concentration of 8.7 µg/L; and trans-1,2-DCE at a concentration of 1.8 µg/L. The VOCs TCE, PCE, 1,1-DCE, and cis-1,2-DCE were detected at concentrations above their MCLs of 5 µg/L, 5 µg/L, 6 µg/L, and 6 µg/L, respectively. The presence of these VOCs is consistent with the historical detection of these VOCs in groundwater samples collected in 1986 and 1992 from wells that were formerly located in this portion of the Site (HLA 1986 and ROUX 1992). As described in the PEA, and previous reports prepared for this Site, an unknown off-site property is the suspected source for these VOCs detected in groundwater (Harding 2001).

There is an LUC prohibiting the use of groundwater by future inhabitants at the Site. In addition, the following sections provide LFR's human health screening evaluation for the potential vapor intrusion pathway for VOCs detected in soil gas to potential future residents.

6.2 Post-Remediation Soil-Vapor Survey

In accordance with the ARDIP and DTSC Guidelines (DTSC 2003), post-remediation soil-vapor sampling was conducted at the Site on February 28 and 29, 2008. A total of

13 soil-vapor samples (plus one duplicate sample) were collected at the Site. Refer to Figure 10 for soil-vapor sampling locations.

In order for the DTSC to provide a document stating that "no further remedial action" is required for the Site, the DTSC requested that a soil-vapor survey be conducted in the area of the former evaporation pond. The purpose of the soil-vapor survey was to provide data to identify whether there are areas where VOCs are off-gassing from the affected groundwater up through the soil column to near the ground surface. To assess if the vapors off-gassing from the affected groundwater would pose a health risk to future residents of this Site, LFR conducted a site-specific Human Health Screening Evaluation as described in sections 6.2.1 and 6.2.2 of this report.

Soil-vapor sampling was conducted by Vironex, Inc., of Pacheco, California. Soil-vapor samples were collected from approximately 5 feet bgs via temporary probes. The temporary soil-vapor probes were constructed of 1-inch-outer-diameter chrom-moly steel with an inert 1/8-inch-diameter nylaflow™ tube that ran down the center of the probe to sampling ports beneath the tip. The temporary probes were driven to a depth of 5 feet bgs and the probe was retracted slightly, which opened the tip and exposed the vapor sampling port. Following equilibration, soil gas was withdrawn from the nylaflow™ tubing using a small calibrated syringe. The first three dead volumes of vapor were discarded to purge the sample tubing. Soil-vapor samples were then collected using one-liter Summa™ canisters and submitted to Calscience Environmental Laboratories, Inc., a state-certified laboratory in Garden Grove, California for VOC analysis using U.S. EPA Method TO-15. A leak check compound (1,1-difluoroethane) was used around the probe rods at each location during soil-vapor sampling. Following the collection of soil-vapor samples, the temporary soil-vapor probes were pulled out of the ground and the hole sealed using hydrated bentonite.

6.2.1 Analytical Results of Soil-Vapor Samples and Human Health Screening Evaluation

The analytical results of the soil-vapor samples collected at the Site in February 2008 are summarized in Table 14. Analytical data reports are provided in Appendix K. Several VOCs were detected in the soil-vapor samples collected at the Site.

LFR performed a level III data-quality review as defined by the U.S. EPA (U.S. EPA 1999) to validate analytical results. The review identified that the laboratory quality control data were within specified limits as required by the U.S. EPA data validation guidelines. No analytical results were qualified based on the data validation review. The complete soil-gas laboratory analytical report for the data is provided as Appendix K.

Per DTSC guidelines, the Johnson & Ettinger model (DTSC 2005) was used to estimate potential vapor transport and intrusion at the Site. The Johnson & Ettinger model incorporates two primary transport mechanisms: (a) diffusion of VOCs from soil vapor to an area near a building foundation, and (b) advection transport from the

foundation into the building's interior. After the model estimates indoor-air concentrations, it subsequently estimates health risks associated with exposure to the affected indoor air. Health risks to a residential population were evaluated and compared to the DTSC target health risk of one excess cancer case in a million or 1 x 10^{-6} and the non-cancer adverse health standard of 1.

Also, as recommended in the DTSC guidance (DTSC 2005), site-specific soil physical parameters were incorporated into the model. Three soil samples were collected and submitted to Cooper Geotechnical Laboratory located in Palo Alto, California ("Cooper") for physical parameter evaluation. Analytical reports from Cooper are provided in Appendix L. Cooper used two of the samples for physical parameter evaluation because one of the samples became disturbed during transport. The results of the physical parameter analyses for two of the three samples are included in Table 15. Based on the physical parameter evaluation, the soils are classified as sandy clay with silts, with an average dry bulk density of 1.82 grams per cubic centimeter (g/cm^3), an average total porosity of 0.334, with a water-filled porosity of 0.296 g/cm^3. Default residential exposure input parameters were used to estimate potential risks and hazards. These include a 30-year exposure duration with exposures occurring 24 hours a day on 350 days per year. The vapor modeling worksheets are presented in Appendix M. The worksheets also present the modeling assumptions.

Statistical data distribution and the recommended upper confidence limit (UCL) of the mean of the soil-gas data were calculated using the U.S. EPA public domain software ProUCL 4.0. Per U.S. EPA guidance (U.S. EPA 1989), the lower of either the UCL or the maximum concentration was selected as the soil-gas concentration used in the modeling. In this evaluation, statistical summary UCLs for each of the compounds were used as soil-gas concentration. Table 16 presents the ProUCLs used for the soil-gas modeling.

The identified compounds in the soil-gas samples collected at the Site included benzene, ethylbenzene, TCE, and PCE. Based on the ProUCL summary results, ethylbenzene, TCE, and PCE data are not represented by standard data distributions. ProUCL performed non-parametric analysis to generate the statistical summaries of these compounds. For these compounds, ProUCL recommended that the nonparametric 99th percent UCL be used for the soil-gas source concentration. Benzene data was shown to be represented by a Gamma distribution and ProUCL recommended the Gamma 95th percent UCL.

These identified VOCs were evaluated for potential to cause both cancer and the potential to cause other non-cancer adverse health effects. DTSC considerers benzene, ethylbenzene, TCE, and PCE to be carcinogens and were evaluated for both carcinogenic and noncarcinogenic risk accordingly.

6.2.2 Human Health Screening Evaluation Results

Cancer risks and non-cancer adverse health effects were estimated for the hypothetical residential receptor. The total estimated cancer risks were calculating using the DTSC version of the Johnson & Ettinger model with site-specific soil input parameters. The estimated cancer risks associated for each of the four identified carcinogens were summed to generate an overall cancer risk for the Site. The total estimated cancer risk was compared to DTSC's cancer risk target of 1×10^{-6}, which is considered protective of public health. The total chronic non-cancer health hazards were compared to an acceptable non-cancer target threshold of 1. The total estimated cancer risk associated with vapor transport modeling was estimated to be 3×10^{-8}, which is more than an order of magnitude below the DTSC recommended target health risk of 1×10^{-6}. The sum of the non-cancer hazard was estimated to be 5×10^{-5}, which is less than the DTSC recommended target of 1. Table 16 presents the estimated cancer and non-cancer risks associated with the Johnson & Ettinger.

6.2.3 Human Health Screening Evaluation Conclusions

Based on the results of this soil-vapor investigation, estimated risks and hazards were below regulatory cancer and non-cancer targets. The detected concentrations are below concentrations associated with vapor intrusion health concerns. The estimated cancer risk was generated considering default building foundation and DTSC residential exposure assumptions and site-specific soil data. The estimated cancer risks and non-cancer health hazards are likely greater than actual risks and health hazards because the human health risk model is very conservative. The risk estimates are based on up to 30-year exposure durations with a residential frequency of 24 hours per day for 350 days per year. The actual exposures will likely be significantly lower, which would result in a lower risk estimate.

6.3 Preparation and Implementation of an O&M Plan

- LFR has prepared an O&M Plan for the eastern boundary containment berm. The O&M Plan has been submitted under separate cover to the DTSC, and a copy of the plan is provided in Appendix N. The O&M Plan includes a description of the following:
- General site overview and history
- Physical features of the landscaped containment berm
- Routine and non-routine monitoring and maintenance procedures and related schedules
- General restrictions on the containment berm

Implementation of the procedures described in the O&M Plan will begin upon approval of the Plan by the DTSC.

6.4 As-Built Drawings

Following the construction of the containment berm, W&K surveyed the location and elevation of the berm. The results of the survey were used to prepare the "as-built drawings" of the berm that are presented as Figures 7, 8, and 9.

The survey data was also used to calculate the amount of material that was placed into the berm. Based on the survey data approximately 53,200 cubic yards of material is in the "north" berm and approximately 11,400 cubic yards of material is in the "south" berm.

7.0 CONCLUSIONS

Based on the results summarized in this report, LFR concludes the following:

- Remediation work has been completed to meet the requirements of the DTSC-approved RAP, RDIP, and ARDIP at the Site. This work has been described in this report and per the objectives presented in Section 2.3.3.1, the Site, with the exception of the eastern boundary berm, has been remediated to allow development for a residential use.
- Approximately 71,100 cubic yards of ACM-affected soil was excavated from the Site. Of this total volume, a reported 17,600 tons (approximately 10,500 cubic yards) was removed from the Site and disposed of at the Forward Landfill in Manteca, California. The remaining volume (approximately 60,600 cubic yards) was placed in the eastern boundary berm. Analytical results for the confirmation soil samples collected in the areas that were excavated for ACM-affected soils met the objectives of the DTSC-approved remedial plans.
- Approximately 22,000 cubic yards of TPH-affected soil was excavated from the Site. Of this total volume, a reported 18,000 cubic yards (approximately 30,300 tons) was removed from the Site and disposed of at the Hay Road Landfill in Vacaville, California. The remaining volume (approximately 4,000 cubic yards) was placed in the above-grade portion of the eastern boundary berm. Analytical results for the confirmation soil samples collected in the areas that were excavated for TPH-affected soils met the objectives of the DTSC-approved remedial plans.
- The eastern boundary berm has been constructed in accordance with the design specifications described in the RDIP, ARDIP, and Grading Permit Application submitted to the City of Pittsburg. A 2-foot-thick cover of clean soil and Tensar Product has been placed on top of the berm. A LUC will be placed on the Site. The LUC will limit access and restrict the future land use of Parcel D.
- Analytical results of the confirmation soil samples collected at the Site and the survey data for the excavation confirmed that the project objective of removing TPH-affected soils to an elevation of 4 feet NGVD was met. Together the analytical results of the confirmation soil samples and survey data indicating that TPH-affected soil has been removed to an elevation of 4 feet NGDV, demonstrate

that the remedial objectives as related to the TPH-affected soil formerly located near the former evaporation pond have been met.

- Groundwater sampling results indicate concentrations of TPHd and TPHmo were detected and that there was little to no BTEX detected in the grab groundwater samples collected at the Site. Benzene was the only petroleum-related constituent detected above its MCL and was detected in only one groundwater sample collected at the Site at a concentration of 1.3 μg/L, just slightly above the MCL of 1.0 μg/L. While the lab reported elevated concentrations of TPHd, the chromatographic patterns did not resemble the laboratory standard for TPHd and was more consistent with oil comprised of longer chain hydrocarbons (approximately C16 to C36). The presence of groundwater affected by TPH consisting of longer chained hydrocarbons is consistent with previous site usage and the historical data collected at this Site. Also as supported by the soil-gas survey and human health screening evaluation, the presence of TPH-affected groundwater below the Site does not pose an adverse human health risk for the planned residential use proposed for the Site.
- To protect future inhabitants at this Site, an LUC has been prepared for the Site and will be placed on the deed for this property. The LUC prohibits the use of groundwater at the Site and restricts intrusive work (excavation) at or below the elevation of 4 feet NGVD in the area near the former evaporation pond without a proper HSP, preparation of a soil management plan, and notification of the DTSC. The area near the former evaporation pond has been defined as the "Soil Management Area" in the LUC. In accordance with the LUC, activities that will disturb the soil at or below 4 feet NGVD or which encounter groundwater if it occurs at a shallower depth (e.g., excavation, grading, removal, trenching, filling, earth movement, mining, or drilling), without a Soil Management Plan and HSP approved by the DTSC in advance, are prohibited. At the time the remediation was completed, there was approximately 5 feet of clean soil above 4 feet NGVD.
- Based on the results of this soil-vapor investigation and human health screening evaluation for the vapor intrusion pathway, estimated risks and hazards were more than an order of magnitude below regulatory cancer and non-cancer targets associated with residential land use. The estimated cancer risk was generated considering default building foundation assumptions, DTSC residential exposure assumptions, and site-specific soil parameters.

Based on the above conclusions, the Site meets the site-specific cleanup goals established in the DTSC-approved RAP, RDIP, and ARDIP. As expected, the analytical results of groundwater samples collected at the Site indicate that TPH-affected groundwater remains at the Site. As provided above, an LUC prohibiting the use of groundwater by future inhabitants and intrusive work (excavation of soil) to elevations at or below 4 feet NGVD in the area defined as the "Soil Management Area" in the LUC without a proper HSP, the preparation of a Soil Management Plan, and notification of the DTSC will be placed on the deed for this Site. It is LFR's opinion that the remedial work and the placement of the LUC on the deed satisfies the conditions and requirements for the Site as specified in the RAP, RDIP, and the

ARDIP and that no further action is required with regard to investigation and remediation of soil or groundwater at the Site.

Therefore, in order for PRPLLC to proceed with the redevelopment plan, on behalf of PRPLLC, LFR respectfully requests that the DTSC issue a letter to PRPLLC stating that no further action is required for Parcels A, B, C, and D with the exception of implementing the O&M Plan for the eastern boundary berm (Appendix N).

8.0 REFERENCES

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Table 1
Analytical Results of Soil Samples Collected from Screened Sandy Material Stockpile
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California

Concentrations are in percent asbestos (%)

Sample Identification	Date Collected	Asbestos (%)
KLPile-East1	11/22/2007	**0.25%**
KLPile-East2	11/27/2007	ND
KLPile-East3	11/27/2007	ND
KLPile-East4	11/27/2007	ND
KLPile-West1	11/22/2007	<0.25%
KLPile-West2	11/27/2007	ND
KLPile-West3	11/27/2007	ND
KLPile-West4	11/27/2007	ND
SAND-SE-1, SE-2, SE-3, SE-4	12/5/2007	ND
SAND-NE-1, NE-2, NE-3, NE-4	12/5/2007	ND
SAND-NC-1, NC-2, NC-3, NC-4	12/5/2007	ND
SAND-NW-1, NW-2, NW-3, NW-4	12/5/2007	ND

Notes:

ND = no asbestos fibers were detected

Samples were analyzed by EMSL Laboratories, Inc., using United States Environmental Protection Agency (U.S. EPA) Method 600/R-93-116 with CARB 435 Milling.

Samples were collected from the sandy material stockpile following the screening process.

Sample in **bold** represents the portion of the stockpile placed in the containment berm.

Table 2
Confirmation Soil Samples
Analytical Results - Asbestos
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California

Concentrations in percent asbestos (%)

Sample Identification	Date Collected	Asbestos Results
Confirmation Samples Collected by ERM		
Samples Collected During Building Demolition		
Area-2A	4/24/2006	ND
Area-2B	4/24/2006	ND
Area-2C	4/24/2006	ND
Area-2D	4/24/2006	ND
Area-2E	4/24/2006	ND
Area-16	4/24/2006	ND
Area-14A	4/27/2006	ND
Area-14B	4/27/2006	ND
Area-14C	4/27/2006	ND
Area-14D	4/27/2006	ND
Area-14E	4/27/2006	ND
Area-14F	4/27/2006	ND
Area-19 East	4/27/2006	ND
Area-19 West	4/27/2006	ND
Area-19 Wall	4/27/2006	ND
Area-19 B	4/27/2006	ND
Area-19 C	4/27/2006	ND
Area-29 A	4/27/2006	ND
Area-29 B	4/27/2006	ND
Area-29 C	4/27/2006	ND
Area-2A	5/1/2006	<1%
Area-2B	5/1/2006	<1%
Area-9A	5/1/2006	ND
Area-9B	5/1/2006	<1%
Area-9C	5/1/2006	<1%
Area-9D	5/1/2006	ND
Area-9E	5/1/2006	<1%
Area-9F	5/1/2006	<1%
Area-9G	5/1/2006	ND
Area-11	5/1/2006	ND
Area-12	5/1/2006	ND
Area-13	5/1/2006	ND
Area-28	5/1/2006	ND
Area-22A	5/3/2006	ND
Area-22B	5/3/2006	ND
Area-22C	5/3/2006	ND
Area-22D	5/3/2006	ND
Area-24	5/3/2006	ND
Area-18N	5/8/2006	ND
Area-18W	5/8/2006	ND
Area-27	5/8/2006	ND
Area-33	5/8/2006	ND

Table 2
Confirmation Soil Samples
Analytical Results - Asbestos
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California

Concentrations in percent asbestos (%)

Sample Identification	Date Collected	Asbestos Results
Area-17a	5/9/2006	ND
Area-17b	5/9/2006	ND
Area-17c	5/9/2006	<1%
Area-21a	5/9/2006	ND
Area-21b	5/9/2006	<1%
Area-21c	5/9/2006	ND
Area-25a	5/17/2006	ND
Area-25b	5/17/2006	ND
Samples Collected During Remediation Activities		
CONF-101	8/11/2006	ND
CONF-102	8/11/2006	ND
CONF-103	8/11/2006	ND
CONF-104	8/11/2006	ND
CONF-105	8/11/2006	<1%
CONF-106	8/11/2006	ND
CONF-107	8/11/2006	ND
CONF-108	8/11/2006	ND
CONF-109	8/11/2006	ND
CONF-110	8/11/2006	ND
CONF-111	8/11/2006	ND
CONF-112	8/11/2006	ND
CONF-113	8/11/2006	ND
CONF-114	8/11/2006	ND
CONF-115	8/11/2006	ND
CONF-116	8/11/2006	ND
CONF-117	8/11/2006	ND
CONF-118	8/11/2006	<1%
CONF-119	8/11/2006	ND
CONF-120	8/11/2006	ND
CONF-120	11/10/2006	<1%
CONF-121	11/10/2006	ND
CONF-122	11/10/2006	ND
CONF-123	11/10/2006	ND
CONF-124	11/10/2006	ND
CONF-125	11/10/2006	ND
CONF-126	11/10/2006	ND
CONF-127	11/10/2006	ND
CONF-128	11/20/2006	ND
CONF-129	11/20/2006	ND
CONF-130	11/20/2006	<1%
CONF-131	11/20/2006	<1%
CONF-132	11/20/2006	ND
CONF-207	8/17/2006	ND
CONF-208	8/17/2006	<1%

Table 2
Confirmation Soil Samples
Analytical Results - Asbestos
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California

Concentrations in percent asbestos (%)

Sample Identification	Date Collected	Asbestos Results
CONF-209	8/17/2006	ND
CONF-210	8/17/2006	< 1%
CONF-211	8/17/2006	< 1%
CONF-212	8/17/2006	< 1%
CONF-213	8/17/2006	< 1%
CONF-214	8/17/2006	< 1%
CONF-215	8/17/2006	< 1%
CONF-216	9/14/2006	ND
CONF-217	9/14/2006	ND
CONF-218	9/14/2006	< 1%
CONF-219	9/14/2006	ND
CONF-220	9/14/2006	ND
CONF-221	9/14/2006	< 1%
CONF-222	9/14/2006	ND
CONF-223	9/14/2006	ND
CONF-224	9/14/2006	< 1%
CONF-225	9/14/2006	ND
CONF-226	9/21/2006	< 1%
CONF-227	9/21/2006	ND
CONF-228	9/21/2006	< 1%
CONF-229	9/21/2006	< 1%
CONF-230	9/21/2006	< 1%
CONF-231	9/21/2006	ND
CONF-232	9/21/2006	ND
CONF-233	10/18/2006	< 1%
CONF-234	10/18/2006	< 1%
Tank 2	10/18/2006	ND
CONF-235	11/3/2006	ND
CONF-236	11/3/2006	< 1%
CONF-237	11/3/2006	ND
CONF-238	11/3/2006	ND
CONF-239	11/3/2006	ND
CONF-240	11/3/2006	ND
CONF-241	11/3/2006	< 1%
CONF-242	11/3/2006	ND
CONF-243	11/3/2006	ND
CONF-301	8/9/2006	ND
CONF-302	8/9/2006	ND
CONF-303	8/9/2006	ND
CONF-304	8/9/2006	ND
CONF-305	8/9/2006	ND
CONF-306	8/9/2006	ND
SF-01	8/17/2006	ND
SF-02	8/17/2006	ND

Table 2
Confirmation Soil Samples
Analytical Results - Asbestos
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California

Concentrations in percent asbestos (%)

Sample Identification	Date Collected	Asbestos Results
SF-03	8/17/2006	ND
SF-04	8/17/2006	ND
CONF-401	8/21/2006	< 1%
CONF-402	8/21/2006	ND
CONF-403	8/21/2006	ND
CONF-404	8/21/2006	ND
CONF-405	8/22/2006	ND
CONF-406	8/22/2006	< 1%
CONF-407	8/22/2006	ND
CONF-408	8/22/2006	ND
CONF-409	8/22/2006	ND
CONF-410	8/22/2006	ND
CONF-411	8/22/2006	ND
CONF-412	8/24/2006	< 1%
CONF-413	8/24/2006	ND
CONF-414	8/28/2006	ND
CONF-415	8/28/2006	ND
CONF-416	8/28/2006	ND
CONF-417	8/29/2006	ND
CONF-418	8/29/2006	< 1%
CONF-419	8/29/2006	< 1%
CONF-420	8/29/2006	< 1%
CONF-421	8/29/2006	< 1%
CONF-422	8/30/2006	ND
CONF-423	8/30/2006	ND
CONF-424	8/30/2006	ND
CONF-425	8/30/2006	ND
CONF-426	8/30/2006	ND
CONF-427	8/30/2006	ND
CONF-428	9/11/2006	< 1%
CONF-429	9/11/2006	< 1%
CONF-430	9/11/2006	ND
CONF-431	9/12/2006	ND
CONF-432	9/12/2006	< 1%
CONF-433	9/18/2006	ND
CONF-434	9/18/2006	ND
CONF-435	9/18/2006	ND
CONF-436	9/29/2006	< 1%
CONF-437	9/29/2006	< 1%
CONF-438	10/7/2006	ND
CONF-439	10/7/2006	ND
CONF-440	10/7/2006	ND
CONF-441	10/7/2006	ND
CONF-442	10/7/2006	ND

Table 2
Confirmation Soil Samples
Analytical Results - Asbestos
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California

Concentrations in percent asbestos (%)

Sample Identification	Date Collected	Asbestos Results
CONF-443	10/7/2006	ND
CONF-444	10/7/2006	ND
CONF-445	10/7/2006	ND
CONF-446	10/13/2006	ND
CONF-447	10/13/2006	ND
CONF-448	10/13/2006	ND
CONF-458	11/7/2006	ND
CONF-459	11/7/2006	ND
CONF-460	11/7/2006	ND
CONF-461	11/7/2006	ND
CONF-462	11/7/2006	ND
CONF-463	11/7/2006	ND
CONF-466	11/7/2006	ND
CONF-465	11/16/2006	ND
CONF-467	11/16/2006	ND
CONF-468	11/16/2006	ND
CONF-471	11/18/2006	ND
CONF-472	11/18/2006	ND
CONF-476	12/7/2006	ND
CONF-477	12/8/2006	ND
CONF-501	9/13/2006	<1%
CONF-502	9/13/2006	ND
CONF-503	9/13/2006	<1%
CONF-504	9/13/2006	ND
CONF-505	9/15/2006	<1%
CONF-506	9/15/2006	<1%
CONF-507	9/15/2006	<1%
CONF-508	9/15/2006	<1%
CONF-509	9/15/2006	<1%
CONF-510	9/15/2006	ND
CONF-511	9/18/2006	<1%
CONF-512	9/18/2006	<1%
CONF-513	9/18/2006	ND
CONF-514	9/29/2006	<1%
CONF-515	11/16/2006	ND
CONF-516	11/16/2006	ND
CONF-517	12/4/2006	ND
CONF-518	12/4/2006	ND
CONF-519	12/4/2006	ND
CONF-520	12/5/2006	<1%
CONF-521	12/5/2006	ND
CONF-522	12/5/2006	ND
CONF-523	12/5/2006	ND
CONF-524	12/5/2006	ND

Table 2
Confirmation Soil Samples
Analytical Results - Asbestos
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California

Concentrations in percent asbestos (%)

Sample Identification	Date Collected	Asbestos Results
CONF-525	12/5/2006	ND
CONF-526	12/5/2006	ND
CONF-528	12/11/2006	ND
CONF-529	12/11/2006	ND
CONF-530	12/11/2006	< 1%
CONF-601	8/24/2006	ND
CONF-602	8/24/2006	< 1%
CONF-603	8/24/2006	ND
CONF-604 [1]	8/24/2006	2%
CONF-604 [2]	8/28/2006	ND
CONF-605	8/24/2006	ND
CONF-606	8/24/2006	< 1%
CONF-607	8/24/2006	ND
CONF-608	8/25/2006	ND
CONF-609	8/25/2006	ND
CONF-610	8/25/2006	ND
CONF-611	8/25/2006	ND
CONF-613	8/25/2006	ND
CONF-614	8/31/2006	ND
CONF-615	8/31/2006	< 1%
CONF-616	8/31/2006	ND
CONF-617	8/31/2006	ND
CONF-618	8/31/2006	ND
CONF-619	8/31/2006	ND
CONF-620	8/31/2006	ND
CONF-621	9/8/2006	< 1%
CONF-622	9/8/2006	< 1%
CONF-623	9/8/2006	< 1%
CONF-624	9/8/2006	< 1%
CONF-625 [1]	9/11/2006	2%
CONF-625 [2]	9/15/2006	ND
CONF-626	9/11/2006	< 1%
CONF-627	9/11/2006	< 1%
CONF-628	9/11/2006	ND
CONF-629	9/11/2006	< 1%
CONF-630	9/11/2006	ND
CONF-631	9/11/2006	ND
CONF-632	9/11/2006	ND
CONF-633	9/11/2006	ND
CONF-634	9/11/2006	ND
CONF-635	9/11/2006	< 1%
CONF-636	9/11/2006	ND
CONF-637	9/15/2006	< 1%

Table 2
Confirmation Soil Samples
Analytical Results - Asbestos
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California

Concentrations in percent asbestos (%)

Sample Identification	Date Collected	Asbestos Results
CONF-637	12/5/2006	ND
CONF-638	12/5/2006	ND
CONF-639	12/5/2006	ND
CONF-640	12/5/2006	ND
CONF-641	12/7/2006	ND
CONF-642	12/7/2006	<1%
CONF-643	12/7/2006	<1%
CONF-644	12/7/2006	ND
CONF-645	12/7/2006	ND
CONF-646	12/7/2006	<1%
CONF-647	12/8/2006	<1%
CONF-648	12/8/2006	<1%
CONF-649	12/8/2006	ND
CONF-650	12/8/2006	ND
CONF-651	12/8/2006	<1%
CONF-652	12/8/2006	<1%
CONF-653	12/15/2006	<1%
CONF-654	12/15/2006	<1%
CONF-655	12/15/2006	<1%
CONF-656	12/15/2006	ND
Confirmation Samples Collected by LFR		
Lay Down Area beneath Stockpile		
LD-#1	12/3/2007	<0.25%
LD-#2	12/3/2007	<0.25%
LD-#3	12/11/2007	ND
LD-#4	12/3/2007	<0.25%
LD-#5	12/3/2007	<0.25%
LD-#6	12/11/2007	ND
LD-#7	12/3/2007	<0.25%
LD-#8	12/3/2007	<0.25%
LD-#9	12/3/2007	ND
LD-#10	12/3/2007	<0.25%
LD-#11 [1]	12/11/2007	0.25%
LD-#11-b [2]	12/13/2007	ND
LD-#12	12/11/2007	ND
Area Beneath Sandy Material Pile		
RMB-1	12/12/2007	ND
RMB-2	12/12/2007	ND
RMB-3 [1]	12/12/2007	1.50%
RMB-3-b [2]	12/14/2007	ND
RMB-4 [1]	12/12/2007	0.25%

Table 2
Confirmation Soil Samples
Analytical Results - Asbestos
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California

Concentrations in percent asbestos (%)

Sample Identification	Date Collected	Asbestos Results
RMB-4-b [2]	12/14/2007	ND
RMB-5 [1]	12/12/2007	0.25%
RMB-5-b [2]	12/14/2007	ND
RMB-6	12/12/2007	<0.25%
RMB-7	12/12/2007	ND
RMB-8 [1]	12/12/2007	0.25%
RMB-8-b [2]	12/14/2007	<0.25%
So.West#1	1/30/2008	<0.25%
So.West#2	1/30/2008	ND
So.West#3	1/30/2008	ND
So.West#4	1/30/2008	ND

Notes:

Samples collected by ERM were analyzed by Forensic Analytical, Inc., using PLM Analysis of Bulk Samples via United States Environmental Protection Agency (U.S. EPA) Method EPA 600/R-93/116.

Samples collected by LFR were analyzed by EMSL Analytical, Inc., using PLM Analysis of Bulk Samples via U.S. EPA Method 600/R-93/116 with CARB 435 Prep (Milling).

[1] = Sample results above proposed cleanup goal and area excavated further and resampled.

[2] = Second confirmation sample collected from area that required further excavation.

ERM = ERM-West, Inc.
ND = no asbestos fibers were detected
PLM = polarized light microscopy

Table 3
Confirmation Soil Samples
Analytical Results - Total Petroleum Hydrocarbons
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California

Concentrations in milligrams per kilogram (mg/kg)

Sample Location	Sample Date	Total Petroleum Hydrocarbons		
		Diesel	Motor Oil	Gasoline
Samples Collected by ERM				
CONF-106	8/15/2006	NA	NA	< 0.1
CONF-110	8/15/2006	NA	NA	NA
CONF-112	8/15/2006	< 2.5	< 10	NA
CONF-122	11/10/2006	< 2.5	< 10	NA
CONF-125	11/10/2006	NA	NA	< 0.1
CONF-404	8/22/2006	< 2.5	< 10	NA
CONF-408	8/22/2006	< 2.5	< 10	< 0.1
CONF-410	8/22/2006	< 2.5	< 10	NA
CONF-417	8/29/2006	< 2.5	53	NA
CONF-419 [1]	8/29/2006	< 500	**11,000**	0.6
CONF-419 [2]	9/12/2006	< 2.5	56	< 0.1
CONF-421	8/29/2006	< 2.5	24	NA
CONF-424 [3]	8/30/2006	**790**	< 200	NA
CONF-427	8/30/2006	< 2.5	< 10	NA
CONF-428 [3]	9/11/2006	< 250	**2,500**	NA
CONF-430 [3]	9/11/2006	< 50	**540**	NA
CONF-431	9/12/2006	NA	NA	< 0.1
CONF-432 [3]	9/12/2006	< 1,200	**7,800**	NA
CONF-439	10/7/2006	< 2.5	< 10	NA
CONF-442	10/7/2006	< 12	140	0.33
CONF-443	10/7/2006	< 250	**3,800**	NA
CONF-444	10/7/2006	< 2.5	< 10	NA
CONF-445	10/7/2006	< 120	**2,300**	NA
CONF-446	10/13/2006	< 5	160	< 0.1
CONF-447	10/13/2006	< 2.5	< 10	< 0.1
CONF-448	10/13/2006	< 2.5	35	< 0.1
CONF-449	10/16/2006	< 2.5	14	NA
CONF-450 [1]	10/16/2006	< 120	**1,400**	NA
CONF-450 B [2]	10/20/2006	13	< 10	< 0.1
CONF-451 [1]	10/16/2006	< 120	**1,200**	NA
CONF-451 B [2]	10/20/2006	< 2.5	< 10	< 0.1
CONF-452 [1]	10/16/2006	< 1,200	**1,600**	NA
CONF-452 B [2]	10/20/2006	390	< 100	< 0.5
CONF-453	10/16/2006	< 2.5	15	NA
CONF-454	10/16/2006	< 2.5	24	NA
CONF-455	10/16/2006	< 50	410	NA
CONF-457	11/7/2006	< 2.5	< 10	NA
CONF-458	11/7/2006	< 2.5	< 10	NA
CONF-459	11/7/2006	< 2.5	< 10	NA
CONF-460	11/7/2006	< 2.5	< 10	NA
CONF-461	11/7/2006	< 2.5	< 10	NA
CONF-462	11/7/2006	< 2.5	< 10	NA
CONF-463	11/7/2006	< 2.5	< 10	< 0.1

Table 3
Confirmation Soil Samples
Analytical Results - Total Petroleum Hydrocarbons
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California

Concentrations in milligrams per kilogram (mg/kg)

Sample Location	Sample Date	Total Petroleum Hydrocarbons		
		Diesel	Motor Oil	Gasoline
CONF-464 (GW) [3]	11/21/2006	**840**	<200	NA
CONF-464-BS	11/14/2006	<2.5	38	0.22
CONF-465	11/16/2006	<2.5	<10	NA
CONF-466	11/7/2006	<2.5	<10	NA
CONF-467	11/16/2006	<2.5	<10	<0.1
CONF-468	11/16/2006	<2.5	<10	NA
CONF-469	11/18/2006	<2.5	<10	NA
CONF-470	11/18/2006	270	<50	NA
CONF-471 [3]	11/18/2006	**6,900**	<1,000	NA
CONF-472 [3]	11/18/2006	**1,000**	<200	NA
CONF-473	11/29/2006	<2.5	22	NA
CONF-474	11/29/2006	92	<10	NA
CONF-475	12/7/2006	<2.5	<10	NA
CONF-476	12/7/2006	<2.5	<10	NA
CONF-477 [3]	12/8/2006	**10,000**	<2,500	NA
CONF-478	12/12/2006	<2.5	<10	NA
CONF-479	12/12/2006	<10	160	0.33
CONF-480	12/12/2006	<2.5	<10	NA
CONF-481	12/15/2006	180	<50	NA
CONF-513	9/18/2006	<2.5	<10	<0.1
CONF-517 [3]	12/4/2006	<250	**2,800**	4
CONF-518 [3]	12/4/2006	<120	**2,100**	NA
CONF-519	12/4/2006	<50	500	NA
CONF-527	12/6/2006	210	<100	NA
CONF-612	8/25/2006	<2.5	<10	<0.1
CONF-625	9/11/2006	<25	0.16	<0.1
CONF-654	12/15/2006	<62	390	NA
E Wall-1	10/13/2006	<12	480	<0.1
E Wall-2	10/13/2006	<2.5	17	<0.1
E Wall-3	10/13/2006	<250	**2,300**	<0.1
Pond INSITU [3]	9/26/2006	**8,100**	<2,000	65
Samples Collected from UST Excavations by ERM				
72006-T1 W	7/20/2006	<2.5	<10	1
72006-T1 BOT [1]	7/20/2006	<50	<200	**1,200**
080206-T1 B [2]	8/2/2006	<2.5	<10	<0.1
080206-T1 N [1]	8/2/2006	<10	<10	**1,100**
082506-T1N [2]	8/25/2006	<2.5	<10	<100
082506-T1W	8/25/2006	<2.5	<10	<100
72006-T1 E	7/20/2006	<2.5	<10	0.25
72006-T2 BOT	7/20/2006	<2.5	<10	<0.1
72006-T2 E	7/20/2006	<2.5	<10	<0.1
72006-T2 W	7/20/2006	<2.5	<10	0.61
Tank3-b-E	10/19/2006	NA	NA	32

Table 3
Confirmation Soil Samples
Analytical Results - Total Petroleum Hydrocarbons
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California
Concentrations in milligrams per kilogram (mg/kg)

Sample Location	Sample Date	Total Petroleum Hydrocarbons		
		Diesel	Motor Oil	Gasoline
Tank3-b-W	10/19/2006	NA	NA	29
Tank3-s-NE	10/19/2006	NA	NA	<0.1
Tank3-s-NW	10/19/2006	NA	NA	<0.1
Tank3-s-SE	10/19/2006	NA	NA	<0.1
Tank3-s-SW	10/19/2006	NA	NA	<0.1
Trench-B	12/19/2006	<2.5	<10	<0.1
Trench-S	12/19/2006	<2.5	18	<0.1
Samples Collected within the Former Evaporation Pond Excavation by LFR				
S-1-5.0	8/9/2007	<1.0	<5.0	NA
S-2-2.5	8/9/2007	42 H Y	39 L	NA
S-3-5.0	8/9/2007	16 H Y	30 H L	NA
S-4-4.0	8/9/2007	2.7 H Y	<5.0	NA
S-5-3.0	8/9/2007	7.4 H Y	17 H L	NA
Samples Collected from TPH Excavation North of Former Evaporation by LFR				
PF-NE-SW	12/5/2007	23	93	<0.25
PF-SE-SW	12/5/2007	<0.99	<50	<0.23
PF-SW-SW	12/5/2007	<0.99	<49	<0.23
PF-NW-SW	12/5/2007	<1.0	<50	<0.25
EXC-SW-SW	2/29/2008	20 Y	52	<1.0
EXC-NW-SW	2/29/2008	13 Y	39	<1.0
EXC-NE-SW	2/29/2008	10 Y	38	<0.91
Cleanup Goal		500	500	400

Notes:
Bold entries = the analytical results exceeded the proposed cleanup goal
[1] = Sample results above proposed cleanup goal and area excavated further and resampled
[2] = Second confirmation sample collected from area that required further excavation
[3] = Sample collected from beneath the water table
H = heavier hydrocarbons contributed to the quantification.
L = lighter hydrocarbons contributed to the quantification.
Y = sample exhibits chromatographic pattern that does not resemble standard.
< 0.1 = Compound not detected at or above the detection limit
ERM = ERM-West, Inc.
NA = not analyzed
TPH = total petroleum hydrocarbons
UST = underground storage tank
Analyses for samples collected by ERM provided by Entech Analytical Labs, Inc., located in Santa Clara, California.
Analyses for samples collected by LFR provided by Test America Labs in Pleasanton, California, and by Curtis & Tompkins, Ltd., in Berkeley, California.

Table 4
Confirmation Soil Samples
Analytical Results - Volatile Organic Compounds
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California
Concentrations are in milligrams per kilogram

Sample Identificaton	Date Collected	Benzene	Toluene	Ethyl-benzene	m,p-Xylene	o-Xylene	Total Xylenes	1,2,4-Trimethyl-benzene	1,3,5-Trimethyl-benzene	Naphthalene	Acetone	Methylene Chloride
Samples Collected from Across the Site by ERM												
CONF-106	8/15/2006	<0.005	<0.005	<0.005	NA	NA	<0.01	<0.005	<0.005	<0.005	<0.1	<0.025
CONF-125	11/10/2006	<0.005	<0.005	<0.005	NA	NA	<0.01	<0.005	<0.005	<0.005	<0.1	<0.025
CONF-612	8/25/2006	<0.005	<0.005	<0.005	NA	NA	<0.01	<0.005	<0.005	<0.005	<0.1	<0.025
CONF-625	9/11/2006	<0.005	<0.005	<0.005	NA	NA	<0.01	<0.005	<0.005	<0.005	<0.1	<0.025
CONF-654	12/15/2006	<0.005	<0.005	<0.005	NA	NA	<0.01	<0.005	<0.005	<0.005	<0.1	<0.05
Trench-B	12/19/2006	<0.005	<0.005	<0.005	NA	NA	<0.01	<0.005	<0.005	<0.005	<0.1	<0.05
Trench-S	12/19/2006	<0.005	<0.005	<0.005	NA	NA	<0.01	<0.005	<0.005	<0.005	<0.1	<0.05
Samples Collected Within the Former Evaporation Pond Excavation by ERM												
CONF-408	8/22/2006	<0.005	<0.005	<0.005	NA	NA	<0.01	<0.005	<0.005	<0.005	<0.1	<0.025
CONF-419	8/29/2006	<0.005	<0.005	<0.005	NA	NA	<0.01	<0.005	<0.005	<0.005	<0.1	<0.025
CONF-419	9/12/2006	<0.005	<0.005	<0.005	NA	NA	<0.01	<0.005	<0.005	<0.005	<0.1	<0.025
CONF-431	9/12/2006	<0.005	<0.005	<0.005	NA	NA	<0.01	<0.005	<0.005	<0.005	<0.1	<0.025
CONF-442	10/7/2006	<0.005	<0.005	<0.005	NA	NA	<0.01	<0.005	<0.005	<0.005	<0.1	<0.025
E Wall-1	10/13/2006	<0.005	<0.005	<0.005	NA	NA	<0.01	<0.005	<0.005	<0.005	<0.1	<0.05
E Wall-2	10/13/2006	<0.005	<0.005	<0.005	NA	NA	<0.01	<0.005	<0.005	<0.005	<0.1	<0.05
E Wall-3	10/13/2006	<0.005	<0.005	<0.005	NA	NA	<0.01	<0.005	<0.005	<0.005	<0.1	<0.05
CONF-446	10/13/2006	<0.005	<0.005	<0.005	NA	NA	<0.01	<0.005	<0.005	<0.005	<0.1	<0.05
CONF-447	10/13/2006	<0.005	<0.005	<0.005	NA	NA	<0.01	<0.005	<0.005	<0.005	<0.1	<0.05
CONF-448	10/13/2006	<0.005	<0.005	<0.005	NA	NA	<0.01	<0.005	<0.005	<0.005	<0.1	<0.05
CONF-450 B	10/20/2006	<0.005	<0.005	<0.005	NA	NA	<0.01	<0.005	<0.005	<0.005	<0.1	<0.025
CONF-451 B	10/20/2006	<0.005	<0.005	<0.005	NA	NA	<0.01	<0.005	<0.005	<0.005	<0.1	<0.025
CONF-452 B	10/20/2006	<0.005	<0.005	<0.005	NA	NA	<0.01	<0.005	<0.005	<0.005	<0.1	<0.025
CONF-463	11/7/2006	<0.005	<0.005	<0.005	NA	NA	<0.01	<0.005	<0.005	<0.005	<0.1	<0.025
CONF-464-BS	11/14/2006	<0.005	<0.005	<0.005	NA	NA	<0.01	<0.005	<0.005	<0.005	<0.1	<0.025
CONF-467	11/16/2006	<0.005	<0.005	<0.005	NA	NA	<0.01	<0.005	<0.005	<0.005	<0.1	<0.025
CONF-464 (GW)	11/21/2006	<0.005	<0.005	<0.005	NA	NA	<0.01	<0.005	<0.005	<0.005	<0.02	<0.02
CONF-479	12/12/2006	<0.005	<0.005	<0.005	NA	NA	<0.01	<0.005	<0.005	<0.005	<0.1	<0.05
CONF-513	9/18/2006	<0.005	<0.005	<0.005	NA	NA	<0.01	<0.005	<0.005	<0.005	<0.1	<0.025
Samples Collected Within the Former Evaporation Pond Excavation by LFR												
S-2-2.5	8/9/2007	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	NA	<0.0047	<0.0047	<0.0047	0.019	0.019
S-4-4.0	8/9/2007	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	NA	<0.0046	<0.0046	<0.0046	0.019	0.019

Table 4
Confirmation Soil Samples
Analytical Results - Volatile Organic Compounds
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California
Concentrations are in milligrams per kilogram

Sample Identificaton	Date Collected	Benzene	Toluene	Ethyl-benzene	m,p-Xylene	o-Xylene	Total Xylenes	1,2,4-Trimethyl-benzene	1,3,5-Trimethyl-benzene	Naphthalene	Acetone	Methylene Chloride
Samples Collected from TPH Excavation North of Former Evaporation Pond by LFR												
PF-NE-SW	12/5/2007	<0.0049	<0.0049	<0.0049	NA	NA	<0.0099	NA	NA	NA	NA	NA
PF-SE-SW	12/5/2007	<0.0047	<0.0047	<0.0047	NA	NA	<0.0093	NA	NA	NA	NA	NA
PF-SW-SW	12/5/2007	<0.0047	<0.0047	<0.0047	NA	NA	<0.0094	NA	NA	NA	NA	NA
PF-NW-SW	12/5/2007	<0.0049	<0.0049	<0.0049	NA	NA	<0.0098	NA	NA	NA	NA	NA
Cleanup Goal		**0.64**	**520**	**400**	NA	NA	**270**	**52**	**21**	**1.7**	**14,000**	**9.1**

Notes:
ERM = ERM-West, Inc.
NA = not analyzed
TPH = total petroleum hydrocarbons
< 0.1 = Compound not detected at or above stated detection limit
Analyses provided by Entech Analytical Labs, Inc., located in Santa Clara, California, and Curtis & Tompkins, Inc., of Berkeley, California.

Table 5
Confirmation Soil Samples
Analytical Results - Metals
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California
Concentrations are in milligrams per kilogram (mg/kg)

Sample Identification	Date Collected	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
Samples Collected from Across the Site by ERM																		
CONF-104	8/11/2006	<1	<1	72	<1	<1	29	8.1	21	12	<0.05	<1	23	<2	<1	<2	51	28
CONF-125	11/10/2006	<1	1.9	130	<1	<1	41	11	20	3.9	<0.05	<1	52	<2	<1	<2	47	41
CONF-301	8/9/2006	<1	5.3	160	<1	<1	42	11	24	9.5	0.18	<1	32	<2	<1	<2	49	47
CONF-305	8/9/2006	<1	5.3	150	<1	<1	22	9.3	21	7	<0.05	<1	28	<2	<1	<2	41	43
CONF-631	9/11/2006	<1	2.9	140	<1	<1	41	12	23	6.1	<0.05	<1	51	<2	<1	<2	49	53
Samples Collected Within the Former Evaporation Pond Excavation by ERM																		
CONF-418	8/29/2006	<1	5.5	210	<1	<1	28	9.5	45	9.9	0.059	<1	28	<2	<1	<2	59	64
CONF-420	8/29/2006	<1	**7.6**	230	<1	<1	25	9.7	26	9.4	<0.05	<1	25	<2	<1	<2	54	46
CONF-422	8/30/2006	<1	5.4	120	<1	<1	31	10	35	18	0.056	<1	41	<2	<1	<2	45	62
CONF-429	9/11/2006	<1	4.5	210	<1	<1	28	8.7	26	8.3	<0.05	<1	26	<2	<1	<2	56	79
CONF-462	11/7/2006	<1	**7.7**	270	<1	<1	25	8.8	30	7.8	<0.05	<1	22	<2	<1	<2	59	75
CONF-468	11/16/2006	<1	5.1	220	<1	<1	26	8.3	35	7.7	<0.05	<1	24	<2	<1	<2	50	71
CONF-476	12/7/2006	<1	4.7	230	<1	<1	16	5.2	17	4.7	<0.05	<1	13	<2	<1	<2	31	44
CONF-480	12/12/2006	<1	4.7	200	<1	<1	19	8.2	18	5.5	<0.05	<1	18	<2	<1	<2	36	48
Samples Collected Within the Former Evaporation Pond Excavation by LFR																		
S-2-2.5	8/9/2007	<0.50	2.9	110	0.32	<0.25	41	11	27	3.0	<0.020	<0.25	62	<0.50	<0.25	<0.50	44	47
S-4-4.0	8/9/2007	<0.50	4.4	86	0.27	<0.25	40	9.9	29	2.5	0.028	<0.25	53	<0.50	<0.25	<0.25	43	45
Cleanup Goal		**6.3**	**5.5**	**750**	**4**	**1.7**	**58**	**40**	**230**	**150**	**2.5**	**40**	**150**	**10**	**20**	**1**	**110**	**600**

Notes:
< 1 = Compound not detected at or above stated analytical reporting limit.
ERM = ERM-West, Inc.
Analyses for samples collected by ERM provided by Entech Analytical Labs, Inc., located in Santa Clara, California.
Analyses for samples collected by LFR provided by Curtis & Tompkins, Inc., of Berkeley, California.

Table 6
Confirmation Soil Samples
Analytical Results - Semivolatile Organic Compounds
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California
Concentrations are in milligrams per kilogram (mg/kg)

Sample Identificaton	Date Collected	2-Chloronaphthalene	Acenaphthene	Anthracene	Benzo(a) anthracene	Chrysene	Flouranthene	Fluorene	Naphthalene	Pyrene
Samples Collected from Across the Site by ERM										
CONF-106	8/15/2006	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CONF-110	8/15/2006	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CONF-126	11/10/2006	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Samples Collected Within the Former Evaporation Pond Excavation by ERM										
CONF-410	8/22/2006	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CONF-422	8/30/2006	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CONF-440	10/7/2006	<5	<5	<5	<5	<5	<5	<5	<5	<5
CONF-463	11/7/2006	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CONF-465	11/16/2006	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CONF-471	11/18/2006	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48
CONF-464 (GW)	11/21/2006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CONF-517	12/4/2006	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CONF-479	12/12/2006	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56
Samples Collected Within the Former Evaporation Pond Excavation by LFR										
S-2-2.5	8/9/2007	<0.330	<0.066	<0.066	<0.066	<0.066	<0.066	<0.066	<0.066	<0.066
S-4-4.0	8/9/2007	<0.330	<0.066	<0.066	<0.066	<0.066	<0.066	<0.066	<0.066	<0.066
Proposed Cleanup Goal		**4,900**	**3,700**	**22,000**	**0.62**	**62**	**2,300**	**2,700**	**1.7**	**2,300**

Notes:
< 1 = compound not detected at or above stated detection limit
ERM = ERM-West, Inc.
Analyses for samples collected by ERM provided by Entech Analytical Labs, Inc., located in Santa Clara, California.
Analyses for samples collected by LFR provided by Curtis & Tompkins, Inc., of Berkeley, California.

Table 7
Imported Soil Analytical Results -
California Avenue/Loveridge Road Site
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California
Concentrations are in milligrams per kilogram (mg/kg)

Sample Identification	Date Collected	2-Chloronaphthalene	Acenaphthene	Anthracene	Benzo(a) anthracene	Chrysene	Flouranthene	Fluorene	Naphthalene	Pyrene	TPHd	TPHmo	TPHg
CA Ave/Loveridge Rd Pile South 1	11/19/2007	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	NA	NA	NA
CA Ave/Loveridge Rd Pile South 2	11/19/2007	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	NA	NA
CA Ave/Loveridge Rd Pile North 1	11/19/2007	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	NA	NA
CA Ave/Loveridge Rd Pile North 2	11/19/2007	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	NA	NA
S1-A-D	10/30/2007	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND
S2-A-D	10/30/2007	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND
S3-A-D	10/30/2007	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.3	ND	ND
S4-A-D	10/30/2007	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.9	ND	ND
Cleanup Goal		**4,900**	**3,700**	**22,000**	**0.62**	**62**	**2,300**	**2,700**	**1.7**	**2,300**	**500**	**500**	**400**

Notes:
Samples were analyzed by TestAmerica Laboratories, Inc.
<0.005 = constituent was not detected above laboratory detection limits
NA = not analyzed
ND = parameter not detected above laboratory reporting limits
TPHd = total petroleum hydrocarbons as diesel
TPHmo = total petroleum hydrocarbons as motor oil
TPHg = total petroleum hydrocarbons as gasoline

Table 7
Imported Soil Analytical Results -
California Avenue/Loveridge Road Site
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California
Concentrations are in milligrams per kilogram (mg/kg)

Sample Identification	Date Collected	Arsenic	Barium	Beryllium	Chromium	Cobalt	Copper	Lead	Nickel	Vanadium	Zinc
CA Ave/Loveridge Rd Pile South 1	11/19/2007	NA	NA	NA	NA	NA	NA	0.97	NA	NA	NA
CA Ave/Loveridge Rd Pile South 2	11/19/2007	NA	NA	NA	NA	NA	NA	1.0	NA	NA	NA
CA Ave/Loveridge Rd Pile North 1	11/19/2007	NA	NA	NA	NA	NA	NA	0.98	NA	NA	NA
CA Ave/Loveridge Rd Pile North 2	11/19/2007	NA	NA	NA	NA	NA	NA	1.0	NA	NA	NA
S1-A-D	10/30/2007	5.7	200.0	0.52	18	6.8	19	6.0	19	39	44
S2-A-D	10/30/2007	5.6	150	ND	15	6.8	18	4.9	18	33	41
S3-A-D	10/30/2007	4.8	170	ND	13	5.8	15	4.3	15	30	36
S4-A-D	10/30/2007	5.3	140	ND	14	7.3	16	4.7	16	31	38
Proposed Cleanup Goal		**5.5**	**750**	**4**	**58**	**40**	**230**	**150**	**150**	**110**	**600**

Notes:
Samples were analyzed by TestAmerica Laboratories, Inc.
< 0.005 = constituent was not detected above laboratory detection limits
NA = not analyzed
ND = parameter not detected above laboratory reporting limits
TPHd = total petroleum hydrocarbons as diesel
TPHmo = total petroleum hydrocarbons as motor oil
TPHg = total petroleum hydrocarbons as gasoline

Table 8
Imported Soil Analytical Results -
Pinole Middle School Site
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California
Concentrations are in milligrams per kilogram (mg/kg)

Sample Identification	Date Collected	TPHd	Arsenic	Barium	Chromium	Cobalt	Copper	Lead	Nickel	Vanadium	Zinc
1	11/19/2007	6.3 g b	4.8	100	33	6.7	9.2	9.5	30	43	46
2	11/19/2007	11 g	5.5	98	26	7.0	11	17	19	46	87
3	11/19/2007	8.3 g	5.6	99	38	8.0	13	17	36	53	60
4	11/19/2007	2.9 g b	4.7	120	41	8.5	36	11.0	54	37	47
Cleanup Goal		**500**	**5.5**	**750**	**58**	**40**	**230**	**150**	**150**	**110**	**600**

Notes:
Samples were analyzed by McCampbell Analytical, Inc., in Pacheco, California.
Only constituents detected above the laboratory detection limit are shown in this table. Samples were also analyzed for semivolatile organic compounds, polychlorinated biphenyls, and total petroleum hydrocarbons as gasoline. These constituents were not detected above the detection limits.
b = diesel range compounds are significant, no recognizable pattern
g = oil range compounds are significant
TPHd = total petroleum hydrocarbons as diesel

Table 9
Imported Soil Analytical Results -
Antioch School Site
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California
Concentrations are in milligrams per kilogram (mg/kg)

Sample Identification	Date Collected	Antimony	Arsenic	Barium	Chromium	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Vanadium	Zinc
A1-A-D	12/9/2007	0.20	6.3	130	22	7.4	20	7.4	2	19	1.8	38	47
Proposed Cleanup Goal		**6.3**	**5.5**	**750**	**58**	**40**	**230**	**150**	**40**	**150**	**10**	**110**	**600**

Notes:
Samples were analyzed by Test America, Inc., in Pleasanton, California.
Only constituents detected above the laboratory detection limit are shown in this table. Samples were also analyzed for semivolatile organic compounds, volatile organic compounds, pesticides, total petroleum hydrocarbons (TPH) as gasoline, TPH as diesel, and TPH as motor oil. These constituents were not detected above the detection limits.

Table 10
Imported Soil Analytical Results -
JC Penny Site
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California
Concentrations are in milligrams per kilogram (mg/kg)

Sample Identification	Date Collected	4,4-DDE	4,4-DDT	Dieldrin	Endrin	Arsenic	Cadmium	Chromium	Lead	Nickel	Zinc
JC Penny Antioch-1	12/19/2007	0.085	0.02	0.0038	<0.002	4.6	1.2	23	7.6	22	41
JC Penny Antioch-2	12/19/2007	0.0055	<0.006	<0.002	<0.002	5.7	1.3	22	7.7	24	44
JC Penny Antioch-3	12/19/2007	0.028	<0.006	<0.002	<0.002	3.4	1.0	23	5.4	25	34
JC Penny Antioch-4	12/19/2007	0.079	0.017	<0.002	<0.002	4.4	1.3	23	6.7	22	40
JC Penny Antioch-5	12/19/2007	0.049	0.01	<0.002	0.0026	5.6	1.3	25	9.3	24	46
Cleanup Goal		**--**	**--**	**--**	**--**	**5.5**	**1.7**	**58**	**150**	**150**	**600**
CHHSLs (residential land use)		**1.6**	**1.6**	**0.035**	**21**	**--**	**--**	**--**	**--**	**--**	**--**

Notes:
Samples were analyzed by Test America, Inc., in Pleasanton, California.
Only constituents detected above the laboratory detection limit are shown in this table.
Proposed cleanup goals were not developed for pesticides as part of the Remedial Action Plan.
Results for pesticides were compared to the California Human Health Screening Levels (CHHSLs) for residential soil.

Table 11
Stockpile Samples Analytical Results
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California
Concentration units are presented in table

Sample Location	Sample Date	Ignitability (deg F)	pH	Asbestos %	Total Petroleum Hydrocarbons			VOCs (mg/kg)									
					Diesel (mg/kg)	Motor Oil (mg/kg)	Gasoline (mg/kg)	Benzene	Ethyl-benzene	Toluene	Xylenes	1,2,4-Trimethyl-benzene	1,3,5-Trimethyl-benzene	Naphthalene	Acetone	Methylene Chloride	n-Propylbenzene
SP-1	9/26/2006	NA	NA	NA	<2.5	<10	3.9	<0.012	<0.012	<0.012	<0.025	<0.012	<0.012	<0.012	<0.25	<0.12	NA
SP-2	9/26/2006	NA	NA	NA	<2.5	<10	540	<2.5	<2.5	<2.5	<5	<2.5	<2.5	<2.5	<50	<25	NA
SP-3	9/26/2006	NA	NA	NA	<12	<50	920	<2.5	<2.5	<2.5	<5	<2.5	<2.5	<2.5	<50	<25	NA
SP-4	10/7/2006	NA	8.5	ND	<120	1,200	1.6	<0.012	<0.012	<0.012	<0.025	<0.012	<0.012	<0.012	<0.25	<0.12	NA
SP-5	10/7/2006	NA	8.4	ND	<50	770	0.28	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.1	<0.05	NA
SP-6	10/7/2006	NA	NA	NA	NA	NA	60	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<10	<5	NA
SP-7	10/7/2006	NA	NA	NA	NA	NA	3.5	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.2	<0.1	NA
SP-8	10/7/2006	NA	NA	NA	NA	NA	<0.1	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.1	<0.05	NA
SP-9	10/7/2006	NA	NA	NA	NA	NA	1.2	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.1	<0.05	NA
SP-10	10/7/2006	NA	NA	NA	NA	NA	0.27	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.1	<0.05	NA
SP-11	10/13/2006	NA	NA	ND	<50	800	<0.1	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.1	<0.05	NA
SP-12	10/13/2006	NA	NA	NA	<50	1,000	<0.25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-13	10/31/2006	NA	8.8	ND	<100	2,400	33	<0.5	<0.5	<0.5	<1.0	NA	NA	NA	NA	NA	NA
SP-14	10/31/2006	NA	8.6	ND	620	<100	37	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<10	<5	NA
SP-15	10/31/2006	<220	8.4	ND	13,000	<2,000	73	<0.5	<0.5	<0.5	<1.0	NA	NA	NA	NA	NA	NA
SP-16	10/31/2006	NA	8.9	ND	<250	4,800	39	<0.25	<0.25	<0.25	<0.5	<0.25	<0.25	<0.25	<5	<2.5	0.28
SP-17	10/31/2006	NA	9.4	<1%	<25	270	0.35	<0.005	<0.005	<0.005	<0.01	NA	NA	NA	NA	NA	NA
SP-18	11/14/2006	NA	8.2	NA	<10	190	<0.1	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.1	<0.025	<0.005
SP-19	11/14/2006	NA	9.4	NA	<120	2,200	7	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.1	<0.025	<0.005
SP-20	11/14/2006	NA	9.2	NA	280	<99	3.3	<0.012	<0.012	<0.012	<0.025	<0.012	<0.012	<0.012	<0.25	<0.12	<0.012
SP-21	11/14/2006	<220	8.2	NA	12,000	<2,000	75	<0.25	<0.25	<0.25	<0.5	<0.25	<0.25	<0.25	<5	<2.5	0.29
SP-22	11/14/2006	<220	8.2	NA	10,000	<2,000	51	<0.25	<0.25	<0.25	<0.5	<0.25	<0.25	<0.25	<5	<2.5	<0.25
SP-23	11/14/2006	NA	8.2	NA	6,800	<1,000	0.41	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.1	<0.025	<0.005
SP-24	11/14/2006	NA	8.6	NA	4,000	<1,000	28	<0.25	<0.25	<0.25	<0.5	<0.25	<0.25	<0.25	<5	<2.5	<0.25
SP-25	11/14/2006	NA	8.1	NA	<1,200	11,000	60	<0.25	<0.25	<0.25	<0.5	<0.25	<0.25	<0.25	<5	<2.5	0.3
SP-26	11/14/2006	<220	8.9	NA	14,000	<5,000	120	<0.25	<0.25	<0.25	<0.5	<0.25	<0.25	<0.25	<5	<2.5	0.3
SP-27	11/14/2006	NA	8.2	NA	<2.5	500	<0.1	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.1	<0.025	<0.005
SP-28	11/14/2006	NA	8.2	NA	8,000	<2,000	44	<0.25	<0.25	<0.25	<0.5	<0.25	<0.25	<0.25	<5	<2.5	<0.25
SP-29	12/4/2006	NA	8.5	NA	<12	280	0.57	<0.01	<0.01	<0.01	<0.01	NA	NA	NA	NA	NA	NA
SP-30	12/4/2006	NA	8.6	NA	<250	4,200	2.5	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.02	<0.02	<0.005
SP-31	12/4/2006	NA	8.2	NA	<120	1,800	<0.5	<0.01	<0.01	<0.01	<0.01	NA	NA	NA	NA	NA	NA
SP-32	12/4/2006	NA	8.5	NA	<1,200	11,000	2.6	<0.005	<0.005	<0.005	<0.01	0.0085	<0.005	<0.005	0.11	<0.02	<0.005
SP-33	12/6/2006	NA	8.4	NA	1,300	<500	<0.5	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	0.01	<0.02	<0.02	<0.005
SP-34	12/6/2006	NA	NA	NA	6,700	<2,000	NA	<0.012	<0.012	<0.012	<0.025	<0.012	<0.012	<0.012	<0.25	<0.12	<0.012

Notes:
All samples were collected by ERM-West, Inc., for waste profiling for off-site disposal.
deg F = degrees Fahrenheit
% = percent asbestos
mg/kg = milligrams per kilogram
< 0.1 = Compound was not detected at or above stated laboratory reporting limit
ND = Asbestos fibers were not detected
NA = Not analyzed
VOCs = volatile organic compounds

Table 11
Stockpile Samples Analytical Results
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California
Concentration units are presented in table

Sample Location	Sample Date	CAM 17 Metals mg/kg																
		Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
SP-1	9/26/2006	<1	5	160	<1	<1	22	8.3	29	6.3	<0.05	<1	21	<2	<1	<2	40	52
SP-2	9/26/2006	<1	4.2	160	<1	<1	22	8.2	27	6.6	<0.05	<1	23	<2	<1	<2	43	53
SP-3	9/26/2006	<1	5.6	170	<1	<1	22	9.2	30	7.3	<0.05	<1	23	<2	<1	<2	43	59
SP-4	10/7/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-5	10/7/2006	<1	5.3	210	<1	<1	27	8.8	31	9	<0.05	<1	39	<2	<1	<2	49	77
SP-6	10/7/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-7	10/7/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-8	10/7/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-9	10/7/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-10	10/7/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-11	10/13/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-12	10/13/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-13	10/31/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-14	10/31/2006	<1	5.5	210	<1	<1	28	8.7	33	9.2	0.064	<1	26	<2	<1	<2	53	79
SP-15	10/31/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-16	10/31/2006	<1	3.7	200	<1	<1	21	6.7	21	5	<0.05	<1	19	<2	<1	<2	43	45
SP-17	10/31/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-18	11/14/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-19	11/14/2006	<1	2.3	120	<1	<1	32	9.1	18	4.3	<0.05	<1	41	<2	<1	<2	40	49
SP-20	11/14/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-21	11/14/2006	<1	2.9	200	<1	<1	24	8.6	30	9.3	<0.05	<1	22	<2	<1	<2	53	72
SP-22	11/14/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-23	11/14/2006	<1	3.3	180	<1	<1	23	7.8	28	8.1	<0.05	<1	21	<2	<1	<2	48	69
SP-24	11/14/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-25	11/14/2006	<1	2.3	160	<1	<1	34	9.3	26	14	<0.05	<1	42	<2	<1	<2	44	130
SP-26	11/14/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-27	11/14/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-28	11/14/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-29	12/4/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-30	12/4/2006	<1	5.8	220	<1	<1	30	9.2	32	8.3	<0.05	<1	29	<2	<1	<2	56	75
SP-31	12/4/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-32	12/4/2006	<1	4.4	210	<1	<1	27	9.9	31	8.3	<0.05	<1	28	<2	<1	<2	54	76
SP-33	12/6/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-34	12/6/2006	<1	4.7	130	<1	<1	17	3.1	20	4.7	0.05	1.2	13	<2	<1	<2	32	40

Notes:
All samples were collected by ERM for waste profiling for off-site disposal.
deg F = degrees Fahrenheit
% = percent asbestos
mg/kg = milligrams per kilogram
< 0.1 = Compound was not detected at or above stated laboraotry reporitng limit
ND = Asbestos fibers were not detected
NA = Not analyzed
NA = Not analyzed

Table 12
Asbestos Air Monitoring Analytical Results
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California

Sample Identification	Sample Location	Sample Collection Date	Average Flow Rate (L/m)	Total Volume (Liters)	Number of Structures	Analytical Results (S/mm^2)	Analytical Results (S/cc)	TWA Dust Concentration (mg/m^3)	Average Wind Speed and Predominant Wind Direction
FB-2007Nov05	Field Blank	NA	NA	NA	1	**16.00**	NA		
SC-2007Nov05	South Center	5-Nov-07	1.04	384	ND	<16.00	<0.0095	0.063	0.0 mph NNW
WC-2007Nov05	West Center	5-Nov-07	1.04	357	--	Overload	-	0.822	
NC-2007Nov05	North Center	5-Nov-07	1.04	345	1	**16.00**	**0.011**	0.029	
EC-2007Nov05	East Center	5-Nov-07	1.04	337	ND	<16.00	<0.0110	0.008	
NC-2007Nov06	North Center	6-Nov-07	1.04	497	ND	<16.00	<0.0072	0.139	0.2 mph WNW
WC-2007Nov06	West Center	6-Nov-07	1.04	492	ND	<16.00	<0.0073	Monitor did not log	
SC-2007Nov06	South Center	6-Nov-07	1.04	488	7	**110.00**	**0.051**	0.058	
EC-2007Nov06	East Center	6-Nov-07	1.04	486	ND	<16.00	<0.0081	0.060	
NC-2007Nov07	North Center	7-Nov-07	1.04	627	ND	<16.00	<0.0098	0.185	0.2 mph NW
WC-2007Nov07	West Center	7-Nov-07	1.04	591	ND	<16.00	<0.0100	0.093	
SC-2007Nov07	South Center	7-Nov-07	1.04	593	ND	<16.00	<0.0100	0.067	
EC-2007Nov07	East Center	7-Nov-07	1.04	612	ND	<16.00	<0.0098	0.107	
NC-2007Nov08	North Center	8-Nov-07	1.04	531	ND	<16.00	<0.0110	0.065	0.9 mph WNW
SC-2007Nov08	South Center	8-Nov-07	1.04	530	ND	<16.00	<0.0110	0.118	
WC-2007Nov08	West Center	8-Nov-07	1.04	530	ND	<16.00	<0.0110	0.044	
EC-2007Nov08	East Center	8-Nov-07	1.04	491	ND	<16.00	<0.0120	0.064	
WC-2007Nov09	West Center	9-Nov-07	1.04	545	ND	<16.00	<0.0110	0.029	0.1 mph NW
EC-2007Nov09	East Center	9-Nov-07	1.04	545	ND	<16.00	<0.0110	0.009	
NE-2007Nov09	Northeast Corner	9-Nov-07	1.04	547	ND	<16.00	<0.0110	NM	
SC-2007Nov09	South Center	9-Nov-07	1.04	543	ND	<16.00	<0.0110	0.009	
NC-2007Nov09	North Center	9-Nov-07	1.04	551	ND	<16.00	<0.0110	0.002	
EC-2007Nov10	East Center	10-Nov-07	1.04	354	ND	<16.00	<0.0170	0.002	0.0 mph NNE
NE-2007Nov10	Northeast Corner	10-Nov-07	1.04	376	ND	<16.00	<0.0190	NM	
NC-2007Nov10	North Center	10-Nov-07	1.04	379	1	**16.00**	**0.019**	0.022	
WC-2007Nov10	West Center	10-Nov-07	1.04	344	ND	<16.00	<0.0170	0.026	
SC-2007Nov10	South Center	10-Nov-07	1.04	338	ND	<16.00	<0.0180	0.022	
FB-2007Nov12	Field Blank	NA	NA	NA	ND	<16.00	NA		0.9 mpgh ENE
NC-2007Nov12	North Center	12-Nov-07	1.04	563	ND	<16.00	<0.0110	0.000	
SC-2007Nov12	South Center	12-Nov-07	1.04	541	ND	<16.00	<0.0120	0.000	
WC-2007Nov12	West Center	12-Nov-07	1.04	549	ND	<16.00	<0.0110	0.007	
EC-2007Nov12	East Center	12-Nov-07	1.04	545	ND	<16.00	<0.0110	0.002	
NE-2007Nov12	Northeast corner	12-Nov-07	1.04	552	ND	<16.00	<0.0110	NM	
NE-2007Nov13	Northeast Corner	13-Nov-07	1.04	566	ND	<16.00	<0.0110	NM	1.1 mph SSW
EC-2007Nov13	East Center	13-Nov-07	1.04	558	ND	<16.00	<0.0110	0.000	
NC-2007Nov13	North Center	13-Nov-07	1.04	548	ND	<16.00	<0.0110	0.007	

Table 12
Asbestos Air Monitoring Analytical Results
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California

Sample Identification	Sample Location	Sample Collection Date	Average Flow Rate (L/m)	Total Volume (Liters)	Number of Structures	Analytical Results (S/mm^2)	Analytical Results (S/cc)	TWA Dust Concentration (mg/m^3)	Average Wind Speed and Predominant Wind Direction
SC-2007Nov13	South Center	13-Nov-07	1.04	494	ND	<16.00	<0.0120	0.068	
WC-2007Nov13	West Center	13-Nov-07	1.04	557	ND	<16.00	<0.0110	0.001	
EC-2007Nov14	East Center	14-Nov-07	1.04	576	ND	<16.00	<0.0110	0.010	1.0 mph S
NE-2007Nov14	Northeast corner	14-Nov-07	1.04	574	ND	<16.00	<0.0110	NM	
NC-2007Nov14	North Center	14-Nov-07	1.04	575	ND	<16.00	<0.0110	0.007	
WC-2007Nov14	West Center	14-Nov-07	1.04	574	ND	<16.00	<0.0110	0.185	
SC-2007Nov14	South Center	14-Nov-07	1.04	573	ND	<16.00	<0.0110	0.014	
EC-2007Nov15	East Center	15-Nov-07	1.04	542	ND	<16.00	<0.0110	0.024	1.4 mph ENE
NE-2007Nov15	Northeast Corner	15-Nov-07	1.04	542	ND	<16.00	<0.0110	NM	
NC-2007Nov15	North Center	15-Nov-07	1.04	542	ND	<16.00	<0.0110	0.031	
WC-2007Nov15	West Center	15-Nov-07	1.04	540	ND	<16.00	<0.0110	0.056	
SC-2007Nov15	South Center	15-Nov-07	1.04	539	ND	<16.00	<0.0110	0.032	
EC-2007Nov16	East Center	16-Nov-07	1.04	489	ND	<16.00	<0.0110	0.004	2.7 mph NE
NE-2007Nov16	Northeast Corner	16-Nov-07	1.04	484	ND	<16.00	<0.0110	NM	
NC-2007Nov16	North Center	16-Nov-07	1.04	474	ND	<16.00	<0.0130	0.016	
WC-2007Nov16	West Center	16-Nov-07	1.04	469	1	**16.00**	**0.013**	0.132	
SC-2007Nov16	South Center	16-Nov-07	1.04	460	ND	<16.00	<0.0130	0.025	
Air Monitoring Not Conducted Saturday 11/17/07									
FB-2007Nov19	Field Blank	NA	NA	NA	ND	<16.00	NA		
NE-2007Nov19	Northeast Corner	19-Nov-07	1.04	554	ND	<16.00	<0.0110	NM	2.0 mph ENE
NC-2007Nov19	North Center	19-Nov-07	1.04	547	ND	<16.00	<0.0110	Not Valid	
EC-2007Nov19	East Center	19-Nov-07	1.04	546	ND	<16.00	<0.0110	0.003	
WC-2007Nov19	West Center	19-Nov-07	1.04	545	ND	<16.00	<0.0110	0.012	
SC-2007Nov19	South Center	19-Nov-07	1.04	544	ND	<16.00	<0.0110	0.000	
NE-2007Nov20	Northeast Corner	20-Nov-07	1.04	489	ND	<16.00	<0.0120	NM	1.4 mph S
EC-2007Nov20	East Center	20-Nov-07	1.04	489	ND	<16.00	<0.0120	0.000	
NC-2007Nov20	North Center	20-Nov-07	1.04	490	ND	<16.00	<0.0120	0.000	
WC-2007Nov20	West Center	20-Nov-07	1.04	487	ND	<16.00	<0.0120	0.009	
SC-2007Nov20	South Center	20-Nov-07	1.04	487	ND	<16.00	<0.0120	0.000	
Break for Thanksgiving Holiday Wednesday 11/21/07 through Sunday 11/25/07									
FB-2007Nov26	Field Blank	NA	NA	NA	ND	<16.00	NA		0.6 mph S
NE-2007Nov26	Northeast Corner	26-Nov-07	1.535	800	ND	<16.00	<0.0075	NM	
NC-2007Nov26	North Center	26-Nov-07	1.42	733	ND	<16.00	<0.0082	0.000	
EC-2007Nov26	East Center	26-Nov-07	1.42	733	ND	<16.00	<0.0082	0.078	
WC-2007Nov26	West Center	26-Nov-07	1.42	734	ND	<16.00	<0.0082	0.059	
SC-2007Nov26	South Center	26-Nov-07	1.42	736	ND	<16.00	<0.0082	0.007	

Table 12
Asbestos Air Monitoring Analytical Results
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California

Sample Identification	Sample Location	Sample Collection Date	Average Flow Rate (L/m)	Total Volume (Liters)	Number of Structures	Analytical Results (S/mm^2)	Analytical Results (S/cc)	TWA Dust Concentration (mg/m^3)	Average Wind Speed and Predominant Wind Direction
NE-2007Nov27	Northeast Corner	27-Nov-07	1.42	809	ND	<16.00	<0.0083	NM	1.9 mph S
EC-2007Nov27	East Center	27-Nov-07	1.42	727	ND	<16.00	<0.0074	0.053	
NC-2007Nov27	North Center	27-Nov-07	1.42	721	ND	<16.00	<0.0083	0.000	
WC-2007Nov27	West Center	27-Nov-07	1.42	716	ND	<16.00	<0.0084	0.000	
SC-2007Nov27	South Center	27-Nov-07	1.42	713	ND	<16.00	<0.0084	0.003	
EC-2007Nov28	East Center	28-Nov-07	1.42	791	ND	<16.00	<0.0084	0.000	2.7 mph WSW
NE-2007Nov28	Northeast corner	28-Nov-07	1.42	720	ND	<16.00	<0.0080	NM	
NC-2007Nov28	North Center	28-Nov-07	1.42	753	ND	<16.00	<0.0080	0.000	
WC-2007Nov28	West Center	28-Nov-07	1.42	751	ND	<16.00	<0.0080	0.028	
SC-2007Nov28	South Center	28-Nov-07	1.42	750	ND	<16.00	<0.0076	0.000	
EC-2007Nov29	East Center	29-Nov-07	1.42	746	ND	<16.00	<0.0081		0.5 mph S
NE-2007Nov29	Northeast Corner	29-Nov-07	1.42	737	ND	<16.00	<0.0082	Dust monitors not set up to log correctly	
NC-2007Nov29	North Center	29-Nov-07	1.42	736	ND	<16.00	<0.0082		
WC-2007Nov29	West Center	29-Nov-07	1.42	737	ND	<16.00	<0.0082		
SC-2007Nov29	South Center	29-Nov-07	1.42	737	ND	<16.00	<0.0082		
EC-2007Nov30	East Center	30-Nov-07	1.42	788	ND	<16.00	<0.0076	0.000	1.9 mph ENE
NE-2007Nov30	Northeast Corner	30-Nov-07	1.42	788	ND	<16.00	<0.0076	NM	
NC-2007Nov30	North Center	30-Nov-07	1.42	784	ND	<16.00	<0.0077	0.011	
WC-2007Nov30	West Center	30-Nov-07	1.42	780	ND	<16.00	<0.0077	0.010	
SC-2007Nov30	South Center	30-Nov-01	1.42	781	ND	<16.00	<0.0078	0.004	
EC-2007Dec01	East Center	1-Dec-07	1.42	608	ND	<16.00	<0.0098		2.9 mph NE
NE-2007Dec01	Northeast Corner	1-Dec-07	1.42	594	ND	<16.00	<0.0100	Dust monitors not set up to log correctly	
NC-2007Dec01	North Center	1-Dec-07	1.42	595	ND	<16.00	<0.0100		
WC-2007Dec01	West Center	1-Dec-07	1.42	599	ND	<16.00	<0.0099		
SC-2007Dec01	South Center	1-Dec-07	1.42	602	ND	<16.00	<0.0099		
EC-2007Dec02	East Center	2-Dec-07	1.42	504	ND	<16.00	<0.0120	0.026	4.4 mph NW
NE-2007Dec02	Northeast Corner	2-Dec-07	1.42	504	ND	<16.00	<0.0120	NM	
NC-2007Dec02	North Center	2-Dec-07	1.42	504	ND	<16.00	<0.0120	0.012	
WC-2007Dec02	West Center	2-Dec-07	1.42	513	ND	<16.00	<0.0120	0.017	
SC-2007Dec02	South Center	2-Dec-07	1.42	497	ND	<16.00	<0.0120	0.003	
Field Blank	NA	NA	NA	NA	ND	<16.00	NA		
NE-2007Dec03	Northeast Corner	3-Dec-07	1.42	787	ND	<16.00	<0.0076	NM	3.2 mph WNW
NC-2007Dec03	North Center	3-Dec-07	1.42	785	ND	<16.00	<0.0077	0.017	
EC-2007Dec03	East Center	3-Dec-07	1.42	734	1	**16.00**	**0.0082**	0.007	
WC-2007Dec03	West Center	3-Dec-07	1.42	751	ND	<16.00	<0.0080	0.014	
SC-2007Dec03	South Center	3-Dec-07	1.42	750	ND	<16.00	<0.0080	0.010	

Table 12
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Sample Identification	Sample Location	Sample Collection Date	Average Flow Rate (L/m)	Total Volume (Liters)	Number of Structures	Analytical Results (S/mm^2)	Analytical Results (S/cc)	TWA Dust Concentration (mg/m^3)	Average Wind Speed and Predominant Wind Direction
Air Monitoring Not Conducted Tuesday 12/4/07 due to Rain									
EC-2007Dec05	East Center	5-Dec-07	1.42	727	ND	<16.00	<0.0083	0.105	0.8 mph ENE
NE-2007Dec05	Northeast corner	5-Dec-07	1.42	853	ND	<16.00	<0.0071	NM	
NC-2007Dec05	North Center	5-Dec-07	1.42	846	ND	<16.00	<0.0071	0.204	
WC-2007Dec05	West Center	5-Dec-07	1.42	805	ND	<16.00	<0.0075	0.136	
SC-2007Dec05	South Center	5-Dec-07	1.42	727	ND	<16.00	<0.0083	0.072	
Air Monitoring Not Conducted Thursday 12/6/07 due to Rain									
EC-2007Dec07	East Center	7-Dec-07	1.42	601	ND	<16.00	<0.0100	0.023	2.5 mph NW
NE-2007Deco07	Northeast Corner	7-Dec-07	1.42	602	ND	<16.00	<0.0100	NM	
NC-2007Dec07	North Center	7-Dec-07	1.42	602	ND	<16.00	<0.0100	0.010	
SC-2007Dec07	South Center	7-Dec-07	1.42	599	ND	<16.00	<0.0100	0.010	
WC-2007Dec07	West Center	7-Dec-07	1.42	601	ND	<16.00	<0.0100	0.024	
Air Monitoring Not Conducted Saturday 12/8/07 or Sunday 12/9/07 - no weekend work conducted									
Field Blank	NA	NA	NA	NA	ND	<16.00	NA		
NE-2007Dec10	Northeast Corner	10-Dec-07	1.42	763	1	**16.00**	**0.0079**	NM	6.2 mph SSE
NC-2007Dec10	North Center	10-Dec-07	1.42	765	ND	<16.00	<0.0079	0.070	
EC-2007Dec10	East Center	10-Dec-07	1.42	751	4	**63**	**0.032**	0.102	
WC-2007Dec10	West Center	10-Dec-07	1.42	761	ND	<16.00	<0.0079	0.081	
SC-2007Dec10	South Center	10-Dec-07	1.42	763	ND	<16.00	<0.0079	0.033	
WC-2007Dec11	West Center	11-Dec-07	1.42	760	ND	<16.00	<0.0079	0.000	4.1 mph SSE
NC-2007Dec11	North Center	11-Dec-07	1.42	763	ND	<16.00	<0.0079	0.005	
NE-2007Dec11	Northeast Corner	11-Dec-07	1.42	765	ND	<16.00	<0.0079	NM	
EC-2007Dec11	East Center	11-Dec-07	1.42	875	ND	<16.00	<0.0069	0.000	
SC-2007Dec11	South Center	11-Dec-07	1.42	734	ND	<16.00	<0.0082	0.028	
WC-2007Dec12	West Center	12-Dec-07	1.42	682	ND	<16.00	<0.0088	0.061	0.3 mph S
NC-2007Dec12	North Center	12-Dec-07	1.42	675	ND	<16.00	<0.0089	0.046	
NE-2007Dec12	Northeast Corner	12-Dec-07	1.42	673	ND	<16.00	<0.0089	NM	
EC-2007Dec12	East Center	12-Dec-07	1.42	675	ND	<16.00	<0.0089	0.038	
SC-2007Dec12	South Center	12-Dec-07	1.42	684	ND	<16.00	<0.0088	0.034	
WC-2007Dec13	West Center	13-Dec-07	1.42	687	ND	<16.00	<0.0088	0.082	0.2 mph S
NC-2007Dec13	North Center	13-Dec-07	1.42	673	ND	<16.00	<0.0089	0.110	
NE-2007Dec13	Northeast Corner	13-Dec-07	1.42	676	ND	<16.00	<0.0089	NM	
EC-2007Dec13	East Center	13-Dec-07	1.42	682	ND	<16.00	<0.0088	0.118	
SC-2007Dec13	South Center	13-Dec-07	1.42	686	ND	<16.00	<0.0088	0.066	
NC-1007Dec14	North Center	14-Dec-07	1.42	748	ND	<16.00	<0.0080	0.250	0.3 mph S
NE-2007Dec14	Northeast Corner	14-Dec-07	1.42	744	ND	<16.00	<0.0081	NM	
EC-2007Dec14	East Center	14-Dec-07	1.42	737	ND	<16.00	<0.0082	0.002	

Table 12
Asbestos Air Monitoring Analytical Results
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Sample Identification	Sample Location	Sample Collection Date	Average Flow Rate (L/m)	Total Volume (Liters)	Number of Structures	Analytical Results (S/mm^2)	Analytical Results (S/cc)	TWA Dust Concentration (mg/m^3)	Average Wind Speed and Predominant Wind Direction
WC-2007Dec14	West Center	14-Dec-07	1.42	733	ND	< 16.00	< 0.0082	0.317	
SC-2007Dec14	South Center	14-Dec-07	1.42	730	ND	< 16.00	< 0.0082	0.248	
NC-1007Dec15	North Center	15-Dec-07	1.42	650	ND	< 16.00	< 0.0093	0.013	0.3 mph NW
NE-2007Dec15	Northeast Corner	15-Dec-07	1.42	649	ND	< 16.00	< 0.0093	NM	
EC-2007Dec15	East Center	15-Dec-07	1.42	650	ND	< 16.00	< 0.0092	0.013	
WC-2007Dec15	West Center	15-Dec-07	1.42	662	ND	< 16.00	< 0.0091	0.036	
SC-2007Dec15	South Center	15-Dec-07	1.42	653	ND	< 16.00	< 0.0092	0.028	
Air Monitoring Not Conducted Sunday 12/16/07									
Field Blank	NA	NA	NA	NA	ND	< 16.00	NA		
NE-2007Dec17	Northeast Corner	17-Dec-07	1.42	667	ND	< 16.00	< 0.0090	NM	0.5 mph WSW
NC-2007Dec17	North Center	17-Dec-07	1.42	675	ND	< 16.00	< 0.0089	0.000	
EC-2007Dec17	East Center	17-Dec-07	1.42	656	ND	< 16.00	< 0.0092	0.000	
WC-2007Dec17	West Center	17-Dec-07	1.42	660	ND	< 16.00	< 0.0091	0.040	
SC-2007Dec17	South Center	17-Dec-07	1.42	653	ND	< 16.00	< 0.0092	0.082	
Air Monitoring Not Conducted Tuesday 12/18/07 due to rain									

Job site shut down from 12/19/07 through 1/16/08 - No soil movement occurred

Air Monitoring Not Conducted Monday 1/14/08 - Job shut down due to wet conditions									
Air Monitoring Not Conducted Tuesday 1/15/08 - Job shut down due to wet conditions									
Field Blank	NA	NA	NA	NA	ND	< 16.00	NA		
NE-2008Jan16	Northeast Corner	16-Jan-08	1.42	700	1	**16.00**	**0.0086**	NM	NM
SC-2008Jan16	South Center	16-Jan-08	1.42	684	ND	< 16.00	< 0.0088	0.000	
EC-2008Jan16	East Center	16-Jan-08	1.42	703	ND	< 16.00	< 0.0084	0.000	
WC-2008Jan16	West Center	16-Jan-08	1.42	706	2	**31.00**	**0.017**	0.024	
NC-2008Jan16	North Center	16-Jan-08	1.42	689	ND	< 16.00	< 0.0087	0.021	
NC-2008Jan17	North Center	17-Jan-08	2.5	715	Overloaded			0.046	0.3 mph NNW
EC-2008Jan17	East Center	17-Jan-08	2.5	723	Overloaded			0.163	
WC-2008Jan17	West Center	17-Jan-08	2.5	738	ND	**63**	**0.033**	0.024	
SC-2008Jan17	South Center	17-Jan-08	2.5	743	ND	< 16.00	< 0.0084	0.011	
NE-2008Jan17	Northeast Corner	17-Jan-08	2.5	713	ND	< 16.00	< 0.0084	NM	
WC-2008Jan18	West Center	18-Jan-08	1.42	782	ND	< 16.00	< 0.0076	0.063	0.3 mph NNW
NC-2008Jan18	North Center	18-Jan-08	1.42	787	ND	< 16.00	< 0.0076	0.133	
NE-2008Jan18	Northeast Corner	18-Jan-08	1.42	788	ND	< 16.00	< 0.0075	NM	
EC-2008Jan18	East Center	18-Jan-08	1.42	780	ND	< 16.00	< 0.0077	0.066	
SC-2008Jan18	South Center	18-Jan-08	1.42	736	ND	< 16.00	< 0.0082	0.056	

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Asbestos Air Monitoring Analytical Results
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Sample Identification	Sample Location	Sample Collection Date	Average Flow Rate (L/m)	Total Volume (Liters)	Number of Structures	Analytical Results (S/mm^2)	Analytical Results (S/cc)	TWA Dust Concentration (mg/m^3)	Average Wind Speed and Predominant Wind Direction
FB-2008Jan21	NA	NA	NA	NA	ND	< 16.00	NA		0.3 mph NNW
SC-2008Jan21	South Center	21-Jan-08	1.42	346	ND	< 16.00	< 0.0170	0.000	
WC-2008Jan21	West Center	21-Jan-08	1.42	344	ND	< 16.00	< 0.0170	0.000	
NC-2008Jan21	North Center	21-Jan-08	1.42	339	Wet filter - Sample not analyzed			0.000	
NE-2008Jan21	Northeast Corner	21-Jan-08	1.42	337	ND	< 16.00	< 0.018	NM	
EC-2008Jan21	East Center	21-Jan-08	1.42	329	ND	< 16.00	< 0.018	0.000	

Notes:
Samples analyzed by EMSL Analytical, Inc., a state-certified laboratory located in San Leandro, California.
Samples analyzed using transmission electron microscopy, selected area electron diffraction, and energy dispersive X-ray Microanalysis (EDX) - Performance by EPA Level II Method
mg/m^3 = milligrams per cubic meter
mph = miles per hour
NA = Not applicable
ND = None detected
NM = Not monitored (no dust meter was set up in the northeast corner location)
L/m = Liters of air per minute
S/mm^2 = Structures of asbestos per square millimeter
S/cc = Structures of asbestos per cubic centimeter
TWA = time-weighted average
Wind speed and wind direction were measured with an on-site meteorological station.
Not Valid = Instrument failure

Table 13
Grab Groundwater Samples Analytical Results
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California
Concentrations in micrograms per liter (µg/L)

Sample ID	Notes	Date	TPHd[(1)]	TPHmo	TPHg[(1)]	Benzene	Toluene	Ethyl benzene	Total Xylenes	MtBE	TCE	PCE	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE
GG-1		30-Jan-08	820	460	160	<0.5	<0.5	<0.5	<0.5	<0.5	7.9	72	11	8.7	1.8
GG-2	2	30-Jan-08	500,000	540,000	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GG-3	3	30-Jan-08	12,000	5,100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GG-4	4	30-Jan-08	7,100	3,700	<50	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GG-5	5	30-Jan-08	100,000	58,000	140	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GG-6	6	30-Jan-08	470,000	150,000	770	1.3	1.9	<0.5	3.3	<0.5	<0.5	<0.5	<0.5	1.6	<0.5
GG-7		30-Jan-08	2,000	2,200	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GG-8		30-Jan-08	1,700	1,300	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GG-9		30-Jan-08	410	<300	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GG-10		30-Jan-08	190	<300	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GG-8D		30-Jan-08	1,400	1,000	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
REGULATORY CONCENTRATIONS															
Groundwater Cleanup Goal - MCL			NE	NE	NE	1	150	700	1,750	13	5	5	6	6	10
RWQCB ESLS - Groundwater is a source of drinking water			100	100	100	1	40	30	20	5	5	5	5	6	10
RWQCB ESLS - Groundwater is not a source of drinking water			5,000	2,500	2,500	540	400	300	5,300	1,800	530	120	6,300	6,200	2,600

Notes:

(1) The chromatographic pattern for TPHd and TPHg analyses did not resemble the laboratory standard for either TPHd or TPHg.

(2) Sample GG-2 contained 2.0 µg/L carbon disulfide.

(3) Sample GG-3 contained 130 µg/L acetone and 28 µg/L 2-Butanone.

(4) Sample GG-4 contained 51 µg/L acetone.

(5) Sample GG-5 contained 18 µg/L acetone and 4.4 µg/L carbon disulfide.

Table 13
Grab Groundwater Samples Analytical Results
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California
Concentrations in micrograms per liter (µg/L)

(6) Sample GG-6 contained 3.64 µg/L carbon disulfide; 0.7 µg/L 1,3,5-trimethylbenzene; 0.7 µg/L 1,2,4-trimethylbenzene; and 0.7 µg/L para-isopropyl toluene.

TPHd = total petroleum hydrocarbons as diesel
TPHmo = total petroleum hydrocarbons as motor oil
TPHg = total petroleum hydrocarbons as gasoline
MtBE = methyl tertiary-butyl ether
TCE = trichloroethene
PCE = tetrachloroethene
1,1-DCE = 1,1-dichloroethene
cis-1,2-DCE = cis-1,2-dichloroethene
trans-1,2-DCE = trans-1,2-dichloroethene
NE = none established

Samples analyzed by: Curtis & Tompkins, Ltd.

Volatile organic compounds not reported in this summary table were not detected above the analytical reporting limits.

MCL = maximum contaminant level provided by the California Environmental Protection Agency (Cal/EPA)

ESLs = Environmental Screening Levels by San Francisco Bay Regional Water Quality Control Board, November 2007.

Table 14
Soil-Vapor Samples Analytical Results
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California
Concentrations in micrograms per cubic meter ($\mu g/m^3$)

Sample ID	Notes	Date	Acetone	2-Butanone	Benzene	Toluene	Ethyl-benzene	m,p-Xylene	o-Xylene	TCE	PCE	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCA (leak
SV-1	1	28-Feb-08	36	6.6	<2.4	12	<3.3	7.6	<3.3	250	**530**	**850**	4.4	10	<8.1
SV-2	2	28-Feb-08	50	23	14	8.7	<3.2	<6.4	<3.2	13	<5.0	<2.9	<2.9	<2.9	<7.9
SV-2 (dup)	3	28-Feb-08	64	22	10	4.0	<3.3	<6.7	<3.3	11	<5.2	<3.1	<3.1	<3.1	<8.3
SV-3	4	28-Feb-08	81	26	4.7	11	<3.1	7.6	<3.1	<3.9	5.6	<2.9	<2.9	<2.9	<7.8
SV-4	5	28-Feb-08	150	29	9.3	16	<3.5	11	4.2	<4.3	<5.5	<3.2	<3.2	<3.2	22
SV-5	6	28-Feb-08	47	6.8	3.1	40	6.2	26	8.9	<4.0	99	<2.9	<2.9	<2.9	<8.0
SV-6	7	28-Feb-08	160	73	3.0	23	4.3	17	6.4	<4.1	<5.2	<3.0	<3.0	<3.0	12
SV-7	8	28-Feb-08	110	28	29	9.0	<3.3	<6.6	<3.3	<4.1	62	<3.0	<3.0	<3.0	<8.2
SV-8	9	29-Feb-08	880	50	**37**	280	700	2,000	490	<4.0	8.3	<3.0	<3.0	<3.0	<8.1
SV-9	10	28-Feb-08	66	<4.9	<2.7	<3.1	<3.6	<7.3	<3.6	19	<5.7	3.4	<3.3	<3.3	<9.0
SV-10	11	29-Feb-08	190	32	25	34	71	220	62	<3.9	9.0	<2.9	<2.9	<2.9	<7.9
SV-11	12	29-Feb-08	4600	<33	21	6,400	8,800	22,000	4,600	<30	<38	<22	<22	<22	<61
SV-12	13	29-Feb-08	220	47	**130**	94	45	120	31	<5.0	16	<3.7	<3.7	<3.7	<10
SV-13	14	28-Feb-08	25	<4.3	<2.3	3.7	<3.2	<3.2	<6.4	<3.9	9.1	<2.9	<2.9	<2.9	<7.9

REGULATORY CONCENTRATIONS													
CHHSLs for Shallow Soil Gas Residential Land Use	NE	NE	36.2	135,000	NE	317,000	315,000	528	180	NE	15,900	31,900	NE
ESLs for Shallow Soil Gas Residential Land Use	660,000	NE	84	63,000	210,000	21,000		1200	410	49	7,300	15,000	NE

Notes:

1 = Sample SV-1 contained 8.8 $\mu g/m^3$ carbon disulfide, 4.0 $\mu g/m^3$ chloroform, 3.0 $\mu g/m^3$ 1,1-DCA, 9.4 $\mu g/m^3$ 1,1,1-TCA

2 = Sample SV-2 contained 2.4 $\mu g/m^3$ carbon disulfide, 2.2 $\mu g/m^3$ chloromethane, 16 $\mu g/m^3$ 2-hexanone, 6.1 $\mu g/m^3$ 4-methyl-2-pentanone

3 = Sample SV-2 dup contained 2.4 $\mu g/m^3$ chloromethane, 7.1 $\mu g/m^3$ 2-hexanone

4 = Sample SV-3 contained 12 $\mu g/m^3$ carbon disulfide, 1.9 $\mu g/m^3$ chloromethane, 12 $\mu g/m^3$ 2-hexanone, 9.6 $\mu g/m^3$ 2-methyl-2-pentanone

5 = Sample SV-4 contained 21 $\mu g/m^3$ carbon disulfide, 4.2 $\mu g/m^3$ chloromethane, 11 $\mu g/m^3$ 2-hexanone, 12 $\mu g/m^3$ 4-methyl-2-pentanone, 8.4 $\mu g/m^3$ 1,2,4-trimethylbenzene

6 = Sample SV-5 contained 4.4 $\mu g/m^3$ carbon disulfide, 13 $\mu g/m^3$ chloroform, 4.0 $\mu g/m^3$ chloromethane, 3.9 $\mu g/m^3$ 4-ethyltoluene, 11 $\mu g/m^3$ 1,2,4-trimethylbenzene

7 = Sample SV-6 contained 20 $\mu g/m^3$ carbon disulfide, 1.6 $\mu g/m^3$ chloromethane, 3.9 $\mu g/m^3$ 4-ethyltoluene, 40 $\mu g/m^3$ 2-hexanone, 23 $\mu g/m^3$ 4-methyl-2-pentanone, 11 $\mu g/m^3$ 1,2,4-trimethylbenzene

8 = Sample SV-7 contained 12 $\mu g/m^3$ carbon disulfide, 5.1 $\mu g/m^3$ 1,1,1-TCA

9 = Sample SV-8 contained 21 $\mu g/m^3$ carbon disulfide, 9.8 $\mu g/m^3$ 4-ethyltoluene, 5.9 $\mu g/m^3$ 1,3,5-trimethylbenzene, 16 $\mu g/m^3$ 1,2,4-trimethylbenzene

Table 14
Soil-Vapor Samples Analytical Results
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California
Concentrations in micrograms per cubic meter ($\mu g/m^3$)

10 = Sample SV-9 contained 12 $\mu g/m^3$ trichlorofluoromethane

11 = Sample SV-10 contained 12 $\mu g/m^3$ bromoform, 14 $\mu g/m^3$ carbon disulfide, 7.4 $\mu g/m^3$ chloroform, 7.3 $\mu g/m^3$ dibromochloromethane

12 = Sample SV-11 contained 30 $\mu g/m^3$ 4-ethyltoluene

13 = Sample SV-12 contained 26 $\mu g/m^3$ carbon disulfide, 6.9 $\mu g/m^3$ chloroethane, 4.7 $\mu g/m^3$ 4-ethyltoluene, 24 $\mu g/m^3$ 4-methyl-2-pentanone, 13 $\mu g/m^3$ 1,2,4-trimethylbenzene

14 = Sample SV-13 contained 9.9 $\mu g/m^3$ chloroform

PCE=tetrachloroethene
TCE=trichloroethene
1,1-DCE=1,1-dichloroethene
cis-1,2-DCE=cis-1,2-dichloroethene
trans-1,2-DCE=trans-1,2-dichloroethene
1,1,1-TCA = 1,1,1-trichloroethane
1,1-DCA = 1,1-dichloroethane
NE=none established

Samples analyzed by Calscience Environmental Laboratories, Inc., in Garden Grove, California, via United States Environmental Protection Agency (U.S. EPA) Method TO-15.

CHHSLs = California Human Health Screening Levels by the California Environmental Protection Agency, January 2005.

ESLs = Environmental Screening Levels by San Francisco Bay Regional Water Quality Control Board, November 2007.

Table 15
Soil Physical Parameters
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California

Sample	Visual Description	Dry Bulk Density g/cm^3	Total Porosity (unitless)	Air-Filled Porosity cm^3/cm^3	Water-Filled Porosity cm^3/cm^3
SV-3	Brown Sandy Lean Clay	1.86	31.9	2.2	29.7
SV-9	Brown Sandy Lean Clay	NC	NC	NC	NC
SV-11	Brown Lean Clay with Sand	1.78	34.9	5.3	29.6

Notes:
g/cm^3 = grams per cubic centimeter
cm^3/cm^3 = cubic centimeters per cubic centimeter
NC = not calculated. Sample SV-9 was disturbed, and only moisture content and seive analyses were performed.

Table 16
Carcinogen Evaluation
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California

Compound	Maximum Soil-Gas Concentration $\mu g/m^3$	ProUCL Recommended Soil-Gas Source Concentration for Vapor Transport Modeling $\mu g/m^3$	ProUCL Recommended Statistical Summary	Estimated Cancer Risk	Estimated Health Hazard
Benzene	130	45.5	95 % Gamma	2.50E-09	6.80E-06
Ethylbenzene	8,800	7444	99% Chebyshev	2.70E-08	2.50E-05
TCE	250	212.2	99% Chebyshev	6.30E-10	1.20E-06
PCE	530	234.5	99% Chebyshev	1.70E-09	1.90E-05
Total Estimates				3.E-08	5.E-05

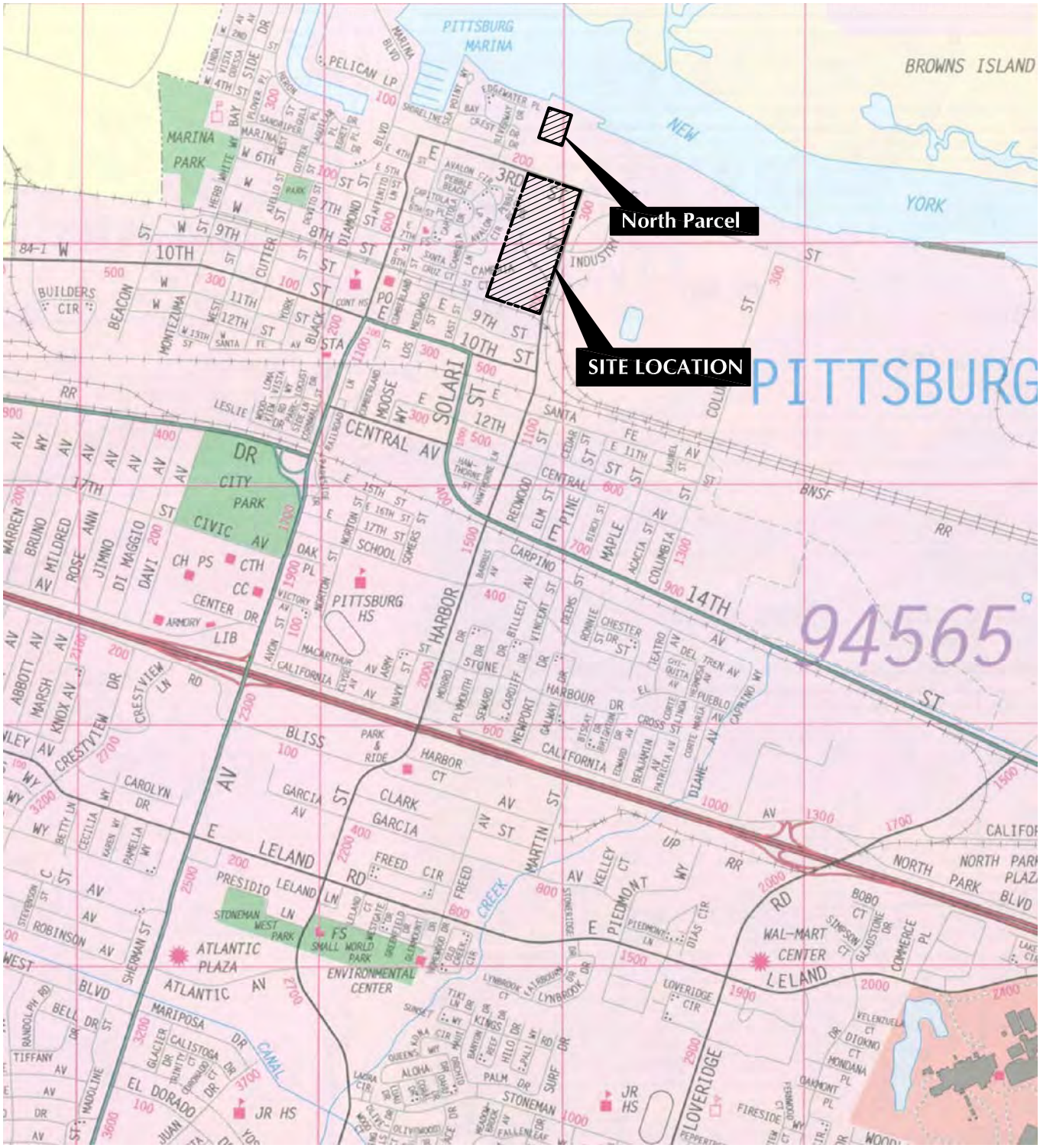
Notes:

$\mu g/m^3$ = micrograms per cubic meters

TCE = trichloroethene

PCE = tetrachloroethene

Site-specific soil physical parameters with the DTSC version of the Johnson & Ettinger model.
Default residential exposure assumptions used in the evaluation.



0 800

SCALE IN FEET

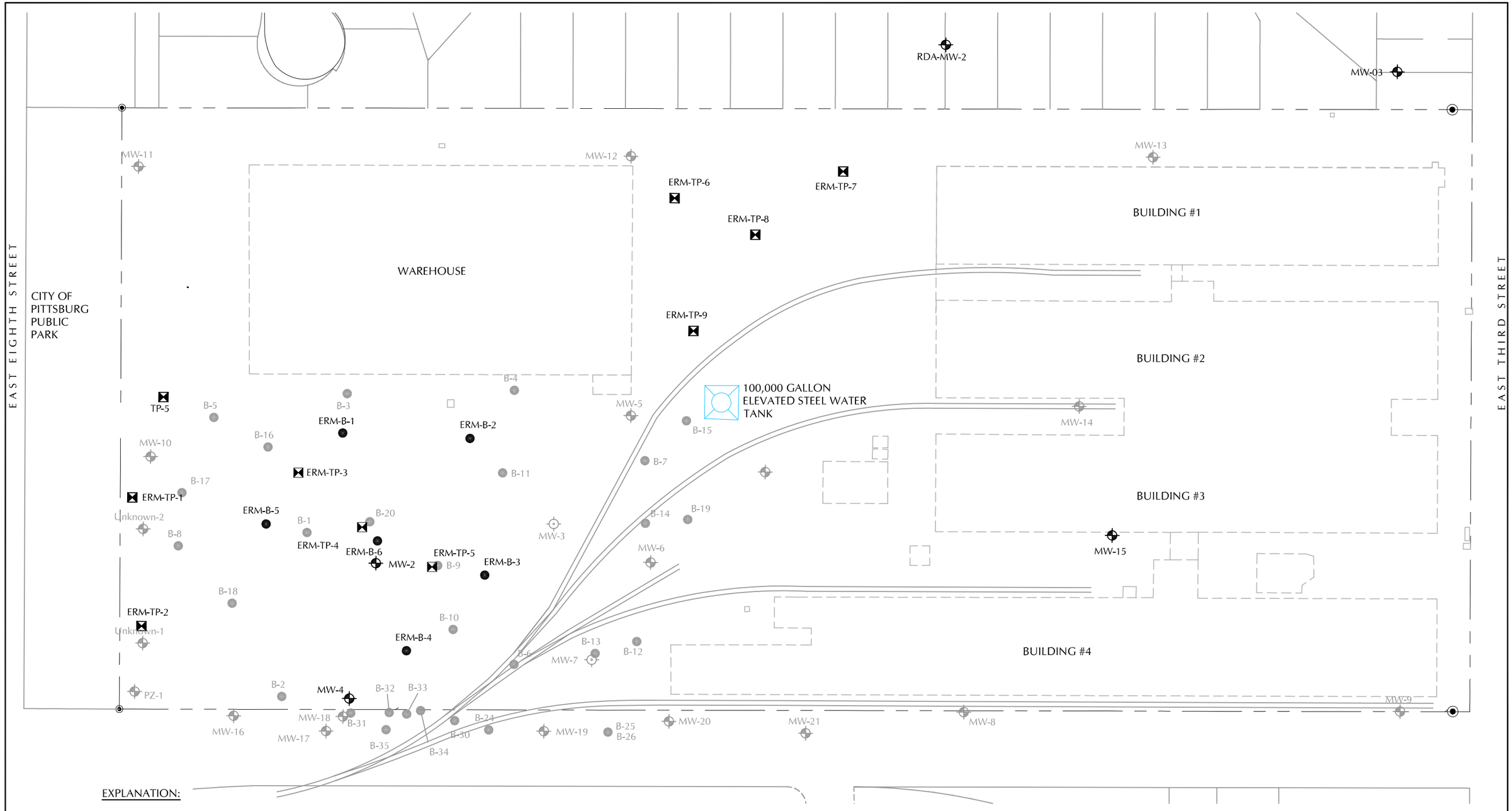
Site Vicinity Map

Former Johns Manville Plant, 420 East 3rd Street, Pittsburg, CA

LFR

Figure 1

I:\Design\001\09587\00\DWG\Johns Manville Site Sampling Plan.dwg 1/31/07



EXPLANATION:

- PARCEL BOUNDARY
- MW-2 — MONITORING WELL (HLA and ROUX)
- MW-3 — MONITORING WELL, ABANDONED
- B-3 — SOIL BORING (ROUX)
- ERM-B-1 — SOIL BORING (ERM)
- ERM-TP-1 — TEST PIT (ERM), SHALLOW, 2'-3' - DEEP (5'x5')
- ERM-TP-3 — TEST PIT (ERM), DEEP, 8'-10' - DEEP (5'x15')

0 100

Approx. Scale (feet)

SOURCE: WINZLER&KELLY

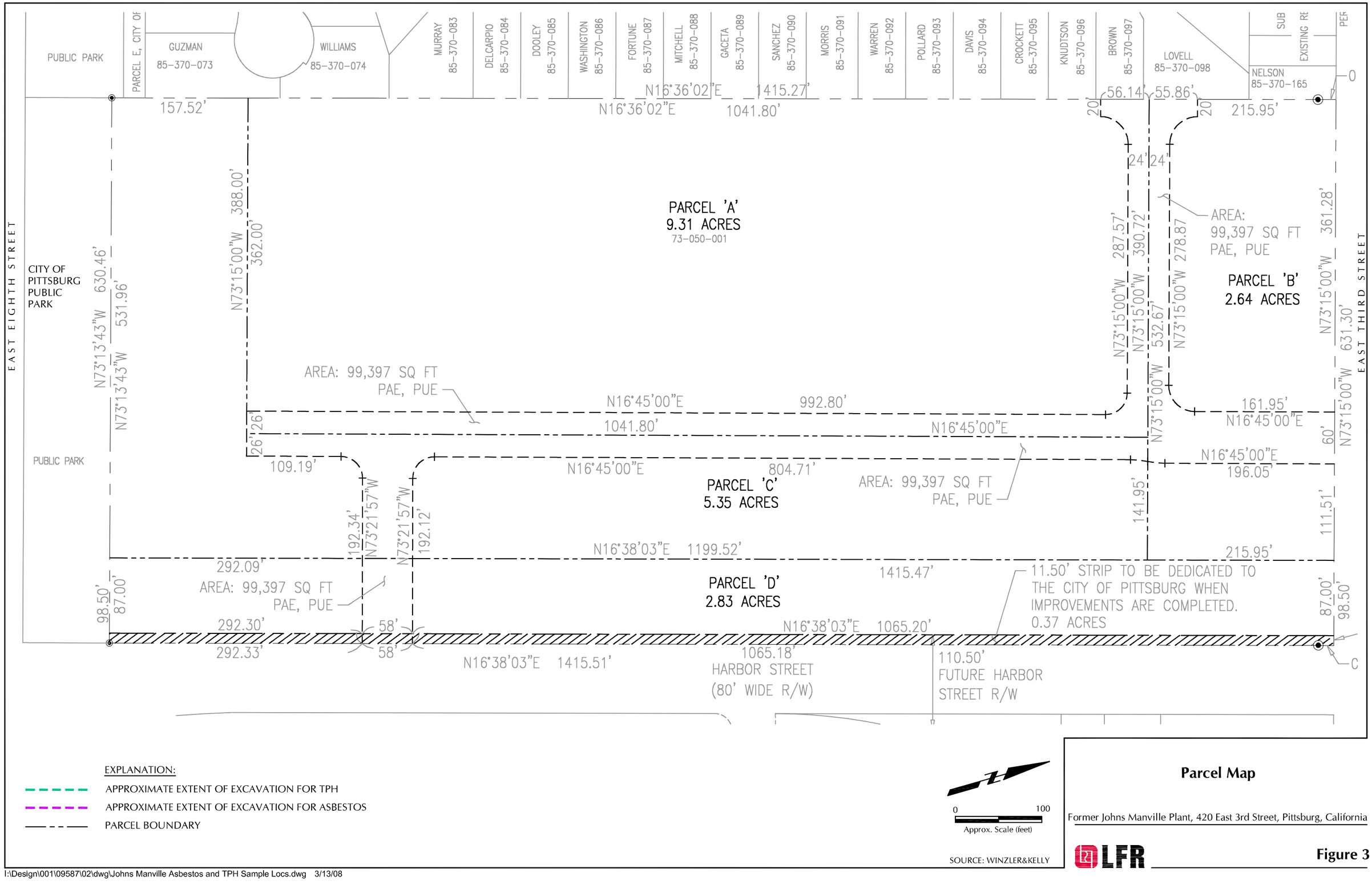
Historical Site Layout

Former Johns Manville Plant, 420 East 3rd Street, Pittsburg, California

LFR

Figure 2

I:\Design\001\09587\02\dwg\Johns Manville Asbestos and TPH Sample Locs.dwg 3/13/08



EXPLANATION:

- APPROXIMATE EXTENT OF EXCAVATION FOR TPH
- APPROXIMATE EXTENT OF EXCAVATION FOR ASBESTOS
- PARCEL BOUNDARY

0 100

Approx. Scale (feet)

SOURCE: WINZLER&KELLY

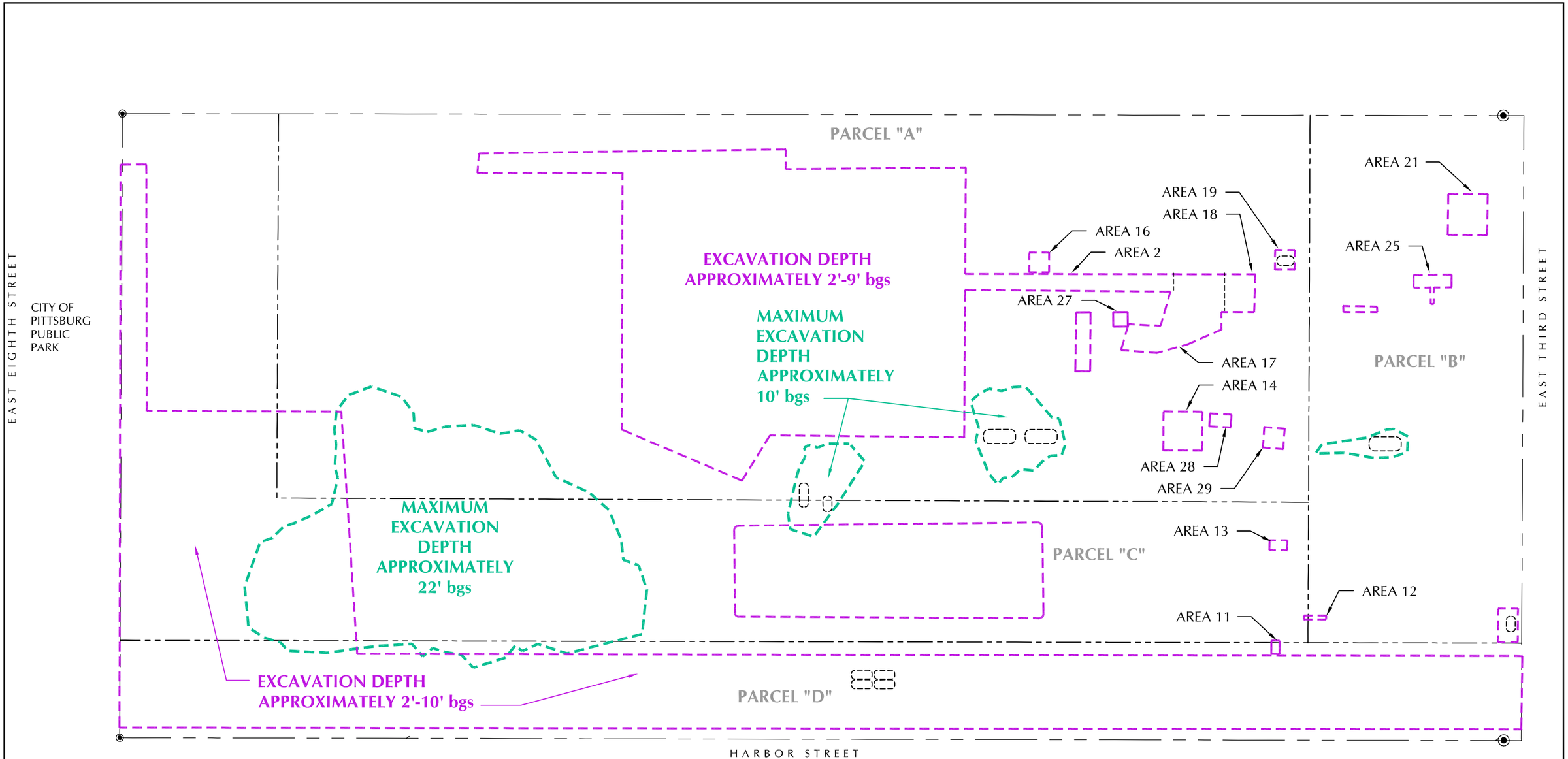
Parcel Map

Former Johns Manville Plant, 420 East 3rd Street, Pittsburg, California

LFR

Figure 3

I:\Design\001\09587\02\dwg\Johns Manville Asbestos and TPH Sample Locs.dwg 3/13/08



EXPLANATION:

- APPROXIMATE EXTENT OF EXCAVATION FOR TPH
- APPROXIMATE EXTENT OF EXCAVATION FOR ASBESTOS
- PARCEL BOUNDARY
- APPROXIMATE LOCATION OF FORMER UST

NOTE:

EXCAVATION DEPTHS ARE APPROXIMATE AND BASED ON FIELD NOTES (ERM), PHOTOGRAPHIC RECORD (ERM), LFR OBSERVATIONS, AND W&K SURVEY DATA.

0 100

Approx. Scale (feet)

SOURCE: WINZLER&KELLY

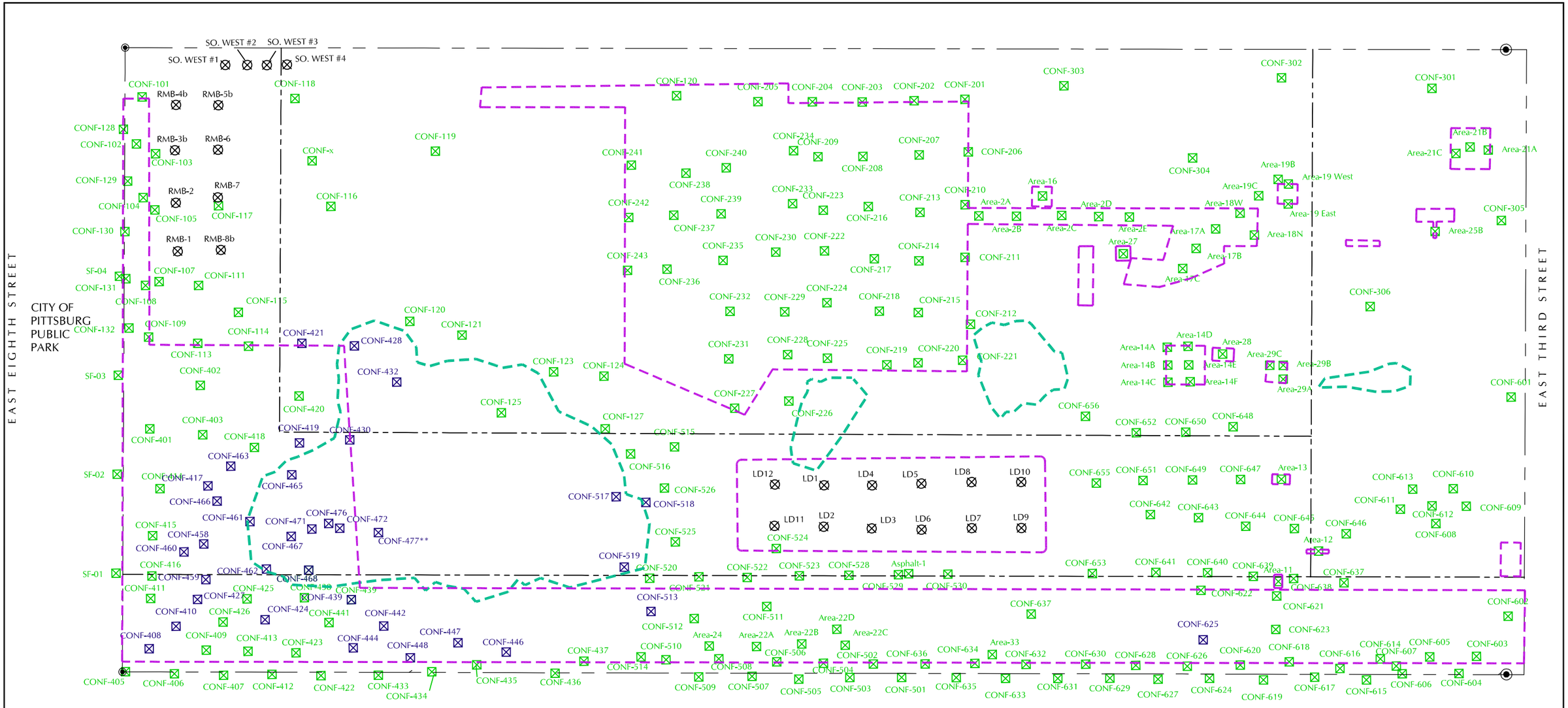
Excavation Areas

Former Johns Manville Plant, 420 East 3rd Street, Pittsburg, California

LFR

Figure 4

I:\Design\001\09587\02\dwg\Johns Manville Asbestos and TPH Sample Locs.dwg 3/13/08



EXPLANATION:

- APPROXIMATE EXTENT OF EXCAVATION FOR TPH
- APPROXIMATE EXTENT OF EXCAVATION FOR ASBESTOS
- PARCEL BOUNDARY

- SAMPLING LOCATION IN GREEN INDICATES SAMPLE ANALYZED FOR ASBESTOS (BY ERM)
- SAMPLING LOCATION IN BLUE INDICATES SAMPLE ANALYZED FOR ASBESTOS AND TPH (BY ERM)
- SAMPLE LOCATION ANALYZED FOR ASBESTOS (BY LFR)
- ** SAMPLE TAKEN BELOW GROUNDWATER, OIL PRESENT IN GROUNDWATER

0 100

Approx. Scale (feet)

SOURCE: WINZLER&KELLY

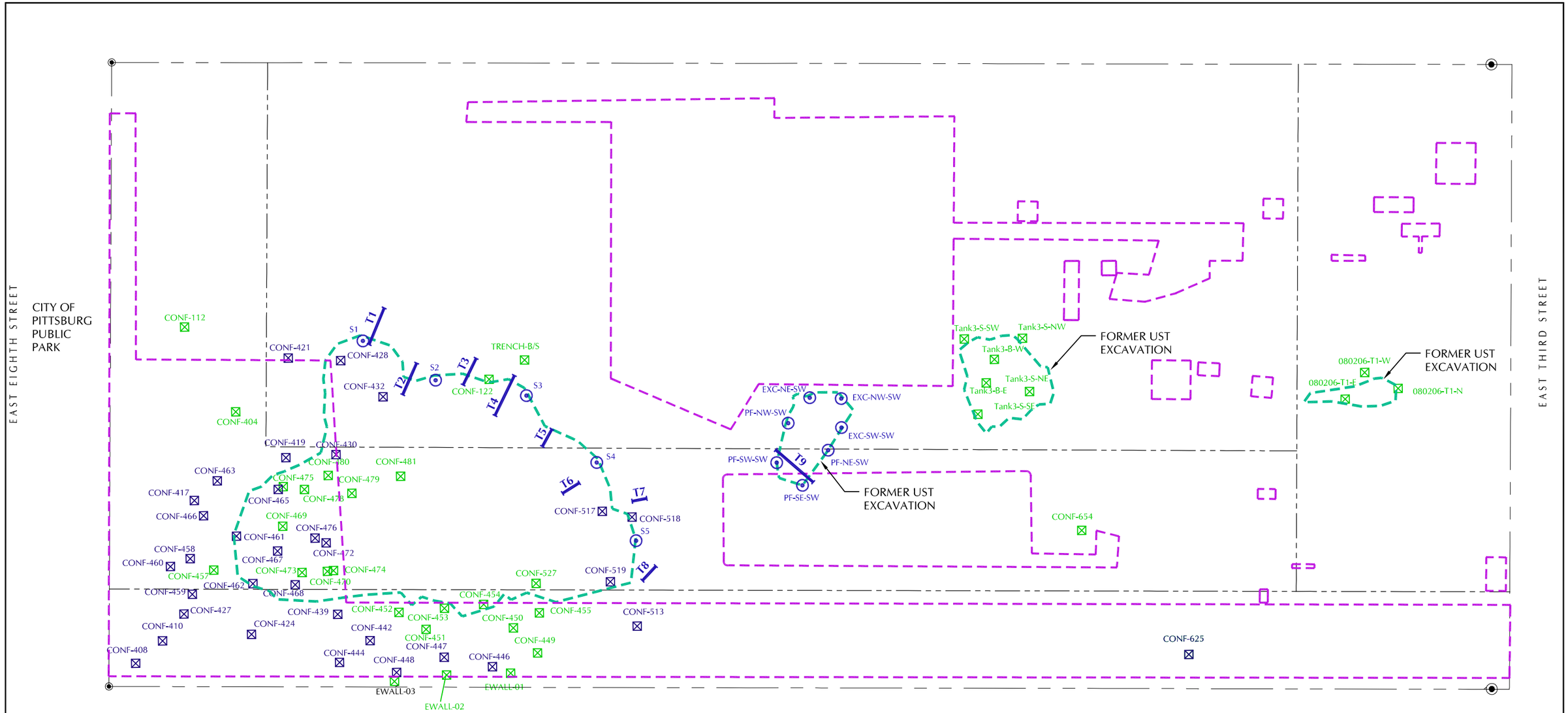
Areas of Excavation and Asbestos Confirmation Sample Locations
Pittsburg River Park LLC

Former Johns Manville Plant, 420 East 3rd Street, Pittsburg, California

LFR

Figure 5

I:\Design\001\09587\02\dwg\Johns Manville Asbestos and TPH Sample Locs.dwg 3/13/08



EXPLANATION:

- APPROXIMATE EXTENT OF EXCAVATION FOR TPH
- APPROXIMATE EXTENT OF EXCAVATION FOR ASBESTOS
- PARCEL BOUNDARY
- TRENCH LOCATION
- SAMPLING LOCATION IN GREEN INDICATES SAMPLE ANALYZED FOR ASBESTOS (BY ERM)
- SAMPLING LOCATION IN BLUE INDICATES SAMPLE ANALYZED FOR ASBESTOS AND TPH (BY ERM)
- CONFIRMATION SOIL SAMPLE LOCATION COLLECTED BY LFR

0 100

Approx. Scale (feet)

SOURCE: WINZLER&KELLY

Areas of Excavation and TPH Confirmation Sample Locations Pittsburg River Park LLC

Former Johns Manville Plant, 420 East 3rd Street, Pittsburg, California

LFR

Figure 6

I:\Design\001\09587\02\dwg\Johns Manville Asbestos and TPH Sample Locs.dwg 3/13/08

APPROXIMATE 10' SOUNDWALL/SOIL BERM

CITY OF PITTSBURG PUBLIC PARK

EAST THIRD STREET

PARCEL "A"

PARCEL "B"

PARCEL "C"

PARCEL "D"

TOE OF BERM WASTE

TOE OF BERM WASTE

SOUTH BERM

NORTH BERM

INTERIM FENCE

INTERIM FENCE

EXISTING PROPERTY BOUNDARY

EXPLANATION:

6-FOOT GALVANIZED CHAIN-LINK FENCE

PARCEL BOUNDARY

FINAL GRADE CONTOURS

CATCH BASIN

0 100 Feet

BASED ON TOPOGRAPHY PROVIDED BY: WINZLER&KELLY

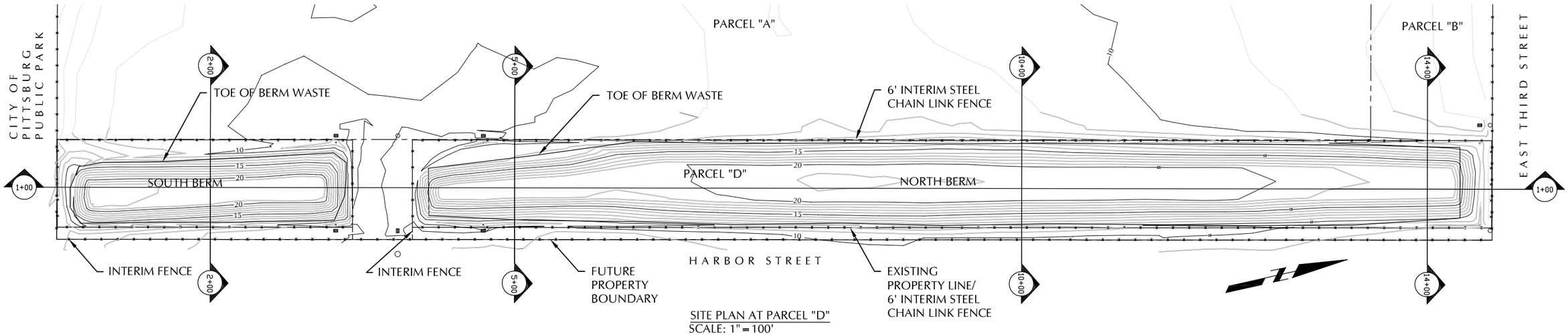
Post-Remediation Site Layout

Former Johns Manville Plant, 420 East 3rd Street, Pittsburg, California

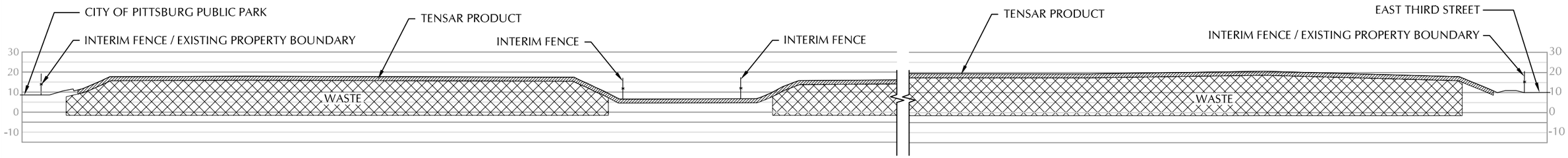
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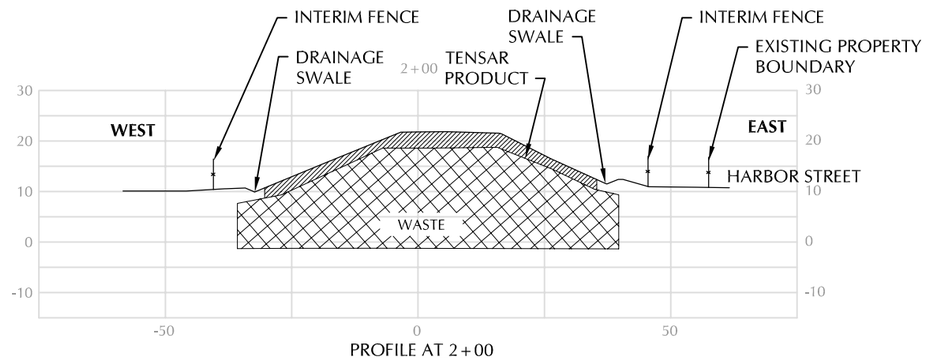
Figure 7

I:\Design\001\09587\02\dwg\Post Remediation FINAL SITE AS-BUILT.dwg May 09,2008-3:03pm

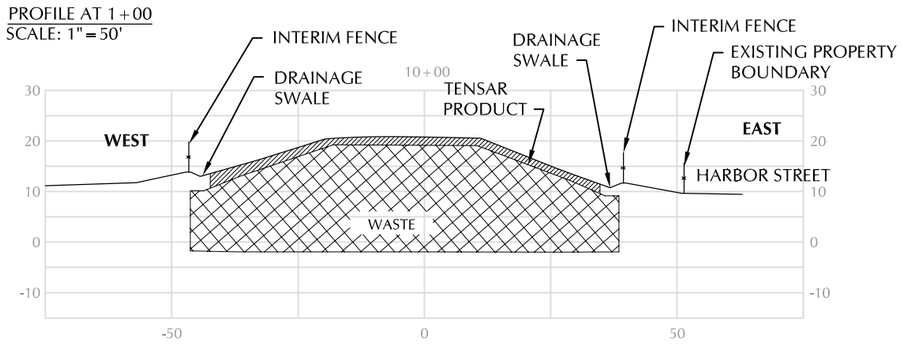


SITE PLAN AT PARCEL "D"
SCALE: 1" = 100'

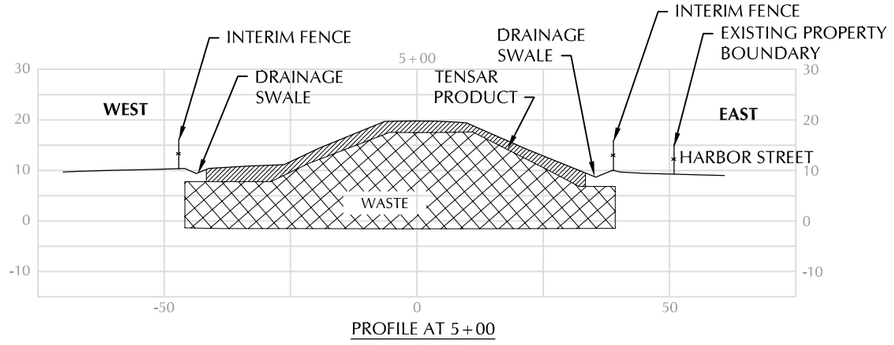




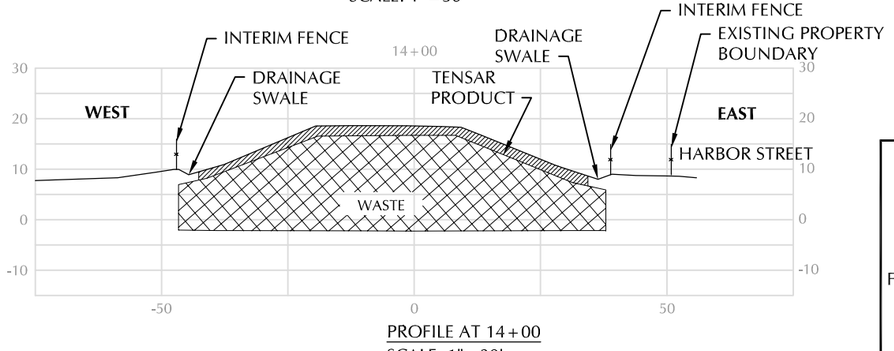
PROFILE AT 2+00
SCALE: 1" = 30'



PROFILE AT 10+00
SCALE: 1" = 30'



PROFILE AT 5+00
SCALE: 1" = 30'



PROFILE AT 14+00
SCALE: 1" = 30'

PROFILE AT 1+00
SCALE: 1" = 50'

SOURCE: WINZLER&KELLY

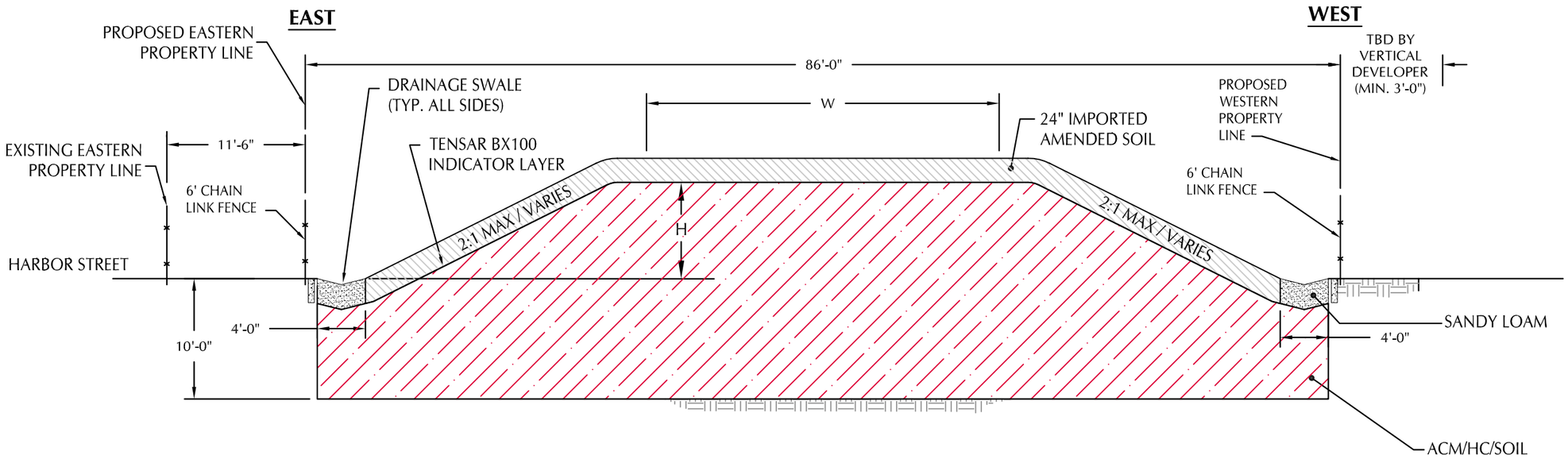
Berm Construction Details

Former Johns Manville Plant, 420 East 3rd Street, Pittsburg, California

LFR

Figure 8

I:\Design\001\09587\02\dwg\Post Remediation FINAL SITE AS-BUILT.dwg Mar 27,2008-1:57pm



EXPLANATION:

A — A' Line of Section

Amended Soil

ACM- and Hydrocarbon-Contaminated Fill

Native Soil

Note: Final location and dimension of berm, swales, and Harbor Street Entrance to be determined by City of Pittsburg Grading Permit.

SOURCE: ENTECH; WINZLER&KELLEY

Eastern Boundary Typical Section
Pittsburg River Park LLC

Former Johns Manville Plant, 420 East 3rd Street, Pittsburg, California

LFR

Figure 9

I:\Design\001\09587\02\dwg\Berm Section Detail FINAL SECTION.dwg May 09,2008-3:05pm

EAST EIGHTH STREET

CITY OF PITTSBURG PUBLIC PARK

EAST THIRD STREET

PARCEL "A"

PARCEL "B"

PARCEL "C"

PARCEL "D"

SV-1
GGW-1
SV-13
SV-5
SV-9
SV-2
SV-6
GGW-6
SV-11
GGW-2
SV-7
GGW-3
SV-10
SV-3
SV-12
SV-4
GGW-4
GGW-7
GGW-8
SV-8
GGW-5
GGW-10
GGW-9

EXPLANATION:

- APPROXIMATE EXTENT OF EXCAVATION FOR TPH
- APPROXIMATE EXTENT OF EXCAVATION FOR ASBESTOS
- PARCEL BOUNDARY
- GRAB GROUNDWATER SAMPLING LOCATION
- SOIL-VAPOR SAMPLING LOCATION

0 100
Approx. Scale (feet)

SOURCE: WINZLER&KELLY

Soil-Vapor and Grab Groundwater Sampling Locations

Former Johns Manville Plant, 420 East 3rd Street, Pittsburg, California

LFR

Figure 10

I:\Design\001\09587\02\dwg\Johns Manville Asbestos and TPH Sample Locs.dwg 3/13/08

Operation and Maintenance Plan for the Engineered Containment Berm on the Plant Site of the Former Johns Manville Facility, 420 East Third Street, Pittsburg, California

October 1, 2008
001-09587-02-008

Prepared for
Pittsburg River Park LLC
36 Washington Street Suite 220
Wellesley, Massachusetts 02481

Prepared by
LFR Inc.
1900 Powell Street, 12th Floor
Emeryville, California 94608

LFR ENVIRONMENTAL MANAGEMENT & CONSULTING ENGINEERING

October 1, 2008 001-09587-02

Ms. Barbara Cook, P.E.
Department of Toxic Substances Control
700 Heinz Avenue
Berkeley, California 94710-2721

Attention: Mr. Mark Piros and Mr. Patrick Lee

Subject: Operation and Maintenance Plan for the Engineered Containment Berm Parcel on the Plant Site of the Former Johns Manville Facility, 420 East Third Street, Pittsburg, California

Dear Mr. Mark Piros and Mr. Patrick Lee:

On behalf of Pittsburg River Park LLC (PRPLLC), LFR Inc. (LFR) has prepared this Operation and Maintenance (O&M) Plan for the Berm Parcel (identified as Parcel D as shown on Minor Subdivision Map) of the Former Johns Manville Facility located at 420 East Third Street in Pittsburg, California ("the Site"; Figure 1). This document addresses the comments from the City of Pittsburg and Department of Toxic Substances Control (DTSC) sent in an email to Ron Goloubow from Patrick Lee on March 12 and September 23, 2008. The O&M Plan is to serve as the guide for operating, maintaining, and repairing the containment berm that has been built at the Site.

The O&M Plan includes a description of the following:

- General site overview and history;
- Physical features of the containment berm and soil cap;
- Routine and nonroutine monitoring and maintenance procedures and related schedules; and
- General restrictions on the containment berm.

This O&M Plan, once approved by the DTSC, will be periodically reviewed and updated in the event that site conditions change.

510.652.4500 m
510.652.2246 f
1900 Powell Street, 12th Floor
Emeryville, California 94608-1814
Offices Nationwide
www.lfr.com

If you have any comments or questions or need any additional information regarding this O&M Plan or the project in general, please call either of the undersigned at LFR (510-652-4500) or Mr. Mike Singer at PRPLLC (781-431-8101 X105)

Sincerely,

Ron Goloubow
Senior Associate Geologist

William L. Carson, P.E. (C60735)
Principal Engineer

Enclosure

cc: Ms. Jodi Smith, Esq., Paul, Hastings, Janofsky & Walker LLP
Mr. Mike Singer, PRPLLC

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1.2 Site History....2

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A Operation and Maintenance Checklist

B Landscape Plan

FIGURES

1 Site Vicinity Map

2 Conceptual Eastern Boundary Berm Layout

3 Conceptual Eastern Boundary Berm Sections

1.0 INTRODUCTION

LFR Inc. (LFR) on behalf of Pittsburg River Park LLC (PRPLLC) has prepared this Operation and Maintenance Plan ("O&M Plan") for the engineered containment berm on the Plant Site of the former Johns Manville (JM) Facility in Pittsburg, California ("the Site"; Figures 1 and 2). As illustrated on Figure 2, the containment berm is located along the eastern boundary of the Site and is comprised of two distinct segments. In order to provide access directly from Harbor Street, a 58-foot-wide access roadway was constructed between the two berm sections. For the purpose of this report the two distinct segments will be referred to as "the berm."

The construction of the on-site containment berm for asbestos-containing materials (ACM) and total petroleum hydrocarbon- (TPH-) affected soil was part of the remedial action that was selected for implementation as described in detail in the Final Remedial Action Plan (RAP; ERM 2006a). This O&M Plan serves as the guide for operating, maintaining, and repairing the containment berm that has been built at the Site. The O&M Plan will be reviewed and approved by the California Department of Toxic Substances Control (DTSC).

The O&M Plan includes a description of the following:

- General site overview and history;
- Physical features of the landscaped containment berm;
- Routine and nonroutine monitoring and maintenance procedures and related schedules; and
- General restrictions on the containment berm.

This O&M Plan, once approved by the DTSC, will be periodically reviewed and updated in the event that site conditions change. The responsibility for implementing the O&M Plan will remain with the owner of the property.

1.1 Site Description

The former JM Facility consists of two distinct properties located at the approximate intersection of East Third Street and Harbor Street in Pittsburg, California. These properties are shown on Figure 1.

The first parcel, known as the North Parcel, is an approximately 4.2-acre parcel located between (and bounded by) New York Slough to the north and the Plant Site to the south, and is situated just north of East Third Street. The North Parcel was formerly used for storage of asbestos-containing products prior to shipment. As a result of this practice, a significant amount of ACM was deposited onto the ground. To prevent future exposure to ACM a soil cap was constructed over the contaminated soil. The O&M plan for the North Parcel is provided in the "Operation and Maintenance

Plan, North Parcel Site, former Johns Manville Plant, Pittsburg, California" (ERM 2005). The O&M of the North Parcel has been conducted and reported on a semiannual basis (two times a year) since 2007 and prior to that the inspections were conducted quarterly.

The Plant Site, located approximately 1,000 feet south of New York Slough, is the subject of remedial actions addressed in this O&M plan. This 21-acre parcel is bounded to the north by the North Parcel, Third Street, and a Tesoro coke facility; to the east by Harbor Street, several small light-industrial businesses, and USS Posco Corporation; to the south by a City Park; and to the west by residential properties. Most recently, until the facility terminated operations in 2003, the facility was used for the manufacturing of commercial roofing materials.

A review of JM's historical operations, as well as site-wide investigation data, indicated that the areas of potential concern at the Site were the former evaporation pond and several additional locations found while conducting abatement and demolition activities at the Site. ERM, on behalf of PRPLLC assessed the remediation alternatives, documented in the RAP (ERM 2006a), and determined the most effective course of remedial action for the Site would be the construction of an engineered containment berm along the eastern boundary of the Site. The details of the construction of the berm is described in the "Remedial Design and Implementation Plan, Harbor Park Development, Pittsburg, California" (RDIP; ERM 2006b), and the "Addendum to the Remedial Design and Implementation Plan, Harbor Park Development (Former Johns Manville Facility), 420 East 3rd Street, Pittsburg, California" (ARDIP; LFR 2007).

1.2 Site History

The manufacturing plant was built sometime between 1925 and 1928. In 1957, a large warehouse was constructed south of the main manufacturing facility. Asbestos-cement products, asphalt roofing materials, and asbestos-containing pipe covering were the primary products produced prior to the termination of asbestos-containing product manufacturing in 1980. A series of four asphalt stills, located along the southwestern margin of former Building 4, was used to convert heavy oil to asphalt. The stills were fueled by fuel oil and later with natural gas. In the process of converting heavy oil to asphalt, off-gas vapors were collected, condensed, and mixed with water to form an oil-water slurry that was transported via an underground pipe to the evaporation pond. The residual oil in the evaporation pond was reportedly burned approximately twice a year. Use of the evaporation pond began in 1946. It remained relatively constant in size until 1959, when discharge of effluent was discontinued, and the pond was subsequently filled with scrap and construction debris and capped with asphalt pavement (ERM 2006a/b). As a result of site operations the chemicals of concern at this Site were identified as ACM, TPH, and related compounds.

Subsequent to the cessation of ACM manufacturing operations at the Site, and until the plant was closed in approximately 2003, JM manufactured commercial roofing

materials using fiberglass mat, asphalt, sand, and limestone. Petroleum-based resins and solvents were also used on site.

In 2005 PRPLLC acquired the plant and retained Plant Reclamation to decommission and demolish the plant facilities. During demolition activities ACM was segregated and stored on site for placement into the containment berm. ACM was observed in many different forms including but not limited to concrete, wall board, roofing material, pipes, and debris. This material along with TPH-affected soil removed from the former evaporation pond has been placed into the berm during remedial activities.

In 2006 PRPLLC also retained Entact Environmental Services ("Entact") to implement the scope of the RAP. During the implementation of the RAP the ACM from the demolition of the on-site structures were placed into the containment berm along with other ACM or TPH-affected soil that was excavated from the subsurface.

2.0 CONTAINMENT BERM CONSTRUCTION

The berm has been constructed along the eastern boundary of the Site, and consists of two components: a north berm and a south berm (Figure 2). The various components and characteristics of the containment berm are detailed in the RDIP and ARDIP and summarized in this section. Based on calculations completed by Winzler & Kelly (W&K), a licensed engineering company located in San Francisco and Santa Rosa, California, approximately 64,400 cubic yards of ACM and TPH-affected soil have been transported and placed in the containment berm.

Project documents related to design, construction, and O&M of the berm are identified in the References section of this O&M Plan.

2.1 Construction Plans and Technical Specifications

The construction plans and technical specifications for the berm as described in the RDIP and the ARDIP include:

- Excavating a trench to approximately 10 feet below ground surface (bgs) beneath the entire length of the berm to accommodate the placement of ACM below grade;
- Backfilling the trench with affected material and constructing a berm above grade;
- Capping the berm with a Tensar product; this is commonly used for the reinforcement of soils in construction of structures such as embankments and 2 feet of clean cover soil. In addition to providing additional structural integrity to the berm, the Tensar product fabric will also serve as a visual demarcation liner between affected soils and the 2-foot-thick clean soil cap;
- Constructing perimeter fencing to prevent public access to the Site;

- Construction of drainage swales adjacent to the berm and grading such that collected storm-water runoff will drain towards catch basins;
- Installing an automated irrigation system; and
- Installing low maintenance landscaping in accordance with the City of Pittsburg requirements.

In the ARDIP completed by LFR, the construction plans and technical specifications for the berm were modified slightly to accommodate a larger volume of ACM waste material encountered at the Site. Specifically, the ARDIP described plans for a western expansion of the berm by approximately 10 feet. The height, northern, southern, and eastern dimensions of the berm were not modified. In addition, the indicator layer to be placed between the affected soil and the 2-foot-thick clean soil cover was changed to a Tensar product (from a Mirafi™ product called for in the RAP and RDIP). Treadwell & Rollo (our Geotechnical Engineer) recommended the substitution of the Tensar product to increase adhesion between the waste material and the clean cover material.

In general, the berm was constructed in accordance with the plans outlined in the RDIP and ARDIP. The berm constructed along the edge of the eastern boundary of the Site, is referred to as “south berm” and “north berm” (Figure 2). Initially a 10-foot-deep trench was excavated in sections along the entire length of the berm. The trench was filled with ACM along the length of both berm sections. In order to provide access directly from Harbor Street, a 58-foot-wide access roadway was constructed between the two berm sections. The TPH-affected material was placed in the berm above the ACM material, which was placed up to the native grade elevations. (i.e., TPH-affected soil was not placed in the subsurface portion of the berm.). The south berm is approximately 296 feet long, while the north berm is approximately 1,072 feet long. Both berms are approximately 85 feet wide at the base and extend approximately 10 feet above the elevation of the adjacent sidewalk area of the City’s Harbor Street Right of Way (8 feet of waste material and 2 feet of clean cover). A minimum buffer distance of 1 to 3 feet exists between the affected soils and public rights of way or private streets or utilities (Figures 2 and 3).

Access to the berm is restricted by a fence, with gates to provide access for inspection and routine maintenance. The fence and all signs posted meet the City of Pittsburg Municipal Code (PMC) requirements.

2.2 Grading and Profile

The containment berm was constructed by Entact in accordance with the RDIP, ARDIP, and the grading permit issued by the City of Pittsburg. The City of Pittsburg periodically monitored grading operations to verify that field operations complied with the approved grading permit. W&K provided locations and final grade control during and after the berm construction.

2.3 Surface Drainage Control

The runoff from the berm is collected in swales that flow to catch basins connected to the city storm-water system. The swales were designed by W&K and were approved by the City of Pittsburg's engineering department. The remainder of the Site is currently undeveloped and in rough grade condition. All other storm-water utilities have been removed from the Site during plant decommissioning-demolition. During soil remediation activities, storm-water management was performed such that the adjacent off-site storm-water collection system was not affected by site activities.

2.4 Slope Protection and Drainage Control

The slope of the berm caps is approximately 2.0 feet horizontal to 1.0 foot vertical (2H: 1V). The side slopes and the associated landscaping were designed to prevent erosion and provide adequate drainage. The vegetation used was determined by a Qualified Landscape Contractor and was approved by the City of Pittsburg prior to construction. It is our understanding that the landscaping on the berm will be augmented as part of the future development plans for this Site.

2.5 Irrigation System

An irrigation system has been installed to provide water for vegetation support and maintenance. The system consists of an aboveground PVC irrigation system. The system includes timer-activated, battery-operated valves so that the system can be operated at night to minimize evaporation. The system is configured such that routine landscape maintenance can be performed with minimal impact to the irrigation system. It is our understanding that the irrigation system on the berm will be upgraded as part of the future development plans for this Site.

3.0 MONITORING AND MAINTENANCE PROCEDURES AND SCHEDULES

This section provides the O&M program; identifies key personnel associated with the program; details monitoring, maintenance, and repair issues to be considered; and describes the reporting program.

3.1 O&M Monitoring Program

The objectives of the proposed O&M program are to:

- Minimize the threat to human health and the environment from ACM and TPH-affected soil contained within the berm;
- Preserve the function and integrity of the berm; and

- Control drainage and erosion on the berm.

O&M monitoring will include routine inspection of the irrigation system, fencing, drainage system, and soil cap. This inspection will also include an assessment of trash accumulation in the berm parcel. If appropriate, trash will be removed during the inspections and if necessary on a more frequent basis. With respect to the soil cap, emphasis will be placed on identifying signs of erosion, lack of vegetative cover, or damage due to burrowing animals or trespassers. Maintenance will include regular grass/weed abatement in accordance with Riverview Fire Prevention District requirements and to ensure that aesthetic issues do not arise with nearby residents. Fertilizing and pruning/trimming the vegetative cover will be conducted on an as-needed basis. The O&M monitoring program will include a quarterly (once every three months) inspection and reporting schedule for the first year and then semiannually (once every six months) assuming minimal disturbances are observed. A semiannual inspection schedule will allow for evaluating site conditions during the summer months (when the irrigation system is operational) and during the winter months (when erosion from seasonal precipitation is of most concern). These inspections will be conducted at the end of the Second Quarter (June) and Fourth Quarter (December) of each calendar year.

3.2 Monitoring Personnel

The site inspection will be conducted and the report written by the Site Inspector, a field engineer, or field geologist under the direct supervision of the Site Engineer, who will be a California professional civil or geotechnical engineer.

The primary responsibilities of the Site Inspector are:

- Perform inspections and evaluations
- Accurately record all inspection data
- Prepare the summary O&M Report
- Review and evaluate the O&M Plan and reference documents to ensure they are accurately reflected in the inspections and repairs performed

The primary responsibilities of the Site Engineer are:

- Review and evaluate data and reports prepared by the Site Inspector
- Report observations and inspection results to the property owner and DTSC
- Review and/or prepare repair plans and specifications
- Review and/or prepare instructions for contractor and Site Inspector for repair and inspection requirements and procedures

3.3 Monitoring and Maintenance Procedures

The inspection program for the containment berm and soil cap and drainage system will evaluate the following:

- Condition of the vegetative cover;
- Erosion from irrigation or storm-water runoff;
- Impacts from burrowing animals and/or trespassers;
- Condition of all drainage system components;
- Indication of settlement survey of the installed "settlement monuments" (see section 3.3.1)
- Condition of the irrigation system and fencing; and
- The need for slope failure repairs.

The site inspection will consist of a complete walk-through and visual examination of all the components addressed above. As appropriate, photographs will be taken to document site conditions. An O&M inspection checklist for use during site inspections is presented as Appendix A, and includes the following information:

- Inspector and date, time, and climatic conditions during inspection;
- Specific visual observations regarding the containment soil cap, fencing, and/or drainage system, and a diagram/map showing the location of the observations;
- Specific observations regarding the vegetative cover system to include an evaluation of weed and fire control issues, the need for re-seeding, rodent control, and the condition of the irrigation system;
- Detailed descriptions associated with observations, as appropriate;
- Short-term actions taken in response to observations, as appropriate; and
- Detailed record regarding any necessary repairs to include the nature/location of the deficiency, repair action taken, and any follow-up remarks or observations.

A map showing locations of specific observations and response/repair activities, and a photographic record of the inspection will be incorporated as part of the checklist for reporting purposes, as noted below.

All repairs determined to disturb the lowest 6 inches of the 2-foot-thick soil cover (1.5 feet below grade) or any repairs determined to be major (i.e., requiring engineering evaluation or cost analysis) will be scoped and completed under the supervision of the Site Engineer, with appropriate experience in caps and covers for waste containment facilities. The owner will be responsible to make these repairs so that the berm will return to its constructed condition. The DTSC will be informed via telephone, email, or written correspondence by the owner of the pending "major" repairs and it will be the DTSC's discretion to observe the repairs.

3.3.1 Differential Settlement

Per the recorded Grading Agreement, the settlement of the berm shall be monitored by a licensed geotechnical firm, selected by the City of Pittsburg and approved by the property owner. The observation period for the differential settlement is to be determined by the City of Pittsburg Engineer. As outlined in the grading agreement, the observation period is to be completed in accordance with the design and specifications of the wick drain report and as approved by the City of Pittsburg and City of Pittsburg geotechnical consultant. In general, the observation period is to last until it has been determined that 90% of the settlement has occurred. However, if at the end of the observation period, if 90% of the settlement has not occurred, then observation will continue.

3.3.2 Vegetation Monitoring, Maintenance, and Repairs

The entire above ground portion of the containment berm and soil cap will be visually inspected semiannually by the Site Inspector following the first year as described previously. The walk-through will focus on any indications of erosion, settlement, cracking, poor and/or unusually discolored vegetation, and animal intrusion on the containment berm and soil cap.

Vegetation on the containment berm soil cap will be maintained on a regular basis as described above to keep the area clear and visible to allow site inspections, and for fire control.

The inspection will also focus on areas of the cap that require re-vegetation. As necessary, limited areas requiring re-vegetation will be planted in a manner consistent with the rest of the berm growth and the City of Pittsburg's approved Landscaping Plan. A copy of the landscaping plan is included as Appendix B. Larger areas exhibiting dead or dying vegetation will be evaluated by the Site Engineer for potential replanting. Completing the landscaping repairs will be the responsibility of the site owner.

3.3.3 Erosion Control Monitoring, Maintenance, and Repairs

Surface erosion damage to the containment soil cap will be evaluated during each site inspection. Surface erosion damage includes areas eroded by storm water, wind, or excessive irrigation. Appropriate repairs will be evaluated and scheduled as soon as possible following identification of a defect. Repair work will be performed by appropriately trained personnel in accordance with a site-specific Health and Safety Plan (HASP) prepared prior to the commencement of work.

Implementation of repairs may require limited excavation prior to filling and grading. In all cases, care will be taken to ensure that excavation below the soil cap does not occur to the extent possible. Final grading and compaction will be performed so as to

match the surrounding topography and RDIP, ARDIP, and grading permit specifications.

3.3.4 Animal Intrusion Monitoring and Repairs

Burrowing animal intrusion will be evaluated during each site inspection. Along with evaluation of repairs necessary to fill the burrowed areas, consideration will be given to the possibility of removing burrowing animals from the Site if burrowing is extensive. Minimal filling of burrows will be conducted using commercially available soil as fill material for repair of vegetative cover as described above. Significant repairs, requiring the use of construction equipment or requiring the removal of burrowing animals, will be performed using appropriately trained personnel in accordance with a HASP prepared prior to the commencement of work.

3.3.5 Drainage System Monitoring, Maintenance, and Repairs

During each site inspection, the drainage swale and catch basins will be evaluated for obstructions, which will be removed on an as-needed basis using rakes or shovels, as appropriate. Signs of cracking, settling, excessive vegetative growth, and other maintenance and repair concerns will be evaluated.

In the event that the swale is damaged severely enough that re-grading is required, the affected section will be demolished and re-graded. The repair work will be designed and overseen by properly trained staff in accordance with a HASP prepared prior to the commencement of work.

3.3.6 Settlement Monitoring and Repairs

During each inspection, indications of settling will be evaluated. These indications include cracking, settling, or other deformations that may compromise the integrity of the containment berm and soil cap. Any such deformities will be repaired immediately using available fill materials that will be stored on site within the fenced area. More significant repairs involving construction equipment and the potential to breach the soil cap will be performed under the oversight of properly trained staff in accordance with a HASP prepared prior to the commencement of work.

3.3.7 Irrigation System Repair

The irrigation system will be evaluated during each inspection. During the growing season, when the irrigation system is generally operable, the inspection will include reviewing the condition of sprinkler heads and conveyance lines. Likewise, each station of the irrigation system will be manually started during the inspection to evaluate the degree to which the Site is being covered. Any damage to irrigation system components will be immediately repaired to ensure that system disruption does not result in damage to the vegetative cover.

During the winter months (i.e., rainy season), inspections will also include evaluation of system components. Any damage to these components will be noted and repaired at a convenient time prior to the following growing season. No efforts to manually start the irrigation system will be made during winter month inspections; however, repair needs will be noted if discovered and the necessary repairs will be made.

3.3.8 Fencing Monitoring and Repair

Because the fence and gates at the Site are the primary barriers between the containment soil cap and the public, it is essential that these components be maintained in good working order. Each inspection will include a perimeter walk along the fencing to evaluate the integrity of fence posts, structural bars, gates, and locks and to identify any evidence of vandalism or entry by humans or animals. Inspections would also include evaluating the condition of signage. Signage will include but not be limited to "no trespassing" signs and "do not enter" signs. The signs will be in English and Spanish and will be in accordance with the City of Pittsburg's requirements. Any required repairs will be conducted immediately to ensure the barrier between the Site and public remains intact.

3.3.9 Slope Failure Repairs

In the event that a localized or site-wide slope failure is identified during a site inspection, the condition will be documented photographically, and repairs will be implemented only after consulting with the Site Engineer and DTSC. If slope failure results in exposure of asbestos materials, that area will be temporarily covered with a tarp and sand bags to minimize potential threat to human health or the environment pending evaluation of appropriate repair actions by the Site Engineer and DTSC.

3.4 Nonroutine Monitoring and Maintenance Procedures and Schedules

A number of nonroutine events will require unscheduled (nonroutine) inspections. As soon as the Site is accessible, it will be inspected following any of the following events:

- Rainfall exceeding 2 inches in a 24-hour period;
- Earthquakes exceeding 5.0 magnitude within a 50-mile radius of the Site;
- Blockage or overflow of the drainage system;
- Vandalism;
- Fire;
- Explosion;
- Broken water mains;
- Misguided utility line repair;

- Vehicle collision with the berm; or
- Any other foreseeable impact which may result in a breach of the berm.

If the damage from one of these events presents an immediate hazard to human health and/or the environment, repairs or temporary controls will be initiated immediately subject to Site Engineer evaluation and approval. All repair work will be completed in accordance with the HASP that will be prepared prior to the commencement of the repair work and under the supervision of the Site Engineer or a registered professional civil engineer. DTSC will be notified if any major repairs are required.

3.5 Emergency Response Plan

As indicated in Section 4.1 of the RAP, none of the waste materials contained in the berm are acutely hazardous. As the primary exposure routes are incidental ingestion, dermal contact, or inhalation of fugitive dust there would be no immediate acute threat to human health or the environment if these materials should become suddenly exposed.

Personnel listed below can be called to contain the breach and the berm will be temporarily covered with a tarp and sand bags to minimize further threat to human health or the environment pending evaluation of appropriate repair actions by the Site Engineer and DTSC.

Contact Information Emergency Only:

- 911 – City of Pittsburg Police Department of Contra Costa County Fire Protection District

Contact Information for Routine and/or Emergencies:

- Pittsburg River Park LLC - 39 Washington Street, Suite 220 Wellesley, MA 02481, 781-431-8101- office
- Michael Singer, Project Director - 860-214-7195 - 24-hour cell phone
- John Hanselman, Managing Partner - 617-480-1667 - 24-hour cell phone
- Pete Pedersen, Managing Partner - 781-223-8157 - 24-hour cell phone
- LFR Inc. (24-Hour Emergency Response) - 510-652-4500 - office
- Ron Goloubow, Project Manager - 510-501-1789 - 24-hour cell phone

3.6 Operation and Maintenance Program Reporting

Upon completion of each inspection of the containment soil cap and drainage system, the responsible party will oversee preparation of a report describing conditions of the Site in accordance with the evaluation factors listed above. The responsible party shall

be the site owner, agent of owner, consultant or subcontractor of owner. Along with the inspection checklist and associated site diagram and photographic log, the inspection reports will include a written evaluation of the following:

- Integrity of the security fence;
- Condition of irrigation system;
- Condition of the vegetative cover;
- Erosion impacts from irrigation or storm-water runoff;
- Rodent or animal populations burrowing into the cap; and
- Condition of drainage system components.

Inspection reports will be maintained by the responsible party, and copies will be forwarded to DTSC within one month following completion of the inspection. In association with the Fourth Quarter submittal (to be submitted to DTSC by the end of January), an annual report will be prepared summarizing the results of semiannual monitoring and any noteworthy repair or maintenance activities.

In the event that slope failure is identified during a site inspection and repairs are required, the Site Engineer will oversee preparation of a report specific to slope failure issues. The report, which will be prepared by the Site Engineer, will document the problem, recommended repairs, procedures, and repair activities. That report will be submitted to DTSC and the appropriate department(s) of the City of Pittsburg within one month following completion of site repair activities.

4.0 TRAFFIC RESTRICTIONS ON THE CONTAINMENT SOIL CAP

The containment soil cap was constructed to allow limited vehicle access for the purpose of inspection, maintenance, and repair of the soil cap or its components. Vehicular traffic on the containment soil cap should be avoided unless absolutely necessary for inspections and repairs to ensure that disturbance of the cap is minimized at all times.

Under no circumstances will vehicular access be provided to anyone other than the responsible party or its subcontractors.

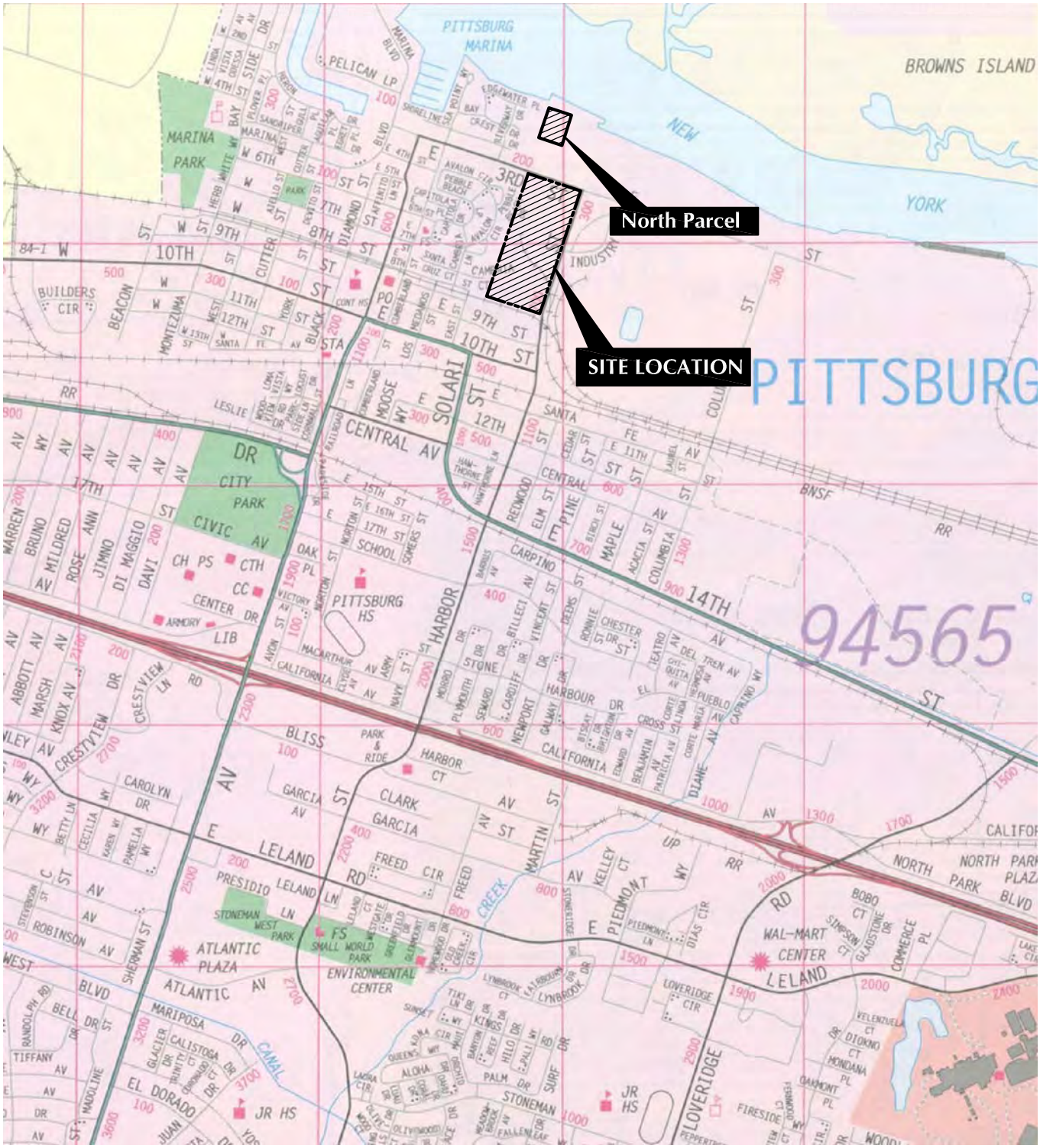
5.0 REFERENCES

ERM-West, Inc. (ERM). 2005. Operation and Maintenance Plan, North Parcel Site, former Johns Manville Plant, Pittsburg, California. November 2005.

———. 2006a. Final Remedial Action Plan, Harbor Park Development (Former Johns Manville Plant), Pittsburg, California. June 2006.

———. 2006b. Remedial Design and Implementation Plan, Harbor Park Development (Former Johns Manville Plant), Pittsburg, California. August 2006.

LFR Inc. (LFR). 2007. Addendum to the Remedial Design and Implementation Plan, Harbor Park Development (Former Johns Manville Facility), 420 East 3rd Street, Pittsburg, California. August 2007.



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SCALE IN FEET

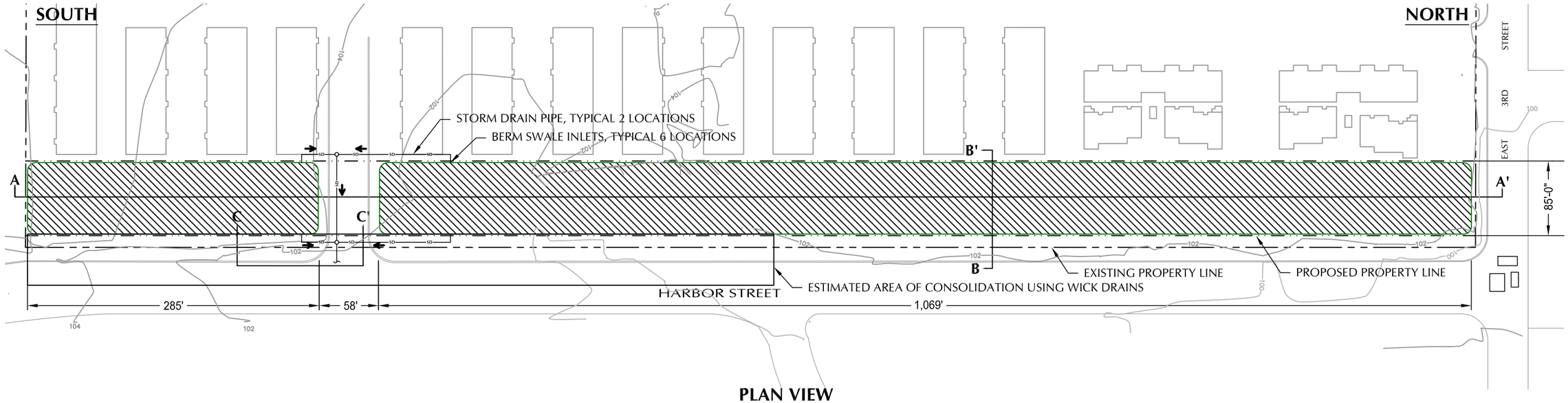
Site Vicinity Map

Former Johns Manville Plant, 420 East 3rd Street, Pittsburg, CA

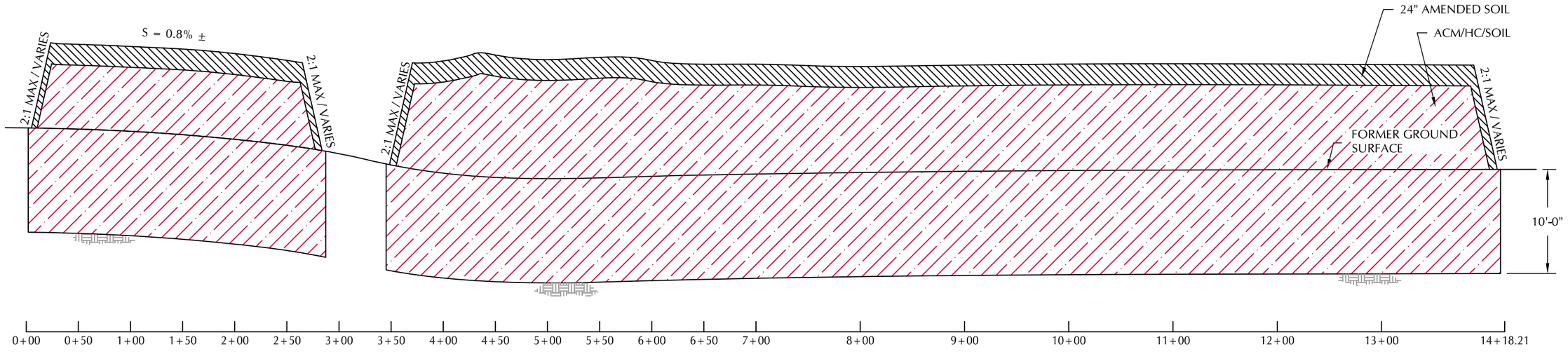
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Figure 1

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PLAN VIEW



PROFILE VIEW A-A'

VERTICAL EXAGGERATION 10X

LEGEND

- A — A' Line of Section
- SD Line of Section
- Amended Soil
- ACM and Hydrocarbon Contaminated Fill
- Native Soil

Note: Final location and dimension of berm, swales, and Harbor Street Entrance to be determined by City of Pittsburg Grading Permit.

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FEET

SOURCE: ERM 08/06

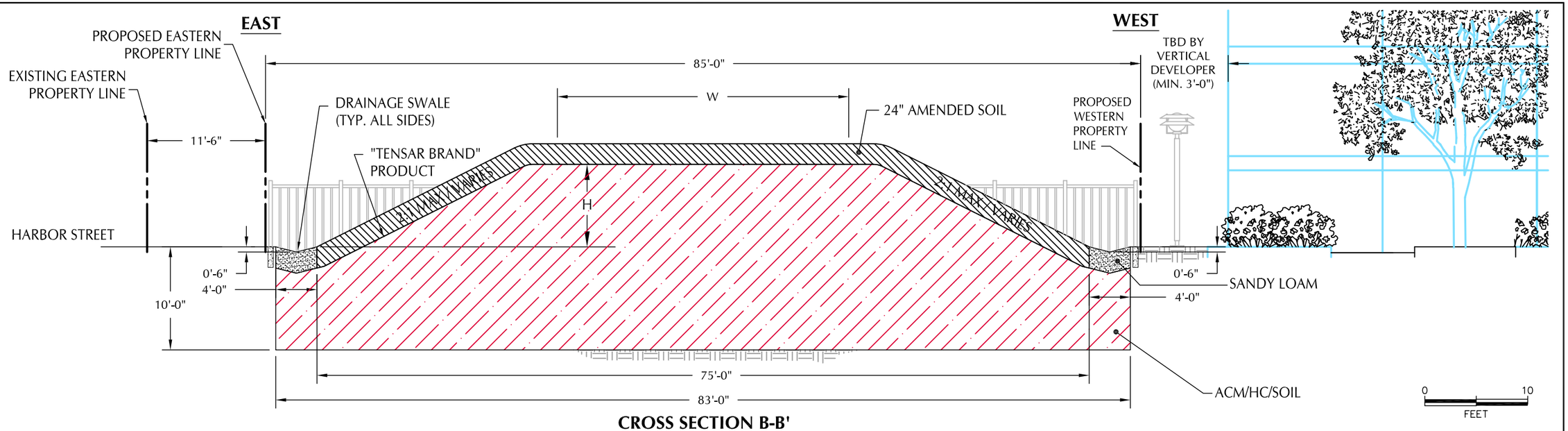
Conceptual Eastern Boundary Berm Layout
Pittsburg River Park LLC

Former Johns Manville Plant, 420 East 3rd Street, Pittsburg, California

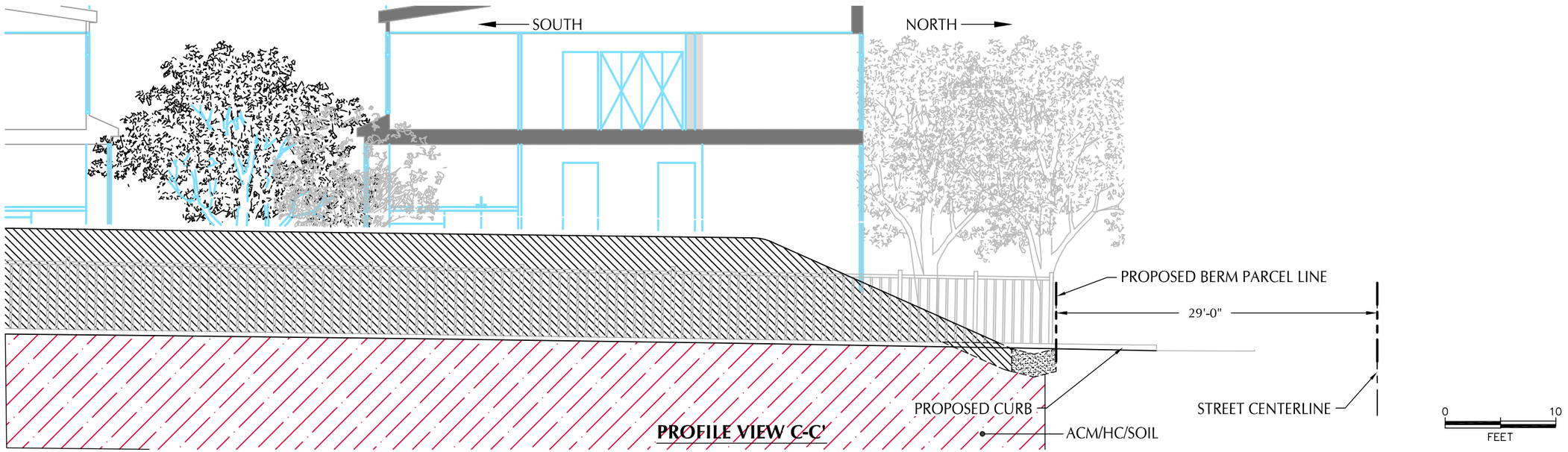
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Figure 2

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CROSS SECTION B-B'



PROFILE VIEW C-C'

LEGEND

- A — A' Line of Section
- Amended Soil
- ACM and Hydrocarbon Contaminated Fill
- Native Soil

Note: Final location and dimension of berm, swales, and Harbor Street Entrance to be determined by City of Pittsburg Grading Permit.

SOURCE: ERM 08/06

Conceptual Eastern Boundary Berm Sections
Pittsburg River Park LLC

Former Johns Manville Plant, 420 East 3rd Street, Pittsburg, California

LFR

Figure 3

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APPENDIX A

Operation and Maintenance Checklist

O&M CHECKLIST
PITTSBURG RIVER PARK LLC (Former JM Plant)
BERM PARCEL

Inspector: _____ Date: _____ Time: _____
Climatic Conditions: _____

Landscaping, Fencing, and Drainage Inspection

Please observe and document the following:

- Note and quantify eroded areas.
- Note and quantify cover soil conditions such as sloughing, sliding (presence of headscarps), and/or toe bulging.
- Note and quantify cracks, fissures, or other features that may potentially allow surface water infiltration.
- Note and quantify areas of subsidence, depressions, or topography where ponding may occur.
- Estimate rodent or other burrowing animal populations.
- Note and quantify burrowing animal intrusion drainage.
- Document (locate) areas where cover deficiencies are observed.
- Inspect and record any ponding.
- Inspect for runoff inundation.
- Inspect fencing.

LOCATION OF OBSERVATION (show on map)**:** _____

OBSERVATION TYPE AND DETAILED DESCRIPTION: _____

ACTION(s) TAKEN (if necessary)***:** _____

REMARKS: _____

_____

_____

_____

_____

_____

*Please also fill out the attached Repair Record Form.

LANDSCAPE COVER

Please observe and document the following:

- Weed and fire control – Observe growth of plant materials and nuisance weeds in late winter. Determine if unsuitable plants pose a threat to the cover.
- Reseeding – Determine areas that require reseeding in summer.
- Rodent control – Evaluate visible signs of burrowing rodents during routine inspections around the site.
- Sprinkler system – Observe the condition of sprinkler heads and any potential leak from irrigation lines.

AREA LOCATION (show on map)	**GENERAL APPEARANCE & MOISTURE**	**MAINTENANCE REQUIRED**	**COMMENTS**

AREA LOCATION (show on map)	GENERAL APPEARANCE & MOISTURE	MAINTENANCE REQUIRED	COMMENTS

Signature:

Site Inspector: _____ Date: _____

REPAIR RECORD

Inspector: _____ Date: _____ Time: _____
Climatic Conditions: _____

DEFICIENCY TYPE AND DETAILED DESCRIPTION: _____

LOCATION OF REPAIR ACTIVITY (show on map)**:** _____

REPAIR ACTION TAKEN: _____

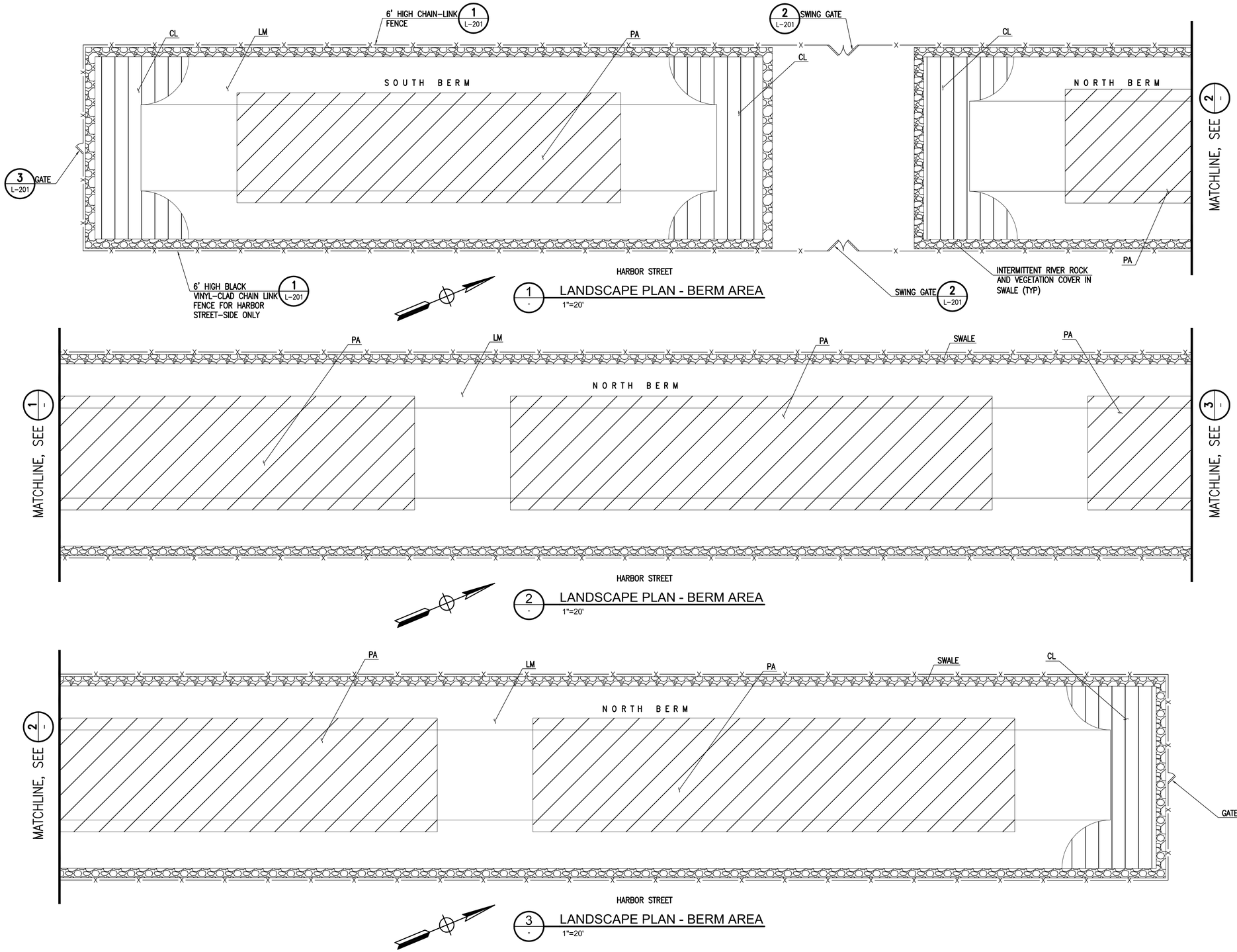
REMARKS: _____

Signature:

Site Inspector: _____ Date: _____

APPENDIX B

Landscape Plan



PLANT LIST - HARBOR PARK

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
PA	PLUMBAGO AURICULATA (CAPENSIS)	CAPE PLUMBAGO	PLUG	5'-0" O.C.
CL	COTONEASTER DAMMERI 'LOWFAST'	BEARBERRY CONTONEASTER	PLUG	5'-0" O.C.
LM	LANTANA MONTEVIDENSIS	PURPLE TRAILING LANTANA	PLUG	5'-0" O.C.

DRAWING NAME: P:\Projects\05\1041.05.001 Harbor Park Redevelopment\CAD\Landscape\Parcel Map Landscape\L-101 thru L-201.dwg
PLOT DATE: Nov 28, 2007 - 3:57pm PLOTTED BY: Hkoong

FOR REFERENCE ONLY

NOT FOR CONSTRUCTION

HARBOR PARK
PITTSBURG, CA

PLANS FOR LANDSCAPING
MS 676-06 (AP-06-370)

LANDSCAPE PLAN

W&K JOB NUMBER
1041505001

SHEET 1 OF 3

L-101

DES HH SUPV EAH
DR HH CHK EAH

BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

NO. SYM. DESCRIPTION DATE APPROVED
REVISIONS

PITTSBURG RIVER PARK LLC

CONTRACTOR TO PROVIDE TEMPORARY IRRIGATION HOOK-UP WITH METER FOR BERM LANDSCAPING

1 - IRRIGATION PLAN
1"=50'

NO.	DESCRIPTION	DATE	APPROVED
3	REVISIONS		

PITTSBURG RIVER PARK LLC
ONE MARITIME PLAZA, SUITE 2000
SAN FRANCISCO, CA 94115
P 415 243 8155
F 415 243 8157

WINZLER & KELLY
CIVIL ENGINEERING AND DEVELOPMENT CONSULTING
582 Market St., 7th Floor, San Francisco, CA 94104
tel 415.243.4690 ♦ fax 415.243.8880 ♦ www.winzler-kelly.com

DR: HH | CHK: EAH
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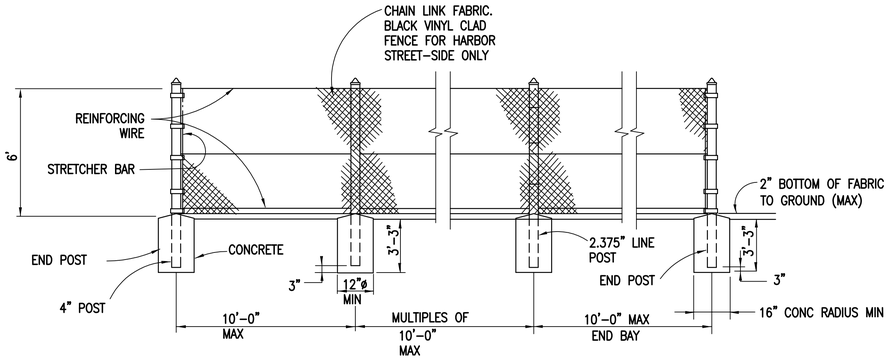
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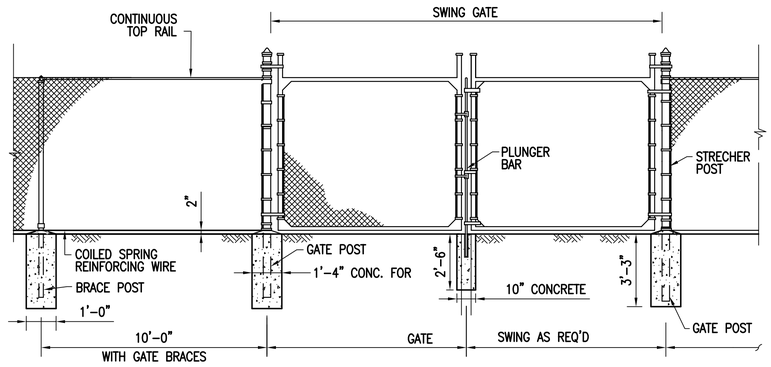
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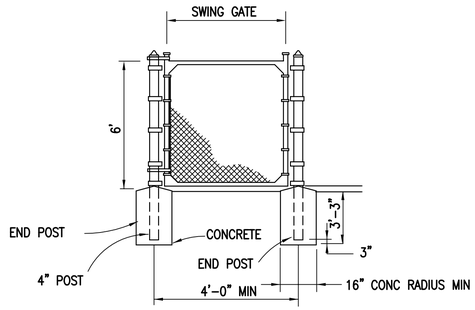
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PITTSBURG, CA

PLANS FOR LANDSCAPING
MS 676-06 (AP-06-370)

FENCE DETAILS

W&K JOB NUMBER
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SHEET 3 OF 3

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PES Environmental, Inc.
Engineering & Environmental Services

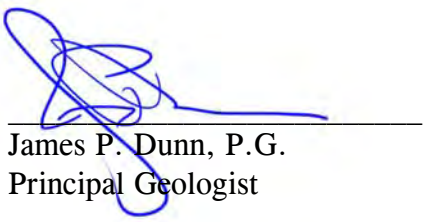
A Report Prepared for:

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DRAFT REMEDIAL ACTION PLAN AMENDMENT AND IMPLEMENTATION PLAN FORMER JOHNS MANVILLE SITE 420 EAST 3RD STREET PITTSBURG, CALIFORNIA

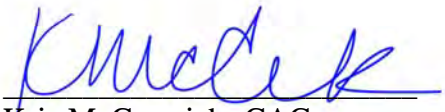
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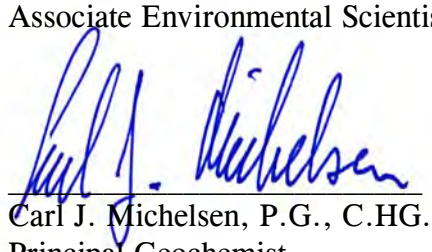


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1.0 INTRODUCTION AND STATEMENT OF PURPOSE

This draft Remedial Action Plan (RAP) Amendment and Implementation Plan was prepared by PES Environmental, Inc. (PES) for a portion of the property located at 420 East 3rd Street, in Pittsburg, California (referred to herein as the "Site", "subject property" or the "Plant Parcel", see Plate 1). The subject property is the location of the former Johns Manville (JM) Plant Site. The Plant Parcel consists of four identified areas (Areas A through D) with Areas A, B and C collectively known as the Residential Property and Area D identified as the Bermed Property. The Bermed Property is currently being used as an engineered containment cell for asbestos- and petroleum hydrocarbon-affected soil generated during remediation of other portions of the Plant Parcel.

This report will be submitted to the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) for review and approval prior to the proposed redevelopment activities of the Bermed Property by Third Street Pittsburg Campus Owner LLC (Owner) and Making Waves Foundation (Making Waves), a not-for-profit entity dedicated to development of private charter schools in disadvantaged areas in Northern California. The Owner and Making Waves seek to construct a school on the Site. In connection with this project, they propose to remediate the Bermed Property in a manner that will justify modification of a recorded land use covenant that prohibits use of the Bermed Property for a public or private school for persons under the age of 21, thereby enabling them to reclaim the Bermed Property for productive use.

Additional permitting and oversight of the proposed Berm Property remediation will be provided by the Bay Area Air Quality Management District (BAAQMD) and the City of Pittsburg.

The activities described in this document are generally consistent with the National Oil and Hazardous Substances Pollution Contingency Plan[1] (NCP), California Health and Safety Code section 25356.1, and Comprehensive Environmental Response Compensation and Liability Act (CERCLA) guidance documents with respect to the performance of remedial investigations and feasibility studies, remedial design and remedial action, and long-term operations and maintenance. Regulatory and technical guidance documents used in preparing this RAP Amendment included: *Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA* (United States Environmental Protection Agency [USEPA], 1988) and *A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents (USEPA, 1999)*.

1.1 Original RAP and Site Closure

The original RAP for the Site was prepared in June 2006 by ERM-West, Inc. (ERM, 2006a) on behalf of Pittsburg River Park, LLC (PRPLLC), prior owner of the Site. The RAP addressed four remedial options for the Site, and recommended selection of one of them,

[1] Title 40 Code of Federal Regulations, Part 300.

specifically, a remedy that featured excavation of asbestos- and petroleum impacted soil from the Plant Parcel, offsite disposal of a portion of this material, and encapsulation of the remainder in the Bermed Property. That remedy, which is discussed in more detail herein, was implemented during the years 2006 through 2008.

In a letter dated November 16, 2009 (DTSC, 2009), DTSC certified completion of remedial action at the Site, subject to compliance with institutional controls set forth in the Covenant to Restrict Use of Property - Environmental Restriction (Covenant), which had already been recorded against the title to the Plant Parcel on October 7, 2009. DTSC concluded that the Plant Parcel, as remediated, and subject to adherence to the restrictions of the recorded Covenant, does not present an unacceptable threat to human safety or the environment.

The Covenant included the following activity/use limitations (AULs) applicable to the Bermed Property:

- The Bermed Property shall not be used for: (1) a residence, including mobile home or factory-built housing, constructed, or installed for use as residential human habitation; (2) a hospital for humans; (3) a public or private school for persons under 21 years of age; (4) a day care center for children; or (5) raising of food such as cattle or food crops;

- The following activities shall not be conducted on the Bermed Property: (1) drilling for water, oil or gas, or extraction of groundwater without written approval of DTSC; and (2) activities that may disturb the berms except as authorized pursuant to the Operations and Maintenance (OM) Agreement for the Bermed Property or as otherwise approved in writing by DTSC;

- The current property owner or occupant shall notify DTSC regarding any disturbance or damage to the lowest 6 inches of the cover soil of the berm. A DTSC-approved Soil Management Plan (SMP) and Health and Safety Plan (HSP) shall be prepared prior to any activities that will disturb the integrity of the berms on the Bermed Property. Any contaminated soil brought to the surface due to such activities shall be managed in accordance with all applicable provisions of state and federal law. Permission shall be gained from the DTSC prior to any removal of affected soils from the Bermed Property; and

- Reasonable access shall be provided to DTSC and the entity or person responsible for implementing the operations and maintenance activities on the Bermed Property Properties.

1.2 Summary of Circumstances Requiring RAP Amendment

Owner and Making Waves acquired the Site from PRPLLC on December 12, 2017. PES understands that the proposed Site use will include construction of a private charter school facility, and that Making Waves proposes to utilize the Bermed Property as part of the school

facility. As noted in Section 1.1 above, AULs associated with the Plant Site Covenant restrict the use of the Bermed Property for "a public or private school for persons under 21 years of age". This RAP Amendment re-evaluates applicable remedial alternatives originally presented in the RAP in light of current circumstances, including the plans of the current owner and Making Waves to use the Site for school purposes and their desire and intention to return the Bermed Property to productive use by incorporating it into the school facility.

2.0 BACKGROUND INFORMATION

2.1 Site History

The primary Johns-Manville manufacturing facility consisted of four buildings in the northern half of the Site, constructed between 1925 and 1928. Use of the Site prior to this time is unknown. Prior to the terminating manufacturing of asbestos-containing products in 1980, products manufactured at the Site included asbestos-cement products, asphalt roofing materials, and asbestos-containing pipe covering. After this time, commercial grade roofing materials were manufactured at the Site until Johns-Manville's operations were terminated in 2003.

2.2 Summary of Contamination Problem, Site Remediation Planning and Mitigation

2.2.1 Contamination Problem Identification

Numerous environmental investigations, which commenced in 1986, evaluated soil and groundwater conditions across the entire Site. These investigations included soil sampling at more than 100 locations. The findings of the investigations and available historical records identified areas on the Residential Property where elevated concentrations of asbestos-containing material (ACM) and medium- to heavy-fraction total petroleum hydrocarbons (TPH) were present.

2.2.2 Original Remedial Planning Document Preparation

The RAP presented: (1) background site information, (2) findings from historical site investigations, (3) information regarding potential human health and environmental effects from exposure to the chemical constituents identified in soil and groundwater at the Site and establishment of cleanup goals, (4) Remedial Action Objectives (RAOs), and (5) remedial alternative evaluation and selection of a preferred remedy.

While clean up goals were established in the RAP for an extensive list of chemical constituents (see Table 9 of ERM, 2006a), the following cleanup goals pertain to the asbestos- and TPH-affected soils that were present at the Residential Property:

Compound	Cleanup Goal
TPHd	500 mg/kg
TPHmo	500 mg/kg
Asbestos	<0.25%[2]

Selection of the preferred remedial alternative was based on an evaluation of potential remedial alternatives that included the following:

- Alternative #1: No Action;
- Alternative #2: Fill Excavation and Off-Site Disposal;
- Alternative #3: Fill Consolidation on North Parcel; and
- Alternative #4: On-Site Consolidation in Eastern Boundary Berm.

RAOs were identified for the RAP based on single- and multi-family residential use of the Residential Property portion of the Site. For soils, these RAOs included:

- Prevention of exposure (i.e., via incidental ingestion, dermal contact, inhalation of fugitive dust, and inhalation of volatile emissions) to soils impacted with TPH or Site-related chemicals at concentrations in excess of the cleanup goals established for the Site;
- Ensuring that asbestos is not present at detectable levels (>0.25%) in any portions of the Plant Site where residences would be constructed; and
- Prevention of migration of constituents in soil that would result in ground water contamination in excess of California Maximum Contaminant Levels or other applicable water quality standards.

The remedial alternative selected and implemented for the mitigation of the asbestos- and TPH-affected affected soil was to excavate and encapsulate the affected soil in an engineered containment trench and berm constructed at the Bermed Property.

For groundwater, the selected remedy presented in the RAP was Natural Attenuation and Deed Restriction. This alternative consists of natural subsurface concentration reduction processes and establishment of a deed restriction prohibiting the use of groundwater for purposes other than site remediation or construction dewatering. Because this selected remedy will not be affected by the proposed change in land use, it is not addressed in this RAP Amendment.

[2] Equivalent to laboratory reporting limit for Polarized Light Microscopy (EPA Test Method 600/R-93/166) with 400-point count and CARB 435 Prep (Milling).

A Remedial Design and Implementation Plan (RDIP) for the selected remedial alternative for soils was prepared in August 2006 by ERM (ERM, 2006b). The RDIP provided specific details regarding: (1) the locations of anticipated excavations of asbestos- and TPH-affected soil; (2) confirmation soil sample collection frequency and analytical protocols, (3) detailed construction plans for the containment berm; (4) air monitoring requirements, and (5) provisions for construction dewatering and storm water management. This RDIP was approved by DTSC in August 2006.

Due to a change in field conditions and a significant increase in volume of asbestos- and TPH-affected soil encountered during remediation relative to pre-construction volume estimates, an addendum to the RDIP was prepared by LFR, Inc. (LFR) in August 2007. While the majority of field activities continued to be guided by the original RDIP, the RDIP Addendum included: (1) modification of the containment area design to accommodate additional volumes of affected soil, (2) modification to excavation parameters within the Residential Property to exclude soil removal activities below the water table, (3) scope and procedures for collection of additional verification samples in the former evaporation pond, and (4) scope and procedures for completion of a post-remediation soil vapor survey. The RDIP Addendum was approved by the DTSC in November 2007. (DTSC, 2007)

As part of the selected remedy, an Operations and Maintenance Plan (OM Plan) was prepared by LFR for the Site. The OM Plan provides: (1) a general site overview and history, (2) physical features of the landscaped containment berm, (3) routine and non-routine monitoring and maintenance procedures and related schedules, and (4) general restrictions for the containment berm (LFR, 2008). The OM Plan was reviewed and approved by the DTSC on October 9, 2008 (DTSC, 2008a).

Electronic copies of the remediation planning documents cited above are available on the DTSC EnviroStor website https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=07390022.

2.2.3 Site Mitigation Activities

Remedial activities commenced in mid-2006 in accordance with the approved RDIP but, as noted above, were stopped by December 2006 when PRPLLC encountered significantly greater-than-expected volumes of both TPH and asbestos-affected soil to be encapsulated on-site, and the insufficiency of the containment cell, as originally designed, to accommodate the higher volume. After permission was granted to increase the size of the containment cell, per the RDIP Addendum, remediation activities were recommenced in November 2017 and were completed in February 2008.

In total, approximately 71,000 cubic yards of ACM-affected soil and 22,000 cubic yards of TPH-affected soil were excavated from and temporarily stockpiled on the Residential Property. Approximately 10,500 cubic yards of the stockpiled ACM-affected soil and 18,000 cubic yards of the stockpiled TPH-affected soil were transported off-site for disposal at an approved

landfill facility. The remaining stockpiled soil (60,600 cubic yard of ACM-affected soil and 4,000 cubic yards of TPH-affected soil) was placed in the engineered containment berm on the Bermed Property. Verification soil sample results in the ACM-affected and TPH-affected soil areas on the Residential Property were found to meet the RAOs for the project. Following excavation activities and confirmation sampling, the excavations were backfilled at the direction of a geotechnical engineering firm.

The berm was constructed by excavating a trench within the Bermed Property to approximately 10 feet below ground surface (bgs). As shown on Plate 2, the berm is divided into north and south sections with an area of separation between them to allow for access to the Site directly from Harbor Street. The asbestos-containing soil was placed in the below grade portions of the berms until they were filled, and was then mounded to create the berms. The TPH-affected soil was placed on top of and combined with ACM-affected soil that had been placed above grade; as a result, TPH-affected soil is not present in the below-grade portion of the berm sections. After placement of the asbestos- and TPH-affected soil, the placed materials were covered with a "Tensar Product" geotextile fabric and approximately 2 feet of clean cover soil. Perimeter fencing was placed around each berm section to prevent public access. Also, drainage swales were incorporated into the berm design adjacent to the toes of the berm to allow for drainage control away from the berms and towards on-site storm water catch basins. A sprinkler system was installed on the berms to support growth of vegetation. Berm construction details are shown on Plate 3.

To document the implementation of site mitigation activities, LFR prepared a remedial action completion report, which was submitted to DTSC in October 2008. Following review of that report, DTSC concluded that the remedial actions were completed in accordance with the approved RAP, RDIP and RDIP Addendum and that no further action was necessary to address the hazardous substances and pollutant releases to soil or groundwater at the Site (DTSC, 2008b).

DTSC certified the completion of the remedial action at the Site and at the North Parcel, subject to ongoing operations, maintenance, and monitoring activities, on November 12, 2009 (DTSC, 2009c). DTSC also indicated that the site will be deleted from the "active" site list.

2.2.4 Operations and Maintenance Activities

Since 2008, inspections of the berms have been performed on a semi-annual basis in accordance with the Operation and Maintenance Plan for the Engineered Containment Berm Final Operations and Maintenance Plan (LFR, 2008). As indicated in the most recent Arcadis Revised Five-Year Review Report (Arcadis, 2016), "no significant damage or issues have been identified at the berm parcel". The most frequently-recurring maintenance issues have been associated with repairing burrows created by rodents. According to the report, the rodents are burrowing into the upper 2-foot thick cover of imported fill. The Tensar material has not been observed in the rodent burrows or burrow spoil piles, indicating that rodent burrows have not extended into the encapsulated contaminated material. In 2013, a Rodent Mitigation Plan

(Arcadis, 2013a) was prepared for the Berm Property to curb the number of burrowing rodents through the use of bait stations and a Passive Exhaust Rodent Control method for extermination of gophers and any remaining ground squirrels. A copy of the Rodent Mitigation Plan can be obtained on the EnviroStor website https://www.envirostor.dtsc.ca.-gov/public/profile_report?global_id=07390022.

3.0 BASIS FOR RAP AMENDMENT

Although the remedial action conducted from 2007-2008 met RAOs as defined in the original RAP, and was successfully implemented in accordance with its revised design, the action necessarily entailed the sacrifice of approximately 3.2 acres of land to a non-productive use (i.e., storage of hazardous materials). Making Waves Foundation (Making Waves), which controls the new owner of the Site, is actively pursuing the development of the Site with new public charter elementary, middle, and high school buildings and related facilities, in order to provide quality educational options to traditionally underserved families in Pittsburg and surrounding areas. Making Waves has determined that the permanent use of a significant portion of school property for entombment of contaminated soils is inconsistent with these educational objectives and underutilizes scarce real property resources that can be put to more productive use as part of the school facilities. The current use of the Bermed Property is, moreover, inconsistent with prevailing land use patterns in this rapidly developing area of the City of Pittsburg.

As a result of these developments, Making Waves has recommended, and DTSC concurs, that the RAO's pertaining to soils, previously applicable only to soils in the Residential Property, should be applied, if technically and financially feasible, on a Site-wide basis. The soils encapsulated in the Berm Property do not meet these RAO's, necessitating this RAP Amendment.

4.0 DESCRIPTION OF PROPOSED REMEDY

4.1 Summary

The proposed remedy entails excavation of contaminated soil encapsulated at the Bermed Property, loading of the excavated material into trucks, and transportation and disposal of the material at appropriate off-Site disposal locations in accordance with applicable federal and state laws. The end result of completion of this remedial action will be similar to the results that would have been obtained under Alternative #2 in the original RAP (Fill Excavation and Off-Site Disposal), and many of the elements of the proposed remedy are similar to the elements of that Alternative #2. Differences between the proposed remedy and Alternative #2 relate primarily to the fact that the contaminated material to be removed from the Site has been consolidated at the Bermed Property.

In summary, the proposed remedy includes three components: (1) Pre-excavation activities; (2) excavation, soil containerization, and backfilling; and (3) containerized soil staging and off-site disposal. As currently configured and subject to the receipt of governmental agency approvals necessary to carry out the proposed redevelopment project for the site, soils from the engineered containment berm will be excavated and containerized for off-site shipment and disposal. A number of activities will be conducted in preparation for excavation and soil containerization, including: (1) abatement/remediation contractor selection; (2) permitting; and (3) health and safety documentation preparation.

The initial phase of excavation will consist of grubbing of the berm to remove existing vegetation and removal and stockpiling of the majority of clean soil overlying the encapsulated contaminated material atop the berms, following agency-approved protocols to manage and monitor construction and asbestos-containing dust. After the overburden soil is removed, the asbestos- and hydrocarbon-containing soil present in the berm area will be excavated and placed in high-sided open top trucks lined with polyethylene sheeting, or suitable equivalent. After filling each truckbed, the polyethylene liner will be folded over the top of the soil to completely encapsulate the soil. The trucks will transport the soil along prescribed haul routes to an off-site Class II asbestos-permitted landfill for disposal. Excavation of the affected soil will continue until undisturbed native soils are reached horizontally and vertically within the former soil containment trench. While no marker bed (signaling the bottom or sides of the former excavation) is believed to be present, care will be taken to avoid excavating native underlying soil. After removal of the asbestos- and petroleum hydrocarbon-affected soil, verification testing will be conducted to confirm that removal actions were successful. Upon such confirmation, the trench excavation will be backfilled with the stockpiled clean berm cover soil and import materials.

The Site as a whole, which is currently vacant, will provide ample space for operation of excavation equipment and for staging of trucks for preparation, loading and decontamination/dust control. The excavation and loading area will be shielded from winds that could distribute dust, and from public view. An estimated 5,500 truck round trips will be required for hauling and disposal of the contaminated material. An estimated 4,583 truck round trips will be required for import of clean fill material to complete the backfill of the emptied trenches. It is reasonably estimated, however, that 25% of the truck trips for hauling contaminated soil for disposal offsite can likely be combined with truck trips hauling import fill to the site, so that the berm removal and backfilling is likely to require total truck round trips in the approximate range of 8,705 trips.

Details of the proposed remediation are provided in Section 8.0 hereof (Remedial Plan Implementation). These details inform the Evaluation of Alternatives discussed in Section 5.0.

4.2 Treatment, containment, and storage components

Neither the original selected remedial action, nor any other feasible alternative considered in the original RAP, nor the proposed remedial action, includes treatment of contaminated soil.

The only demonstrated treatment technologies for asbestos-contaminated soil involve thermal destruction, which if conducted on-Site would be excessively expensive and inappropriate for a neighborhood with nearby residences, and would cause unacceptable delays in commencement of school construction. Additional discussion of treatment of asbestos-contained soil can be found in Section 5.0.

The proposed remedial action would eliminate on-site containment as part of the remedy, and would shift storage of contaminated soil to Class II landfills qualified to accept such wastes.

4.3 Institutional Control components

Upon implementation of the proposed remedial action, institutional controls in the recorded Covenant that restrict use and activities in the Bermed Property would be eliminated through recordation of an amended Covenant.

4.4 Key Applicable or Relevant and Appropriate Requirements

The NCP requires that the selected remedial action comply with ARARs (USEPA, 1990, 2003). The NCP defines applicable requirements as a promulgated federal or state standard that specifically addresses a hazardous constituent, remedial action, location, or other circumstance. The NCP defines a relevant and appropriate requirement as a promulgated federal or state requirement that addresses problems or situations sufficiently similar to those encountered, even though the requirement is not legally applicable.

A requirement may be relevant but not appropriate, given site-specific circumstances; such a requirement would not be an ARAR. If only part of a requirement is relevant and appropriate, then only that portion needs to be addressed. ARARs are categorized as chemical-, action-, or location-specific. Chemical-specific ARARs are typically health- or risk-based values that establish the acceptable amount or concentration of a chemical that may be found in, or discharged to, the ambient environment, such as federal or state drinking water standards for specific chemicals. Action-specific requirements generally set performance, design, or other similar action specific controls related to the management of hazardous substances. An example of an action-specific ARAR is the National Pollutant Discharge Elimination System (NPDES) requirements, which regulate the discharge of pollutants to surface water. Location specific requirements address restrictions on the nature of activities or the concentrations of hazardous substances solely because they occur in a particular location. Examples of location-specific ARARs include possible requirements associated with remedial activities in areas designated as wetlands, flood plains, or historic sites.

In addition to ARARs, which are regulatory requirements, non-promulgated advisories, or guidance, referred to as “to be considered” (TBC) criteria, have also been identified. TBCs are non-binding criteria, advisories, guidance, and proposed standards that might provide useful information or recommended procedures for developing standards that protect human health and the environment.

Key ARARs and TBCs compiled for the RAP and updated for this project using federal, state, and local statutes, regulations, and guidance are provided on Table 1.

4.5 Impact on RAOs for the Site

Implementation of the original selected remedial action in 2007-2008 resulted in achievement of RAOs in the Residential Property only. Implementation of the proposed remedial action would meet RAOs for the Site as a whole. Implementation of the proposed remedial action would not affect cleanup levels to be achieved in order to meet RAOs Site-wide, because cleanup levels met standards for residential land use, which are equally and sufficiently protective for use of the Site for schools for persons under the age of 21 years.

4.6 Changes in Expected Outcomes

The outcome of implementation of the original remedial action was achievement of RAOs in the Residential Property coupled with long term restrictions on use of and activities on the Bermed Property, and requirements for long term operations, maintenance, and monitoring of the Bermed Property under DTSC oversight.

The outcome of implementation of the proposed remedial action will be achievement of RAOs across the entire Site, including the Bermed Property, elimination of use and activity restrictions affecting the Bermed Property, and elimination of requirements for operations, maintenance, and monitoring of the Bermed Property.

5.0 EVALUATION OF ALTERNATIVES

This section evaluates two remedial action alternatives: No Action, and Berm Property Excavation and Offsite Disposal.

- No Action.: This alternative would leave the engineered containment berm in place, and continue the existing inspection, operations and maintenance program and institutional controls applicable to this remedy; and

- Berm Property Excavation with Off-Site Disposal: Under this alternative, asbestos-and TPH-affected soil/fill materials consolidated within the engineered containment berm would be excavated and transported off site for disposal at an approved landfill(s). Based on the quantities detailed in the RDIP Completion Report (LFR, 2008), it is estimated that approximately 64,600 cubic yards of excavated soil/fill materials would be removed from the site. Confirmation samples would be collected to ensure that removal activities are adequate. Sampling would also be conducted of the portions of the Residential Property used for remediation staging (i.e., the Regulated Area; see Section 7.3.1) to confirm handling of contaminated soil does not result in re-contamination of the Residential Property. Excavation, loading, and transporting of soil/fill materials impacted with ACM and petroleum hydrocarbons would be performed

by state-certified contractors and in compliance with regulations to prevent offsite migration of ACM during construction. This alternative also includes revising the Covenant to remove land use restrictions applicable to the Bermed Property, and termination of the Operations and Maintenance Agreement applicable to the Bermed Property. Restrictions in the Covenant applicable to excavation within the Soil Management Area of the Site, and the Operations and Maintenance Agreement applicable to the North Parcel, would be unaffected.

The No Action alternative is, in essence, the same as Alternative 4 in the original RAP. The Berm Excavation and Offsite Disposal alternative is similar to Alternative 2 in the original RAP, the principal difference being that soils to be excavated and removed (i.e., soils containing contaminants exceeding cleanup levels) are no longer distributed throughout the Site at the locations of their original release, and instead have been consolidated in the Bermed Property.

The other alternatives considered in the original RAP are not evaluated in this Amended RAP. Alternative 1 in the original RAP – "no action" based on conditions as they existed when the original RAP was prepared – was mooted by implementation of Alternative 4. Alternative 3 in the original RAP, "Fill Consolidation on North Parcel," would, like Berm Excavation and Offsite Disposal, achieve RAOs for the entire Site, but is deemed to be infeasible in light of the volume of contaminated material to be excavated from the Berm Property. The North Parcel, located at East Third and Harbor Streets in Pittsburg, is about 4.2 acres in size and is currently vacant, with a site-wide engineered soil cap covering buried asbestos wastes approximately 2 feet in maximum depth over a surface area of about 159,000 square feet. In 2006, when the RAP was prepared and Alternative 3 was evaluated, it was estimated that a total of 42,000 cubic yards (63,000 tons) of contaminated material would be transported from the Plant Site to the North Parcel for disposal on top of the existing buried asbestos wastes already there. Implementation of a project of this magnitude would have raised the elevation of the North Parcel by approximately 7 feet, a consequence not specifically discussed in the RAP but one that was evidently deemed acceptable. During implementation of the selected remedy, however, the volume of contaminated soil at the Plant Parcel was discovered to be significantly higher than estimated, and, as a result, the total volume of contaminated material encapsulated at the Bermed Property is estimated to be approximately 64,600 cubic yards (110,000 tons). Placement of this material at the North Parcel would raise the elevation at that parcel by about 11 feet, a consequence that on its face renders this alternative no longer feasible.[3]

No other alternatives that would meet the RAOs for the entire Site were identified. Specifically, no feasible alternatives that entailed the treatment of encapsulated wastes were identified. PES completed a cursory review of a rarely used vitrification process where asbestos wastes are heated to temperatures in excess of 1000 degrees Celsius.

[3] Additionally, as explained in the original RAP, this alternative required the re-opening of a closed disposal site, a feature that would likely render it unacceptable to the community. Under the current circumstances, this alternative would require re-opening of two closed sites without the off-setting benefit of removing soils containing hazardous materials from the neighborhood altogether.

This process melts the asbestos fibers (along with the inert soil components) creating a non-hazardous glass material (Finucane, K.G. et al, 2008). While this process has been used effectively for relatively small quantities of asbestos-containing materials, the rate of treatment (~100 tons per day), the distance of transport to an existing facility, and the power consumption costs (~1-kilowatt hour per kilogram or $16 million for project estimated volume) makes this treatment option infeasible.

5.1 Remedy Evaluation Criteria

This re-evaluation includes a detailed analysis of the two alternatives with respect to the nine Federal evaluation criteria (inclusive of six California state criteria.). The alternatives were also assessed for their effectiveness in achieving RAOs.

The nine federal evaluation criteria as set forth in the NCP [Code of Federal Regulations, Part 300.430(e)(9)(iii)] are categorized into two threshold criteria, five balancing criteria, and two modifying criteria.

Threshold criteria are: (1) Overall protection of human health and the environment; and (2) Compliance with ARARs. Specifically, as discussed in the RAP, the threshold criteria are:

- Overall Protection of Human Health and the Environment: This criterion assesses whether an alternative provides adequate protection of human health, the environment, and the beneficial uses of ground water. It evaluates how site risks posed through each exposure pathway are eliminated, reduced, or controlled through treatment, engineering, or institutional controls. It also evaluates the degree to which the alternative satisfies RAOs; and

- Compliance with Applicable or Relevant and Appropriate Requirements: This evaluation criterion is used to determine whether each alternative will meet ARARs. Each alternative will be evaluated to determine compliance with chemical-specific, action-specific, and location-specific ARARs. Additionally, compliance with other applicable criteria, advisories, and guidelines (TBCs) will be considered;

The five balancing criteria are the primary component of the analysis and consist of the following: (1) Long-term effectiveness and permanence; (2) Reduction in toxicity, mobility, and volume (TMV) through treatment; (3) Short-term effectiveness; (4) Implementability; and (5) Cost.

- Long-Term Effectiveness and Permanence: The long-term effectiveness and permanence criterion evaluates the long-term reliability of the proposed equipment and process, and the permanence of the proposed alternative. This criterion evaluates the magnitude of residual risk posed by the presence of untreated waste or treatment residuals and the adequacy of institutional actions or containment measures needed to manage residual risk;

- Reduction of Toxicity, Mobility, or Volume through Treatment: This criterion addresses the statutory preference for selecting remedial actions that employ treatment to permanently reduce TMV. It evaluates the amount of hazardous substances that will be destroyed, treated, or recycled and the degree to which the treatment is irreversible. The residual compounds that will remain following treatment and the degree to which treatment reduces the inherent hazards posed by principal threats at the site are considered. This criterion favors alternatives that utilize treatment to the maximum extent possible and generate little or no residual wastes;

- Short-Term Effectiveness: The short-term effectiveness criterion measures the short-term risks to the community or remediation construction personnel that might occur during implementation of remediation. It also evaluates the time required to implement the proposed remediation. Finally, this criterion assesses the potential impact on the environment during remediation and the effectiveness of the proposed remedial measures;

- Implementability: The implementability criterion evaluates technical and administrative feasibility of an alternative, and the availability of services and materials needed to implement the alternative. Evaluation of technical feasibility includes an assessment of the reliability of technologies and ease of undertaking additional remedial action, if necessary. This criterion favors proven technologies that are widely available and simple to implement or construct and operate; and

- Cost: The cost criterion assesses the financial burden associated with implementing the alternative. The factors addressed include capital costs, both direct and indirect, and OM costs. Direct capital costs include construction costs or expenditures for labor, materials, equipment, and subcontractors associated with the remedial action. Indirect capital costs include expenditures for engineering, permitting, construction management, and other services necessary to carry out the remedial action. O&M costs include operational labor and maintenance materials associated with the extended O&M and reporting for each alternative. Costs are given in present value.

Finally, the two modifying criteria consist of: (1) State acceptance; and (2) Community acceptance. These criteria are explained as follows:

- State Acceptance: The State Acceptance criterion incorporates input from state agencies to modify the alternative selection process. This input can be obtained via formal comments received during the project comment period; and

- Community Acceptance: This criterion addresses input from the local citizenry and can be obtained through formal comments received during the public comment period on the draft plan and through other means.

5.2 Re-evaluation and Comparison of Original and New Proposed Remedies

In the following sections, the No-Action Alternative (Section 5.2) and the Bermed Property Excavation and Offsite Disposal Alternative (Section 5.3) are compared and evaluated with respect to the remedy evaluation criteria summarized in Section 5.1, including their efficacy in achieving RAOs.

5.2.1 Overall Protection of Human Health and the Environment

The No-Action Alternative provides high overall protection of human health and environment. Under this alternative, asbestos- and TPH-affected soil and fill materials that posed a potential threat to human health or the environment were removed from the Residential Property. Excess impacted materials were transported to and disposed of at an appropriate off-site landfill. Asbestos- and TPH-affected soil have been consolidated in two containment berms along the eastern boundary. Clean fill has been placed on top of the contaminated soil, preventing exposure and the berms are routinely inspected and maintained. Vegetation has been planted on the berms to reduce ground water infiltration to the affected soil. Chemical constituents in the encapsulated soil (asbestos and TPH in the diesel and motor oil ranges) are generally not mobile, therefore the threat of migration of constituents to groundwater is minimal. A covenant recorded against the title to Site limits future use of the land and groundwater at the Bermed Property.

Because the owner's objective for the Site is development of the entire Site for school purposes and because soils with asbestos and TPH concentrations above the Residential Property cleanup goals would remain on the Bermed Property, the No-Action Alternative does not meet RAOs for the Site.

5.2.2 Compliance with ARARs

This alternative meets ARARs identified for the project.

5.2.3 Long-Term Effectiveness and Permanence

Residual risks to human health were reduced by capping the consolidation area with clean fill. The residual risks to ground water are considered low because the chemical constituents in soil are generally not mobile. Additionally, vegetation has been placed on the berm to limit infiltration of precipitation. Excavation and consolidation effectively removed the contaminated soil from unrestricted areas and thus permanently reduced the possibility of human exposure to the materials in those areas. However, this remedy is not as effective in the long term at the Bermed Property as it is in the Residential Property, where the risk of human exposure and groundwater contamination has been effectively eliminated, whereas the reduction in risk of human exposure and groundwater contamination under this remedy can be sustained only through implementation of operations and maintenance requirements, under regulatory oversight, that must remain in place indefinitely.

Nor can this remedy be considered permanent, because land use restrictions applicable to the Bermed Property may become inconsistent with development patterns in the area and/or landowner requirements for productive use of the Bermed Property.

5.2.4 Reduction of Toxicity, Mobility, or Volume through Treatment

This alternative does not reduce the toxicity, mobility, or volume of chemicals in on-site soil through treatment. To the extent contaminated soils were consolidated in the eastern boundary berm, implementation of this alternative did not reduce the volume of contaminants at the Site; rather, it merely reduced the volume of contaminants at the Residential Property while increasing the volume in the Bermed Property. The toxicity and volume of contaminants site-wide were not reduced, but the engineered features of the berm do reduce the mobility of contaminants.

5.2.5 Short-Term Effectiveness

This remedy has been implemented, and an on-going O&M program is being implemented as well. Risks associated with the effectiveness of this remedy in the near term are considered to be low.

5.2.6 Implementability

This remedy was implementable during excavation and berm construction, and the O&M obligations in the DTSC-approved O&M Plan remain implementable, but only so long as the land use restrictions relating to the Bermed Property remain in effect. In the absence of such restrictions, this remedy is no longer implementable, as there is no basis for postulating that the current use of the Bermed Property for storage of hazardous materials could continue in the absence of use restrictions.

5.2.7 Cost

The costs of continued application of this remedy include on-going operations and maintenance costs, which are estimated to be $698,000 over 30 years (although a 30-year period is used for cost estimating purposes, the O&M obligation would go on indefinitely). This estimate does not include costs of DTSC oversight, and it assumes that significant repair of the berms will not be required over the life of the containment cell.

The costs of continued application of this remedy also include the opportunity costs associated with the permanent unavailability of the Bermed Property for productive use due to use restrictions set forth in the Covenant.

5.2.8 State and Community Acceptance

This alternative is believed to be currently acceptable to the State and local community. However, community acceptance may erode if a school were to be constructed on the Residential Property with the containment berm still present on the adjacent Bermed Property.

5.3 Bermed Property Excavation and Off-Site Disposal

A detailed analysis of the Bermed Property Excavation and Off-Site Disposal alternative against the nine federal evaluation criteria is presented below.

5.3.1 Overall Protection of Human Health and the Environment

This alternative provides the highest degree of overall protection of human health and environment. Under this alternative, affected soil would be removed from the Bermed Property and properly disposed of offsite. As such, affected soil with constituents exceeding health-based levels could no longer would pose a potential threat to human health, and the risk of migration of constituents to groundwater from encapsulated berm material would be eliminated.

This alternative meets RAOs for the Site as a whole.

5.3.2 Compliance with ARARs

This alternative meets ARARs identified for the project. Because the existing land use covenant would be modified as part of this alternative to eliminate use restrictions on the Berm Property and to be consistent with that provided for the Residential Property, the ARAR[4] governing land use covenants would be met. Compliance with local regulations, such as those for permitting, zoning, and transport would also be required.

5.3.3 Long-Term Effectiveness and Permanence

This alternative would be highly effective over the long term. The removal and off-site disposal of contaminated soil at the site would meet the RAO by eliminating the source of contamination and potential pathways. Residual risks associated with the asbestos- and TPH-affected soil would be permanently eliminated by removing the source. Excavation and disposal are proven and reliable technologies that would effectively remove the contaminated soil and thus permanently reduce the possibility of human exposure to the materials. No long-term management (operations and maintenance) would be needed, and DTSC oversight of Berm Property operations and maintenance would be terminated.

[4] Civil Code Section 1471(c), Health and Safety Code Section 25355.5 and 22 CFR 67391.1

Removal of the asbestos- and TPH-affected soil would eliminate the need for land use restrictions on the Bermed Property. While AULs related to groundwater for the Plant Parcel would still remain in force, these are not considered a hindrance to the proposed future use of the Site as a school facility.

5.3.4 Reduction of Toxicity, Mobility, or Volume through Treatment

As with the No-Action alternative, this remedy does not entail treatment of chemicals. However, the toxicity, mobility, and volume of chemicals on the Bermed Property would be eliminated through removal and disposal at an approved landfill. The mobility of chemicals in the impacted soils would be reduced through re-emplacement of those soils at a facility designed and professionally operated to contain them.

5.3.5 Short-Term Effectiveness

Potential short-term risks associated with this alternative include generation of airborne contaminants from the excavation, including dust and asbestos fibers. Reduction of these risks would be achieved through implementation of dust mitigation procedures, utilization when and where appropriate of personal protective equipment by on-site workers, and perimeter air monitoring. There are also risks associated with transportation of contaminated materials to landfill(s) and physical hazards from the construction equipment, but these risks can be minimized by compliance with applicable regulations regarding transportation of hazardous materials and maintenance of construction workplace safety.

5.3.6 Implementability

This alternative is highly implementable. Soil removal uses standard construction methods and the necessary labor, materials, and equipment are readily available. This alternative is also implementable in the context of the future site development plans, in that it accomplishes the removal of contaminants from the Bermed Property and eliminates the need for the associated AULs and O&M requirements discussed above.

5.3.7 Cost

The estimated cost of implementing this alternative is $13,500,000 (see Table 2). This estimate assumes that approximately 100 trucks per day will be loaded and moved off-Site, and that truckloads will average 20 tons per load. This cost also assumes that suitable import material will be readily available for backfilling at the Site when it is needed. Cost savings may be realized through a volume discount for landfill tipping fees.

5.3.8 State and Community Acceptance

This alternative would likely be acceptable to the State and local community because it addresses Site impacts through permanent removal of contaminated soil from the site and surrounding neighborhood. Transportation of impacted soil and fill materials to the landfill and construction noise may raise concerns within the community. Final determination of community acceptance would depend on comments received during the public comment period.

5.4 Comparison of Alternatives and Identification of Preferred Alternative

Achievement of RAOs, an element of overall protection of human health and the environment, represents the most significant difference between the two considered alternatives. The Bermed Property Excavation and Offsite Disposal alternative achieves RAOs, as redefined for the Site, whereas the No Action alternative does not.

Both alternatives comply with ARARs.

The Bermed Property Excavation and Offsite Disposal alternative is superior to the No Action alternative with respect to Long Term Effectiveness and Permanence because it eliminates risks of human exposure and groundwater impacts by removing the source of hazardous substances from the Site altogether, and obviates the need for long term inspection, monitoring, operations, maintenance, reporting and regulatory oversight at the Bermed Property. The No Action alternative leaves the Bermed Property and the encapsulated hazardous substances in place permanently, and requires long term inspections, monitoring, operations, maintenance, reporting and regulatory oversight of an indefinite duration.

Neither alternative reduces TMV through treatment. The Bermed Property Excavation and Offsite Disposal alternative is somewhat superior to the No Action alternative in reducing the mobility of hazardous substances through disposal at a licensed landfill.

The No Action alternative is superior to the Bermed Property Excavation and Offsite Disposal alternative with respect to Short-Term Effectiveness because the former entails no physical activities at the Site other than continued performance of operations and maintenance of the Bermed Property, and its implementation gives rise to no new potential short-term risks to the community or the environment.

Both alternatives are implementable. The No Action alternative is easier to implement in the short term, whereas the Bermed Property Excavation and Offsite Disposal alternative is easier to implement in the long term.

The No Action alternative is significantly less costly than the Bermed Property Excavation and Offsite Disposal alternative with respect to remedial implementation costs, in that the costs of excavating hazardous materials from the Bermed Property and transporting and disposing of them offsite at a licensed landfill far exceed the discounted long-term costs of operations and

maintenance under the No Action alternative. The No Action alternative is significantly more costly than the Bermed Property Excavation and Offsite Disposal alternative with respect to capital costs, however, in that the No Action alternative entails the permanent capital costs of relegating the Bermed Property to an unproductive use, of diminishing the quality of school facilities to be constructed at the Site, and of diminishing the long-term value of the Site.

State and community acceptance is likely greater for the Bermed Property Excavation and Offsite Disposal alternative, notwithstanding the short-term effectiveness issues caused during implementation, because it permanently removes industrial environmental contaminants and both actual and perceived health and environmental risks from the community, and eliminates an aesthetic eyesore from the neighborhood.

Based on this evaluation and comparative analysis, the Bermed Property Excavation and Offsite Disposal alternative has been selected as the preferred remedy for the Site subject to approvals by the City of Pittsburg of the proposed school projects, including the design and construction of the proposed school facilities.

6.0 PUBLIC PARTICIPATION COMPLIANCE

6.1 Public Participation Procedures

Public participation activities will be completed as part of the RAP Amendment approval process. After submittal to DTSC for review, comment, and revision as appropriate, the draft RAP Amendment will be made available to the public for review and comment. Steps that will be taken as part of the public participation process will include the following:

- Publication of notice of availability and brief description of the proposed amended RAP in a major local newspaper of general circulation;
- Making the RAP Amendment and information supporting the decision to amend available for public comment;
- Providing at least a 30-calendar day period for submission of oral or written comments, which can be extended to 60 days if any member of the public makes a timely request for extension;
- Conducting a public meeting near the site during the public comment period; and
- Keeping a transcript of comments received at the public meeting.

The results of the public review process for the draft RAP Amendment will be included as a chapter in the final RAP Amendment document that responds to each significant comment, criticism, and any new relevant information submitted during the public comment period.

After the final RAP Amendment has been submitted for review and approved by the DTSC, a notice of availability of the final RAP Amendment will be published in a major local newspaper of general circulation. In addition, the RAP Amendment and supporting information will be placed in the administrative record and public information repository before beginning work on implementation of the amended RAP. Finally, a fact sheet will be distributed to the community and, if DTSC deems it necessary, a "public briefing" will be held before starting implementation of the RAP Amendment.

6.2 Response to Public Comments

<To be completed following public review of draft RAP Amendment as part of final RAP Amendment>

7.0 REMEDIAL PLAN

7.1 Summary

Remediation of the Bermed Property will be conducted in three components: (1) Pre-excavation activities; (2) excavation, soil containerization, and backfilling; and (3) containerized soil staging and off-site disposal. As currently configured and subject to the timely receipt of governmental agency approvals necessary to carry out the proposed redevelopment project for the site, soils from the engineered containment berm will be excavated and containerized for off-site shipment and disposal in the Spring of 2019 (estimated May 2019) and will continue through the 2019 construction season until all of the asbestos- and hydrocarbon-containing soils currently encapsulated in the containment berm are removed (estimated August 2019). A number of activities will be conducted in preparation for excavation and soil containerization, including: (1) abatement/remediation contractor selection; (2) permitting; and (3) health and safety documentation preparation. Details of the pre-remediation activities are discussed in Section 7.2.1.

The selected remedial alternative for the Site will involve removal and off-site disposal of the asbestos- and TPH-affected soil currently residing in the engineered containment berm and underlying trench in the Bermed Property. The initial phase of excavation will consist of grubbing of the berm to remove existing vegetation and removal of the majority of clean overburden soil following agency-approved protocols to manage and monitor construction and asbestos-containing dust. After the overburden soil is removed, the asbestos- and hydrocarbon-containing soil present in the berm area will be excavated and placed in high-sided open top trucks lined with polyethylene sheeting, or suitable equivalent. Once the truck is full, the polyethylene liner will be folded over the top of the soil to completely encapsulate the soil. Once filled, the truck will transport the soil to an off-site Class II asbestos-permitted landfill for disposal. Excavation of the affected soil will continue until undisturbed native soils are reached horizontally and vertically within the former soil containment trench. While no marker bed (signaling the bottom of the original trench

excavation) is known to be present, care will be taken to avoid excavating native underlying soil by first surveying in the mapped lateral limits of the waste materials depicted on Plate 3 and then carefully excavating until the waste materials are encountered.

After removal of the asbestos- and petroleum hydrocarbon-affected soil, verification testing will be conducted to confirm that removal actions were successful. Once confirmed, the trench excavation will be backfilled with the stockpiled clean berm cover soil and import materials.

7.2 Remedial Plan Implementation

As noted above and subject to receipt of the government approvals needed to implement the overall redevelopment process, remediation will be accomplished in several phases. These phases are described in the following sections.

7.2.1 Pre-Remediation Activities

7.2.1.1 Contractor Selection and Submittals

Remedial contractors expected to be utilized during the course of the remediation include, but are not limited to, the following:

- Asbestos Abatement/Earthwork for Soil Excavations and Soil Management (e.g., stockpiling/on-site transport);
- Off-Site Waste Disposal (Regulated ACM [RACM]).
- Utility Location Services;
- Air Quality Monitoring and Industrial Hygiene Services;
- Geotechnical Engineering (to provide professional services regarding slope stability, backfilling specifications and procedures, and compaction testing);
- Traffic control;
- Construction Equipment and Supplies;
- Laboratory Chemical Analyses; and
- Over-Highway Waste Transportation.

Prospective contractors utilized in this project will be licensed in their field under applicable California and Federal regulations and will be required to submit a Statement of Qualification (SOQ) to Third Street Pittsburg Campus Owner LLC prior to submittal of work and cost proposals. The SOQ will include:

- Required applicable licenses;
- Examples of work product or experience in similar projects;
- Resumes of proposed primary participants for the abatement project; and
- OSHA Health and Safety Training documentation.

Where appropriate, and to facilitate procurement of cost-effective service providers, contracts for performance of remediation work will be awarded only after completion of a competitive bidding process. Although cost reduction will be a goal of the bidding process, only qualified bidders with a proven work record will be considered. In some cases, sole sourcing may be required based on the limited availability of specialized technical contractors.

The contractor selection process is anticipated to require approximately 8 weeks.

7.2.1.2 Permitting

The documentation needed for obtaining permits required to implement the remedial activities will be compiled. Approvals, permits, and licenses required by local, state, and federal agencies to complete the work will be obtained, and the work will be conducted in accordance with applicable federal, state, and local regulations. These include, but are not limited to:

- US EPA Regulation, 40 CFR Part 61, Subpart M;
- Bay Area Air Quality Management District Regulation 11, Rule 2;
- OSHA Regulations, 29 CFR Part 1926, Subparts C and D;
- OSHA Regulation 29 CFR 1910.1101, Health and Safety Regulations for Construction, Asbestos;
- Cal-OSHA Regulation 8 CCR Section 1529, Asbestos;
- US EPA Regulation 40 CFR Part 763 (the Asbestos Hazard Emergency Response Act [AHERA]);
- State of California, Business and Professions Code, Section 7028.1, 7058.5, 7058.6, 7058.7 and 7188.6, Contractor Certification to Engage in Asbestos-Related Work;
- State of California, Labor Code, Sections 6501.5, 6501.7 through 6502, 6503, 6503.5, 6505.5, Contractors Certificate of Registration for Asbestos-Related Work;
- State of California, Labor Code, Sections 60.5, 63087 and 6501.5, Notification to the Division of Occupational Safety and Health, Occupational and Carcinogen Control Unit, or Asbestos-Related Work;

- California Administrative Code, Title 22, Division 4, Chapter 30, Minimum Standards for Management of Hazardous and Extremely Hazardous Wastes;
- Department of Transportation 40 CFR Parts 171 and 172;
- National Fire Protection Association (NFPA) NFPA 30 Flammable and Combustible Liquids;
- Occupational Safety and Health Administration (OSHA), Title 29 Code of Federal (CFR) 1910.120. Regulations applicable to hazardous waste site operations (HAZWOPER);
- Health and Safety Code Division 20, Chapters 6.5 and 6.8;
- Title 8 California Code of Regulations (CCR) General Industry Safety Orders (GISO) 5192 Hazardous Materials Storage Ordinance, and Title 8 CCR 1532.1;
- Hazardous Waste Regulations, Title 22, CCR Sections 66261.2 and 66261.3;
- Construction Storm Water General Permit (2009-0009-DWQ);
- City of Pittsburg Grading and Construction Ordinances; and
- Construction Safety Order Subchapter 4 of Title 8, Division 1, Chapter 4 of the CCR regarding excavation safety.

Based on an archeological assessment (which included trenching at the Site) conducted in 2006 for the prior remedial efforts, no evidence of historic and/or prehistoric cultural deposits were found within the Site boundaries. It was clear from trenching that the site had been historically leveled for the construction of the Johns Manville Plant. No buried layers of topsoil were noted which could have served as a "living surface" for Native Americans. Trenching across the site did not identify midden deposits. The conclusions of the assessment indicated that construction activities related to earthmoving would have no effect on Native American cultural resources and that the possibility of discovery of buried deposits were so low that it was not recommended that archeological monitoring be conducted during trenching or grading operations (Holman & Associates, 2006). In addition, no cultural artifacts were identified during the prior remediation. In accordance with AB 52, the City of Pittsburg, as lead agency for the school development project of which the berm removal is a part, provided notice of the berm removal to representatives of tribes that may be traditionally and culturally affiliated with the subject geographic area and that had requested such notifications; the City of Pittsburg reported that it had received no requests for consultation in response to this notification. Based on these findings, on the fact that the project entails excavation of previously emplaced asbestos- and TPH-affected materials with safeguards for avoiding over-excavation of underlying soils, and on the City of Pittsburg's completion of the tribal notification and consultation process mandated by AB 52, additional tribal affairs consultation regarding this excavation project is not anticipated at this time.

The permit acquisition process is anticipated to require 26 weeks to complete. .

7.2.1.3 Worker Health & Safety Considerations

All work conducted under the Plan will be completed in accordance with all applicable worker health & safety regulations established by OSHA. Site work will involve a multitude of different activities, some occurring simultaneously, and will be performed by multiple parties. Compliance with worker health & safety regulations will be assured through the procedures set forth in this section.

7.2.1.3.1 Worker Safety Chain-of-Authority

Employee worker health and safety obligations will be the responsibility of each remediation/ abatement earthwork and engineering contractor (including subcontractors) retained for implementation of the Plan. Each contractor shall develop and implement its own worker safety program consistent with the nature of its on-site activities. In addition, an independent 3rd party may be retained to act as a Site-wide safety officer whose responsibility is to oversee implementation of remediation activities and confirm that minimum OSHA health and safety requirements are met. The Site safety officer will be given the authority to stop all remediation activities if he or she deems that an unsafe situation is present.

The Site safety officer would have the responsibility to perform the following functions:

- Review health and safety programs for all remediation earthwork and engineering contractors;
- Provide a minimum level of safety training for all Site visitors and service representatives who enter the Site during remediation on an infrequent basis;
- Oversee Site operations to confirm that no unsafe practices are being conducted; and
- Document and report, as necessary, all on-Site accidents.

7.2.1.3.2 Health & Safety Planning

A Hazardous Waste Operations and Emergency Response (HAZWOPER) Health and Safety Plan (HASP) will be prepared in accordance with applicable OSHA regulations for remedial activities at the Site. The HASP will provide information that addresses: (1) the health risks and hazards for each task to be conducted during implementation of the remedy; (2) employee training assignments to assure compliance with Title 8 of the California Code of Regulations; (3) personal protective equipment; (4) personnel monitoring; (5) control measures; and (6) decontamination procedures. An Emergency Response Plan will also be included in the HASP. The Emergency Response Plan addresses any reasonably foreseeable accident or upset conditions and outlines the procedures to be followed in the event of an emergency at the Site.

Emergencies that may occur at the Site can include, but are not limited to chemical spills, fires, explosions, and personal injuries.

Selected contractors, yet to be determined, will also be required to develop a HASP for their workers. The contractors' HASPs will be provided to the property owner or its representative, and to the Site Safety Officer, for review and concurrence at least four (4) weeks prior to commencement of that contractor's portion of the work implementing the remediation activities.

7.3 Asbestos-Containing Soil Excavation and Handling

7.3.1 Regulated Area Delineation and Preparation

Prior to the start of excavation activities, a designated work area in the eastern portion of the Site (the "Regulated Area") will be delineated around the containment berm using high fencing (up to 16 feet high) equipped with visual screens and plastic wind barriers (see Plate 4). The Regulated Area will have openings for trucks entering the zone for loading, for worker ingress and egress, for trucks exiting the decontamination area and manifest control station prior to leaving the Site.

Using the limits of the waste materials mapped on Plate 3, the lateral extent of the waste materials will be surveyed and flagged prior to excavation.

Once the Regulated Area has been established, the surface of the berm will be grubbed to removed existing vegetation. These grubbings will be stockpiled on the site (outside of the Regulated Area) for possible future re-use.

7.3.2 ACM- and Petroleum-Hydrocarbon-Affected Soil Removal

Soil excavation activities will commence at the southern extent of the Bermed Property and move north until the northern boundary of the engineered containment cell is reached. Soil excavation will be conducted using conventional earthmoving equipment (e.g., track- or tire-mounted excavator, front-end loaders). During excavation activities, an environmental professional with proper RACM management certifications will be present to observe exposed conditions and the excavated soil.

The Project will require excavations greater than 4 feet in depth. In order to maintain a safe working environment during excavation at depths greater than 4 feet deep, OSHA regulations (California Code of Regulations, Title 8, Sections 1539-1543) pertaining to excavations will be followed. Slope stabilization techniques (e.g. lay backs, benching, and temporary shoring) will be determined upon evaluation of site-specific conditions, and in association with the project geotechnical engineer.

Excavations are not expected to extend into the saturated zone (groundwater is approximately 13 feet below ground surface). However, if groundwater is encountered, special handling of the excavated soil and dewatering of the excavation will be implemented. Prior to placement in the lined bins, excavated water-saturated soils will be temporarily stockpiled within portions of the excavation above the saturated zone to allow for drainage of free water back into the excavation. Free water from the excavated soil will be retained within the limits of excavation and managed through excavation dewatering. Excess water generated during excavation dewatering, if necessary, will be contained in a portable tank(s) until characterization[5] of the water is completed. Based on the results of characterization, the excess water will either be used on-site for dust control during construction or discharged as appropriate either to the stormwater system or to the sanitary sewer. Although considered unlikely, on-site pre-treatment (i.e., filtering and/or activated carbon polishing) may be necessary, if required by applicable regulations or permit conditions.

To confirm that adequate asbestos- and TPH-affected soil removal has been achieved, verification soil samples will be collected from excavation bottom and sidewalls for laboratory analysis. Verification soil sampling location selection, frequency, procedures, and analyses are discussed in the VSAP (Appendix A). If the verification sample results indicate the soil cleanup levels has been attained (e.g. $<0.25\%$ for asbestos), no further excavation will be conducted, and the excavation will be backfilled as described below. If the verification sample results indicate that soil cleanup levels have not been attained, further excavation will be conducted, to the extent practicable.

As discussed in the VSAP, confirmation soil samples will also be collected from the Regulated Areas to confirm that remedial activities have not impacted the Plant parcel.

It is estimated that soil removal activities and excavation backfilling operations will require approximately 16 weeks to complete including contractor mobilization and set-up, remediation activities, backfilling operations, and contractor demobilization (see Section 7.10).

Because of development schedules and the need to overlap remediation and construction activities, areas of the Bermed Property from which contaminated material has been removed will be backfilled (see Section 7.3.4) as soon as verification and confirmation samples are received that indicate the excavation of contaminated soil is complete within such areas. Once backfilled, and with interim concurrence of the DTSC (see Section 7.8), the area of the Bermed Property at which Remediation has been completed will be removed from the Project to allow for site grading and/or soil improvement activities associated with the planned development. In addition, the boundary of the Regulated Area will be adjusted accordingly to remove the portion of the Regulated Area associated with the area of completed Remediation from the Remediation project.

[5] Characterization of excess water may include analyses for asbestos, TPH compounds and/or volatile organic compounds (VOCs).

7.3.3 Soil Packaging and On-Site Staging

Excavated soils will be segregated into similar waste streams. Anticipated waste soil streams include the following:

- Clean Overburden - Unsaturated (dry) berm cover soil must be excavated to access underlying contaminated unsaturated soil. It is estimated that approximately 11,000 tons of clean overburden soil will be removed and stockpiled for reuse; and

- Contaminated Soil Above Cleanup Levels – Unsaturated and water-saturated (if encountered) asbestos- and/or hydrocarbon-affected soil with contaminant concentrations above cleanup levels. It is estimated that approximately 110,000 tons of this material is present in the containment berm.

In general, the initial grading activities will consist of removing the clean overburden within 3 to 4 inches above the geotextile marker barrier that was originally placed to separate the clean overburden soil from the underlying contaminated fill. Care will be taken not to disturb the geotextile marker barrier so that the underlying contaminated soil remains undisturbed and is not introduced into the clean overburden soil. Once removed, the remaining overburden and underlying contaminated fill will be removed to the limits of the containment cell.

It is not known if a geotextile or other marker barrier is present at the base of the containment cell. In order to reduce the possibility of over-excavation of native soils underlying the containment cell, an assessment of visual cues (marker barrier, soil color or consistency differences, presence of debris, etc.) at the encapsulated fill/native soil interface will be made when the assumed base of excavation is encountered. These cues, if found, will be used to direct excavation at the interface. If such cues are not found, the encapsulated soil will be removed to a depth of 10 feet below grade and will be verified by sampling and analysis alone.

Clean Overburden

Clean overburden soil removed from the berm will be transported to the "Clean Soil" staging area (Clean Soil Storage Area on Plate 4) using 20-yard end dump trucks where it will be stockpiled in 200-cubic yard piles. These stockpiles will be constructed for short-term storage of the clean overburden soil and will not require special construction standards in excess of those prescribed in a site-specific storm water pollution prevention plan (SWPPP).

In accordance with the SWPPP, the stockpile will be considered active if soil is being received at least once within a 14-day period. Best management practices for an active stockpile (perimeter sediment barriers, covering or soil stabilization measures, etc.) will be implemented as required per the Project SWPPP. Once the stockpile becomes inactive, temporary vegetation via hydroseeding will be applied to the stockpile.

Once a stockpile has been created, a 4-part composite sample of the soil will be collected and tested for asbestos and medium- to heavy-fraction petroleum hydrocarbons to verify that

concentrations of contaminants in the soil are below residential cleanup levels. Upon confirmation, this overburden soil will be consolidated into a larger stockpile for storage pending backfilling operations. Details of the verification sampling procedures and analysis for the clean overburden soils are presented in the VSAP (Appendix A).

Contaminated Soil Above Cleanup Levels

Upon excavation, contaminated soils removed from the engineered containment cell will be placed in a minimum of 6-mil plastic lined high-sided 20-yard end dump truck in accordance with the following procedures:

- The empty trucks will enter the Site at the main ingress location and travel southward along the western property boundary to the Truck Prep Area. At this location, the bed of the truck will be lined with a minimum of 6-mil plastic sheeting or suitable equivalent such as pre-assembled zippered plastic bags. The prepared trucks will then move to Truck Staging Areas where they will await entrance to the Regulated Area for filling;

- Upon entering the Regulated Area, the prepared trucks will be positioned adjacent to the active excavation area so that soil can be direct loaded into the lined truck bed. Once each truck is filled with approximately 20 tons of asbestos- and TPH-containing soil, it will proceed to the Final Containment Area where plastic sheeting will be used to enclose the soil, the seams of the wrapped soil will be secured, the waste containment will be appropriately labeled, and a final bed tarp will be placed over the enclosed load; and

- Once secured, the trucks will proceed to the Decontamination Station to have the truck wheels cleaned prior to leaving the Regulated Area. A schematic of this operation is shown on Plate 4.

7.3.4 General Backfilling Procedures

Following completion of excavation activities and verification sidewall and bottom sampling in each of the excavation stages, backfilling of the excavation will proceed in accordance with the project geotechnical engineer's requirements.

While not expected, if excavations extend into the saturated zone, backfilling of the excavation may require the use of bridging material (consisting of imported granular fill) to an elevation at or slightly above the water table. Excavation areas above the water table will be backfilled with clean overburden soil and imported fill. Field density testing will be conducted by the project geotechnical engineer contractor in accordance with ANSI/ASTM 1557. If the field density tests indicate the tested soil does not meet specified requirements, the soil will be re-compacted and retested until the minimum requirements are met.

Based on the amount of soil removed from the Site and the expected quantity of clean overburden soil that will be available for use as backfill material, it is estimated that roughly 91,665 tons (~4,583 truckloads) of import soil will be required to backfill the berm excavation to ground surface elevation. This import soil is expected to be received from a variety of locations. To confirm acceptability, the import soil will be evaluated in accordance with the DTSC's *Information Advisory – Clean Imported Fill Material (DTSC, 2001)*

7.3.5 Decontamination and Dust Control

The work areas outside of the Regulated Area will be kept reasonably clean and free of excessive soil or debris. A water truck will be made available, as needed, to keep the loading area and haul roads wetted, as necessary, to reduce the potential for dust generation during loading and transportation activities. A street sweeper will be made available to keep the public surface streets clean. To further aid in controlling dust, a speed limit of 10 miles per hour shall be imposed on all construction vehicles while moving within the Site. Details of dust control procedures are presented in a Site-specific Asbestos Dust Mitigation Plan (Appendix B)

Prior to leaving the Regulated Area, soil residue on equipment and excavator tracks/tires and truck tires will be removed using a combination of wet and dry methods. A decontamination station and stabilized construction ingress/egress for off-haul trucks and demobilizing earthwork equipment will be constructed at the main entrance in the northwest corner of the Site (see Plate 3). The station will consist of a bermed bed of crushed aggregate rock equipped with a water collection sump. During dry conditions, soil residues will be removed by dry brushing. Soil that cannot be removed by this procedure will be removed from equipment by washing with high-pressure water. During wet conditions, high-pressure water washing will be used to remove material residues and mud from equipment and tires. The work areas will be kept clean and free of excessive soil or debris.

Decontamination fluids generated during truck cleaning will be stored at the site in either Department of Transportation (DOT)-approved 55-gallon drums or a poly tank, pending characterization. Based on characterization analytical results, the decontamination fluids will be filtered for on-site reuse or transported off-site for disposal.

7.4 Off-Site Disposal

The estimated volume of waste soil expected to be sent off-site is 64,600 cy (in place; equivalent to approximately 110,000 tons) using a conversion factor of 1.65 tons per cubic yard (in- place). Based on this quantity, it is estimated that approximately 5,500 truckloads of asbestos- and TPH- affected soil will be generated and hauled from the Site during the Project.

Waste characterized as RACM will likely be sent to one or more Class II asbestos disposal facilities based on daily capacity, lowest tipping fees, and associated transportation costs.

A waste profile will be prepared and submitted to the appropriate landfill(s) for acceptance. The proposed waste disposal facilities slated for this project include the Class II Recology Hay Road facility in Vacaville, California and/or the Class II Waste Management Altamont Landfill in Livermore, California. Both of these facilities are also licensed to accept TPH-contaminated soils excavated from the Bermed Property. These facilities were selected based on their close proximity to the Site and ability to accept wastes anticipated to be generated during the Project. If changes in the Project require that other waste disposal facilities be selected, procedures will be modified accordingly to meet the requirements of the new facilities.

7.4.1 Generator Information

A State of California or Federal generator identification number, as appropriate, will be obtained prior to off-site disposal of the soils.

7.4.2 Manifesting Procedures and Haul Truck Tracking

Impacted soil to be disposed of off-Site will be manifested and transported in accordance with applicable California and Federal waste manifesting and hazardous materials transportation procedures.

Copies of the signed manifests will be retained on-site by the Project Engineer until the completion of remediation activities. Signed manifests will be provided in the final remedial implementation report. In addition, a log will be maintained documenting off-site haul truck traffic. This log will include, at a minimum, the following:

- Trucking company name, driver name, and truck number;
- Uniform hazardous waste or non-hazardous waste manifest number;
- Type and weight of waste; and
- Date and time leaving Project site and landfill destination.

7.4.3 Waste Transportation and Haul Routes

Once the trucks are appropriately decontaminated, the trucks will proceed through security fencing onto East 3rd Street. If necessary, a flagman will be provided to ensure safe entrance from the subject property onto the public right-of-way. All wastes will be hauled to off-site disposal facilities via surface streets to the closest suitable freeway on-ramp, as shown on Plate 5. A description of the off-site truck routes from the project site to the major interstate freeway is as follows:

- Leaving the site, the trucks will turn right (to the east) and continue 100 feet to the intersection of the East 3rd Street and Harbor Street, turn right;

- Travel south on Harbor Street approximately ½-mile to the intersection with Pittsburg-Antioch Highway, turn left (to the east);

- Travel east, then south and then east on Pittsburg-Antioch Highway approximately 1 ½ miles to the intersection with Pittsburg-Antioch Highway and Loveridge Road, turn right (to the south);

- Travel south on Loveridge Road approximately ½-mile to California State Highway 4 eastbound on-ramp, turn left (to the east).

Once the trucks are on California State Highway 4, the exact truck route will depend on the location of the disposal facility that accepts the soil for disposal; haul routes from the site to the selected landfill sites will be determined once appropriate facilities have been identified. The anticipated truck routes to the Class II Hay Road facility and the Class II Altamont facility are also shown on Plate 5.

For trucks returning to the site, the following route shall be used:

- From westbound California State Highway 4, exit at Harbor Street/Railroad Avenue (Exit 23) and turn left on California Avenue;

- Proceed west 400 feet to the intersection of California Avenue and Harbor Street, turn right;

- Travel north approximately 1.2 miles to the intersection of Harbor Street and East 3rd Street, turn left;

- Travel 500 feet on East 3rd Street to main entrance to Site; turn left.

For trucks hauling clean fill to the Site for backfilling purposes, the local route near the Site is likely to be similar to the route described above, with the more distant portions of the routes dependent on the source of the fill, which is unknown at this time.

7.5 Contingency Soil Management Plan

Due to the history of industrial use at the site, there is a potential for isolated previously-unknown soil contamination to be identified during remediation and/or following implementation of the RAP during site development grading or other intrusive subsurface activities. To properly address these potential environmental concerns, PES has prepared a Contingency Soils Management Plan (SMP), attached as Appendix C to this RAP Amendment. The SMP provides step-by-step procedures for characterization, hazardous and non-hazardous materials handling, and timely regulatory agency notification in the event that previously unknown soil and/or groundwater contamination is identified.

7.6 Air Monitoring Program

Asbestos air monitoring will be conducted at the Site property perimeters and at potential onsite emission areas during all asbestos-containing soil disturbance activities. At a minimum, the air sampling will be performed under the direction and authority of a California Certified Asbestos Consultant (CAC). Asbestos air monitoring will be conducted following the procedures described in the Site-specific Asbestos Air Monitoring Plan (Appendix D).

7.7 Community Relations and Incident Response

In order to maintain a high level of community relations, signage will be posted on the perimeter of the subject project to provide contact information for the public to report visible dust or other concerns (such as odors or traffic interference) so that the fugitive dust or situation of concern can be promptly mitigated. The contact information will be for a "visible dust alert" hotline that is monitored by the responsible person (or designee) during construction hours and allows for voice messaging at all other times. Usage of the hotline will be tracked and reported in the weekly data transmittal. A log of callers will be maintained and available upon request.

Site-specific emergency response procedures will be developed and presented in the project-specific health and safety plan. This plan will be reviewed with all site personnel at the start of the project and weekly during the daily "tail-gate" safety meetings.

7.8 Interim and Final Implementation Reporting

A daily construction log will be maintained by the project environmental consultant documenting progress of the project, incidents, and related events.

On an interim basis (at approximately 25%, 50% and 75% remediation completion), an interim status report will be provided to the DTSC which includes project completion statistics (project percent complete, number of truck trips and tonnage of soil transported from the site) as well as the results of verification and clearance soil sampling and analysis. Based on this information, a request will be made to the DTSC for removal of the completed area(s) from the Project to allow for initiation at such areas of site preparation and construction activities for the planned development.

Following completion of all remediation activities, a final remedial action implementation report will be prepared and submitted to the DTSC for review and approval. The report will summarize the work that was performed, verification soil sample analytical results, and document that the cleanup levels have been achieved. Copies of laboratory reports, manifests, landfill weight tickets, and completed sample chain-of-custody forms will be included, and daily construction logs will be available for DTSC review.

7.9 Covenant Modification

Following DTSC's review and approval of the remedial action implementation report, the Covenant will be modified to eliminate provisions limiting use of and activities on the Bermed Property.

7.10 Tentative Project Timeline

The tentative project timeline for implementation of the RAP Amendment (subject to change, based on DTSC approval and completion of the public participation process) includes the significant milestones below. Some of these activities will be completed concurrently:

- Pre-Remediation Activities
  - Permit Acquisition — 26 weeks
  - Contractor Bidding and Selection — 8 weeks
  - Health and Safety Planning — 9 weeks
  - Waste Profiling and Landfill Acceptance — 17 weeks

- Remediation Activities
  - Contractor Mobilization and Set-Up — 2 weeks
  - Soil Removal and Excavation Backfill — 13 weeks
  - Waste Transport and Disposal — 13 weeks
  - Contractor Demobilization — 1 week
  - Remediation Completion Reporting — 8 weeks
  - Covenant Modification — 8 weeks

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TABLES

Table 1
List of Potential ARARs and TBCs
RAP Amendment and Implementation Plan
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California

Chemical-Specific ARAR	Agency	Reference	Description	Comment
California Air Quality Regulations – Asbestos Demolition, Renovation and Manufacturing	BAAQMD	Regulation 11, Rule 2	Provides a definition of regulated asbestos containing material (RACM)	RACM defined to be hazardous if it is friable (can be crumbled by hand pressure) and present at a level greater than 1 percent by weight.
Safe Drinking Water Act - Maximum Contaminant Levels (MCLs)	USEPA	40 CFR 141.11 - 141.16; 141.60 - 141.62	National Primary Drinking Water Standards - enforceable standards for specified contaminants in drinking water.	Relevant and appropriate for setting water quality objectives for ground water. Lists water quality criteria for chemicals where an MCL is not established.
National Emission Standard for Hazardous Air Pollutants	USEPA	40 CFR 61.141 - 61.157 Subpart M	National Emission Standard for Asbestos and associated guidance documents	Relevant and appropriate for setting the no visible emission standard for construction and demolition activities and provides a standard for management of inactive waste disposal sites.
Clean Air Act (CAA)	US Congress	2 U.S.C. § 7412	Identification of hazardous air pollutants	Relevant and appropriate for identification of asbestos as a hazardous air pollutant.
California Safe Drinking Water Act - Maximum Contaminant Levels (MCLs)	State Water Resources Control Board	22 CCR 64444; 64473	California drinking water standards; primary and secondary maximum contaminant levels for specified contaminants in drinking water.	Relevant and appropriate for setting water quality objectives for ground water, to the extent that state MCLs are more stringent than federal MCLs. Lists water quality criteria for chemicals where an MCL is not established.
Hazardous Waste Identification	USEPA/DTSC	0 CFR 261/ 22 CCR 66261	Sets standards for classification of hazardous wastes. Establishes constituent levels for characteristic wastes and lists of wastes considered to be hazardous wastes.	All wastes generated during site activities must be evaluated to determine if they are hazardous. Asbestos defined to be hazardous if present at a level greater than 1 percent by weight.
Hazardous Waste - Land Disposal Restrictions (LDR)	USEPA/DTSC	40 CFR 268 22 CCR 66268.114	Sets land disposal restriction constituent concentrations and treatment standards. Provides treatment standard for Asbestos-Containing Waste.	Hazardous wastes generated during site activities must meet LDR standards prior to land disposal. Provides detailed description of handling practice to asbestos containing waste.
SFBRWQCB Basin Plan	SFBRWQCB	RWQCB Water Quality Control Plan	Establishes water quality objectives, including narrative and numerical standards, that protect the beneficial uses and water quality objectives of surface and ground waters in the region.	Applicable portions of the Basin Plan include the beneficial uses of affected water bodies and water quality objectives to protect those uses. Any activity, including, but not limited to, the discharge of contaminated waters, must not result in actual water quality exceeding water quality objectives.
Safe Drinking Water and Toxics Enforcement Act (Proposition 65)	Health and Welfare Agency	22 CCR 12000 et. Seq	Warning requirement/prohibition of discharge of any chemical listed by the state as a carcinogen or reproductive hazard to water or land, where the chemical will probably pass through a source of drinking water	Lead and several VOCs and SVOCs are on the list of chemicals. Relevant and appropriate for discharges that may impact source of drinking water.
Toxic Substances Control Act - Asbestos Hazard Emergency Response	USEPA	15 U.S.C. § 2601 et. seq. Title 2	Provides regulations pertaining to handling and treatment of asbestos generated during building demolition and requirements for asbestos worker protection	Appropriate and relevant to soil excavation and transport activities that may be a significant part of the chosen remedial alternative.
Regional Screening Levels (RSLs)	USEPA	RSLTable - May 2018	Sets a screening level for potential industrial and residential uses for a variety of compounds.	May be used for general risk screening purposes or to set initial cleanup goals.
Proposed Corrective Action Rule (40 CFR 264 Subpart S) Action Levels	USEPA	55 FR 30798	Sets action levels for certain chemicals in soil, exceeding action levels may trigger requirements for additional investigation or remediation.	May be used in determining whether contamination poses potential threat to human health or the environment.
State "Notification Levels"	State Water Resources Control Board	SWRCB Division of Drinking Water	Notification Levels are based mainly on health threats.	Notification levels are health-based advisory levels established by the Division of Drinking Water for chemicals in drinking water that lack maximum contaminant levels (MCLs).

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Chemical-Specific ARAR	Agency	Reference	Description	Comment
Health Advisories and Water Quality Advisories	USEPA	USEPA Office of Water	Short- and long-term and life-time exposure health advisories for noncarcinogens and possible human carcinogens.	Incremental cancer risk estimates for known and probable human carcinogens are also included.
National Ambient Water Quality Criteria	USEPA/Clean Water Act	Quality Criteria for Water, 1986	Protects human health and welfare	
Water Quality for Agriculture	Food and Agriculture Organization of the United Nations	Water Quality for Agriculture, 1985	Contains criteria protective of agricultural uses of water.	
Water Quality Criteria	SWRCB, 1963 and 1978	Water Quality Criteria, McKee and Wolf, 1963 and 1978	Contains criteria for human health and welfare, agricultural use, and industrial use.	
Air Resources Act	CA Air Resources Board/Bay Area Quality Management District (BAAQMD)	Health & Safety Code, Div. 26, Sec. 39000 et seq.	Regulates both vehicular and non-vehicular sources of air contaminants in California. Defines relationship of California Air Resources Board and local or regional air pollution control districts. Establishes ambient air quality standards and permit procedures.	Applicable to air emission sources. The BAAQMD is the enforcement agency.
Air - Permits; exemptions	BAAQMD	Regulation 2 Rule 1	Specifies emissions units that are not required to obtain an Authority to Construct or a Permit to Operate.	Sources deemed by the air pollution control officer that emit any pollutants without the benefit of air pollution control devices and would not exceed 2 pounds in any 24-hour period are not required to obtain an authority to construct or permit to operate.
Air - New Source Review	BAAQMD	Regulation 2 Rule 2	Requires review of new stationary air pollution sources to prevent exceedances of ambient air quality standards. Requires Best Available Control Technology (BACT) for emissions in excess of 10 lbs/day for reactive organic compounds; 10 lbs/day for particulates; 3.3 lbs/day for lead; and 5.5 lbs/day for vinyl chloride.	Applicable to new sources of air emissions that are subject to Regulation 2 (General Permit Requirements) and that emit or may emit any affected pollutants.
Air – Particulate Matter and Visible Emissions	BAAQMD	Regulation 6	Sets limits for opacity of emissions (Number 1 on the Ringelmann chart) and permissible discharges of particulate matter.	Applicable to emissions of visible air contaminants. Associated with dust-producing actions. Applicable to any construction activities that result in emissions of dust.
Air – Odorous Substances	BAAQMD	Regulation 7	Prohibits discharge of air contaminants in quantities that cause injury, detriment, or nuisance.	Applicable to emissions of air contaminants that may cause injury, detriment, nuisance or annoyance to any considerable number of persons or the public, or that endanger the comfort, health, or safety of any such persons or the public, or that cause or have natural tendency to cause injury or damage to business or property.
Air – Hazardous Pollutants	BAAQMD	Regulation 11	Limits permissible emissions of dusts and condensed fumes based on process throughput rates.	Applicable to specific activities discharging in excess of specified emission rates – see Rule pertaining to specific pollutant.
Excavation Requirements - Asbestos	CalRecycle	14 CCR Division 7, Chapter 3.5	Provides requirements for excavation of asbestos containing materials	Applicable to excavation activities.

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Chemical-Specific ARAR	Agency	Reference	Description	Comment
OSHA Hazardous Waste Operations and Emergency Response	Cal/OSHA	29 CFR 1910.120/8 CCR 5192	Worker training and health and safety plan requirements for site cleanup operations.	Applicable to on-site workers engaged in site cleanup operations.
OSHA Excavation Standards	Cal/OSHA	29 CFR 1926/8 CCR 1540 and 341	Includes requirements for benching, sloping or shoring of excavations to prevent cave-ins; entry into any excavation deeper than 5 feet requires a permit.	Applicable to excavation activities.
OSHA Heavy Equipment Operation Standards	Cal/OSHA	29 CFR 1926/8 CCR 1590 and 3649	Requirements for safe operation of haulage, earthmoving, industrial trucks and tractors.	Applicable to activities involving the use of heavy equipment.
OSHA Head, Eye, Face, and Hearing Protection Standards	Cal/OSHA	29 CFR 1926 Subpart E/8 CCR 3381, 3382, 5162, and 5097.	Specific details regarding personal protective equipment and noise levels for hearing protection for workers.	Applicable to activities where employees may encounter hazards requiring the use of personal protective equipment or hearing protection.
OSHA Worker Protection Programs	Cal/OSHA	29 CFR 1910.1200/8 CCR 5194 and 3203	Written program requirements include hazard communication and an illness and injury prevention plan (IIPP)	Employees who may be exposed to hazardous substances must be informed of those hazards in accordance with hazard communication requirements. All employers must develop an IIPP for providing information on safe and healthy work practices.
Clean Water Act/Porter Cologne Water Quality Control Act - NPDES/Pretreatment Requirements	USEPA/RWQCB	40 CFR 122 and 403; California Water Code 13370.	Establishes permit and potential treatment requirements for any wastewater stream discharged to surface water. Standards may differ depending on whether water is discharged to a POTW or directly to the river under an NPDES permit.	Applicable to discharge of any wastewater stream generated as part of an alternative.
CA Hazardous Substance Account Act	DTSC	Health & Safety Code Sec. 26249.5 et seq.	State “Superfund” program; requires compliance with the RI/FS/RAP process.	Governs remediation at this site.
Hazardous Waste	DTSC	22 CCR 66260	Provides definitions of terms used in the hazardous waste regulations under Title 22 of the California Code of Regulations.	Applicable to activities generating wastes; wastes must be classified using generator knowledge or waste analysis.
Hazardous Waste Identification	DTSC	22 CCR 66261	Sets standards for classification of RCRA hazardous wastes and California hazardous wastes and requirements for recycling and reclamation of RCRA and California hazardous wastes.	Wastes generated during site activities (including residues from treatment operations) must be evaluated to determine if hazardous.
Hazardous Waste Generator Standards	DTSC	22 CCR 66262	Requirements for generation, on-site management, and off-site transportation of RCRA and non-RCRA hazardous waste.	Waste generated during site activities must be managed in accordance with these standards if determined to be a hazardous waste.
Hazardous Waste	DTSC	40 CFR 265, 264/22 CCR 66265, 66264	Requirements for management/storage of hazardous waste in containers.	Applicable to any hazardous wastes accumulated or stored in containers.
Hazardous Waste	DTSC	40 CFR 264 and 265 Subpart B/22 CCR 66264 and 66265	General facility standards for on-site treatment, storage, or disposal of hazardous waste.	Applicable to alternatives involving treatment, storage, or disposal of hazardous waste.
Hazardous Waste	DTSC	40 CFR 264, 265 Subpart C/22 CCR 66264 and 66265	Preparedness and prevention requirements applicable to on-site treatment, storage, and disposal (TSD) of hazardous waste. Applies to generators and TSD facilities.	Applicable to alternatives involving TSD of hazardous waste.

Table 1
List of Potential ARARs and TBCs
RAP Amendment and Implementation Plan
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California

Chemical-Specific ARAR	Agency	Reference	Description	Comment
Hazardous Waste	DTSC	40 CFR 264, 265 Subpart D/22 CCR 66264 and 66265	Contingency plan requirements applicable to on-site TSD of hazardous waste. Applies to generators and TSD facilities.	Applicable to alternatives involving TSD of hazardous waste.
Hazardous Waste	DTSC	40 CFR 264, 265 Subpart E/22 CCR 66264 and 66265	Manifesting, record keeping, and reporting requirements applicable to TSD facilities.	Applicable to alternatives involving TSD of hazardous waste.
Hazardous Waste	USEPA/DTSC	40 CFR 264, 265 Subpart F/22 CCR 66264 and 66265	Establishes monitoring requirements for facilities that treat, store, or dispose of hazardous waste.	Applicable to alternatives involving TSD of hazardous waste.
Hazardous Waste	USEPA/DTSC	40 CFR 264, 265 Subpart G/22 CCR 66264 and 66265	Closure and post-closure requirements for hazardous waste TSD in new on-site units.	Applicable to alternatives involving creation of new TSD units.
Hazardous Waste	USEPA/DTSC	40 CFR 264, 265 Subpart L/22 CCR 66264 and 66265	Requirements for storage of hazardous waste in a waste pile for greater than 90 days.	Applicable to alternatives in which hazardous waste is stored in a waste pile for greater than 90 days.
Hazardous Waste	USEPA/DTSC	40 CFR 264, 265 Subpart N/22 CCR 66264 and 66265	Requirements for hazardous waste landfills.	Applicable to alternatives involving land disposal of hazardous waste.
Hazardous Waste	USEPA/DTSC	40 CFR 264 Subpart X/22 CCR 66264	Requirements for treatment in miscellaneous units.	Applicable to alternatives involving treatment in units classified as miscellaneous units.
Hazardous Waste	DTSC	Health and Safety Code 25200 et. Seq	Establishes tiered permitting system for facilities involved in the treatment of certain non-RCRA hazardous wastes. Sets requirements applicable to facilities subject to tiered permitting.	Alternatives treating non-RCRA hazardous waste which meet specified waste stream and quantity limitations may be subject to tiered permitting.
Hazardous Waste	DTSC	Health and Safety Code 25123.3	Remediation waste staging requirements allowing the temporary accumulation of non-RCRA contaminated soil provided that certain conditions are met.	Applicable to activities that involve temporary accumulation of non-RCRA contaminated soil. Requires an impermeable surface, controls to prevent dispersion or runoff, inspections, and certification.
Hazardous Waste - CAMUs and TUs	USEPA	40 CFR 264 Subpart S	Requirements for the establishment of specialized units under the corrective action program that are applicable to site remediation activities.	Applicable to activities using corrective action management units or temporary units.
Hazardous Waste - Land Disposal Restrictions	DTSC	22 CCR 66268	Establishes land disposal restrictions and treatment standards for hazardous wastes applicable to generators.	Any hazardous wastes generated as a result of on-site activities or by treatment systems must meet LDR requirements.
Hazardous Material/Hazardous Waste Transportation Requirements	USEPA/DOT	40 CFR 262/49 CFR 172/22 CCR 66262	Requirements for packaging, labeling, placarding and transporting hazardous waste.	Any hazardous wastes shipped off site for disposal must meet the requirements for hazardous waste shipping and transportation.
Discharge of Waste to Land	RWQCB	23 CCR Chapter 15	Waste and site classifications of waste landfills, including allowable soluble constituent concentrations.	Applicable to on-site land disposal of wastes.
Porter-Cologne Water Quality Control Act	RWQCB	California Water Code Sec. 13243	RWQCB may specify certain conditions or areas where the discharge of waste, or certain types of waste, will not be permitted.	Applicable to discharges that may affect water quality.

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420 East 3rd Street, Pittsburg, California

Chemical-Specific ARAR	Agency	Reference	Description	Comment
Porter-Cologne Water Quality Control Act	RWQCB	California Water Code Sec. 13267(b)	RWQCB may require any person suspected of discharging, or who proposes to discharge, waste to furnish technical or monitoring program reports	Applicable to discharges that may affect water quality.
Porter-Cologne Water Quality Control Act	RWQCB	California Water Code Sec. 13304(a)	RWQCB may require any person who causes or permits any waste to be deposited or discharged where it is, or probably will be, discharged to waters of the state and create a condition of pollution or nuisance to clean up the waste or abate the effects of the waste.	Applicable to discharges that may affect water quality.
Porter-Cologne Water Quality Control Act/CVRWQCB Basin Plan	RWQCB	RWQCB-R-5 Water Quality Control Plan	Establishes water quality objectives that protect the beneficial uses and water quality objectives of surface and ground waters in the region. Describes implementation plans and other control measures designed to ensure compliance with statewide plans and policies and provide comprehensive water quality planning.	Applicable portions of the Basin Plan include the beneficial uses of affected water bodies and water quality objectives to protect those uses. Any activity, including, but not limited to, the discharge of contaminated waters must not result in actual water quality exceeding water quality objectives.
Porter-Cologne Water Quality Control Act	RWQCB	State Water Resources Control Board (SWRCB) Resolution No. 92-49 (As amended October 2, 1996	Establishes requirement for investigation and cleanup and abatement of discharges. Among other requirements, discharges must clean up and abate the effects of discharges in a manner that promotes the attainment of either background water quality, or the best water quality that is reasonable if background water quality cannot be restored. Requires the application of 23 CCR Division 3, Chapter 15 requirements to cleanups	Applicable to all cleanups of discharges that may affect water quality.
Porter-Cologne Water Quality Control Act	RWQCB	23 CCR 2511(d)	Specifies that wastes removed from the immediate place of release must be discharged in accordance with the classification and siting requirements of Chapter 15. Waste contained or left in place must comply with Chapter 15 to the extent feasible.	Applies to actions taken by or at the direction of public agencies to clean up unintentional or unauthorized discharges of waste to the environment.
Porter-Cologne Water Quality Control Act	RWQCB	23 CCR 2550.4	Cleanup levels must be set at background concentration levels, or, if background levels are not technologically and economically feasible, then at the lowest levels that are economically and technologically achievable. Specific factors must be considered in setting cleanup levels above background levels. Cleanup levels above background levels shall be evaluated every 5 years. If the actual concentration of a constituent is lower than its associated cleanup level, the cleanup level shall be lowered to reflect existing water quality.	Applies in setting cleanup levels for ground water, surface water, and the unsaturated zone for all discharges of waste to land.
Porter-Cologne Water Quality Control Act	RWQCB	23 CCR 2550.6	Establishes compliance period for monitoring for waste management unit. Requires monitoring for compliance with remedial action objectives for 3 years from the date of achieving cleanup levels.	Applies to water quality monitoring for new waste management units and for corrective action activities.

Table 1
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RAP Amendment and Implementation Plan
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California

Chemical-Specific ARAR	Agency	Reference	Description	Comment
Porter-Cologne Water Quality Control Act	RWQCB	23 CCR 2550.7	Requires general soil, surface water, and ground water monitoring.	Applies to all areas at which waste has been discharged to land.
Porter-Cologne Water Quality Control Act	RWQCB	23 CCR 2550.9	Requires an assessment of the nature and extent of the release, including a determination of the spatial distribution and concentration of each constituent.	Applies to areas at which monitoring results show statistically significant evidence of a release.
Porter-Cologne Water Quality Control Act	RWQCB	23 CCR 2550.10	Requires implementation of corrective action measures that ensure that cleanup levels are achieved throughout the zone affected by the release by removing the waste constituents or treating them in place. Source control may be required. Also requires monitoring to determine the effectiveness of the corrective actions.	Applies to cleanup activities in order to protect ground water.
Porter-Cologne Water Quality Control Act	RWQCB	23 CCR Chapter 15, 2550.2, 2550.3, 2550.4, 2550.5, 2550.6	Establishes water quality protection standards consisting of COCs, concentration limits, point of compliance and monitoring points.	SWRCB Resolution 92-49 requires actions to cleanup discharge of waste to comply with Chapter 15.
Safe Drinking Water and Toxics Enforcement Act (Proposition 65)	Health and Welfare Agency	California Health and Safety Code, Division 20	Warning requirements/discharge prohibitions of any chemical listed by state as carcinogen or reproductive hazard to water or land, where chemical will pass through a source of drinking water.	Chemicals and applicable regulatory levels are listed in 22 CCR 12000, et seq.
Clean Water Act - Storm Water	USEPA/RWQCB	40 CFR 122; California General Permit	Requires permits for storm water discharges associated with industrial activity. Construction activities on less than 5 acres are exempt.	Applicable to storm water discharges from activities involving material handling, hazardous waste TSD, or construction activities on 5 acres or more.
State Water Resources Control Board Non-Degradation Policy	SWRCB	Resolution 68-16 (as contained in the RWQCB's Water Quality Control Plan)	SWRQC policy requiring maintenance of existing water quality unless demonstrated that the change is beneficial, will not unreasonably affect present or potential uses, and will not result in water quality less than what is prescribed by other state policies.	Applicable to discharges of waste to waters, including discharges that may affect surface or ground waters.
CA Environmental Quality Act (CEQA)	Cal-EPA	Public Resources Code 21000 et. seq.	Requires an analysis to determine whether a project will have a "significant" impact and proposed mitigation measures. Projects with potential significant impacts requires and environmental impact evaluation.	CEQA requirements are conducted as part of the RAP process.
SFRWQCB Basin Plan	SFRWQCB	SFRWQCB-R-5 Water Quality Control Plan	Establishes requirements for drinking water protection.	Applicable to discharges that may impact drinking water quality. Ground water quality requirements are established for industrial service, process supply, and agricultural supply.
OSHA Worker Lead Exposure Standard	Cal-OSHA	29 CFR 1910.1025/8 CCR5216	Specific standard for occupational exposure to lead; includes requirements for monitoring and protective equipment. The Permissible Exposure Limit (PEL) for lead is currently 50 µg/m3 for an 8-hour time-weighted average (TWA).	If concentrations of lead in air exceed the PEL, control measures will be required. This applies to dust-producing actions.

Table 1
List of Potential ARARs and TBCs
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Former Johns Manville Site
420 East 3rd Street, Pittsburg, California

Chemical-Specific ARAR	Agency	Reference	Description	Comment
OSHA Worker Vinyl Chloride Exposure Standard	Cal-OSHA	29 CFR 1910.1017/8 CCR 5210	Specific standard for occupational exposure to vinyl chloride; includes requirements for monitoring, protective equipment and decontamination. The PEL for vinyl chloride is currently 1 ppm for an 8-hour TWA.	If concentrations of vinyl chloride in air exceed the PEL, control measures will be required. This applies to actions that may encourage offgassing of VOCs.
OSHA Permissible Exposure Limits	Cal-OSHA	29 CFR 1910.1001/8 CCR 5155	Requirements for controlling employee exposure to airborne contamination during work operations; sets PELs for specified contaminants and workplace monitoring requirements.	If concentrations of any specified contaminants in air exceed the PEL, control measures (administrative or engineering controls, or PPE) will be required. This applies to dust-producing actions or actions that may encourage offgassing of VOCs.
Respiratory Protection Standard	USEPA	29 CFR Part 1910.134	Establishes standards and guidelines for respiratory protection.	Relevant and appropriate for establishing the level of respiratory protection necessary for remedial activities.
Memo: Interpretation of "Use in Manner Constituting Disposal"	DTSC	Staff Working Paper, October 1989	Guidelines and exemption for restrictions on reuse of recycled materials placed on land	To be considered for activities involved placement of recycled materials on the land.
Proposed Regulations, Recyclable Materials Placed on the Land, Department Reference Number R-93-09	DTSC	DTSC 45-Day Public Notice and Comment Period Announcing Public Hearing on June 13, 1996	Proposed additions to Title 22 (Sections 66266.20 and 66266.21) regarding recycling of non-RCRA hazardous and nonhazardous wastes.	To be considered for activities involved placement of recycled materials on the land.
City of Pittsburg Grading Ordinance, Title 15, Chapter 15.88	City of Pittsburg	Pittsburg Municipal Code, Title 15, Chapter 15.88	Guideline regulating all activities effecting grading, including excavations and embankments, cut and fill slopes and erosion, sediment controls, and creating setbacks and terraces.	
Standard Conditions of Development	City of Pittsburg - Planning Commission	Planning Commission Resolution No. 8931	Outlines the standard conditions to be met for approval from the Planning Commission.	
Harbor Park General Plan amendment (AP-05-223) and Mitigated Negative Declaration and Mitigation and Monitoring Plan (SCH#2005102062)	City of Pittsburg		Approval of an amendment to the General Plan Land Use Diagram and Land Use Element in order to change the General Plan land use designations on a 20.5 acre site from Park (approximately 2.3 acres) and Marine Commercial (approximately 18.2 acres) to Downtown High Density Residential (10.5 acres), with additional amendments necessary to revise the Downtown Element for consistency with the requested changes.	
City of Pittsburg Grading Ordinance, Title 18, Chapter 18.84	City of Pittsburg	Pittsburg Municipal Code, Title 18, Chapter 18.84	Regulations for minimum site landscaping and planting, applicable to each project for which a zoning permit is required (excepting a single-family residence)	
Location Standards for Hazardous Waste Facilities - Floodplains	DTSC	22 CCR 66264.18	Requires that a facility located within a 100-year floodplain must be designed, constructed, operated, and maintained to prevent washout of any hazardous waste unless it can be demonstrated that the wastes can be removed safely before floodwaters can reach the facility.	Applicable to TSD facilities within a 100 year floodplain.

Table 1
List of Potential ARARs and TBCs
RAP Amendment and Implementation Plan
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California

Chemical-Specific ARAR	Agency	Reference	Description	Comment
Location Standards for Hazardous Waste Facilities - Seismic Considerations	DTSC	22 CCR 66264.18	Specifies that portions of new facilities where transfer, treatment, storage or disposal of hazardous waste will be conducted shall not be located within 200 feet (61 meters) of a fault that has had displacement in Holocene period.	Applicable to construction of any new TSD facilities.
Seismic Construction Standards	International Conference of Building Officials/City of Sacramento Building Department	Uniform Building Code	Specifies requirements for earthquake-resistant design.	Any construction must be designed in accordance with these requirements.
Discharges of Waste to Land	RWQCB	23 CCR, Chapter 15	Waste management unit classification and siting and construction standards.	

Table 2. Estimated Cost - Alternative 2
RAP Amendment and Implementation Plan
Former Johns Manville Site
420 East 3rd Street, Pittsburg, California

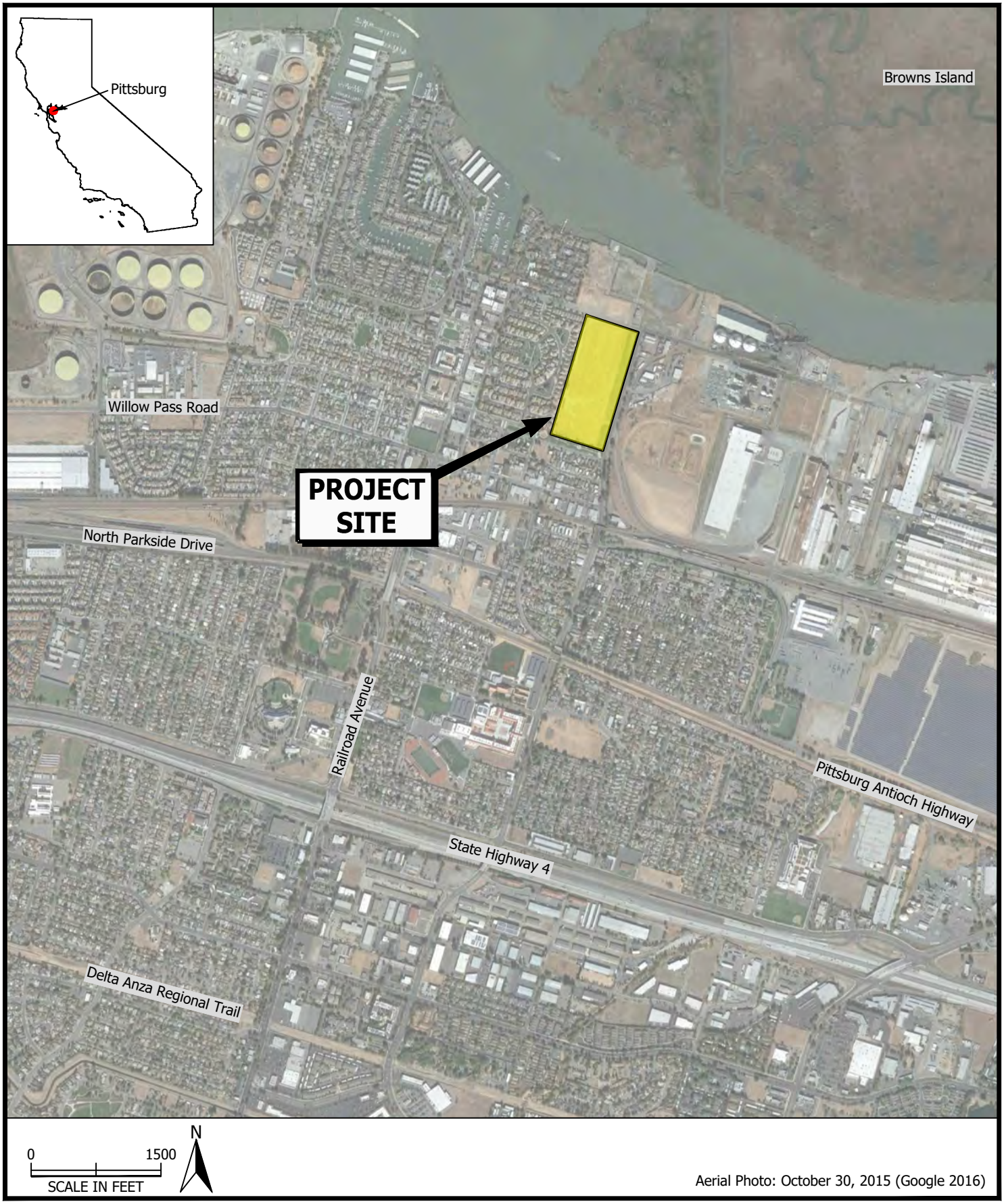
Mobilization & Site Preparation Costs				
	Unit	Rate	Quantity	Cost
Permitting/Contractor Mobilization	lump	$50,000	1	$50,000
Site Fence Construction	foot	$30	3000	$90,000
Subtotal				**$140,000**

Remediation/Oversight Costs				
	Unit	Rate	Quantity	Cost
Excavation	ton	$12	120000	$1,440,000
Backfill and Compact	ton	$10	70000	$700,000
Import Soil Analytical	ton	$1	68000	$68,000
Truck Preparation (per load)	ea	$20	5500	$110,000
Dust Suppression	day	$1,000	60	$60,000
Transportation and Disposal	ton	$90	110000	$9,900,000
Hazardous Waste Generator Fee	fixed	$95,000	1	$95,000
Contractor Oversight + Laborers	lump	$5,500	80	$440,000
Air Monitoring/Sampling	day	$1,500	60	$90,000
Environmental Consultant Oversight (2 field & PM)	day	$3,600	70	$252,000
Verification Soil Sampling	ea	$250	125	$31,250
Clean/Import Stockpile Sampling	ton	$1	77000	$77,000
Storm Water Compliance	lump	$50,000	1	$50,000
Subtotal				**$13,313,250**

Reporting & Certification of Completion				
	Unit	Rate	Quantity	Cost
Implementation Reporting	lump	$40,000	1	$40,000
LUC Revision and Re-Recording	lump	$25,000	1	$25,000
Subtotal				**$65,000**

TOTAL ESTIMATED COST $13,518,250

ILLUSTRATIONS



Aerial Photo: October 30, 2015 (Google 2016)

PES Environmental, Inc.
Engineering & Environmental Services

Site Location
Remedial Action Plan Amendment
and Implementation Plan
420 East 3rd Street Property
Pittsburg, California

PLATE
1

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JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

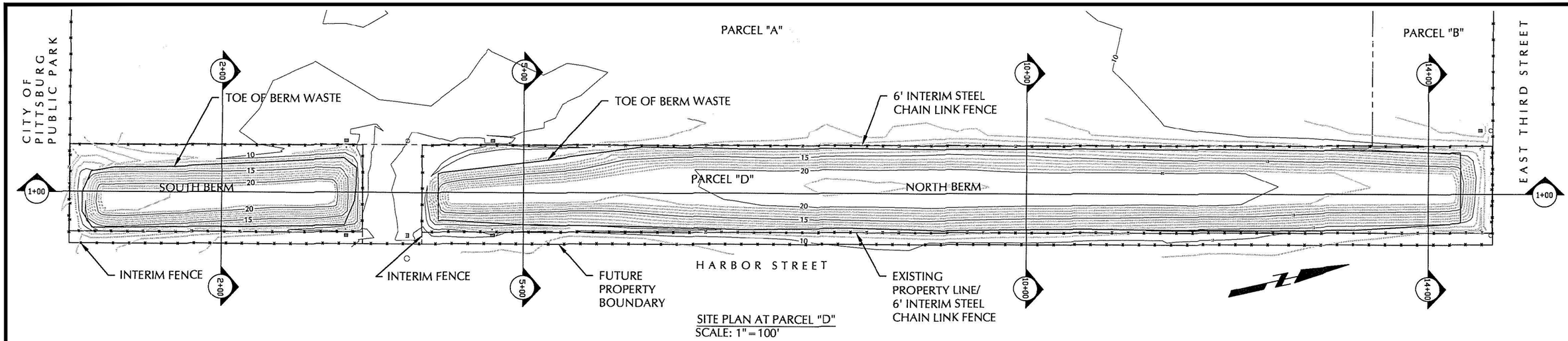


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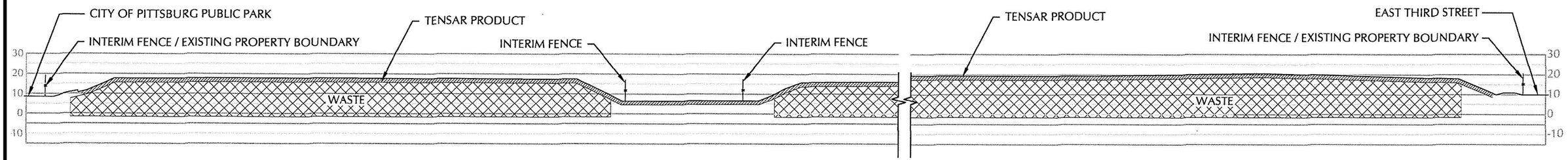
Site Plan and Vicinity
Asbestos Dust Mitigation Plan
420 East 3rd Street Property
Pittsburg, California

PLATE
2

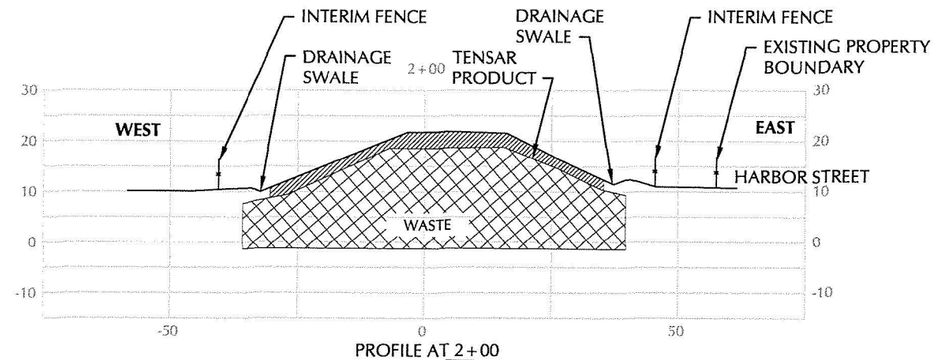
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JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



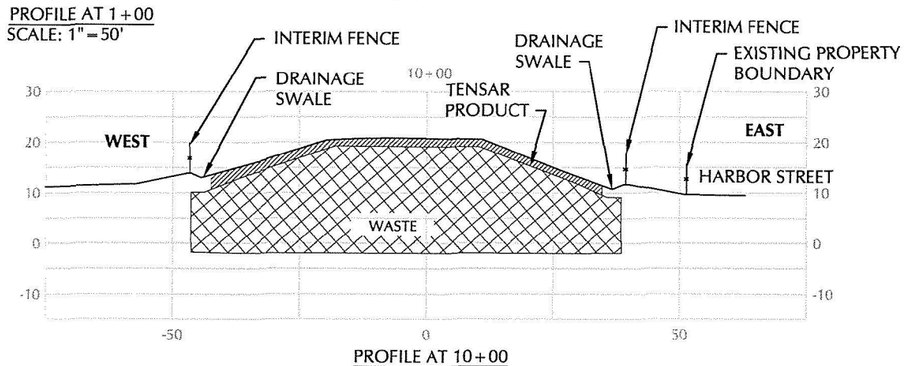
SITE PLAN AT PARCEL "D"
SCALE: 1" = 100'



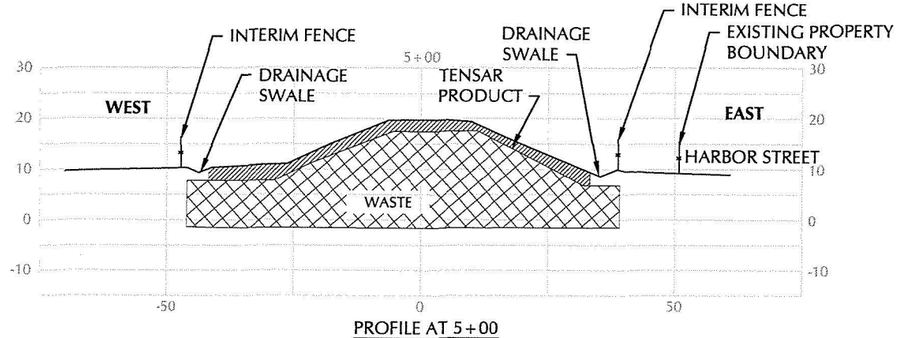
PROFILE AT 1+00
SCALE: 1" = 50'



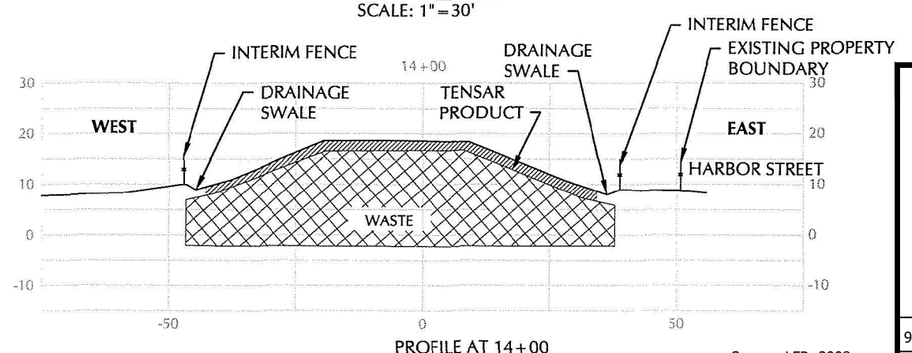
PROFILE AT 2+00
SCALE: 1" = 30'



PROFILE AT 10+00
SCALE: 1" = 30'



PROFILE AT 5+00
SCALE: 1" = 30'



PROFILE AT 14+00
SCALE: 1" = 30'

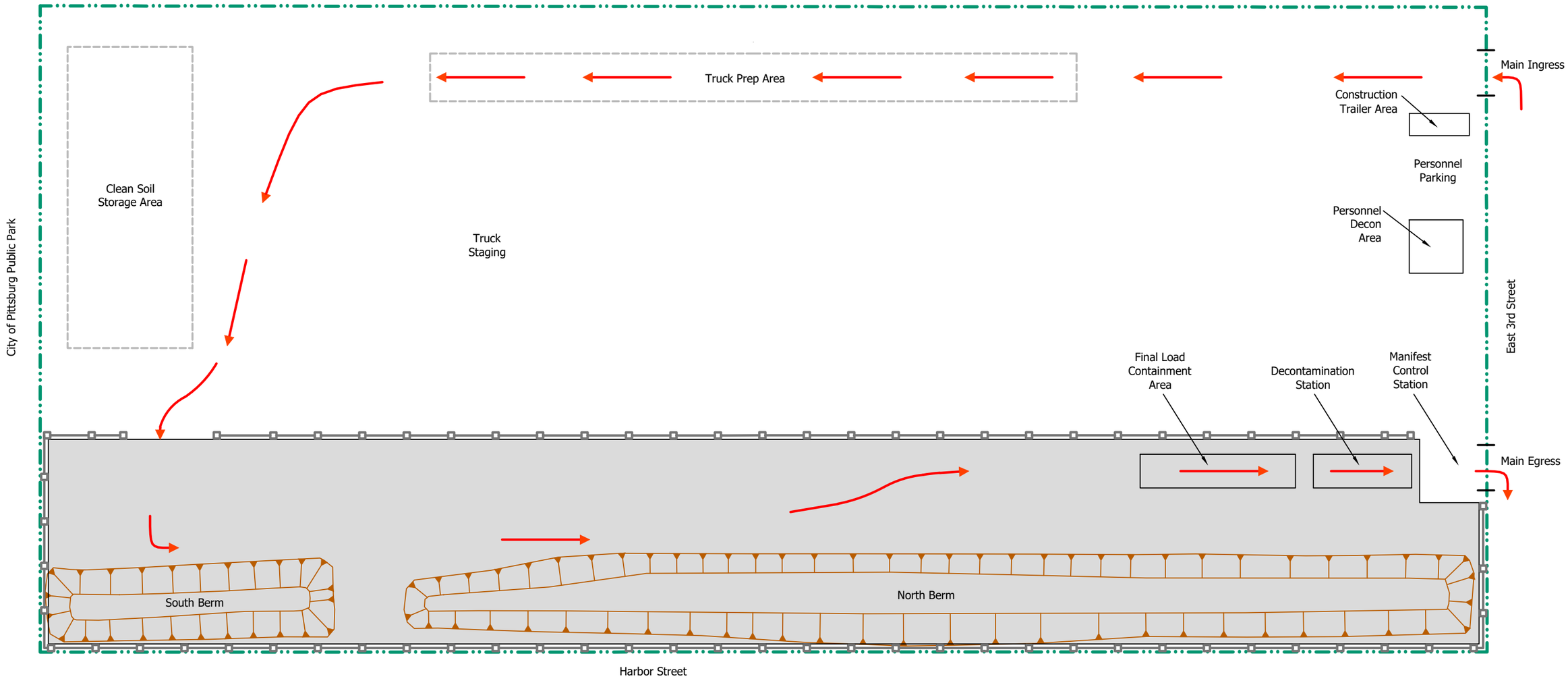
Source: LFR, 2008

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Berm Construction Details
Remedial Action Plan Amendment
and Implementation Plan
420 East 3rd Street Property
Pittsburg, California

PLATE 3

999.014.01.008	99901401008_RAWadd-IP_1-5E-1	JPD	1/19
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



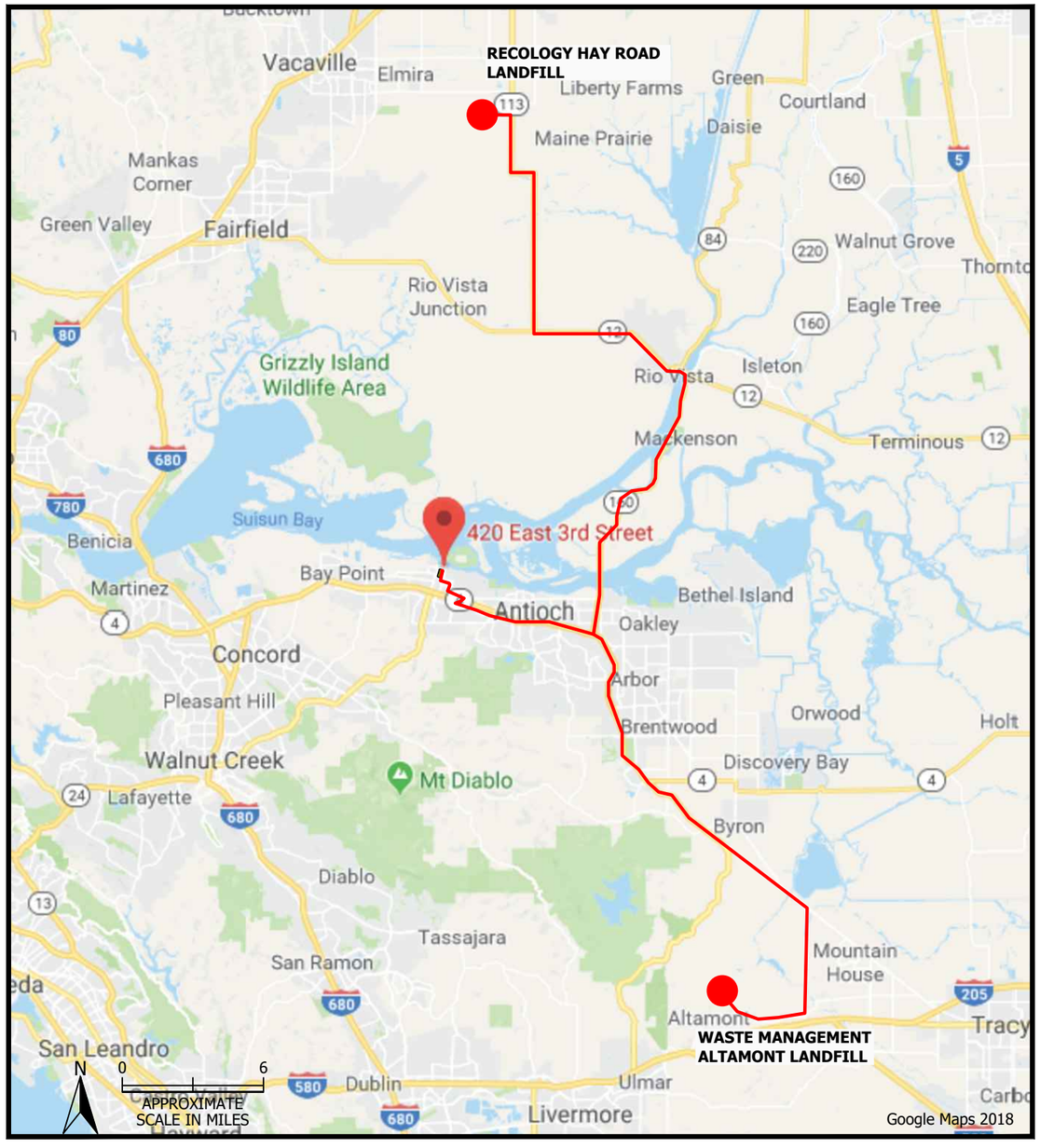
PES Environmental, Inc.
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Remedial Operations Schematic
Remedial Action Plan Amendment
and Implementation Plan
420 East 3rd Street Property
Pittsburg, California

PLATE
4

999.014.01.008	99901401008_RAWadd-IP_1-5E-1	JPD	1/19
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE





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Offsite Truck Routes to Landfills
Remedial Action Plan Amendment
and Implementation Plan
420 East 3rd Street Property
Pittsburg, California

PLATE
5

999.014.01.008	99901401008_RAWadd-IP_1-5E-1	JPD	1/19
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

APPENDIX A

VERIFICATION SAMPLING AND ANALYSIS PLAN

PES Environmental, Inc.
Engineering & Environmental Services

A Report Prepared for:

Third Street Pittsburg Campus Owner LLC
c/o Making Waves™ Foundation, Inc.
3220 Blume Drive, Suite 250
Richmond, California 94806

APPENDIX A

VERIFICATION SAMPLING AND ANALYSIS PLAN REMEDIAL ACTION PLAN AMENDMENT AND IMPLEMENTATION PLAN FORMER JOHNS MANVILLE SITE 420 EAST THIRD STREET PITTSBURG, CALIFORNIA

JANUARY 23, 2019

By:

Kris McCormick, C.A.C.
Associate Environmental Scientist
California Certified Asbestos Consultant (#09-2677)

James P. Dunn, P.G.
Principal Geologist

999.014.01.008

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A1.0 INTRODUCTION

The objective of this Verification Sampling and Analysis Plan (VSAP) is to confirm that target cleanup goals have been met following implementation of remedial activities. The verification sampling includes: (1) soil sampling to confirm that all soils exceeding applicable cleanup levels have been removed, (2) soil sampling of the clean overburden soil (presently covering the berm) that will be used as backfill, and (3) post-remediation confirmation sampling of portions of the Residential Parcel that are designated as the Regulated Area (see Plate 4 of RAP Amendment) during the proposed remediation.

Sampling and analysis will be performed in accordance with applicable guidance and requirements set forth pursuant to the Comprehensive Environmental Response Compensation Liability Act (CERCLA), as amended by the Superfund Amendment and Reauthorization Act (SARA); the National Contingency Plan (NCP); and local, State and Federal practices in effect at the time of performance of the work.

The following sections summarize the performance standards and guidelines under which this VSAP will be conducted, and outlines verification sampling frequencies and protocols and laboratory analysis.

A2.0 VERIFICATION SAMPLING LOCATIONS AND FREQUENCY

A2.1 Excavation Verification Soil Sampling

Soil samples will be collected from excavation sidewalls and bottoms to confirm that the soil cleanup goals are achieved following soil removal activities. Excavation verification soil sampling will be conducted for areas where: (1) asbestos- and hydrocarbon-containing soils were present in the berm area; and (2) undisturbed native soils are reached horizontally and vertically within the former containment berm.

Sidewall and Excavation Bottom Sampling Depths

In areas of the containment cell where asbestos and/or hydrocarbon-contaminated soil are excavated and native soils are encountered, verification soil samples will be collected from the sidewalls at approximately 5 feet bgs, or one-half the distance between the surface and the total depth of the excavation, if the excavation exceeds 10 feet bgs. Soil samples will also be collected from the bottom of the excavation.

Sidewall and Bottom Sampling Frequencies

In the excavation trench, sidewall samples and bottom samples will be collected at a frequency of approximately one soil sample per 50 linear feet of sidewall. Sample locations and the number of samples may vary based on field observations and the final area of the excavation.

A2.2 Clean Overburden Cap Soil Stockpiles

An approximately 2-foot thick layer of uncontaminated soil caps the North and South berm areas. This soil will be removed from the berm, stockpiled, and then will be analyzed by an analytical laboratory to verify that soil concentrations are below applicable cleanup goals. Soil stockpiles will be sampled for the suspected chemicals of concern at a rate of one 4-point composite sample per 200 cubic yards of excavated cap soil. An accelerated laboratory analytical turnaround time may be utilized to facilitate characterization of the stockpiles. Soil stockpile sampling and analysis procedures are discussed in Sections A3.2 and A6.0, respectively.

A2.3 Post-Remediation Confirmation Sampling

Following the completion of soil removal and excavation backfilling activities, the portion of the Residential Property that was used for the Regulated Area will be sampled to confirm that the area is clear of asbestos. Surface soil samples will be collected at regular patterned intervals over the Regulated Area (minus the Berm Property) at a frequency of approximately one sample per 10,000 square feet. It is estimated that roughly 40 samples will be collected for analysis. The samples will be collected in accordance to procedures discussed in Section A3.3. Analytical procedures are discussed in A6.0.

A3.0 SAMPLING PROCEDURES AND ANALYSIS

A3.1 Excavation Verification Soil Sampling

Following soil removal activities, sidewall sample locations will be marked on the ground surface above the sample location with neon paint and stick-mounted flags. Verification bottom sample locations will be approximated using a hand-held GPS unit or by tape measurement from a known location.

Soil from the sidewalls and bottom of the excavations will be obtained using the excavator bucket. For TPHd analyses, TerraCore® soil sampling devices (ore equivalent) will be used to collect fresh, undisturbed clumps of soil from the excavator bucket (rather than loose soil) for laboratory analyses. The Encore® sampler head will then be cleaned, and the sampler cap tightly secured. Three 5-gram Encore® samplers will be prepared for submittal to the analytical laboratory for each sampling location where TPHd will be analyzed. The Encore® soil samples will be collected in accordance with U.S. EPA Test Method 5035. The soil samples will be processed by the analytical laboratory in accordance with U.S. EPA Method 5035 within 48 hours of sample collection. For asbestos analyses, soil samples will be collected from the excavator bucket by pushing a clean brass or stainless-steel liner directly into fresh, undisturbed clumps of soil in the excavator bucket (rather than loose soil).

The following is a summary of equipment that may be used during soil sampling activities:

- Hand trowel;
- Hand-held Encore® t-bar sampling tool;
- Tape line (in feet and inches or tenths of a foot for locating sampling points);
- 5-gram disposable Encore® or TerraCore® sample containers;
- Pre-cleaned, laboratory-supplied, glass sample jars, if needed;
- Pre-cleaned brass and/or stainless-steel soil sample tubes;
- Re-sealable plastic bags;
- Personal protective equipment;
- Ice or "blue-ice" packs, insulated cooler and appropriate packing supplies;
- Buckets, brushes, and detergents for equipment decontamination;
- Sample labels;
- Chain-of-custody forms; and
- Sample collection log, sub-area field map, water-resistant ink pen, and daily field report forms.

A3.2 Stockpile Soil Sampling

Stockpile soil samples will be collected using hand tools (trowels and/or hand-augers) and/or mechanized equipment (i.e., portable drilling equipment) depending on the depth of sampling required. Once collected, the soil sample will be transferred to a clean stainless-steel tube or pre-cleaned glass jar.

For samples collected for TPHd and/or asbestos analyses, the stainless-steel tube will be sealed with Teflon® sheeting and plastic end caps, or the glass jar with a Teflon® septum will be closed, the container will be labeled with the sample identification, collection date and time, logged on the chain-of-custody, and placed in a thermally-insulated cooler with ice, pending transport to the laboratory.

A3.3 Post-Remediation Confirmation Soil Sampling

Post-remediation confirmation soil samples will be collected using a pre-cleaned trowel. The sample will be collected within the upper 2 inches of surficial soil and placed in a clean stainless-steel tube or pre-cleaned glass jar. The filled container will be labeled with the sample identification, collection date and time, logged on the chain-of-custody, and placed in a thermally-insulated cooler, pending transport to the laboratory.

A4.0 DECONTAMINATION AND SAMPLING HANDLING PROCEDURES

Equipment used for sampling activities will be cleaned prior to each use by high-pressure hot water washing, or washing with phosphate-free detergent solution and double rinsed with distilled water. Verification soil sampling equipment will be cleaned with a mild phosphate-free detergent solution and double rinsed between sample locations.

Decontamination fluids will be stored in a poly tank or DOT-approved poly drums pending characterization and disposal. Solid waste materials (i.e., gloves, paper towels, etc.) will be stored in drums or bins pending disposal.

Following collection, soil samples will be labeled for identification purposes. The sample identification and the date the sample was collected will be printed on a label affixed to the sample container. The following information will be specified on each label:

- Project name;
- Project number;
- Date and time of sample collection;
- Sample identification number; and
- Analyses requested.

Individual sample containers will be placed in resealable plastic bags to prevent intrusion of moisture into sample containers and damage to sample labels. The samples will be immediately stored in a thermally insulated cooler (containing "blue-ice" packs or ice packaged in doubled plastic bags) chilled to approximately four degrees Centigrade pending delivery to the State-certified laboratory for analyses under chain-of-custody protocol. Coolers will be transported to the laboratory either by laboratory couriers or field sampling personnel. Samples will be accompanied by 3-copy, pressure-sensitive chain-of-custody documents. The form will accompany every sample shipment to the analytical laboratory to document sample possession from the time of collection. The form will contain the following information:

- Sample identification number;
- Signature of collector;
- Date and time of collection;
- Site name and project number;
- Sample matrix;

- Sample container description;
- Analyses requested;
- Special analytical procedures requested;
- Remarks (expected interferences, hazards, unusual events at the time of sampling, if applicable);
- Preservatives added (if any);
- Any special sample preparation (if applicable);
- Destination of samples (laboratory name);
- Signature of persons involved in chain of possession (relinquished by and received by); and
- Date and time of sample receipt at laboratory.

The two top sheets of the chain-of-custody form will be secured in a watertight plastic bag that will be placed in the cooler for transport.

When transferring samples, the individuals relinquishing and receiving the samples will sign, date, and record the time on the chain-of-custody form. A separate chain-of-custody form will accompany each sample shipment. The method of shipment and courier name(s) will be entered on the chain-of-custody form.

Field activities will be recorded daily on field report forms which indicate the date and time of field observations made by field personnel. Field forms will be signed by field personnel.

Original data recorded on field logs, chain-of-custody forms, and other forms will be written in water-resistant ink. These documents will not be destroyed or discarded, even if they are illegible or contain inaccuracies that require a replacement document.

If an error is made on a document assigned to one individual, that individual will make corrections by drawing a line through the error, entering the correct information, and initialing and dating the change. The erroneous information should not be obliterated. If possible, any subsequent error(s) discovered on a document will be corrected by the person who made the entry.

A5.0 LABORATORY PROCEDURES

Sample handling procedures used by the laboratory may vary from the procedures specified herein provided they fulfill the objective of maintain sample integrity and traceability.

A5.1 Chain-of-Custody Procedures

The sample custodian at the laboratory will accept custody of delivered samples and verify:

1. All samples are present;
2. All samples are in good condition;
3. All samples are accompanied by a properly completed chain-of-custody form;
4. The sample identification is complete and corresponds to the chain-of-custody form; and
5. The condition of custody seals (if used) and temperature of the chest interior.

If the integrity of a sample is in question, the sample custodian will immediately notify the laboratory's project administrator, who in turn will notify the PES project manager. The sample custodian will document the sample condition on the sample custody log and sign the chain-of-custody form.

A5.2 Logging and Storage of Laboratory Samples

After chain-of-custody procedures are complete and acceptable, the sample custodian will assign laboratory identification numbers to the samples. Laboratory sample identification numbers may be written on the chain-of-custody form for tracing purposes. The custodian will transfer the samples to the proper analyst(s) or store the samples in an appropriate secure area.

Laboratory personnel are responsible for the care and custody of samples from the time they are received until the sample is exhausted. Data sheets and laboratory records are retained by the laboratory as part of the permanent documentation for at least three years.

Samples and extracts are retained by the analytical laboratory for up to 180 days after the data are reported by the laboratory. Unless notified by the program managers, excess or unused samples will be disposed by the laboratory in a manner consistent with appropriate government regulations.

A6.0 LABORATORY ANALYTICAL PROGRAM

Soils samples will be analyzed by a laboratory certified by the State of California Department of Health Services for performing the analyses specified herein. Verification and stockpile soil sample analyses include one or more of the following: (1) TPHd using USEPA Test Method 8015B; and (2) asbestos by fiber count by Polarized Light Microscopy (PLM; EPA/600/R-93/116) with a 400-point count and CARB 435 prep (milling). The detection limit for PLM is 0.25%.

Post-remediation confirmation soil samples will be analyzed for asbestos by fiber count by PLM with 400-point count and CARB 435 prep (milling).

APPENDIX B

ASBESTOS DUST MITIGATION PLAN

A Report Prepared for:

Third Street Pittsburg Campus Owner LLC
c/o Making Waves™ Foundation, Inc.
3220 Blume Drive, Suite 250
Richmond, California 94806

APPENDIX B

ASBESTOS DUST MITIGATION PLAN
FORMER JOHNS MANVILLE SITE
420 EAST THIRD STREET
PITTSBURG, CALIFORNIA

JANUARY 23, 2019

By:

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999.014.01.008

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B1.0 INTRODUCTION

This Asbestos Dust Mitigation Plan (ADMP) has been prepared by PES Environmental, Inc. (PES) on behalf of Third Street Pittsburg Campus Owner LLC (Owner) and Making Waves Foundation (Making Waves) for the proposed remediation of Parcel D, identified as the Bermed Parcel, located at 420 East 3rd Street, in Pittsburg, California (referred to herein as the "Site", "subject property" or the "Plant Parcel", see Plate B-1).

The regulatory threshold for manufactured asbestos-containing material (ACM) mixed with soil in construction and grading operations is 1.0 percent (%) asbestos in accordance with the Bay Area Air Quality Management District (BAAQMD) and at any detectable amount (>0%) in accordance with the California Occupational Safety and Health Administration (Cal-OSHA) California Code of Regulations Title 8, Section 1529, *Asbestos* (8 CCR 1529).

The purpose of the ADMP is to guide implementation of appropriate dust control and asbestos hazard mitigation measures during all phases of project construction, grading, and operations. Compliance with the ADMP is required prior to groundbreaking or other project activities which may have the ability to disturb soil containing asbestos. Provisions of this ADMP shall apply throughout grading and construction activities.

A copy of this ADMP shall be maintained at the project site at all times during active project activities. The Contractor shall keep a daily record of measures taken to control fugitive dust in accordance with this ADMP.

B2.0 BACKGROUND

B2.1 Site Description

The subject property is at the location of the former Johns Manville (JM) Plant Site. The Plant Parcel consists of four identified areas (Parcels A through D) with Parcels A, B and C collectively known as the Residential Parcel and Parcel D identified as the Bermed Parcel (see Plate B-2). The Bermed Parcel is currently being used as an engineered containment cell for asbestos- and petroleum hydrocarbon-affected soil that was generated during remediation of other portions of the Plant Parcel.

B2.2 Site History

The primary JM manufacturing plant consisted of four buildings in the northern half of the site, constructed between 1925 and 1928. Use of the Plant Site prior to this time is unknown. Prior to the terminating manufacturing of asbestos-containing products in 1980, products manufactured at the Plant Site included asbestos-cement products, asphalt roofing materials, and asbestos-containing pipe covering. After this time, commercial grade roofing materials were manufactured at the facility until the operations terminated in 2003.

Numerous environmental investigations, which commenced in 1986, evaluated soil and groundwater conditions across the entire facility. The findings of the investigations and available historical records indicated that the former evaporation pond and several other areas on the Residential Parcel contained soils with elevated concentrations of total petroleum hydrocarbons (i.e., heavier fraction total petroleum hydrocarbons quantified as diesel [TPHd] and motor oil [TPHmo]) and/or ACM.

The remedial alternative selected for the mitigation of affected soil was to excavate and encapsulate the asbestos- and TPH-affected soil in an engineered containment berm that was constructed along the eastern boundary of the Plant Parcel (i.e., the Berm Parcel). The berm was constructed by excavating a trench to approximately 10 feet below ground surface (bgs) beneath its entire length. As shown on Plate D-2, the bermed area is comprised of the north and south berm, in order to allow for access to the site directly from Harbor Street. The ACM-affected soil was placed in the below grade portions of the berms and the TPH-affected soil was placed on top of the ACM-affected soil. A geotextile barrier was placed on top of the TPH-affected soil followed by approximately two feet of clean fill to form a cap on the berm.

B2.3 Proposed Earthwork Activities

Activity/use limitations (AULs) associated with the Site restrict the use of the Bermed Property for "a public or private school for persons under 21 years of age." PES understands that the proposed site use consists of redevelopment for a public charter school facility. As part of this redevelopment, the Bermed Parcel will require remediation to all for inclusion of the property in the proposed school facility.

Within the Regulated Area, proposed earthwork activities include the excavation and direct loading of soil into high-sided end dump trucks. ACM and petroleum hydrocarbon affected soil currently consolidated in the engineered containment berm (Bermed Parcel) will be transported and disposed of off-site at an appropriate landfill.

B3.0 SOIL EXCAVATION AND ONSITE OPERATIONS - ASBESTOS DUST MITIGATION MEASURES

The following sections address sources of dust emissions and required handling of asbestos in soil.

B3.1 Preliminary Activities and Site Preparation

Contractors and subcontractors performing work within the Regulated Area will be required to prepare a site-specific Health and Safety Plan (HASP) for their own staff and work activities. Employee/worker notification, safety, and monitoring shall be performed in accordance with applicable laws and requirements (e.g. CCR, Title 8, Section 1529 et al).

Prior to site project operations, establish wind breaks along existing and installed fencing around the designated Regulated Area.

Prior to site project operations, areas to be cleared or graded and excavation areas, will be clearly identified and secured (e.g. signs and fencing, barriers). Sufficient water will be applied to the areas to be excavated prior to any ground disturbance.

"Adequately wet" shall be field determined by the following procedure:

- A sample of at least one quart in volume shall be taken from the top 3 inches of a road, or bare area, or from the surface of a stockpile. The samples shall be poured out form a height of 4 feet onto a clean hard surface. The material shall be considered to be adequately wetted if there is no observable dust emitted when the material is dropped.

B3.2 Track-Out Prevention Measures

Track-out means any bulk material that adheres to and agglomerates on the exterior surfaces of motor vehicles, haul trucks, and/or equipment, including tires, and that has fallen or been deposited onto a paved public roadway.

All equipment and truck tires will be washed down and decontaminated before moving them from the property onto a paved public road, and prevent any track-out of contaminated materials. If accidental track-out occurs, the visible track-out will be cleaned on paved public road within 24 hours using a high efficiency particulate air (HEPA) filter-equipped vacuum device and upgrade decontamination procedures to prevent future track-out.

Installation of a gravel pad (designed using good engineering practices) to clean the tires of exiting vehicles must be implemented as a track-out prevention measure.

Gravel pad means a layer of gravel, rock, or crushed rock which is at least 1-inch or larger in diameter and less than five percent ($<5\%$) silt content, maintained at the point of intersection of a paved public roadway and a work site entrance to dislodge mud, dirt, and debris from tires of motor vehicles and haul trucks prior to leaving a worksite.

A visual inspection will be made to verify that the tires of the construction trucks, equipment, and vehicles leaving the site are reasonably free of accumulated soil prior to leaving the site. A designated truck inspection/tire cleaning area will be set up. Truck and tire cleaning will be conducted using wet methods.

If accidental track-out occurs, the visible track-out on a paved public road at any location where vehicles exit the work site must be removed immediately upon identification and no longer than within 24 hours. Removal must be done using wet sweeping or a HEPA filter-equipped vacuum device, if visible track-out is present.

The soil will be wetted, as necessary, to reduce the potential for dust generation during loading and transportation activities. All earth-moving equipment will be stored and operated on the site for the duration of construction and grading activities.

In addition, truck beds used for transporting affected soil will be lined with 6-mil poly sheeting or equivalent prior to direct loading of the soil. The plastic lining will also be used to cover ("burrito wrap") the affected soil once the truck load is full. The trucks will be covered to reduce the potential for fugitive dust during transport to the disposal facility.

Transportation routes have been developed to minimize transportation of the asbestos-containing soil through residential areas. The transportation route is via surface streets to the closest suitable freeway on-ramps.

B3.3 Active Soil Storage Piles

Active storage piles of soil (non-asbestos containing berm cap soil) must be kept adequately wet or covered with secured tarps. The soil stockpiles will be constructed with plastic sheeting beneath and above the material to prevent run on/run off and dust emissions. The stockpiles will be covered and secured at the end of each day or during periods of inactivity with ropes and sandbags, or equivalent measures.

B3.4 Inactive Areas and Storage Piles

Control for disturbed surface areas and storage piles (non-asbestos containing soil) that will remain inactive for more than seven days shall include the following:

- Keep the surface adequately wet if not covered; and
- Cover the soil stockpiles. Plastic sheeting will be placed beneath and above the material to prevent run on/run off and dust emissions. The stockpiles will be covered and secured at the end of each day with ropes and sandbags, or approved equivalent measures.

In addition, wind breaks will be established along existing and installed chain-link fence perimeters.

B3.5 Traffic on Site Unpaved Roads, Parking Lots, and Staging Areas

Vehicles entering or exiting the construction area shall travel at a speed, which prevents dust generation, not to exceed 10 miles per hour. At a minimum, speed limit signs shall be prominently posted on site at 500-foot intervals.

On site traffic routes will be covered with non-asbestos materials. In addition, the areas will be watered every two hours of active operations or sufficiently often to keep the area adequately wetted.

B3.6 Earthmoving Activities

Sufficient water will be applied to the areas to be excavated, and continued throughout the earth moving process to prevent dust generation; however, application of water should be controlled to have no runoff. Water shall be applied by means of truck(s), hoses, and/or sprinklers prior to any land clearing or earth movement to minimize dust emissions. A water truck shall be on site at all times. Water shall be applied to disturbed areas as necessary to control dust, but no less than 4 times per day during excavation and earthwork activities. In addition, the disturbed area shall be sprayed down at the end of the work shift to form a thin crust upon drying.

Security measures such as fencing and locked gates shall be placed at the project entrance to prevent the entry of unauthorized vehicles during non-working hours and weekends. The site is presently fenced, and the site fencing shall remain in place during the construction and grading operations.

Control for earthmoving activities must include the following:

- Pre-wet the ground to the depth of anticipated cuts;
- Suspend grading operations when wind speeds are high enough to result in dust emissions crossing the property line, despite the application of dust mitigation measures;
- Apply water prior to any land clearing;
- Minimize the area that requires excavation and earth moving operation; and
- Cover and secure the working face of excavations at the end of each day or during periods of inactivity with ropes and sandbags, or equivalent measures.

Following the asbestos-containing soil excavation, trenches shall be backfilled with non-asbestos-containing soil or cover materials.

B3.7 Off-Site Transport

Upon direct-load excavation, contaminated soils removed from the engineered containment cell will be placed in a minimum of 6-mil plastic-lined high-sided 20-yard end dump truck. Once filled with approximately 20 tons of asbestos- and TPH-containing soil, the truck will move to the Final Containment Area where the plastic sheeting will be used to enclose the soil, the seams of the wrapped soil will be secured, the waste containment will be appropriately labeled, followed by placement of a final bed tarp. No trucks are allowed to transport excavated material off site unless the trucks can be maintained in such a way so that no spillage can occur from holes or other openings in cargo compartments (“leak-tight”) and loads are adequately wet. No soil materials shall be transported off the site except to approved sites in accordance with applicable laws and regulations.

Following exit of trucks, the public paved roadways surrounding the site will be checked for any material accidently tracked out, despite mitigation efforts. The roadways will be cleaned of this material using wet sweeping or a HEPA filter equipped vacuum device promptly and no later than within 24 hours of observation.

B3.8 Recordkeeping

The Owner shall maintain copies of all test results, daily logs, maps, consultant reports, and location of asbestos-containing soil, as required by all applicable laws and regulations.

B4.0 ASBESTOS AIR MONITORING

Asbestos air monitoring will be conducted during soil disturbance, excavation, and loading activities associated with the berms. Asbestos air monitoring will be conducted following the procedures described in Appendix D.

B5.0 REFERENCES

Bay Area Air Quality Management District (BAAQMD) Regulation 11, Rule 2, *Asbestos*.

California Occupational Safety and Health Administration (OSHA) California Code of Regulations, Title 8, Section 1529 et al. *Asbestos*.

Federal OSHA Regulation 29 CFR 1910.1101, *Health and Safety Regulations for Construction, Asbestos*.

US Department of Transportation (DOT) Regulations, 40 CFR Parts 171 and 172.

US Environmental Protection Agency (EPA) Regulation, 40 CFR Part 61, Subpart M, *National Emission Standard for Asbestos*.

ILLUSTRATIONS



PES Environmental, Inc.
Engineering & Environmental Services

Site Location
Asbestos Dust Mitigation Plan
420 East 3rd Street Property
Pittsburg, California

PLATE
B-1

999.014.01.008	99901401008_RAWadd-IP_1-5E-1	JPD	1/19
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



PES Environmental, Inc.
Engineering & Environmental Services

Site Plan and Vicinity
Asbestos Dust Mitigation Plan
420 East 3rd Street Property
Pittsburg, California

PLATE
B-2

999.014.01.008	99901401008_RAWadd-IP_1-5E-1	JPD	1/19
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

DISTRIBUTION

APPENDIX B

ASBESTOS DUST MITIGATION PLAN
FORMER JOHNS MANVILLE SITE – BERMED PARCEL
420 EAST THIRD STREET
PITTSBURG, CALIFORNIA

JANUARY 23, 2019

Third Street Pittsburg Campus Owner LLC — 1 Copy
c/o Making Waves™ Foundation, Inc.
3220 Blume Drive, Suite 250
Richmond, California 94806

PES Electronic File

APPENDIX C

SOIL CONTINGENCY PLAN

PES Environmental, Inc.
Engineering & Environmental Services

A Report Prepared for:

Third Street Pittsburg Campus Owner LLC
c/o Making Waves™ Foundation, Inc.
3220 Blume Drive, Suite 250
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APPENDIX C

SOIL CONTINGENCY PLAN
DRAFT REMEDIAL ACTION PLAN AMENDMENT
AND IMPLEMENTATION PLAN
FORMER JOHNS MANVILLE SITE
420 EAST 3RD STREET
PITTSBURG, CALIFORNIA

JANUARY 23, 2019

By:

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999.014.01.008

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C1.0 INTRODUCTION

This Soil Contingency Plan (SCP) has been prepared on behalf of Third Street Pittsburg Campus Owner LLC (Owner) and Making Waves Foundation (Making Waves) by PES Environmental, Inc. (PES) as a contingency plan for managing contaminated soils that may be unexpectedly encountered during proposed remedial activities at 420 East 3rd Street, in Pittsburg, California (referred to herein as the "Site" or "subject property", [see Plates C-1 and C-2]). Asbestos containing materials (ACMs) and total petroleum hydrocarbon (TPH) contaminated soils present at the containment berm are slated for cleanup via excavation and offsite disposal following a Department of Toxic Substances Control (DTSC) approved Remedial Action Plan Amendment and Implementation Plan (RAP Amendment & RDIP; PES, 2018). The RAP Amendment & RDIP pertain to soils consolidated in the Bermed Parcel (see RAP; ERM, 2006a) located on the eastern margin of the Plant Site. This contingency plan is designed to address potentially contaminated soils that may be discovered during soil removal or other activities and that are not already governed by the RAP Amendment & RDIP and associated documents.

The goal of the SCP is to manage human health and environmental concerns associated with resolution of soil contamination that may be discovered during excavation. To accomplish this goal, this plan details the steps to be followed to: (1) investigate and define the contamination; (2) resolve or remediate the soil and/or groundwater, as appropriate; (3) obtain regulatory agency oversight and concurrence; and (4) document the activities.

Should soil contamination be found during remedial construction or other intrusive activities the following steps will be taken:

1. A qualified professional will be retained to define the contaminants present and their extent and assess the appropriate remedial method, if needed, to protect human health and the environment;
2. The appropriate regulatory agency will be notified to provide oversight and concurrence. For example, if residual soil contamination is found in the vicinity of the RAP Amendment and RDIP remediation areas, then the DTSC will be notified. In the unlikely event that an underground storage tank (UST) is found, then the DTSC and Contra Costa County Department of Environmental Health (CCCDEH) would both be notified. CCCDEH, acting as the Certified Unified Program Agency (CUPA), would be the appropriate oversight agency for the removal of a UST;
3. Investigation and remediation of contamination will follow all pertinent local, state, and federal laws and regulations, including those for health and safety that have been established for worker health and safety;
4. If remediation is necessary, data will be collected to verify that remediation of the contamination was properly conducted; and
5. The contaminants present, their extent, and the remediation performed will be documented and provided to the oversight agency.

C2.0 SITE DESCRIPTION AND BACKGROUND

The Plant Site was formerly the location of the Johns Manville manufacturing facility, first constructed between 1925 and 1928. Use of the Plant Site prior to this time is unknown. Prior to the terminating manufacturing of asbestos-containing products in 1980, products manufactured at the Plant Site included asbestos-cement products, asphalt roofing materials, and asbestos-containing pipe covering. After this time, commercial grade roofing materials were manufactured at the facility until the operations terminated in 2003.

Numerous environmental investigations, which commenced in 1986, evaluated soil and groundwater conditions across the entire facility. As part of these investigations more than 100 soil locations were sampled throughout the site. The findings of the investigations and available historical records also identified areas on the Residential Parcel were elevated concentrations of asbestos-containing material (ACM) and medium- to heavy-fraction total petroleum hydrocarbons (TPH) were present.

The RAP presented: (1) background site information, (2) findings from historical site investigations, (3) information regarding potential human health and environmental effects from exposure to the chemical constituents identified in soil and groundwater at the Site and establishment of cleanup goals, (4) Remedial Action Objectives (RAOs), and (5) remedial alternative evaluation and selection of a preferred remedy. The remedial alternative selected and implemented for the mitigation of the asbestos- and TPH-affected affected soil was to excavate and encapsulate the affected soil in an engineered containment berm that was constructed in the Bermed Parcel. A Remedial Design and Implementation Plan (RDIP; ERM, 2006b) and RDIP Addendum (LFR, 2007) were utilized to implement the selected remedy.

In total, approximately 71,000 cubic yards of ACM-affected soil and 22,000 cubic yards of TPH-affected soil were excavated from and temporarily stockpiled on the Residential Property portion of the Site. Approximately 10,500 cubic yards of ACM-affected soil and 18,000 cubic yards of TPH-affected soil were transported off-site for disposal at an approved landfill facility. The remaining excavated soil (60,600 cubic yard of ACM-affected soil and 4,000 cubic yards of TPH-affected soil) was placed in the engineered containment berm located on the Bermed Property. Verification soil sample results in the ACM-affected and TPH-affected soil areas on the Residential Parcel met the RAOs for the project. Following excavation activities and confirmation sampling, the excavations were backfilled at the direction of a geotechnical engineering firm.

The berm was constructed by excavating a trench to approximately 10 feet below ground surface (bgs) beneath its entire length. As shown on Plate C-2, the Bermed Parcel is comprised of a north and south berm with an area of separation to allow for access to the site directly from Harbor Street. The asbestos-containing soil was placed in the below grade portions of the berms until filled and mounded to create the berm. The TPH-affected soil was placed on top of and combined with the ACM-affected soil placed above grade (TPH-affected soil is not present in the below-grade portion of the berm). After placement of the asbestos- and TPH-affected soil, the placed materials were covered with a

"Tensar Product" geotextile fabric and approximately 2 feet of clean cover soil. Perimeter fencing was placed around each berm to prevent public access. Also, drainage swales were incorporated into the berm design adjacent to the berm toes to allow for drainage control away from the berms and towards on-site storm water catch basins. A sprinkler system was also installed on the berms to support growth of vegetation.

LFR prepared a remedial action completion report which was submitted to DTSC in October 2008. DTSC concluded that the remedial actions were completed in accordance with the approved RAP, RDIP and RDIP Addendum and no further action was necessary to address the hazardous substances and pollutant releases to soil or groundwater at the Site (DTSC, 2008).

The proposed remedy entails excavation of contaminated soil encapsulated at the Bermed Property, loading of the excavated material into trucks, and transportation and disposal of the material at appropriate off-Site disposal locations in accordance with applicable federal and state laws.

C3.0 IMPLEMENTATION SCENARIOS AND RESPONSIBILITIES

Soil affected by undocumented contamination sources may be discovered during remedial activities. The property owner (Owner) is responsible for providing a copy of this SCP to all third-party contractors who may come into contact with soil or groundwater during their work on-site. The Owner and the contractors share the responsibility for implementation of the SCP. Over time the SCP may need to be revised or updated to reflect changes in regulations, chemical toxicity information, property use, or other factors. The Owner is responsible for these modifications to the SMP, as appropriate.

C4.0 CONTINGENCY SOIL PLAN

These procedures provide a generic sampling and analysis plan developed using best professional estimate of requirements to characterize contaminated soils that may be identified during remedial activities. These procedures may be modified based on specific requirements of a disposal facility or party, once identified.

C4.1 Procedures for Observation during Construction

This section describes procedures for observing site conditions during excavation conducted for site remediation activities that involve exposure of underlying soils and subsurface utilities, including visual observation and screening of soil. All Facility observation and sampling activities will be conducted in accordance with a Site-specific Health and Safety Plan.

If contamination or suspected contamination is identified during construction, a qualified licensed engineer or geologist will observe conditions and conduct field screening.

If suspect soil conditions are identified through visual or olfactory observations, or if field-screening using a PID and FID identifies potentially contaminated soils, work shall be halted in the area of suspect materials. The area will be cordoned off using delineators and caution tape, or similar materials, and the soil management procedures described in Section C4.2 shall be instituted.

C4.2 Soil Management Procedures

Procedures for management of potentially contaminated soil, including sampling and analysis as well as handling and stockpiling, are presented below. Handling and stockpiling of uncontaminated soil shall be conducted in accordance with applicable regulations and standard construction practices.

C4.3 Sampling and Analysis of Potentially Contaminated In-Place Soil

The sampling and analytical program for potentially contaminated in-place soils will be developed based on soil observations and screening results. At a minimum, one sample of the suspect soil will be collected, and a second will be collected outside the suspect area for comparison purposes. If stained soils are identified, a sample of the stained material will be collected. If possible, a sample will also be collected of apparent unaffected soil beneath the stain.

Depending on the nature of the soil to be sampled, samples will likely be collected using hand tools. A pre-cleaned trowel will be used to expose undisturbed soil and collect a sample in a clean stainless-steel tube or pre-cleaned glass jar. If analysis of VOCs is deemed necessary, samples will be collected in the appropriate En Core® samplers. The stainless-steel tube will be sealed with Teflon® sheeting and plastic end caps, or the glass jar with a Teflon® septum will be closed, the container will be labeled with the sample identification, collection date and time, logged on the chain of custody, and placed in a thermally insulated cooler with ice, pending transport to the laboratory.

Samples will be analyzed for one or more compounds, based on observations, screening results, and/or the known site use history in the vicinity of the suspect soil. Analyses may be conducted for VOCs, petroleum hydrocarbons, metals, and/or other compounds. It is likely that samples will be analyzed on a rush turn-around basis, due to the site redevelopment schedule.

C4.4 Evaluation of Soil Analytical Results

In consultation with DTSC, analytical results will be compared to DTSC Screening Levels, (DTSC-SLs) and/or background soil conditions to evaluate if the soil contamination is significant. The most current DTSC-SLs (adjusted to account for site specific conditions) should be used to evaluate the soil data.

If criteria are not exceeded, no further evaluation will be conducted, and work will be permitted to resume in that area. In other words, the soil will be considered "clean" and treated as uncontaminated soil that can continue to be excavated.

If criteria are exceeded, additional characterization and/or evaluation may need to be performed, in consultation with DTSC. Additional activities may consist of the following:

- Additional soil sampling to characterize the lateral and vertical extent of affected soil and off-site disposal options; and

- Development of a remediation plan to mitigate the contaminated soil.

Prior to determining appropriate reuse/disposal options, the soils will require characterization. If there is sufficient data from the procedures outlined in Section C4.3, then a licensed hazardous waste contractor can be retained to remove off-site the contaminated soil, if excavation is deemed the appropriate remedial response. Soils handled for off-site disposal will be loaded into transport trucks using a loader or track-mounted excavator. A water truck will be maintained on-site during the excavation and loading operations for dust suppression. General nuisance dust conditions and other applicable Bay Area Air Quality Management District (BAAQMD) dust control measures will apply. All loads will be covered prior to transport. Soil will be transported to the appropriate predetermined waste management facility under the appropriate hazardous or non-hazardous waste manifests as dictated by the laboratory analytical results.

Alternatively, the contaminated soils may need to be excavated and temporarily stockpiled on-site, then characterized for appropriate reuse/disposal, as described below.

C4.5 Handling and Stockpiling of Excavated Soil

Soil identified as potentially contaminated based on visual or olfactory indicators, or field screening results, may need to be temporarily stockpiled on-site pending further characterization and prior to selecting an appropriate landfill disposal facility. Stockpiles will be constructed with plastic sheeting beneath and above the soil to prevent runon/runoff and fugitive dust emissions. Stockpiled soil will be covered and secured at the end of each day.

Once previously uncharacterized soils have been excavated and placed in stockpiles, the stockpile will be characterized, and management alternatives will be evaluated. The soil sampling procedures and analytical program for stockpiles are as follows:

- Soil samples will be collected using a pre-cleaned hand trowel and transferred into laboratory-supplied glass containers and/or En Core® samplers, as appropriate. One four-point composite sample will be collected per 750 cubic yards of excavated soil or per disposal facility requirements;

- Following soil sample collection, the containers will be labeled for identification and immediately placed in a chilled, thermally insulated cooler containing bagged ice or blue ice. The cooler containing the samples will then be delivered under chain-of-custody protocol to a state-certified laboratory; and

- The composite samples collected from the soil stockpiles will be submitted for laboratory analysis for one or more compounds, based on observations, screening results, and/or the known site use history in the vicinity of the suspect soil. Analyses may be conducted for VOCs, petroleum hydrocarbons, metals, and/or other compounds. It is likely that samples will be analyzed on a rush turn-around basis, due to the site redevelopment schedule.

C4.6 Decontamination Procedures

Equipment used for soil excavation and loading (including heavy equipment and truck tires, will be cleaned before leaving the site. During soil excavation and loading, the work areas will be kept reasonably clean and free of excessive soil or debris. Care will be exercised to minimize the potential for tracking any contaminated soil out of the work area.

C4.7 Off-Site Disposal Plan

The following activities will be performed as part of the off-site disposal plan: (1) waste characterization analytical testing in accordance with off-site facility waste acceptance criteria; (2) completing waste profiling for disposal purposes; (3) completing the waste manifest forms and documenting truck load volumes and/or weights; and (4) transportation of soil from the site to a permitted disposal facility. The excavation contractor will be responsible for implementing the off-site disposal plan, including identifying and coordinating with the appropriate disposal facilities. The consultant engineer or geologist will work with the excavation contractor to support waste acceptance evaluations, including collecting and directing laboratory analysis of soil samples.

C4.8 Transportation Plan

Following acceptance of the excavated soil at an appropriate disposal facility, the soil (classified as non-hazardous or hazardous) will be loaded onto licensed hazardous waste trucks and transported following appropriate California and federal hazardous (or non-hazardous) waste manifesting procedures. As each truck is filled, an inspection will be made to ensure that the soil is properly covered and that the tires and sides of the trucks are reasonably free of accumulated soil prior to leaving the site. A street sweeper will be made available, as needed, to keep the loading area and haul roads clean. The off-site route taken by the haul trucks will be determined once the disposal site has been selected. The route will be selected and provided to each driver prior to leaving the site.

C5.0 REFERENCES

DTSC, 2008. *Approval of Remedial Action Completion Report, Former Johns Manville Site, Pittsburg, California*. October 21.

ERM, 2006a. *Final Remedial Action Plan, Harbor Park Development (Former Johns Manville Plant), Pittsburg, California*. June.

ERM, 2006b. *Final Design and Implementation Plan, Harbor Park Development (Former Johns Manville Plant), Pittsburg, California*. August.

LFR, Inc. (LFR), 2007. *Addendum to the Remedial Design and Implementation Plan, Harbor Park Development (Former Johns Manville Facility), 420 East 3rd Street, Pittsburg, California*. August 1.

PES Environmental, Inc., 2018. *Draft Remedial Action Plan Amendment and Implementation Plan, Former Johns Manville Site, 420 East 3rd Street, Pittsburg, California*. June 15.

PLATES



PES Environmental, Inc.
Engineering & Environmental Services

Site Location
Soil Contingency Plan
420 East 3rd Street Property
Pittsburg, California

PLATE
C-1

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PES Environmental, Inc.
Engineering & Environmental Services

Site Plan and Vicinity
Soil Contingency Plan
420 East 3rd Street Property
Pittsburg, California

PLATE
C-2

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APPENDIX D

ASBESTOS AIR MONITORING PLAN

PES Environmental, Inc.
Engineering & Environmental Services

A Report Prepared for:

Third Street Pittsburg Campus Owner LLC
c/o Making Waves™ Foundation, Inc.
3220 Blume Drive, Suite 250
Richmond, California 94806

APPENDIX D

SITE-SPECIFIC CONSTRUCTION DUST AND ASBESTOS AIR MONITORING PLAN FORMER JOHNS MANVILLE SITE 420 EAST THIRD STREET PITTSBURG, CALIFORNIA

JANUARY 23, 2019

By:

Kris McCormick, C.A.C.
Associate Environmental Scientist
California Certified Asbestos Consultant (#09-2677)

James P. Dunn, P.G.
Principal Geologist

999.014.01.008

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ILLUSTRATIONS

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Plate D-1 Remedial Operations Schematic

D1.0 INTRODUCTION

These construction dust and asbestos air monitoring procedures will be used to monitor air quality in regard to disturbance and excavation of identified asbestos-containing soil at the subject property. The asbestos air monitoring will be conducted in accordance with California Code of Regulations, Title 8, Section 1529 *Asbestos* (8 CCR 1529). Compliance with these procedures is required prior to groundbreaking or other project activities which may have the ability to disturb asbestos-containing soil and will continue throughout excavation activities. The purpose of the air sampling is to assess and ensure that the proposed dust control measures are effective.

D2.0 AIR MONITORING

During demolition and construction activities at the site, air monitoring for dust will be performed to demonstrate compliance with the provisions of this air monitoring plan. Control of visible dust will be the primary responsibility of the demolition/excavation contractor at the site. The Owner or its designee will have the authority to direct the contractor to implement the measures outlined below if visible dust is observed.

D2.1 Monitoring of Wind Conditions

Localized wind conditions at the subject property are fairly consistent throughout the construction day with the predominant wind direction from west to east. Wind intensity increases progressively from calm to no wind in the early morning hours, to a steady moderate breeze by the late afternoon.

Meteorological measurements will include, at a minimum, ambient temperature, weather conditions, wind speed, wind direction, and relative humidity. Meteorological data will be obtained using a temporary weather station established in a centralized location on the subject property (see Plate D-2).

D2.2 On-Site Air Monitoring and Sampling Equipment

Dust monitoring at the subject property will be conducted using portable airborne particulates monitors (*personal* DataRAM Model pDR-1000 or similar) positioned at various locations of the site. This dust monitoring equipment has real-time monitoring capabilities complete with an alarm and data recording. The monitors will be placed on the site as follows:

- At least one upwind perimeter location near the active demolition and construction work;
- At least one downgradient perimeter location near the active demolition and construction; and

- At any active entry/egress location for construction equipment and trucks.

The proposed dust monitoring locations are shown on Plate D-2.

Results of monitoring information shall be recorded, and will include time, date, location operations, and any other conditions that may contribute to potential exposures. Maintenance and calibration information shall be maintained and made available upon request. The monitoring equipment will be calibrated in accordance with the manufacturer's specifications, and the records of such maintained with the project health and safety plan.

D2.3 Set-Up of Air Monitoring and Sampling Equipment

The particulate air monitoring equipment will log continuously during demolition and construction activities with alarms set to trigger for a 10-minute time-weighted average exceeding 250 micrograms per cubic meter ($\mu g/m^3$). If an alarm is triggered, then the upwind background dust monitor will immediately be checked to confirm that the level of concern is more than 250 $\mu g/m^3$ above the background level. If it is confirmed that the action level has been exceeded, then the dust control measures discussed above will be implemented immediately to mitigate the problem. However, if a visible dust cloud is observed leaving the property boundary, then work will be temporarily halted until additional watering can be performed. The logs will be downloaded on a daily basis so that data can be reviewed, and the dust control plan and activities revised as needed if perimeter particulate monitoring results exceed 50 $\mu g/m^3$ in any given 24-hour period. Similar to the discussion above, dust levels of concern will be compared against upwind background particulate levels to confirm that levels of concern are more than 50 $\mu g/m^3$ above background levels. Integrated IH sampling for lead may include personnel monitoring and fence line sampling.

D2.4.4 Data Reporting

Monitoring data, including real-time data and daily time-weighted averages, along with a description of related corrective activities, if any, will be compiled on a weekly basis and retained at the project field office. At the termination of the project, the weekly construction dust monitoring data packages will be included as an appendix to the RAP implementation report.

D3.0 AIR MONITORING

D3.1 Air Sampling Personnel

Air sampling shall be performed under the direction and authority of a California Certified Asbestos Consultant (CAC) as defined by the State of California Division of Occupational Safety and Health, California Code of Regulations (CCR) Title 8, Section 1529, Asbestos in Construction Standard.

D3.2 Air Sampling Devices

The type of air sampling device(s) shall be high-volume air sampling pumps. This may require the use of generators for electricity if electrical power is not readily available. If battery operated high flow air pumps are utilized, at least two additional battery packs will be readily charged and available at the site.

Air samples will be collected by drawing air through a 0.45 micron mixed cellulose ester (MCE) filter housed in a 25-millimeter diameter cowled plastic housing at a maximum airflow rate of 10.0 liters per minute (lpm). The filter removes and collects the dust in the air as air passes through it. The volume of air passing through the filter is calculated by multiplying the sampling rate by the sampling time.

The airflow rates for the high-volume sampling pumps shall be calibrated prior to and at the conclusion of the sampling period using either a primary standard calibrator, or a field rotameter calibrated by a primary standard within the previous year.

D3.3 Air Sampling Locations

Air monitoring will be conducted at the subject property perimeter and at potential on site emission areas. The operating locations of the sampling devices shall include a minimum of one device at the upwind edge of the site and one device at the downwind edge of the site while asbestos-containing soil is being disturbed. Air monitoring will also be conducted at a crosswind perimeter location while asbestos-containing soil is being disturbed. Planned air monitoring locations are shown on Plate D-1.

Depending upon wind conditions, if the wind shifts greater than 45 degrees for more than 30 minutes during the work day, the sample locations shall be re-evaluated and moved as necessary to measure downwind or upwind locations. When this is not feasible, the changes in wind direction shall be noted in the air monitoring log.

D3.4 Air Sampling Schedule

Air sampling shall commence upon the initiation of site excavation activities and will be conducted at a minimum of three monitoring stations. The samplers will be placed in the breathing zone, approximately 4 to 5 feet above the ground. The air sampling cassette will be oriented downward at approximately 45 degrees from the horizontal.

Air samples shall be collected for full-work shift periods during disturbance of asbestos-containing soil. The sampling period shall be no less than six continuous hours, however, air cassettes may be replaced during the work shift if filters become clogged.

At least three area air samples shall be collected daily during activities where asbestos-containing soil is being disturbed to determine the effectiveness of engineering controls and dust mitigation measures. Air monitoring will be conducted whenever earth disturbing activities are occurring at the project site.

D3.5 Data Quality Indicators

Quality control (QC) methods include both a field and laboratory component. Air sampling personnel shall prepare two types of QC samples: (1) replicates; and (2) blanks.

Field Replicates

Field replicates are defined as separate samples that are collected using separate air pumps and filters. These air samples are collected side by side (co-located) at a location and are sampled at the same time. Air pumps are set at the same airflow rate so that adequate and equivalent air volumes are passed through each filter. A minimum of one replicate sample will be collected for every 20 samples collected during this project.

Blanks

Two types of blanks will be used as QC checks for the filters and handling procedures. Trip (box) and field blank cassettes will be included with the field samples sent to the laboratory. A trip blank is a sealed filter cassette taken from the box and carried with each sample set. This cassette is not opened in the field and is intended to ensure no contamination occurs during transport to and from the sampling site. A field blank is a cassette taken from the box, installed, leak checked, then removed and recapped. This sample ensures that the sampler did not introduce contamination during handling. Both blanks shall be labeled and sent to the laboratory for analysis with no indication that they are blanks (i.e., blind). One trip blank and one field blank per day or per delivery group, whichever is greater, will be submitted to the laboratory with the field samples.

D3.6 Sample Identification

Each air sample will be identified with a unique code. The first six digits will be the date followed by the unique three-digit sample identification. For example, the second sample collected on December 1, 2018 would have a sample identification of "120118-002." Sample identifications shall be properly recorded on a laboratory chain-of-custody form.

D3.7 Analytical Methodology

The laboratory used for this project will be accredited under the National Voluntary Laboratory Approval Program (NVLAP) for Transmission Electron Microscopy (TEM) analysis.

Sampling results shall be analyzed according to the method(s) prescribed by the U.S. Environmental Protection Agency (EPA), Asbestos Hazard Emergency Response Act (AHERA) criteria located in 40 CFR, Part 763, subpart E, Appendix A. The results of the analysis of air samples shall be reported as TEM asbestos structures per millimeter squared (s/mm^2). Rush (less than 24 hours) laboratory turnaround time (TAT) will be requested for the first week of asbestos-containing soil excavation activities and a 24-hour laboratory analytical TAT will be requested for the remaining weeks.

D3.8 Laboratory Analytical Results

The criteria for work areas where TEM analysis is used will be the EPA's recommended level of 70 structures per millimeter squared (s/mm^2). If air sampling indicates results greater than the 70 s/mm^2 "clean air" trigger criteria, then work which disturbs asbestos-containing soil shall cease until additional dust mitigation measures are implemented.

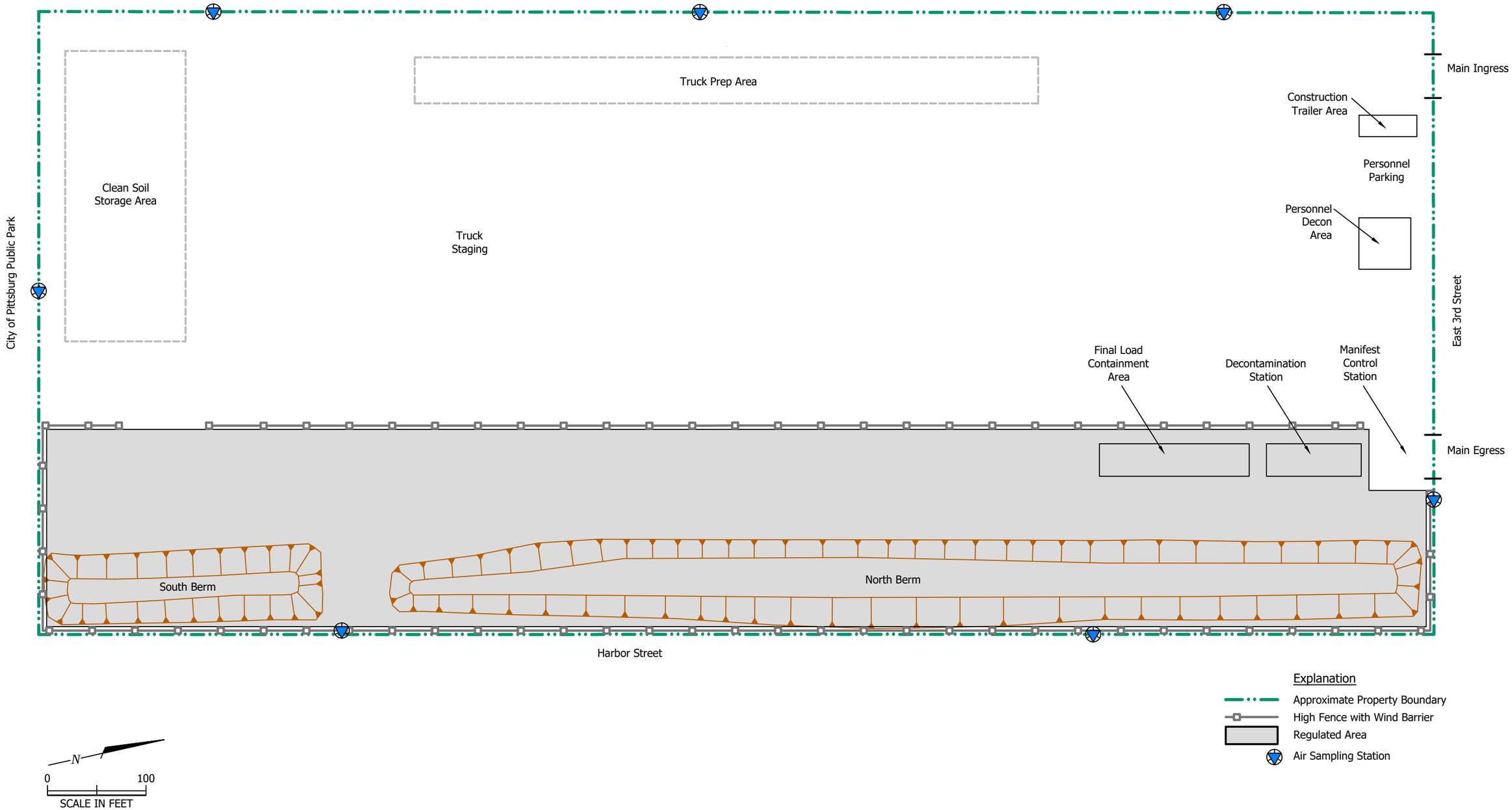
D3.9 Reporting

Sample details including location, start time, stop time, calibration information, weather conditions, wind direction, on site activities, sampling personnel, etc. shall be maintained in an air sampling log and field data sheets. Any deviations from this air sampling plan shall also be recorded in the air sampling log.

D3.10 Recordkeeping

Results of all monitoring or sampling performed pursuant to these procedures shall be retained by Owner, or designated representative, for at least seven years following the completion of the project, and shall be made available to the BAAQMD upon request.

ILLUSTRATIONS



PES Environmental, Inc.
Engineering & Environmental Services

Remedial Operations Schematic
Asbestos Air Monitoring Plan
420 East 3rd Street Property
Pittsburg, California

PLATE
D-1

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APPENDIX D

SITE-SPECIFIC CONSTRUCTION DUST AND ASBESTOS AIR MONITORING PLAN FORMER JOHNS MANVILLE SITE 420 EAST THIRD STREET PITTSBURG, CALIFORNIA

JANUARY 23, 2019

Third Street Pittsburg Campus Owner LLC — 1 Copy
c/o Making Waves™ Foundation, Inc.
3220 Blume Drive, Suite 250
Richmond, California 94806

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DRAFT REMEDIAL ACTION PLAN AMENDMENT AND IMPLEMENTATION PLAN FORMER JOHNS MANVILLE SITE 420 EAST 3RD STREET PITTSBURG, CALIFORNIA

JANUARY 23, 2019

Third Street Pittsburg Campus Owner LLC c/o Making Waves™ Foundation, Inc. 3220 Blume Drive, Suite 250 Richmond, California 94806	2 Copies
Department of Toxic Substances Control Megan Indermill Environmental Scientist – Project Manager 7 00 Heinz Avenue, Suite 100 Berkeley, California 94710-2721	Electronic Only
PES Electronic File	

PES Environmental, Inc.
Engineering & Environmental Services

February 26, 2021

999.014.01.010

California Department of Toxic Substances Control
Site Mitigation and Brownfields Reuse Program
Attention: Ms. Isabella Roman
700 Heinz Avenue, Suite 200
Berkeley, California 94710-2721

SEMI-ANNUAL OPERATION AND MAINTENANCE REPORT
NORTH PARCEL AND FORMER JOHNS MANVILLE PLANT SITE
420 EAST THIRD STREET
PITTSBURG, CALIFORNIA
MARCH 1, 2020 THROUGH AUGUST 31, 2020

Dear Ms. Roman:

This letter, prepared by PES Environmental, Inc. (PES), presents results of the Semi-Annual Operation and Maintenance (O&M) inspections for the North Parcel and Former Johns Manville Plant Parcel at and in the vicinity of 420 East Third Street (the "Site") in Pittsburg, California (see Plates 1 & 2 for the Site Location and Site Plan; respectively). This inspection was conducted on the behalf of the property owners, Third Street Pittsburg LLC (North Parcel) and Third Street Pittsburg Campus Owner LLC (Plant and Berm Parcels). Collectively these entities will be referred to as Owner for this report. Quarterly inspection results associated with the Rodent Mitigation Plan (RMP) are included in this report.

All work was completed in accordance with the March 5, 2012 approval by the California Department of Toxic Substances Control (DTSC) of a semi-annual inspection and reporting schedule, and in accordance with the RMP as described in the *Revised Combined Semi-Annual O&M Report – North and Berm Parcels* dated September 29, 2014.

BACKGROUND

North Parcel

The North Parcel, approximately 4.2 acres, was historically used by Johns Manville from approximately 1926 to the mid-1980s for storage of bulk asbestos fiber used in product manufacturing. Bulk asbestos was delivered by barge and freight to the adjacent waterfront and then stored on the North Parcel. Analytical results from subsurface investigations, beginning in 1986, identified asbestos present throughout the North Parcel, with the exception of the southeastern portion of the property. In order to mitigate the presence of

asbestos, an engineered soil cap was installed by Harding Lawson Associates (HLA) between mid-December 1987 and early March 1988. The construction of the soil cap included: (1) removing portions of existing fencing and constructing new periphery fencing to limit public access to the site; (2) scarifying, moisture conditioning, and compacting the existing ground surface; (3) placing a minimum 9-inch-thick layer of engineered fill, forming a continuous cover over the existing soil, and grading to facilitate site drainage; (4) installing an automated sprinkler system; and (5) hydroseeding the cover soil with an appropriate grass seed mixture. Initially, routine O&M inspection activities were completed periodically by Johns Manville personnel. Beginning in December 2004, O&M inspections were performed in accordance with the *Final Operations and Maintenance Plan, Asbestos Soil Cap, Johns Manville Pittsburg Plant – North Parcel Site, Pittsburg, California* prepared by HLA and dated July 31, 2001. In 2006, the *Final Operations and Maintenance Plan, North Parcel* prepared by Environmental Resources Management (ERM) was submitted to and approved by DTSC.

Plant Parcel

Between approximately 1925 and 1980, the Plant Parcel, approximately 20.5 acres, was utilized for manufacturing of asbestos-cement products, asphalt roofing materials, and asbestos-containing pipe covering. Numerous environmental investigations, beginning in 1986, evaluated soil and groundwater conditions at the site. The findings of the investigations indicated that a former evaporation pond and several other areas contained soils affected with total petroleum hydrocarbons (i.e., heavier fraction total petroleum hydrocarbons [TPH] quantified as diesel [TPHd] and TPH quantified as motor oil [TPHmo]) and/or asbestos containing materials (ACM). The remedial approach for the affected soil was to excavate and encapsulate the ACM- and TPH-affected soil into two engineered containment berms constructed along the eastern boundary of the Plant Parcel. The ACM-affected soil was reportedly placed in the below grade portions of the berms and the TPH-affected soil was placed on top of the ACM-affected soil (i.e., TPH-affected soil was not placed in the trench portion of the berms). The berms were capped with a "Tensar Product" and 2 feet of clean cover soil. As shown on Plate 2, the berm areas are comprised of the north and south berm. Since 2008, inspections of the berms have been performed on a semi-annual basis in accordance with the *Operation and Maintenance Plan for the Engineered Containment Berm Final Operations and Maintenance Plan* (Plant Parcel O&M Plan) dated October 1, 2008.

Recent Activities

During the semi-annual reporting period of March 1st, 2020 through August 31st, 2020, routine maintenance activities at the North Parcel and Former Plant Parcel, were conducted by J M Drummond Landscape Management (Drummond). Routine maintenance activities, completed by Drummond, generally consisted of removal (i.e. mowing) of excess vegetation, sapling removal, routine testing, and maintenance of the irrigation system, and tamping and/or backfilling of rodent mounds or burrows.

Semi-Annual Operation and Maintenance for North Parcel and Plant Parcel

Mr. Chris Pollio, Senior Staff Geologist with PES, conducted the semi-annual inspection of the engineered cap area on the north and south berm areas of the Plant Parcel on August 6th, 2020 and the North Parcel on August 14th, 2020. The semi-annual inspections were conducted in accordance with the North Parcel O&M Plan and the Former Plant Parcel O&M Plan. A summary of the findings of the inspection of each parcel is presented below.

General Observations and Maintenance

North Parcel

The North Parcel was observed to be in generally good condition at the time of the semi-annual inspection. The site and inspection observations are presented on Plate 3. Photos taken during the August 14, 2020 inspection are presented on Plates 8 and 9. Below is a summary of observations and recommendations made during the North Parcel inspection:

- Minor fresh gopher mounds/holes were observed;
- Numerous surface cracks were observed on the cap;
- Numerous areas of dry vegetation were observed on the cap and may require reseeding; and
- The road to the North Parcel access gate was overgrown with vegetation and may prevent a fire hazard when accessing the North Parcel by vehicle.

Plant Site

The Plant Parcel was observed to be in generally good condition at the time of the semi-annual inspection. The site and inspection observations are presented on Plate 4. Photos taken during the August 6, 2020 inspection are presented on Plates 5 through 7. Below is a summary of observations made during the Plant Parcel inspection:

- Several areas of the north berm appeared to have sparse and/or dead vegetation and may require reseeding;
- Vegetation in some areas on both parcels may require mowing;
- Several surface cracks were observed on the north berm;
- Numerous gopher mounds/holes were observed on the northern berm and several were observed on the southern berm. The number of gopher mounds/holes appears to have decreased from that seen during the prior semi-annual inspection in January 2020;

- Numerous small saplings and/or shrubs were observed on both the north and south berms;
- Rodent bait stations along both berms appeared to be empty;
- Fencing around the south berm remains damaged; and
- Minor amounts of trash were observed along the base of the berms and the western perimeter of the Plant Parcel.

Ongoing O&M Requirements

The following O&M requirements shall continue as described in the North Parcel O&M Plan and Plant Parcel O&M Plan until such a time that removal of the cells occur.

- Maintain fences and irrigation systems. Make modifications to irrigation systems to improve water spray coverage to support vegetation growth;
- Maintain adequate landscaping irrigation;
- Reseed cap area of North Parcel and both berms where appropriate;
- Continue quarterly rodent inspections and ground squirrel bait station requirements;
- Remove saplings and/or shrubs on berms;
- Remove trash along berms and Plant Parcel perimeter; and
- Continue general maintenance and repair on a quarterly schedule, as required by the O&M schedule.

Rodent Mitigation Plan Implementation and Recommendations

In accordance with the DTSC-approved RMP dated September 27, 2013 prepared by Arcadis U.S., Inc. (Arcadis), quarterly RMP inspections are required to mitigate the rodent population present on the berm areas of the of the Plant Parcel. Clark Pest Control (Clark) has provided rodent control services for several years at the site and was retained by the Owner in 2018 to maintain the bait stations on a routine schedule into the future.

Rodent activity was observed on the Berm Parcel but appears to have decreased since the last semi-annual reporting period. The PERC treatment conducted by Clark in April 2020 appeared to be successful in reducing rodent activity on the berms. As such, a regularly-scheduled semi-annual or annual PERC treatment of the berms will be conducted to control existing and future rodent populations. A PERC treatment was conducted in February 2021

and is scheduled for August 2021 as well. Maintaining the bait stations to control ground squirrel activity will also continue.

Current eradication measures should continue on the North Parcel.

Please call with any questions or comments regarding this document.

Very truly yours,

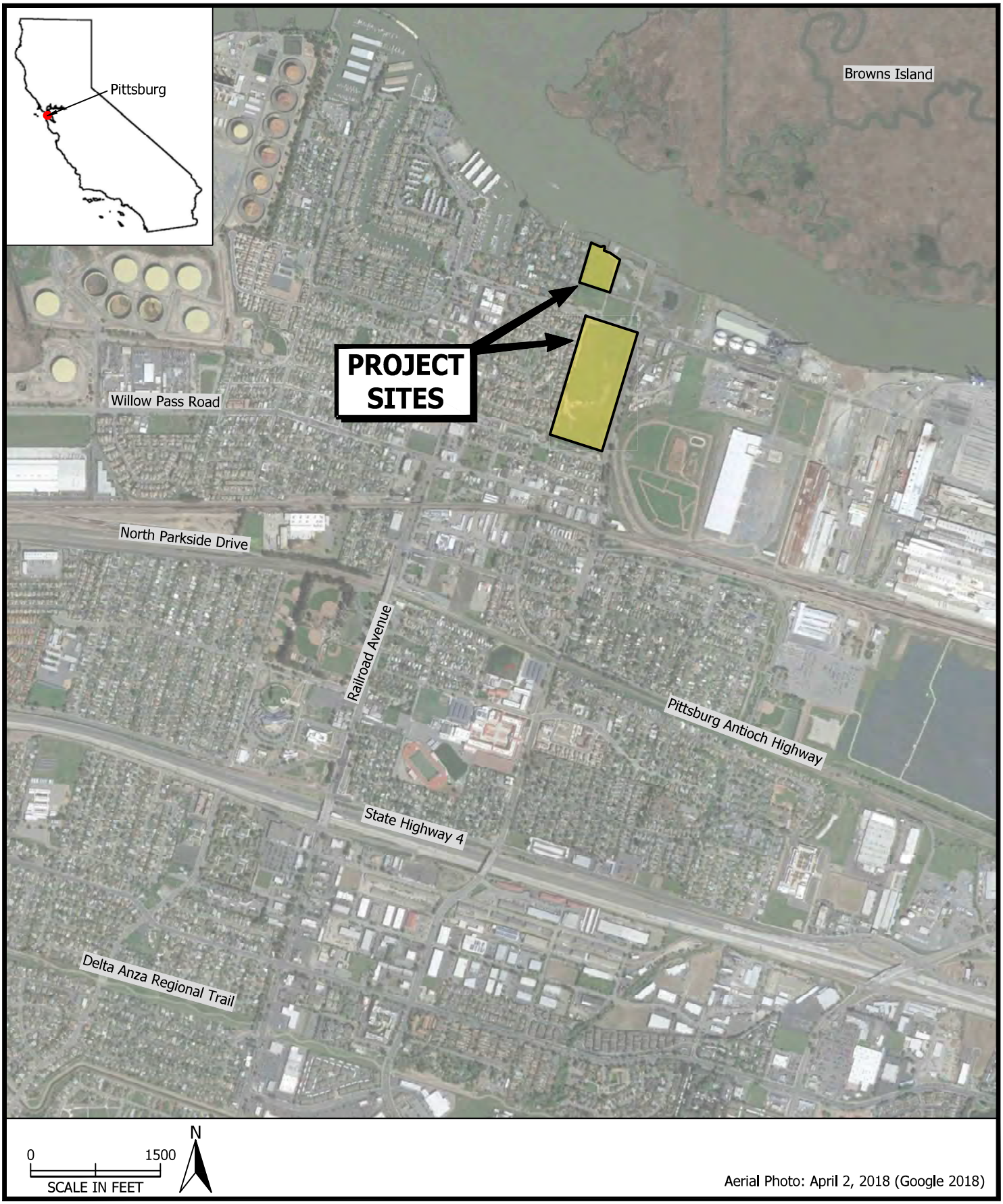
PES ENVIRONMENTAL, INC.

James P. Dunn, P.G.
Principal Geologist

Attachments: Plate 1 – Site Location
Plate 2 – Site Plan
Plate 3 – North Parcel Inspection Observations
Plate 4 – Plant Parcel Inspection Observations
Plates 5-9 – Site Photographs

cc: Ms. Corina Garcia, Making Waves

PLATES



PES Environmental, Inc.
Engineering & Environmental Services

Site Location
Semi-Annual Operation and Maintenance Report
North Parcel and Plant Parcel - August 2020
East 3rd Street Properties
Pittsburg, California

PLATE
1

999.014.01.010	99901401010_SAR-20Aug_1-2,4	JPD	2/21
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



PES Environmental, Inc.
Engineering & Environmental Services

Site Plan
Semi-Annual Operation and Maintenance Report
North Parcel and Plant Parcel - August 2020
East 3rd Street Properties
Pittsburg, California

PLATE
2

999.014.01.010	99901401010_SAR-20Aug_1-2,4	JPD	2/21
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



PES Environmental, Inc.
Engineering & Environmental Services

North Parcel Inspection Observations
Semi-Annual Operation and Maintenance Report
North Parcel and Plant Parcel - August 2020
East 3rd Street Properties
Pittsburg, California

PLATE
3

999.014.01.010	99901401010_SAR-20Aug_3	JPD	2/21
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

Plant Parcel

Plant Parcel

North Berm

South Berm

Hole in fence

Harbor Street

Explanation

- Parcel Boundary
- Berm Areas
- Lack of Vegetation/Dead Vegetation
- Gopher Mound/Hole
- Surface Cracks
- Small Sapling/Shrub
- C Irrigation Control Box
- T Trash

N

0 100

SCALE IN FEET

Aerial Photo: April 2, 2018 (Google 2018)

PES Environmental, Inc.
Engineering & Environmental Services

Plant Parcel Inspection Observations
Semi-Annual Operation and Maintenance Report
North Parcel and Plant Parcel - August 2020
East 3rd Street Properties
Pittsburg, California

PLATE 4

999.014.01.010	99901401010_SAR-20Aug_1-2,4	JPD	2/21
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



Photo 1.
View, facing south, of the northern berm with irrigation piping visible.
Photograph taken on August 6, 2020.



Photo 2.
View, facing north, of the northern berm with irrigation piping visible.
Photograph taken on August 6, 2020.



Photo 1.
View, facing south, of the southern berm with irrigation piping visible.
Photograph taken on August 6, 2020.



Photo 2.
View, facing north, of the northern berm from the southern berm.
Photograph taken on August 6, 2020.



Photo 1.
View of fresh gopher mounds on the northern berm.
Photograph taken on August 6, 2020.



Photo 2.
View of sapling on the southern berm. Photograph taken on August 6, 2020.



Photo 1.
View, facing southwest, of the southern portion of the North Parcel with irrigation piping visible. Photograph taken on August 14, 2020.



Photo 2.
View, facing west, of the North Parcel. Photograph taken on August 14, 2020.



Photo 1.
View, facing north, of the North Parcel with irrigation piping visible. Photograph taken on August 14, 2020.



Photo 2.
View, facing east, of the southern portion of the North Parcel.
Photograph taken on August 14, 2020.

January 2019 | Rail Safety Study

PITTSBURG SCHOOL CAMPUS

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Project Number MWF-04.0

PLACEWORKS

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1. Introduction

1.1 PURPOSE

This report presents the results of a Rail Safety Study (RSS) prepared for Making Waves Foundation, which is evaluating a new school site. The RSS identifies rail lines within a 1,500-foot radius of the school site and evaluates the actual or potential endangerment to school occupants from an incident (derailment or other accident) that could occur along the rail lines.

1.2 SCHOOL SITE LOCATION

The 33.27-acre project site is located at 420 and 595 East 3rd Street in the City of Pittsburg, Contra Costa County, California. The site encompasses accessor parcel numbers 073-050-001 and 073-010-013 and is bounded on the north by the New York Slough, on the east by industrial uses including the Los Medanos Energy Center, on the south by a small neighborhood park and East 8th Street, and on the west by single-family residences (Figure 1).

There is a railroad easement operated by Burlington Northern Santa Fe (BNSF) approximately 820 feet south of the school site and there are two above-grade crossings within 1,500 feet of the proposed school site. There are no at-grade crossings within 1,500 feet of the site. There are inactive railroad spurs located approximately 100 feet east of the site associated with neighboring industrial facilities. Additionally, there is a former 50-foot wide BNSF railroad right-of-way through parcel 073-010-013. The abandoned BNSF right-of-way was purchased by Making Waves Foundation and is a part of the current sports campus. The BNSF Pittsburg Railyard is located approximately 1,000 feet southeast of the site.

1.3 REGULATORY CONTEXT

Under Education Code Section 17251, the California Department of Education (CDE) requires preparation of a rail safety study if a district school is within 1,500 feet of a railroad easement. The Making Waves Foundation's Pittsburg site is not a district project, and is therefore not subject to the CDE site standards. This report was completed voluntarily to address a comment on the Draft Environmental Impact Report raising concerns regarding the site's proximity to railroad easements.

CDE standards and regulations for this process are presented in California Code of Regulations, Title 5, Sections 14010, 14011, and 14012. Information on assessing safety hazard related to railroads is discussed in Section 14010 (d):

> *If the proposed site is within 1,500 feet of a railroad track easement, a safety study shall be done by a competent professional trained in assessing cargo manifests, frequency, speed, and schedule of railroad traffic, grade, curves, type and condition of track needed for sound and safety barriers, need for pedestrian and vehicle safeguards at railroad*

crossings, presence of high pressure gas lines near the tracks that could rupture in the event of a derailment, preparation of an evacuation plan. In addition to the analysis, possible and reasonable mitigation measures must be identified.

1.4 STUDY OBJECTIVES

To meet the requirements of CCR Title 5 Sections 14010(d), and CDE's policy on railroads, the following objectives have been established:

- Identify all active and inactive rail lines located within 1,500 feet of proposed or existing school sites.
- Identify all natural gas and hazardous liquid pipelines crossing or located within railroad track easements that lie within 1,500 feet of proposed or existing school sites.
- Identify track characteristics, including whether it is single or double track, curvature, track gradient, switching equipment, signage, and warning systems.
- Identify locations and characteristics of crossings, including type (vehicular or pedestrian), relationship to rail line (at grade, elevated, or below grade), and accident history.
- Identify rail line operational information, including type of rail traffic (passenger, freight, or both), type of cargo (hazardous and/or non-hazardous), frequency of train traffic, length of trains, speed, and track maintenance schedule (if available).
- Conduct an incident analysis, using accident data provided by federal and state agencies (National Transportation Safety Board, Federal Railroad Administration, Federal Transportation Administration, and California Public Utilities Commission) to determine the probability of an accident occurring within 1,500 feet of the proposed school site.
- Conduct an additional site-specific analysis of potential risk to occupants of the proposed school site, based on rail line characteristics, train speeds, presence of at-grade vehicle crossings, etc.

1.5 ASSESSMENT METHODOLOGY

The RSS process is composed of three steps. The first step is to collect existing information on the rail line and conduct a qualitative safety assessment, based on rail traffic, type of cargo, train speed, and highway-rail crossings. The second step involves calculating the probability of an accident or derailment on the rail line within a 1,500-foot radius of the school. Finally, the accident/derailment probability is modified to take into account site-specific conditions, including accident data for the railroad owner/operator and the probability that the students would be in school when an accident occurs. The results are used to determine the likelihood that a railroad incident would result in an unacceptable safety hazard to occupants of the school.



Source: ESRI, 2018

0 750
Scale (Feet)

Future Sports Complex
School Campus
1,500-ft Radius
Above-Grade Railroad Crossing

Figure 1
School Site and Railroad Location Map

1. Introduction

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2. Railroad Operating Conditions

2.1 RAILROAD LOCATION AND OWNERSHIP

There is one railroad right-of-way that contains two mainline tracks within 1,500 feet of the school site. Burlington Northern Santa Fe Railway owns the double track rail lines within a 100-foot wide easement approximately 820 feet south of the school site. The tracks are oriented in a northwest-to-southeast direction with both freight and passenger traffic along this line.

BNSF owns and operates freight traffic associated with the Calwa-Richmond Branch of the Stockton Subdivision on the tracks near the school site. The BNSF Pittsburg Railyard is located approximately 1,000 feet southeast of the site. Additionally, there is Amtrak passenger train traffic on these tracks. Amtrak operates the San Joaquins commuter rail system along the railroad easement at this location. The San Joaquins rail system provides service from Bakersfield to Oakland. The nearest station to the site is the Antioch Station, which is approximately 3.3 mile east from the site.

There are several inactive BNSF railroad spurs within 1,500 feet of the site. Making Waves Foundation currently owns the former BNSF railroad right-of-way that bisects APN 073-010-013 (sports complex parcel). The former BNSF railroad right-of-way east of the site across Harbor Street was purchased from Making Waves Foundation by a third-party industrial facility, and the rail spurs east of the site will remain inactive (Making Waves Foundation, 2019).

There are two above-grade crossings within 1,500 feet of the site: 1) Harbor Street which is approximately 850 feet from the school site's southeast corner, and 2) Solari Street which is approximately 860 feet south from the school's property boundary. The location of the rail lines, highway-rail crossings, and railyard with respect to the school site are shown in Figure 1.

2.2 SITE RECONNAISSANCE

PlaceWorks conducted a site reconnaissance on January 2, 2019 during the hours of 8:50 pm to 12:50 pm (4 hour period). Photographs documenting the condition of the tracks and highway-rail crossings are provided in Appendix A. Table B in Appendix B provides more detailed observations from the site reconnaissance, including the number of locomotives, the number and type of cars, direction, and approximate speed. The reconnaissance consisted of evaluating the following:

- Train traffic
- Track condition
- Presence of spurs
- Highway-rail crossings

2. Railroad Operating Conditions

- Safety devices at each crossing (signage, flashing lights, and gates)
- Potential for trespass by students onto the railroad easement during travel to and from school.

2.2.1 Track Conditions

The railroad easement south of the site is approximately 100 feet wide and contains two main line BNSF tracks. The tracks are constructed of continuously welded steel, are maintained to Class 4 standards, and appeared to be in good condition at the time of the site reconnaissance. The tracks are relatively straight south of the school site but just west of the site, the track curves gently to the west.

The BNSF track is part of the Stockton Subdivision, which extends from Fresno (Calwa) to Richmond. The Federal Rail Administration (FRA) website states that there are a total of 34 trains per day that pass by the school site on this section of track. BNSF operates approximately 26 freight trains per day and Amtrak operates on-average 8 passenger trains per day along the tracks next to the school site. According to the latest BNSF timetable, the maximum speed for passenger trains along this section of tracks is 70 mph and freight trains are limited to 60 mph on the main tracks and 30 mph when entering the Pittsburg sidings.

A total of four trains (three BNSF trains and one Amtrak train) were observed during PlaceWorks' site reconnaissance on January 2, 2019 between the hours of 8:50 pm to 12:50 pm. Two of the observed three BNSF freight trains traveled back-and-forth from the BNSF Pittsburg Railyard during switching operations. Two of the three freight trains observed during PlaceWorks' site reconnaissance were intermodal trains with single stack container cars. The other BNSF freight train consisted of 17 tanker cars carrying liquefied petroleum gas (LPG) and 5 hopper cars. The freight trains observed during the site reconnaissance consisted of two to five locomotives and 7 to 48 intermodal container cars and/or tank cars, with an average estimated speed of 8 mph. The average speed of 8 mph primarily reflects the switching operations that were occurring at the Pittsburg Railyard; BNSF through trains most likely will be traveling at higher rates of speed. Note that the estimated speeds of the trains are approximations based on the train length and time it takes for the train to past by a fixed location.

The latest Amtrak schedule (December 17, 2018) for the San Joaquins line show a total of 8 trains per weekday passing by the site. However, only 6 of those trains travel by the site during typical school hours (8:00 am to 6:00 pm). Amtrak reports average speeds of 52 mph along the San Joaquins line. One Amtrak passenger train was observed passing by the school site during PlaceWorks' site reconnaissance. Although the maximum allowable passenger train speed along this section of tracks near the school site is 70 mph, the estimated speed during the site reconnaissance was 33 mph. As noted above, the estimated speed is an approximation based on the train length and time it takes for the train to pass by a fixed location. Table B in Appendix B provides more detailed observations from the site reconnaissance.

The Amtrak train observed during the site reconnaissance consisted of one locomotive and 5 bi-level coach cars. The Amtrak train consisted of one EMD F59PHI locomotive, which is typically used for the Capitol Corridor and San Joaquin lines. The trains are operated in a push-pull mode, with the eastbound Metrolink trains being pushed by a locomotive at the rear of the train and a cab car at the front of the train, and the westbound trains being pulled by a locomotive at the front of the train.

Amtrak is in the process of implementing Positive Train Control (PTC) technology on all routes throughout the nation. However, for the San Joaquins Line, Amtrak is currently waiting for interoperability testing to be conducted. PTC will reduce train-to-train collisions, over-speed derailments, and casualties or injuries to roadway workers. The PTC system involves a collision avoidance system using GPS equipment on the locomotive, data radio at the control center, and a bi-directional wireless data link between the train and control center. Warnings and overrides are made if the train exceeds established parameters, or a potential danger of collision is identified.

The railroad spurs east of the school site were observed to be inactive and not maintained. The spurs appear overgrown slightly with vegetation with scattered debris at various locations. There are no at-grade crossings within 1,500 feet of the school site. The Harbor Street and Solari Street crossings are grade separated with the railroad tracks passing over the roadways. Therefore, there is no potential for trespassing within the right-of-way or safety issues related to pedestrian usage at these locations.

2.2.2 Highway-Rail Crossings

There are two above-grade crossings within 1,500 feet of the site at Harbor Street, approximately 850 feet from the school site's southeast corner, and at Solari Street, which is approximately 860 feet south from the school's property boundary. However, there are no at-grade crossings within 1,500 feet of the school site. There is an at-grade crossing at Columbia Street (post mile: 1154.983; Crossing Inventory Number: 029743K), approximately 2,350 feet southeast of the school site. No accidents have been reported at this crossing in the past (FRA, 2018). With the presence of above-grade crossings, there would be no issues with potential trespassing of students within the railroad easement during travel to or from the school site.

2.3 HAZARDOUS MATERIAL TRANSPORT

Amtrak is a commuter rail line and does not ship hazardous materials. However, BNSF has the authorization to transport all types of cargo, based on Department of Transportation (DOT) and FRA regulations, which includes hazardous materials and chemicals. The freight traffic along the tracks near the school site is fairly heavy; three freight trains were observed during PlaceWorks' site reconnaissance within a 4-hour period between 8:50 pm and 12:50 pm. It is therefore possible that eight freight trains could pass by the school site during typical school hours (8:00 am to 6:00 pm). Two of the three observed freight trains along this line are associated with intermodal transport and were carrying single-stacked containers. Since all of these transported goods are shipped within enclosed container units, the possibility of a hazardous material release impacting the school site is minimal.

However, one of the freight trains that passed by the site during the site reconnaissance consisted predominantly of tanker cars that were carrying LPG. If the freight train was involved in a derailment, it could potentially impact the school site if one of the tanker cars released its contents. An incident involving a propane tank car can potentially result in a pool fire, flammable vapor cloud resulting in a flash fire or vapor cloud explosion, or boiling liquid expanding vapor explosion (BLEVE). Of the possible accident scenarios, the BLEVE scenario results in the largest potential impact distance in the event of a railyard fire continuously impinges a tank car for a period of time. The CDE recommends a significant injury threshold value of 15.77

kW/m² for thermal radiation heat flux in their *Guidance Protocol for School Site Pipeline Risk Analysis* (CDE, 2007). According to the CDE guidance, a 30 second exposure to a radiant heat flux of 15.77 kW/m² (or 5,000 BTU/hr-ft²) would result in a fatality probability of 1 percent (CDE, 2007).

The Areal Location Hazardous Atmospheres (ALOHA) computer model can be used to estimate the impact distance for tank releases (USEPA, 2016). The worst-case BLEVE scenario would be for an LPG tank located at the northwest corner of the railyard at a distance of 1,000 feet from the site. According to a worst-case release scenario, a tank car carrying 30,000 gallons of LPG would result in a burn duration of only 14 seconds. Since the effect of radiant heat exposure is both a function of thermal flux and the duration of exposure, the calculated significant injury threshold is higher for this short duration period (14 seconds) and was calculated to be 30 kW/m². Using a significant injury threshold of 30 kW/m² for a period of 14 seconds, the ALOHA model predicts an impact radius of 894 feet. Since the closest school site boundary is a distance of 1,000 feet from the postulated BLEVE accident location, students and staff at the proposed school site are not expected to sustain any significant injuries from this worst-case release scenario.

It also should be noted that this assumes a complete rupture of a LPG tank car at the potential closest location to the school site and assumes that the entire contents of the LPG tanker car is released catastrophically with immediately ignition. In most cases, a slow leak from the LPG tanker car would occur, which would enable students and staff at the school site to take evasive action. Also, the maximum temperature that a 30,000-gallon LPG tank can attain in 30 minutes is 384°F. Since the temperature at which the yield strength of steel begins to decrease is 800°F, it is unlikely that an exterior fire could cause rupture of the LPG tanker car (NPGA, 2015). Safety devices that are required on pressurized tanker cars include pressure relief devices, coupler vertical restraint systems for derailment resistance, tank head puncture-resistance systems, thermal protection systems, and bottom shell protection systems (AAR, 2012).

Overall, the transport of hazardous materials and chemicals constitutes less than 4% of the total freight traffic in California (AAR, 2017). Additionally, no hazardous material releases from BNSF or UP trains traveling within Contra Costa County have been reported in the last ten years (FRA, 2018). Given the distance between the BNSF Pittsburg Railyard and the school site (1,000 feet) and the low incidence of accidents and/or derailments in Contra Costa County, the probability of a hazardous material release resulting in an adverse impact at the school site is minimal.

2.4 HIGH PRESSURE NATURAL GAS AND HAZARDOUS LIQUID PIPELINES

Information obtained from the National Pipeline Mapping System (NPMS) and the analyses provided in the Pipeline Safety Hazard Assessment (PlaceWorks, 2018) indicate that there are no hazardous liquid or natural gas pipelines that cross the railroad rights-of-way within 1,500 feet of the school site. However, one high pressure Calpine (CPN) 24-inch natural gas transmission line is located in close proximity to the BNSF Pittsburg Railyard parcel.

The probability of pipeline damage occurring as a result of a derailment is included in PlaceWorks' pipeline analysis. The results of the pipeline assessment show that there would be no adverse impacts to students or staff at the school site in the unlikely event that one of the pipelines ruptured.

2.5 RAILROAD NOISE

Railroad noise levels are dependent on the type of track, number of locomotives, number of cars, speed of trains, and the presence of at-grade crossings that require the engineer to sound warning horns/whistles. Noise sources associated with freight and passenger trains include:

- Wheel/Rail Rolling Noise. This results from the interaction of steel wheels rolling on steel rails. It increases in direct proportion to train speed and increases at locations with special track work, such as crossovers and turnouts. The BNSF tracks in the vicinity of the school site are straight with one crossover. Based on PlaceWorks' site reconnaissance, the average speeds of freight and passenger trains in the vicinity of the school site were assumed to be 8 mph and 33 mph, respectively. The tracks in the vicinity of the school site are constructed of continuously welded steel, which greatly reduces the noise of passing trains.
- Train Horn. The CPUC requires a train audible warning to be sounded in advance of every at-grade crossing. The train horns must be between 96 and 110 decibels at 100 feet. Although there are no at-grade crossings within 1,500 feet of the school site, BNSF freight trains sounded their train horns during switching operations at the Pittsburg Railyard. Therefore, train horns were included in this analysis.

The noise from grade crossing bells was not evaluated because there are no at-grade crossings within 1,500 feet of the school site. The methodology presented in the Transit Noise and Vibration Impact Assessment (FTA, 2006) was used to calculate potential noise levels at the school site. For this evaluation, it was assumed that BNSF freight traffic consisted of one train per hour during school hours traveling at 8 mph and consisting of a maximum of five locomotives and 48 freight cars. For the Amtrak passenger trains, it was assumed that a maximum of two trains per hour would occur when school is in session, traveling at 33 mph, and consisting of one locomotive and 5 passenger cars. The nearest railroad track is approximately 840 feet south of the school's nearest classroom building. The classroom was conservatively assumed to be located at the southern property line of the site, although according to the school site plan the nearest classroom building would be located 900 feet from the nearest railroad track. The CREATE Railroad Noise Model spreadsheet (HMMH, 2006) was used to estimate sound levels for these trains at the nearest classroom building. A Category 3 Land Use (institutional land use with primarily daytime and evening uses, such as schools, libraries, churches, and theaters) was used for the analysis.

The results are provided in Appendix D and are summarized as follows:

- BNSF freight trains and Amtrak passenger trains (maximum 3 trains/hour during school hours) = 54 dBA L_{eq} (1 hour) at nearest school building (conservatively assumed to be located at the property line)

The CalGreen building code has applicable noise standards for non-residential buildings (State of California, 2017). The building code has a performance standard that the interior noise environment attributable to

exterior sources shall not exceed an hourly equivalent noise level (Leq – 1 hr) of 50 dBA. Assuming a reduction of 15 dBA for interior noise levels as compared to exterior noise levels and conservatively assuming that the windows in the nearest possible classroom at 840 feet from the nearest track are open, the highest predicted noise level at the nearest possible classroom to the tracks is 54 dBA – 15 dBA = 39 dBA Leq (1 hr). This noise level is below the CalGreen interior noise standard of 50 dBA Leq (1 hr). Therefore, noise from trains traveling along the railroad tracks are not anticipated to adversely impact students and staff at the school site.

2.6 POTENTIAL FOR TRESPASS OVER THE RAILROAD EASEMENT

A potential safety issue is the trespass of students in the railroad easements during their travel to and from school. Accidents involving trespassers on railroad easements account for more than 400 trespasser fatalities and 500 related injuries every year (Metro Magazine, 2015). Additionally, accidents involving trespassers on railroad easements accounted for 123 fatalities and 91 injuries in California in 2017 (CPUC, 2018).

The specified attendance area for the new school has not yet been determined, but residences are located both south and west of the BNSF railroad tracks. Thus, some of the students may have to cross the tracks to reach the school site. However, the highway-rail crossings are above grade with trains passing over Harbor Street and Solari Street in the vicinity of the school site. South of the school site, there are commercial buildings north of the railroad easement and chain link fencing along both sides of the easement. The presence of commercial buildings and fencing limits the potential for short-cutting across the track in these areas near the school site. The potential for trespass as a route to school is low due to the presence of above-grade crossings, fencing around the tracks in the vicinity of the school site, and limited access to the tracks at other locations. Additionally, the project would further reduce the potential for trespass through sidewalk improvements for pedestrians accessing the site.

3. Incident Analysis and Determination of Risk

The probability that an accident or derailment could occur along the section of track within 1,500 feet of the school site was determined based on railroad accident rates and site-specific conditions.

3.1 RAILROAD ACCIDENT RATES

Nationwide accident and derailment rates from the FRA for the last five years of record were used to determine the probability of rail accidents along the BNSF tracks (FRA, 2019). The results are summarized in Table 1.

Table 1 Nationwide BNSF Accident and Derailment Rates

Year	Total Train Miles (millions)	Total Train Accidents	Total Derailments	Derailment Probability	Accident Rate/Train Mile	Derailment Rate/Train Mile
2014	190.0	409	301	0.74	2.2E-06	1.6E-06
2015	185.7	424	316	0.75	2.3E-06	1.7E-06
2016	171.2	354	265	0.75	2.1E-06	1.5E-06
2017	179.7	350	272	0.78	1.9E-06	1.5E-06
2018	156.5	305	239	0.78	1.9E-06	1.5E-06
Average	176.6	368	279	0.76	2.1E-06	1.6E-06

The FRA website was also accessed to determine the railroad accident and derailment rates for passenger trains operated by Amtrak (FRA, 2019). The results are summarized in Table 2.

Table 2 Nationwide Amtrak Accident and Derailment Rates

Year	Total Train Miles (millions)	Total Train Accidents	Total Derailments	Derailment Probability	Accident Rate/Train Mile	Derailment Rate/Train Mile
2014	40.70	75	29	0.39	1.8E-06	7.1E-07
2015	40.00	82	27	0.33	2.1E-06	6.8E-07
2016	40.12	68	26	0.38	1.7E-06	6.5E-07
2017	40.05	64	19	0.30	1.6E-06	4.7E-07
2018	33.42	64	30	0.47	1.9E-06	9.0E-07
Average	38.86	71	26	0.37	1.8E-06	6.7E-07

Next, the railroad accident and derailment rates were determined using FRA data for BNSF main line tracks and Amtrak trains in Contra Costa County over a 5-year period from 2014 to 2018. The information is summarized in Table 3.

3. Incident Analysis and Determination of Risk

Table 3 BNSF and Amtrak Accidents and Derailments for Contra Costa County

Year	2014	2015	2016	2017	2018	Total
BNSF – Contra Costa County						
Accidents	2	3	3	0	0	**8**
Derailments	2	1	3	0	0	**6**
% of Accidents as Derailments	100%	33%	100%	0%	0%	**75%**
Total Hazardous Material Releases	0	0	0	0	0	**0**
% of Accidents as Hazardous Material Release	0%	0%	0%	0%	0%	**0%**
Amtrak – Contra Costa County						
Accidents	0	2	0	0	0	**2**
Derailments	0	0	0	0	0	**0**
% of Accidents as Derailments	0%	0%	0%	0%	0%	**0%**

As can be seen from these data, eight accidents have occurred along BNSF tracks within Contra Costa County in the last five years. The Contra Costa County derailment rate per train mile of 0.75 was used in the analysis for BNSF main lines near the school site because this rate is less than the nationwide derailment probability of 0.76. There were no releases of hazardous materials during any of the BNSF freight train accidents during this five-year period.

Only two accidents have occurred on Amtrak main tracks within Contra Costa County in the last five years. No derailments on main line tracks were reported during this time period. Because of the very low frequency of accidents in Contra Costa County for Amtrak passenger trains and the fact that there were no derailments on main line tracks, a site-specific adjustment to the Amtrak average accident and derailment rates could not be made. However, it should be noted that use of the nationwide Amtrak rates on all of the lines will overestimate the probability of accidents and derailments in the Contra Costa County area and in the vicinity of the school site. Releases of hazardous materials are not relevant for Amtrak systems since they only carry passengers.

The probability of a hazardous material release if an accident were to occur could not be calculated from the data reported above, because there were no hazardous material releases in Contra Costa County along BNSF tracks over the past five years. Therefore, the following equation was used to determine the probability of a hazardous material release:

$$P_{HAZ} = P_D \times P_T \times P_R$$

Where P_{HAZ} = probability of a derailment resulting in a hazardous material release
P_D = annual BNSF derailment rate = 1.6E-06
P_T = probability of train carrying hazardous materials (0.225 from AAR analysis)
P_R = probability of hazardous material release = 0.0029x + 0.0243 (Barkan et al, 2003)
x = speed of train in mph = 8 mph

The calculated probability of a hazardous material release is 1.7×10^{-8}.

Based on the information presented above, the accident and derailment rates used for this risk assessment are as follows:

- Main line accident rate for BNSF freight trains in Contra Costa County – 2.1 x 10^{-6}
- Main line derailment rate for BNSF freight trains in Contra Costa County – 1.6 x 10^{-6}
- Probability of a hazardous material release – 1.7 x 10^{-8}
- Main line accident rate for Amtrak passenger trains in Contra Costa County – 1.8 x 10^{-6}
- Main line derailment rate for Amtrak passenger trains in Contra Costa County – 6.7 x 10^{-7}

3.2 SITE SPECIFIC INCIDENT ANALYSIS

The likelihood of an accident or derailment occurring within a 1,500-foot radius of the school during school hours was determined using the calculated accident and derailment rates presented in Section 3.1. The site reconnaissance conducted by PlaceWorks and the FRA information indicate that the number of trains passing by the school site during typical school hours (8:00 am to 6:00 pm) is likely to be 14 (8 BNSF freight trains and 6 Amtrak trains). The length of the rail lines within a 1,500-foot radius of the school site was calculated to be 2,850 feet, or 0.54 mile. The probability of an accident or derailment on the BNSF tracks occurring within a 1,500-foot radius of the school site is calculated as follows:

$$PA = P(A) \times D \times N$$

or

$$PD = P(D) \times D \times N$$

or

$$PH = P(H) \times D \times N$$

Where	PA	=	probability of an accident occurring within a 1,500-foot radius of the school site
	PD	=	probability of a derailment occurring within a 1,500-foot radius of the school site
	PH	=	probability of a hazardous material release occurring within a 1,500-foot radius
	P(A)	=	weighted probability of a BNSF or Amtrak accident per mile per year = 2.1 x 10^{-6}
	P(D)	=	weighted probability of a BNSF or Amtrak derailment per mile per year = 1.6 x 10^{-6}
	P(H)	=	probability of a hazardous material release = 1.7 x 10^{-8}
	D	=	distance along rail tracks within 1,500 feet of the school = 2,850 feet = 0.54 mile
	N	=	number of trains per year, during school attendance hours and days
		=	14 trains per day during school hours x 180 days/year = 2,520 trains/year

The calculated probabilities are:

- Annual probability of a BNSF or Amtrak accident within 1,500 feet of the school site = 1.4 x 10^{-3}
- Annual probability of a BNSF or Amtrak derailment within 1,500 feet of the school site = 8.6 x 10^{-4}
- Annual probability of a BNSF hazardous material release within 1,500 feet of the school site = 1.3 x 10^{-5}

This is equivalent to a BNSF or Metrolink accident in the vicinity of the school site once every 710 years or a derailment once every 1,160 years. The probability of a hazardous material release happening in the vicinity of the school site is estimated to occur once every 76,900 years.

3.3 ADDITIONAL INCIDENT ANALYSIS

Based on a review of FRA accident reports in Contra Costa County for the last five years, there have been 8 rail accidents on BNSF rail lines. One major concern is the possibility of debris from a derailment impacting the students and staff at the school. A study conducted by the Los Angeles Unified School District (LAUSD) indicated that debris from a derailment typically extends no more than 128 feet (about 1.5 rail car lengths) from the centerline of the track. There is no risk of debris from a derailment reaching the school site because the BNSF track is approximately 840 feet from the school site at its nearest location and there are intervening structures between the tracks and the school property.

Another concern is the possibility of a derailment resulting in the release of hazardous materials that could impact students and staff at the school. As reported in Section 3.2, there have been no hazardous material releases from BNSF freight trains in Contra Costa County for the past five years of record. Additionally, the calculated probability of a hazardous material release happening in the vicinity of the school site is estimated to occur once every 76,900 years. The potential for a LPG tanker car accident and derailment at the railyard causing a release and ignition of LPG is discussed in detail in Section 2.3. The modeling results of the postulated BLEVE incident indicate that there would be no significant injury to students or staff at the school site in the unlikely event that this occurred.

In general, the transport of hazardous materials and chemicals does not constitute a major portion of the total freight traffic in California. In 2015, intermodal transport consisted of 70% of the total freight traffic originating in California and chemical transport was less than 4% of the total freight traffic (AAR, 2017). Also, the hazardous materials accident-caused release rate has declined by nearly 90% since 1980 (Barkan et al, 2003). Therefore, the probability of a hazardous material release impacting students and staff is considered low in the unlikely occurrence of a derailment near the school site.

4. Findings and Conclusions

Findings

- The Burlington Northern Santa Fe (BNSF) Railway Company owns the double mainline track easement located 820 feet south of the school site and operates freight traffic along these lines. The closest track is approximately 840 feet from the school's property boundary at its nearest location. Amtrak has trackage rights to run passenger trains along these tracks.
- The BNSF tracks are Class 4 with continuously welded rail. Freight trains passing by the school site were estimated to be traveling at approximately 8 mph and Amtrak passenger trains were estimated to be traveling at about 33 mph.
- There are approximately 26 BNSF freight trains that pass by the school site daily. A total of 8 BNSF trains were assumed to pass the site during typical school hours of 8:00 am to 6:00 pm.
- During PlaceWorks' site reconnaissance on January 2, 2019 between the hours of 8:50 pm and 12:50 pm, three BNSF freight trains and one Amtrak passenger trains were observed passing the Harbor Street above-grade crossing. The one observed Amtrak train was consistent with the latest Amtrak schedule.
- The BNSF freight trains typically consisted of two to five locomotives and 7 to 48 freight cars.
- Two of the three BNSF freight trains were intermodal transport trains with single-stacked containers. The other BNSF freight train consisted of 17 tanker cars carrying liquefied petroleum gas (LPG) and 5 hopper cars.
- The Amtrak commuter trains typically consisted of one locomotive and five bi-level passenger cars.
- There are eight Amtrak commuter trains passing by the school site during the hours between 6:20 am and 10:20 pm, according to the latest Amtrak schedule. A total of six Amtrak trains were assumed to pass the site during school hours of 8:00 am to 6:00 pm.
- There are no at-grade crossings within a 1,500-foot radius of the school site; however, there are two above-grade crossings at Harbor Street and Solari Street.

Conclusions

- The potential for trespass during travel to or from the school site is low due to the presence of above-grade crossings, fencing around the tracks in the vicinity of the school site, and limited access to the tracks at other locations.
- The probability of a BNSF or Amtrak accident or derailment occurring near the school site is calculated to be 1.4×10^{-3} and 8.6×10^{-4}, respectively. This is equivalent to a BNSF or Amtrak accident in the vicinity of the school site once every 710 years or a BNSF or Amtrak derailment once every 1,160 years.
- The possibility of debris from a derailment reaching the school site is negligible because of the distance between the main track and the school site and the presence of intervening structures between the tracks and the school property.

4. Findings and Conclusions

- The modeling results of the postulated boiling liquid expanding vapor explosion (BLEVE) incident indicate that there would be no significant injury to students or staff at the school site in the unlikely event that an incident involving a propane tank car occurred at the BNSF Pittsburg Railyard.
- The noise level from BNSF freight trains and Metrolink passenger trains in the interior of the nearest school building (assumed at property boundary) was estimated to be 39 dBA Leq (1 hr), which is below the CalGreen performance standard of 50 dBA Leq (1 hr).

In summary, there are no unusual circumstances present that would present special risks to students or staff at the school site from freight and passenger rail operations along the BNSF railroad tracks.

5. Recommendations

Based on the analysis presented in the previous sections, there are no mitigation measures or special provisions required at this school site.

The Safety Education Program incorporates Operation Lifesaver, which is a non-profit international public education program established in 1972 to end collisions, death, and injuries at highway-rail crossings and on railroad right-of-ways. The program addresses rail safety and teaches students, at age-appropriate levels, to understand rail signage, the importance of avoiding the railroad easements, and safe driving skills in the vicinity of railroads. Operation Lifesaver provides free presentations to schools and community groups, and offer free programs to students that attend schools within a 0.5-mile radius of a railroad track. The project sponsor has committed to inviting Operation Lifesaver to present as part of its annual orientation program.

5. Recommendations

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6. References

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Appendix A. Photographic Essay

Appendix

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PLACEWORKS

PHOTO ESSAY

Client Name: Making Waves Foundation

Site Location: Pittsburg School Campus

Project No.: MWF-04.0

Photo No:	Date:
1	1/2/2019

Description:

View looking to the north at the Harbor Street above-grade railroad crossing.



Photo No:	Date:
2	1/2/2019

Description:

View looking to the north of BNSF Pittsburg Railyard. Two locomotives are visible in the photograph.



PLACEWORKS

PHOTO ESSAY

Client Name: Making Waves Foundation

Site Location: Pittsburg School Campus

Project No.: MWF-04.0

Photo No:	**Date:**
3	1/2/2019

Description:

View looking to the north of BNSF Pittsburg Railyard. Two rows of tank cars are visible in the photograph.



Photo No:	**Date:**
4	1/2/2019

Description:

View looking to the north of Harbor Street above-grade railroad crossing. Hopper cars are visible in the photograph crossing above Harbor Street. The freight train was stopped on the track at the time of the photograph.



PLACEWORKS

PHOTO ESSAY

Client Name: Making Waves Foundation

Site Location: Pittsburg School Campus

Project No.: MWF-04.0

Photo No:	**Date:**
5	1/2/2019

Description:

View to the north of inactive spur track at Industry Road, east of Harbor Street.



Photo No:	**Date:**
6	1/2/2019

Description:

View to the south of inactive spur track at Industry Road, east of Harbor Street. Harbor Street is visible on the right side of photograph.



PLACEWORKS

PHOTO ESSAY

Client Name: Making Waves Foundation

Site Location: Pittsburg School Campus

Project No.: MWF-04.0

Photo No:	**Date:**
7	1/2/2019

Description:

View looking to the north at the Solari Street above-grade railroad crossing.



Photo No:	**Date:**
8	1/2/2019

Description:

Close up of tracks east of the site at the Loveridge Road at-grade crossing. Pictures of trackage closer to the site were not taken due to fencing on either side of the railroad easement and above-grade crossings. The tracks shown in photograph are approximately 1.3 miles east of the project site.



Appendix

Appendix B. Site Reconnaissance

Appendix

TABLE B

Harbor Street Crossing - Site Reconnaissance

1/2/2019 - 8:50 AM to 12:50 PM

Harbor Street Crossing (Double Track owned by BNSF)									
time	owner/ operator	# locomotives	locomotive number	# freight cars	# passenger cars	elapsed time (s)	direction	speed (mph)	notes
8:54 AM	Amtrak	1	2011		5	10	Eastbound	33	
9:37 AM	BNSF	2	122	7		60	Westbound	6	leaving railyard
9:38 AM	BNSF	2	1841	7		60	Eastbound	6	returning to railyard
10:13 AM	BNSF	3	5371	48		135	Westbound	16	
12:08 PM	BNSF	5	7267	22			Westbound	5	see notes
								13	**Average**

Scouting Observations - Harbor Street
Above-grade crossing with signage.
BNSF track appears to be continuously welded rail (CWR).
Train horns heard during reconnaissance as trains approached railyard.
At BNSF Pittsburg Railyard, two rows of tank cars (20-30 cars each row) were observed north of Pittsburg Antioch Highway. HazMat placards on all tank cars were designated as either 1830 (sulfuric acid, with more than 51% acid) or 1075 (liquified petroleum gas, LPG). Container cars were also observed at railyard.
At 12:08 PM, westbound BNSF freight train stopped multiple times while switching cars and locomotives at the railyard. Tank cars and hopper cars were observed traveling at low speeds (5 mph) or stopped at the Harbor Street crossing during switching activities.
Crossing Number: 029753R

Appendix

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Appendix

Appendix C. Highway-Rail Crossing Data

Appendix

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U. S. DOT CROSSING INVENTORY FORM

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

OMB No. 2130-0017

Instructions for the initial reporting of the following types of new or previously unreported crossings: For public highway-rail grade crossings, complete the entire inventory Form. For private highway-rail grade crossings, complete the Header, Parts I and II, and the Submission Information section. For public pathway grade crossings (including pedestrian station grade crossings), complete the Header, Parts I and II, and the Submission Information section. For Private pathway grade crossings, complete the Header, Parts I and II, and the Submission Information section. For grade-separated highway-rail or pathway crossings (including pedestrian station crossings), complete the Header, Part I, and the Submission Information section. For changes to existing data, complete the Header, Part I Items 1-3, and the Submission Information section, in addition to the updated data fields. Note: For private crossings only, Part I Item 20 and Part III Item 2.K. are required unless otherwise noted. An asterisk * denotes an optional field.

A. Revision Date *(MM/DD/YYYY)*	B. Reporting Agency	C. Reason for Update *(Select only one)*	D. DOT Crossing Inventory Number
03 / 04 / 2016	☒ Railroad ☐ Transit ☐ State ☐ Other	☒ Change in Data ☐ New Crossing ☐ Closed ☐ No Train Traffic ☐ Quiet Zone Update ☐ Re-Open ☐ Date Change Only ☐ Change in Primary Operating RR ☐ Admin. Correction	029753R

Part I: Location and Classification Information

1. Primary Operating Railroad	2. State	3. County
BNSF Railway Company [BNSF]	CALIFORNIA	CONTRA COSTA

4. City / Municipality	5. Street/Road Name & Block Number	6. Highway Type & No.
☒ In ☐ Near PITTSBURG	HARBOR STREET *(Street/Road Name)* | * *(Block Number)*	Not Yet Reported by State

7. Do Other Railroads Operate a Separate Track at Crossing? ☐ Yes ☒ No	8. Do Other Railroads Operate Over Your Track at Crossing? ☐ Yes ☒ No
If Yes, Specify RR	If Yes, Specify RR

9. Railroad Division or Region	10. Railroad Subdivision or District	11. Branch or Line Name	12. RR Milepost
☐ None CALIFORNIA	☐ None STOCKTON	☐ None CALWA-RICHMOND	| 1155.364 | *(prefix) | (nnnn.nnn) | (suffix)*

13. Line Segment *	14. Nearest RR Timetable Station *	15. Parent RR *(if applicable)*	16. Crossing Owner *(if applicable)*
7200	PITTSBURG YD, CA	☒ N/A	☐ N/A BNSF

17. Crossing Type	18. Crossing Purpose	19. Crossing Position	20. Public Access *(if Private Crossing)*	21. Type of Train	22. Average Passenger Train Count Per Day
☒ Public ☐ Private	☒ Highway ☐ Pathway, Ped. ☐ Station, Ped.	☐ At Grade ☐ RR Under ☒ RR Over	☐ Yes ☐ No	☒ Freight ☐ Intercity Passenger ☐ Commuter ☐ Transit ☐ Shared Use Transit ☐ Tourist/Other	☐ Less Than One Per Day ☐ Number Per Day 0

23. Type of Land Use
☒ Open Space ☐ Farm ☐ Residential ☐ Commercial ☐ Industrial ☐ Institutional ☐ Recreational ☐ RR Yard

24. Is there an Adjacent Crossing with a Separate Number?	25. Quiet Zone *(FRA provided)*
☐ Yes ☒ No If Yes, Provide Crossing Number	☒ No ☐ 24 Hr ☐ Partial ☐ Chicago Excused Date Established

26. HSR Corridor ID	27. Latitude in decimal degrees	28. Longitude in decimal degrees	29. Lat/Long Source
☒ N/A	*(WGS84 std: nn.nnnnnnn)* 38.0257181	*(WGS84 std: -nnn.nnnnnnn)* -121.8787326	☐ Actual ☒ Estimated

30.A. Railroad Use *	31.A. State Use *
30.B. Railroad Use *	31.B. State Use *
30.C. Railroad Use *	31.C. State Use *
30.D. Railroad Use *	31.D. State Use *
32.A. Narrative *(Railroad Use)* *	32.B. Narrative *(State Use)* *

33. Emergency Notification Telephone No. *(posted)*	34. Railroad Contact *(Telephone No.)*	35. State Contact *(Telephone No.)*
800-832-5452	817-352-1549	415-703-3722

Part II: Railroad Information

1. Estimated Number of Daily Train Movements

1.A. Total Day Thru Trains *(6 AM to 6 PM)*	1.B. Total Night Thru Trains *(6 PM to 6 AM)*	1.C. Total Switching Trains	1.D. Total Transit Trains	1.E. Check if Less Than One Movement Per Day ☐ How many trains per week?
0	0	0	0	1

2. Year of Train Count Data *(YYYY)*	3. Speed of Train at Crossing
2013	3.A. Maximum Timetable Speed *(mph)* 0 3.B. Typical Speed Range Over Crossing *(mph)* From 0 to 0

4. Type and Count of Tracks
Main 1 Siding 0 Yard 0 Transit 0 Industry 0

5. Train Detection *(Main Track only)*
☐ Constant Warning Time ☐ Motion Detection ☐AFO ☐ PTC ☐ DC ☐ Other ☒ None

6. Is Track Signaled?	7.A. Event Recorder	7.B. Remote Health Monitoring
☐ Yes ☒ No	☐ Yes ☐ No	☐ Yes ☐ No

U. S. DOT CROSSING INVENTORY FORM

A. Revision Date *(MM/DD/YYYY)*	PAGE 2	D. Crossing Inventory Number *(7 char.)*
03/04/2016		029753R

Part III: Highway or Pathway Traffic Control Device Information

1. Are there Signs or Signals? ☐ Yes ☒ No

2. Types of Passive Traffic Control Devices associated with the Crossing

2.A. Crossbuck Assemblies *(count)*	2.B. STOP Signs *(R1-1)* *(count)*	2.C. YIELD Signs *(R1-2)* *(count)*	2.D. Advance Warning Signs *(Check all that apply; include count)* ☐ None
0	0		☐ W10-1 _____ ☐ W10-3 _____ ☐ W10-11 _____ ☐ W10-2 _____ ☐ W10-4 _____ ☐ W10-12 _____

2.E. Low Ground Clearance Sign *(W10-5)*	2.F. Pavement Markings	2.G. Channelization Devices/Medians	2.H. EXEMPT Sign *(R15-3)*	2.I. ENS Sign *(I-13)* Displayed
☐ Yes *(count_____)* ☐ No	☐ Stop Lines ☐ Dynamic Envelope ☐ RR Xing Symbols ☐ None	☐ All Approaches ☐ Median ☐ One Approach ☐ None	☐ Yes ☐ No	☐ Yes ☐ No

2.J. Other MUTCD Signs ☐ Yes ☒ No	2.K. Private Crossing Signs *(if private)*	2.L. LED Enhanced Signs *(List types)*
Specify Type _____ Count _____ Specify Type _____ Count _____ Specify Type _____ Count _____	☐ Yes ☐ No	

3. Types of Train Activated Warning Devices at the Grade Crossing *(specify count of each device for all that apply)*

3.A. Gate Arms *(count)*	3.B. Gate Configuration	3.C. Cantilevered *(or Bridged)* Flashing Light Structures *(count)*	3.D. Mast Mounted Flashing Lights *(count of masts)* 0	3.E. Total Count of Flashing Light Pairs
Roadway 0 Pedestrian _____	☐ 2 Quad ☐ Full *(Barrier)* Resistance ☐ 3 Quad ☐ 4 Quad ☐ Median Gates	Over Traffic Lane 0 ☐ Incandescent Not Over Traffic Lane 0 ☐ LED	☐ Incandescent ☐ LED ☐ Back Lights Included ☐ Side Lights Included	0

3.F. Installation Date of Current Active Warning Devices: *(MM/YYYY)*	3.G. Wayside Horn	3.H. Highway Traffic Signals Controlling Crossing	3.I. Bells *(count)*
_____/_____ ☐ Not Required	☐ Yes Installed on *(MM/YYYY)* _____/_____ ☐ No	☐ Yes ☒ No	0

3.J. Non-Train Active Warning	3.K. Other Flashing Lights or Warning Devices
☐ Flagging/Flagman ☐ Manually Operated Signals ☐ Watchman ☐ Floodlighting ☐ None	Count 0 Specify type _____

4.A. Does nearby Hwy Intersection have Traffic Signals?	4.B. Hwy Traffic Signal Interconnection	4.C. Hwy Traffic Signal Preemption	5. Highway Traffic Pre-Signals	6. Highway Monitoring Devices *(Check all that apply)*
☐ Yes ☐ No	☐ Not Interconnected ☐ For Traffic Signals ☐ For Warning Signs	☐ Simultaneous ☐ Advance	☐ Yes ☐ No Storage Distance * _____ Stop Line Distance * _____	☐ Yes - Photo/Video Recording ☐ Yes – Vehicle Presence Detection ☐ None

Part IV: Physical Characteristics

1. Traffic Lanes Crossing Railroad	2. Is Roadway/Pathway Paved?	3. Does Track Run Down a Street?	4. Is Crossing Illuminated? *(Street lights within approx. 50 feet from nearest rail)*
☐ One-way Traffic ☐ Two-way Traffic ☐ Divided Traffic Number of Lanes _____	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No

5. Crossing Surface *(on Main Track, multiple types allowed)* Installation Date * *(MM/YYYY)* _____/_____ Width * _____ Length * _____
☐ 1 Timber ☐ 2 Asphalt ☐ 3 Asphalt and Timber ☐ 4 Concrete ☐ 5 Concrete and Rubber ☐ 6 Rubber ☐ 7 Metal
☐ 8 Unconsolidated ☐ 9 Composite ☐ 10 Other *(specify)* _____

6. Intersecting Roadway within 500 feet?	7. Smallest Crossing Angle	8. Is Commercial Power Available? *
☐ Yes ☒ No If Yes, Approximate Distance *(feet)* _____	☐ 0° – 29° ☐ 30° – 59° ☐ 60° - 90°	☐ Yes ☐ No

Part V: Public Highway Information

1. Highway System	2. Functional Classification of Road at Crossing	3. Is Crossing on State Highway System?	4. Highway Speed Limit
☐ (01) Interstate Highway System ☐ (02) Other Nat Hwy System (NHS) ☐ (03) Federal AID, Not NHS ☐ (08) Non-Federal Aid	☐ (0) Rural ☐ (1) Urban ☐ (1) Interstate ☐ (5) Major Collector ☐ (2) Other Freeways and Expressways ☐ (3) Other Principal Arterial ☐ (6) Minor Collector ☐ (4) Minor Arterial ☐ (7) Local	☐ Yes ☐ No	_____ MPH ☐ Posted ☐ Statutory

5. Linear Referencing System *(LRS Route ID)* *

6. LRS Milepost *

7. Annual Average Daily Traffic *(AADT)*	8. Estimated Percent Trucks	9. Regularly Used by School Buses?	10. Emergency Services Route
Year 1970 AADT _____	_____ %	☐ Yes ☒ No Average Number per Day 0	☐ Yes ☐ No

Submission Information - *This information is used for administrative purposes and is not available on the public website.*

Submitted by _____ Organization _____ Phone _____ Date _____

Public reporting burden for this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for information collection is 2130-0017. Send comments regarding this burden estimate or any other aspect of this collection, including for reducing this burden to: Information Collection Officer, Federal Railroad Administration, 1200 New Jersey Ave. SE, MS-25 Washington, DC 20590.

U. S. DOT CROSSING INVENTORY FORM

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

OMB No. 2130-0017

Instructions for the initial reporting of the following types of new or previously unreported crossings: For public highway-rail grade crossings, complete the entire inventory Form. For private highway-rail grade crossings, complete the Header, Parts I and II, and the Submission Information section. For public pathway grade crossings (including pedestrian station grade crossings), complete the Header, Parts I and II, and the Submission Information section. For Private pathway grade crossings, complete the Header, Parts I and II, and the Submission Information section. For grade-separated highway-rail or pathway crossings (including pedestrian station crossings), complete the Header, Part I, and the Submission Information section. For changes to existing data, complete the Header, Part I Items 1-3, and the Submission Information section, in addition to the updated data fields. Note: For private crossings only, Part I Item 20 and Part III Item 2.K. are required unless otherwise noted. An asterisk * denotes an optional field.

A. Revision Date (MM/DD/YYYY)	B. Reporting Agency	C. Reason for Update (Select only one)	D. DOT Crossing Inventory Number
03 / 04 / 2016	☒ Railroad ☐ Transit ☐ State ☐ Other	☒ Change in Data ☐ New Crossing ☐ Closed ☐ No Train Traffic ☐ Quiet Zone Update ☐ Re-Open ☐ Date Change Only ☐ Change in Primary Operating RR ☐ Admin. Correction	029743K

Part I: Location and Classification Information

1. Primary Operating Railroad	2. State	3. County
BNSF Railway Company [BNSF]	CALIFORNIA	CONTRA COSTA

4. City / Municipality	5. Street/Road Name & Block Number	6. Highway Type & No.
☒ In ☐ Near PITTSBURG	COLUMBIA STREET (Street/Road Name) | * (Block Number)	PVT

7. Do Other Railroads Operate a Separate Track at Crossing?	8. Do Other Railroads Operate Over Your Track at Crossing?
☐ Yes ☒ No If Yes, Specify RR	☒ Yes ☐ No If Yes, Specify RR UP

9. Railroad Division or Region	10. Railroad Subdivision or District	11. Branch or Line Name	12. RR Milepost
☐ None CALIFORNIA	☐ None STOCKTON	☐ None CALWA-RICHMOND	(prefix) | 1154.983 (nnnn.nnn) | (suffix)

13. Line Segment *	14. Nearest RR Timetable Station *	15. Parent RR (if applicable)	16. Crossing Owner (if applicable)
7200	PITTSBURG YD, CA	☒ N/A	☐ N/A BNSF

17. Crossing Type	18. Crossing Purpose	19. Crossing Position	20. Public Access (if Private Crossing)	21. Type of Train	22. Average Passenger Train Count Per Day
☐ Public ☒ Private	☒ Highway ☐ Pathway, Ped. ☐ Station, Ped.	☒ At Grade ☐ RR Under ☐ RR Over	☐ Yes ☒ No	☐ Freight ☐ Transit ☒ Intercity Passenger ☐ Shared Use Transit ☐ Commuter ☐ Tourist/Other	☐ Less Than One Per Day ☒ Number Per Day 8

23. Type of Land Use
☐ Open Space ☐ Farm ☐ Residential ☐ Commercial ☒ Industrial ☐ Institutional ☐ Recreational ☐ RR Yard

24. Is there an Adjacent Crossing with a Separate Number?	25. Quiet Zone (FRA provided)
☐ Yes ☒ No If Yes, Provide Crossing Number	☒ No ☐ 24 Hr ☐ Partial ☐ Chicago Excused Date Established

26. HSR Corridor ID	27. Latitude in decimal degrees	28. Longitude in decimal degrees	29. Lat/Long Source
☒ N/A	(WGS84 std: nn.nnnnnnn) 38.02418800	(WGS84 std: -nnn.nnnnnnn) -121.87186200	☐ Actual ☒ Estimated

30.A. Railroad Use *	31.A. State Use *
30.B. Railroad Use *	31.B. State Use *
30.C. Railroad Use *	31.C. State Use *
30.D. Railroad Use *	31.D. State Use *
32.A. Narrative (Railroad Use) *	32.B. Narrative (State Use) *

33. Emergency Notification Telephone No. (posted)	34. Railroad Contact (Telephone No.)	35. State Contact (Telephone No.)
800-832-5452	817-352-1549	415-703-3722

Part II: Railroad Information

1. Estimated Number of Daily Train Movements

1.A. Total Day Thru Trains (6 AM to 6 PM)	1.B. Total Night Thru Trains (6 PM to 6 AM)	1.C. Total Switching Trains	1.D. Total Transit Trains	1.E. Check if Less Than One Movement Per Day ☐ How many trains per week?
17	17	0	0	

2. Year of Train Count Data (YYYY)	3. Speed of Train at Crossing
2013	3.A. Maximum Timetable Speed (mph) 79 3.B. Typical Speed Range Over Crossing (mph) From 1 to 79

4. Type and Count of Tracks
Main 1 Siding 0 Yard 7 Transit 0 Industry 0

5. Train Detection (Main Track only)
☐ Constant Warning Time ☐ Motion Detection ☐AFO ☐ PTC ☐ DC ☐ Other ☒ None

6. Is Track Signaled?	7.A. Event Recorder	7.B. Remote Health Monitoring
☐ Yes ☒ No	☐ Yes ☐ No	☐ Yes ☐ No

U. S. DOT CROSSING INVENTORY FORM

A. Revision Date *(MM/DD/YYYY)*	PAGE 2	D. Crossing Inventory Number *(7 char.)*
03/04/2016		029743K

Part III: Highway or Pathway Traffic Control Device Information

1. Are there Signs or Signals? ☒ Yes ☐ No

2. Types of Passive Traffic Control Devices associated with the Crossing

2.A. Crossbuck Assemblies *(count)*	2.B. STOP Signs *(R1-1) (count)*	2.C. YIELD Signs *(R1-2) (count)*	2.D. Advance Warning Signs *(Check all that apply; include count)* ☐ None
2	0		☐ W10-1 _____ ☐ W10-3 _____ ☐ W10-11 _____ ☐ W10-2 _____ ☐ W10-4 _____ ☐ W10-12 _____

2.E. Low Ground Clearance Sign *(W10-5)*	2.F. Pavement Markings	2.G. Channelization Devices/Medians	2.H. EXEMPT Sign *(R15-3)*	2.I. ENS Sign *(I-13)* Displayed
☐ Yes *(count_____)* ☐ No	☐ Stop Lines ☐ Dynamic Envelope ☐ RR Xing Symbols ☐ None	☐ All Approaches ☐ Median ☐ One Approach ☐ None	☐ Yes ☐ No	☐ Yes ☐ No

2.J. Other MUTCD Signs ☐ Yes ☒ No	2.K. Private Crossing Signs *(if private)*	2.L. LED Enhanced Signs *(List types)*
Specify Type _____ Count _____ Specify Type _____ Count _____ Specify Type _____ Count _____	☒ Yes ☐ No	

3. Types of Train Activated Warning Devices at the Grade Crossing *(specify count of each device for all that apply)*

3.A. Gate Arms *(count)*	3.B. Gate Configuration	3.C. Cantilevered *(or Bridged)* Flashing Light Structures *(count)*	3.D. Mast Mounted Flashing Lights *(count of masts)* 2	3.E. Total Count of Flashing Light Pairs
Roadway 0 Pedestrian _____	☐ 2 Quad ☐ 3 Quad ☐ 4 Quad ☐ Full *(Barrier)* Resistance ☐ Median Gates	Over Traffic Lane 0 ☐ Incandescent Not Over Traffic Lane 0 ☐ LED	☐ Incandescent ☐ LED ☐ Back Lights Included ☐ Side Lights Included	0

3.F. Installation Date of Current Active Warning Devices: *(MM/YYYY)*	3.G. Wayside Horn	3.H. Highway Traffic Signals Controlling Crossing	3.I. Bells *(count)*
_____/_____ ☐ Not Required	☐ Yes Installed on *(MM/YYYY)* _____/_____ ☐ No	☐ Yes ☒ No	0

3.J. Non-Train Active Warning	3.K. Other Flashing Lights or Warning Devices
☐ Flagging/Flagman ☐ Manually Operated Signals ☐ Watchman ☐ Floodlighting ☐ None	Count 0 Specify type _____

4.A. Does nearby Hwy Intersection have Traffic Signals?	4.B. Hwy Traffic Signal Interconnection	4.C. Hwy Traffic Signal Preemption	5. Highway Traffic Pre-Signals	6. Highway Monitoring Devices *(Check all that apply)*
☐ Yes ☐ No	☐ Not Interconnected ☐ For Traffic Signals ☐ For Warning Signs	☐ Simultaneous ☐ Advance	☐ Yes ☐ No Storage Distance * _____ Stop Line Distance * _____	☐ Yes - Photo/Video Recording ☐ Yes – Vehicle Presence Detection ☐ None

Part IV: Physical Characteristics

1. Traffic Lanes Crossing Railroad	2. Is Roadway/Pathway Paved?	3. Does Track Run Down a Street?	4. Is Crossing Illuminated? *(Street lights within approx. 50 feet from nearest rail)*
☐ One-way Traffic ☐ Two-way Traffic ☐ Divided Traffic Number of Lanes _____	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No

5. Crossing Surface *(on Main Track, multiple types allowed)* Installation Date * *(MM/YYYY)* _____/_____ Width * _____ Length * _____

☐ 1 Timber ☐ 2 Asphalt ☐ 3 Asphalt and Timber ☐ 4 Concrete ☐ 5 Concrete and Rubber ☐ 6 Rubber ☐ 7 Metal

☒ 8 Unconsolidated ☐ 9 Composite ☐ 10 Other *(specify)* _____

6. Intersecting Roadway within 500 feet?	7. Smallest Crossing Angle	8. Is Commercial Power Available? *
☐ Yes ☒ No If Yes, Approximate Distance *(feet)* _____	☐ 0° – 29° ☐ 30° – 59° ☐ 60° - 90°	☐ Yes ☐ No

Part V: Public Highway Information

1. Highway System	2. Functional Classification of Road at Crossing	3. Is Crossing on State Highway System?	4. Highway Speed Limit
☐ (01) Interstate Highway System ☐ (02) Other Nat Hwy System (NHS) ☐ (03) Federal AID, Not NHS ☐ (08) Non-Federal Aid	☐ (0) Rural ☐ (1) Urban ☐ (1) Interstate ☐ (5) Major Collector ☐ (2) Other Freeways and Expressways ☐ (3) Other Principal Arterial ☐ (6) Minor Collector ☐ (4) Minor Arterial ☐ (7) Local	☐ Yes ☐ No	_____ MPH ☐ Posted ☐ Statutory

5. Linear Referencing System *(LRS Route ID)* *

6. LRS Milepost *

7. Annual Average Daily Traffic *(AADT)*	8. Estimated Percent Trucks	9. Regularly Used by School Buses?	10. Emergency Services Route
Year 1970 AADT _____	_____ %	☐ Yes ☒ No Average Number per Day 0	☐ Yes ☐ No

Submission Information - *This information is used for administrative purposes and is not available on the public website.*

Submitted by _____ Organization _____ Phone _____ Date _____

Public reporting burden for this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for information collection is 2130-0017. Send comments regarding this burden estimate or any other aspect of this collection, including for reducing this burden to: Information Collection Officer, Federal Railroad Administration, 1200 New Jersey Ave. SE, MS-25 Washington, DC 20590.

Worst-Case BLEVE Scenario
30,000 gallon LPG Tank Car

Text Summary

ALOHA® 5.4.7

```
 SITE DATA:
   Location: PITTSBURG, CALIFORNIA
   Building Air Exchanges Per Hour: 0.63 (unsheltered single storied)
   Time: January 8, 2019  1502 hours PST (using computer's clock)

 CHEMICAL DATA:
   Chemical Name: PROPANE
   CAS Number: 74-98-6                    Molecular Weight: 44.10 g/mol
   AEGL-1 (60 min): 5500 ppm   AEGL-2 (60 min): 17000 ppm   AEGL-3 (60 min):
33000 ppm
   IDLH: 2100 ppm     LEL: 21000 ppm      UEL: 95000 ppm
   Ambient Boiling Point: -43.7° F
   Vapor Pressure at Ambient Temperature: greater than 1 atm
   Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

 ATMOSPHERIC DATA: (MANUAL INPUT OF DATA)
   Wind: 3 meters/second from W at 3 meters
   Ground Roughness: urban or forest      Cloud Cover: 5 tenths
   Air Temperature: 77° F                 Stability Class: D
   No Inversion Height                    Relative Humidity: 50%

 SOURCE STRENGTH:
   BLEVE of flammable liquid in horizontal cylindrical tank
   Tank Diameter: 9.78 feet               Tank Length: 60 feet
   Tank Volume: 33700 gallons
   Tank contains liquid
   Internal Storage Temperature: 77° F
   Chemical Mass in Tank: 123,560 pounds
   Tank is 89% full
   Percentage of Tank Mass in Fireball: 100%
   Fireball Diameter: 243 yards           Burn Duration: 14 seconds

 THREAT ZONE:
   Threat Modeled: Thermal radiation from fireball
   Red    : 298 yards --- (30 kW/(sq m))
```

894 feet

Appendix

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Appendix

Appendix D. CREATE Railroad Noise Model Results

APPENDIX D

RAILROAD NOISE COMPUTATION

The BNSF tracks located approximately 840 feet south of the school site appeared to be in good condition at the time of the site reconnaissance. Based on the site reconnaissance, a speed of 8 mph of freight traffic and a speed of 33 mph for passenger traffic was assumed. For this evaluation, it was conservatively assumed that there was 1 BNSF train per hour (5 locomotives, 48 freight cars) and 2 Amtrak trains per hour (1 locomotive, 5 commuter rail cars) during school hours for the train movement analysis. For this train horn noise analysis, the locomotive horn was assumed to sound at 110 dBA at a distance of 50 feet. The BNSF Pittsburg Railyard is located 1,000 feet south of the school site and train movement at the railyard was included in this analysis.

This analysis calculates the noise levels at the school property line.

Train Movement Hourly-L_{eq} Calculation:

Please see the attached CREATE Railroad Noise Model spreadsheet (HMMH, 2006)

Calculated L_{eq} (1 hr) at nearest classroom facade for 1 freight train per hour and 2 commuter trains per hour = 41 dB Leq (1 hr)

Train Horn Noise – Horn Sounded Near School Site

The reference SEL for train horn soundings is 110 dB SEL at 50 feet (FTA, 2008)

L_{eq} horn (day) = SEL_{ref} + 10 log (V_d) – 35.6 where V_d = number of trains per hour

V_d = 3

L_{eq} horn (1 hr) = 110 + 10 log (3) – 35.6 = 79 dBA at 50 feet

Attenuation = -20 x $\log_{10}$ ($distance_{new}$)/($distance_{ref}$) = -20 x $\log_{10}$ (840/50) = -25 dBA

L_{eq} horn (1 hr) at 360 feet = 79 - 25 = 54 dBA Leq (1 hr) at nearest classroom building

Combined Locomotive, Rail Cars, Railyard, and Train Horn Noise

10 log [$10^{(41/10)}$ + $10^{(54/10)}$] = 54 dBA Leq (1 hr)

54 DBA Leq (1 hr) – 15 (conservatively assuming windows in classroom are open) = 39 dBA Leq (1 hr) classroom interior noise level

Noise Model Based on Federal Transit Adminstration General Transit Noise Assessment
Developed for Chicago Create Project
Copyright 2006, HMMH Inc.
Case: Pittsburg School Campus

RESULTS		
Noise Source	**Leq - 1-hr (dB)**	
All Sources	41	
Source 1	37	
Source 2	32	
Source 3	33	
Source 4	24	
Source 5	37	
Source 6	0	
Source 7	0	
Source 8	0	

Enter noise receiver land use category below.

LAND USE CATEGORY	
Noise receiver land use category (1, 2 or 3)	

Enter data for up to 8 noise sources below - see reference list for source numbers.

NOISE SOURCE PARAMETERS				
Parameter	**Source 1**		**Source 2**	
Source Num.	Freight Locomotive	9	Freight Cars	10
Distance (source to receiver)	distance (ft)	840	distance (ft)	840
Noisiest Hour of	speed (mph)	8	speed (mph)	8
Activity During	trains/hour	1	trains/hour	1
Sensitive Hours	locos/train	5	length of cars (ft) / train	2880
Wheel Flats?		0.00%	% of cars w/ wheel flats	0.00%
Jointed Track?	Y/N	n	Y/N	n
Embedded Track?	Y/N	n	Y/N	n
Aerial Structure?	Y/N	n	Y/N	n
Barrier Present?	Y/N	n	Y/N	n
Intervening Rows of of Buildings	number of rows	5	number of rows	5

			3		

Source 3		**Source 4**		**Source 5**	
Commuter Diesel Locomotive	2	Commuter Rail Cars	3	Rail Yard or Shop	17
distance (ft)	840	distance (ft)	840	distance (ft)	1000
speed (mph)	33	speed (mph)	33	trains/hour	1
trains/hour	2	trains/hour	2		
locos/train	1	cars/train	5		
	0.00%	% of cars w/ wheel flats	0.00%		
Y/N	n	Y/N	n		
Y/N	n	Y/N	n		
Y/N	n	Y/N	n		
Y/N	n	Y/N	n	Y/N	n
number of rows	5	number of rows	5	number of rows	0

ROCKRIDGE GEOTECHNICAL

Prepared for **Making Waves Academy & Foundation**

GEOTECHNICAL INVESTIGATION
PROPOSED NEW CAMPUS & SPORTS COMPLEX
MAKING WAVES ACADEMY
595 E 3RD STREET
PITTSBURG, CALIFORNIA

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May 11, 2018
Project No. 18-1477

270 Grand Avenue
Oakland, CA 94610
www.rockridgegeo.com
510 420-5738 tel
510 652-3096 fax

ROCKRIDGE GEOTECHNICAL

May 11, 2018
Project No. 17-1353

Steven J. Roth
Chief Operating Officer
Making Waves Academy & Foundation
3220 Blume Drive, Suite 250
Richmond, CA 94806

Subject: Proposal for Geotechnical Investigation
Proposed New Campus and Sport Complex
Making Waves Pittsburg Campus
East 3rd Street
Pittsburg, California

Dear Mr. Roth,

We are pleased to present our geotechnical investigation report, dated May 11, 2018, for the proposed Making Waves Pittsburg campus to be constructed at East 3rd Street in Pittsburg, California. Our services were provided in accordance with our proposal dated March 13, 2018.

The project includes development of two main sites designated as the Plant Parcel and Tesoro parcels. Development of the two sites will include a new campus and sport complex. A description of the two sites and the proposed construction is as follows:

1) The Plant Parcel consists of a rectangular-shaped, vacant lot located at 420 East 3rd Street. The site is relatively level with approximate plan dimensions of 630 by 1415 feet and includes a 10- to 15-foot-tall berm along the eastern perimeter of the site. The site is bordered by 3rd Street to the north, Harbor Street to the east, concrete flatwork and landscaping to the south, and a residential development to the west. Previous investigations were performed at this site by Treadwell & Rollo, which included advancing 61 cone penetration tests, drilling 13 exploratory borings, and performing laboratory testing on selected soil samples. Treadwell & Rollo also performed services during remedial grading in 2008 to confirm the fill placed during remediation was compacted per their geotechnical report. Current plans for this site are to construct a new campus on this parcel, which will include one-story and two-story structures, basketball and tennis courts, asphalt-paved parking, and landscaping.

2) The Tesoro parcels are located at 595 East 3rd Street, which is directly north of the proposed new campus. The site is an L-shaped lot with maximum plan dimensions of approximately 600 by 1,100 feet and is relatively level with elevations ranging from approximately 8 to 12 Feet (NAVD 88). The property was previously occupied by a Tesoro petroleum coke storage facility generally consisting of one-story structures and storage tanks near the center and southeastern portion of the site; however, these structures have been demolished. The site is bordered by East 3rd Street and vacant lots to the south, a vacant lot to the west, a slough off the San Joaquin River known as the New York Slough to the north, and the Koch Carbon plant to the east. The schematic plans call for construction of a one-story structure, softball/baseball fields and a track along the northern perimeter of the site, and a one-story structure and surface parking on the southern portion of the site. The finished floor and improvement elevations are not currently known.

From a geotechnical standpoint, we conclude the site can be developed as planned, provided the recommendations presented in this report are incorporated into the project plans and specifications and are implemented during construction. The primary geotechnical concerns at the project site include:

- settlement due to the underlying undocumented fill of varying thickness that blankets the site,
- settlement due to compression of the weak, compressible bay deposits underlying portions of the site,
- the potential for up to 5-1/2 inches of liquefaction-induced ground settlement in some areas,
- the potential for liquefaction-induced lateral spread displacements up to 15 to 20 feet along the waterfront,
- the presence of subsurface obstructions that may interfere with future construction activities and affect the performance of new foundations,
- relatively shallow groundwater, and
- constraints associated with potentially contaminated soil and groundwater.

The primary geotechnical concern at the project site from a foundation standpoint is the presence of potentially liquefiable soil layers in combination with compressible clay deposits encountered throughout a majority of the site. The compressible clay deposits may be susceptible to settlement under new fill and foundation loads, as discussed in Section 7.1 of the report. We estimate additional settlement up to approximately 5-1/2

inches of due to liquefaction may occur following a major earthquake. Therefore, new structures supported on a shallow foundation system founded on non-improved soil may experience seismically induced settlement up to approximately 5-1/2 inches due to post-liquefaction reconsolidation following a major earthquake.

If the estimated total settlement (static plus seismic) discussed in Section 7.1 of this report is acceptable from a structural standpoint, the proposed new buildings may supported on mat foundations bearing on unimproved soil. If the estimated settlement (static plus seismic) cannot be tolerated by the structures, then the proposed new buildings may be supported on a shallow foundation system, such as footings or a mat, bearing on improved soil provided: (1) the soil improvement is implemented to mitigate liquefaction hazards, and (2) the soil improvement extends to a depth that would reduce differential settlement of the structure under seismic conditions to a tolerable amount.

The recommendations contained in our report are based on a limited subsurface investigation and laboratory testing programs. Consequently, variations between expected and actual subsurface conditions may be found in localized areas during construction. Therefore, we should be engaged to observe grading and foundation installation during which time we may make changes in our recommendations, if deemed necessary.

We appreciate the opportunity to provide our services to you on this project. If you have any questions, please call.

Sincerely yours,
ROCKRIDGE GEOTECHNICAL, INC.





Tessa E. Williams, P.E.
Project Engineer

Craig S. Shields, P.E., G.E.
Principal Geotechnical Engineer

Enclosure

ROCKRIDGE GEOTECHNICAL

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APPENDIX A

Figures A-1 through A-8 Cone Penetration Test Results

APPENDIX B

Figure B-1 Plasticity Chart

Figure B-2 Particle Size Distribution

R-value Test Results

Corrosivity Test Results

APPENDIX C

Cone Penetration Test Results, Boring Logs, and Laboratory Test Results by Others

ROCKRIDGE GEOTECHNICAL

GEOTECHNICAL INVESTIGATION
PROPOSED NEW CAMPUS AND SPORT COMPLEX
MAKING WAVES PITTSBURG CAMPUS
EAST 3RD STREET
Pittsburg, California

1.0 INTRODUCTION

This report presents the results of the geotechnical investigation performed by Rockridge Geotechnical, Inc. for the proposed new Making Waves school campus and sport complex to be constructed at East 3rd Street in Pittsburg, California. The site is at the intersection of East 3rd and Harbor streets, as shown on the Site Location Map, Figure 1.

The project includes development of two main sites designated as the Plant Parcel and Tesoro parcels. Development of the two sites will include a new campus and sport complex. A description of the two sites and the proposed construction is as follows:

1) The Plant Parcel consists of a rectangular-shaped, vacant lot located at 420 East 3rd Street. The site is relatively level with approximate plan dimensions of 630 by 1415 feet and includes a 10- to 15-foot-tall berm along the eastern perimeter of the site. The site is bordered by 3rd Street to the north, Harbor Street to the east, concrete flatwork and landscaping to the south, and a residential development to the west. Previous investigations were performed at this site by Treadwell & Rollo, which included advancing 61 cone penetration tests, drilling 13 exploratory borings, and performing laboratory testing on selected soil samples. Treadwell & Rollo also performed services during remedial grading in 2008 to confirm the fill placed during remediation was compacted per their geotechnical report. Current plans for this site are to construct a new campus on this parcel, which will include one-story and two-story structures, basketball and tennis courts, asphalt-paved parking, and landscaping.

2) The Tesoro parcels are located at 595 East 3rd Street, which is directly north of the proposed new campus. The site is an L-shaped lot with maximum plan dimensions of approximately 600 by 1,100 feet and is relatively level with elevations ranging from

approximately 8 to 12 Feet (NAVD 88). The property was previously occupied by a Tesoro petroleum coke storage facility generally consisting of one-story structures and storage tanks near the center and southeastern portion of the site; however, these structures have been demolished. The site is bordered by East 3rd Street and vacant lots to the south, a vacant lot to the west, a slough off the San Joaquin River known as the New York Slough to the north, and the Koch Carbon plant to the east. The schematic plans call for construction of a one-story structure, softball/baseball fields and a track along the northern perimeter of the site, and a one-story structure and surface parking on the southern portion of the site. The finished floor and improvement elevations are not currently known.

The finished floor and improvement elevations are not currently known. We assume portions of the site will require cut and fill on the order of 3 to 5 feet during construction of the proposed sport complex at the Tesoro Parcel. Structural design loads were not available at the time this report was prepared; however, we anticipate the loads will be light as is typical for these types of structures.

2.0 SCOPE OF WORK

Our investigation was performed in accordance with our proposal dated March 13, 2018. Our scope of work consisted reviewing existing subsurface information, further evaluating subsurface conditions at the site by advancing eight cone penetration tests (CPTs), advancing three hand-auger borings, excavating two shallow test pits, performing laboratory tests on selected soil samples, and performing engineering analyses to develop conclusions and recommendations regarding:

- the most appropriate foundation type(s) for the proposed new structures
- design criteria for the recommended foundation type(s), including vertical and lateral capacities
- estimates of foundation settlement
- slope stability under static and seismic loading conditions

- measures to mitigate slope stability issues, if any
- lateral earth pressures for design of retaining walls, if any
- subgrade preparation for slab-on-grade floors and concrete flatwork
- site grading and excavation, including criteria for fill quality and compaction
- pavement sections for asphalt concrete and Portland cement concrete
- site seismicity and seismic hazards, including the potential for liquefaction and liquefaction-induced ground failure
- 2016 California Building Code (CBC) site class and design spectral response acceleration parameters
- corrosivity of the near-surface soil and the potential effects on buried concrete and metal structures and foundations
- construction considerations.

3.0 DATA REVIEW

We reviewed the results of a previous geotechnical investigation performed at the Plant Parcel by Treadwell & Rollo (T&R) in 2006. T&R's investigation consisted of advancing 61 CPTs, drilling 13 test borings, and performing laboratory tests on selected soil samples. The results of their investigation were presented in a report titled *Geotechnical Investigation, Proposed Harbor Park Development, Pittsburg, California*, dated June 13, 2006.

T&R also provided geotechnical consultation and services during remedial grading at the Plant Parcel site, the results of which are presented in the following reports:

- Treadwell & Rollo (2006), *Slope Stability of Proposed Earthen Embankment, Harbor Park Development, Pittsburg, California,* dated August 3, 2006.
- Treadwell & Rollo (2007), *Geotechnical Consultation, Selected Approach for Remedial Mass Grading and Revised Earthen Embankment Construction, Harbor Park Development, Pittsburg, California*, dated July 31, 2007.
- Treadwell & Rollo (2007), *Geotechnical Consultation, Selected Approach for Remedial Mass Grading and Revised Earthen Embankment Construction, Harbor Park Development, Pittsburg, California*, dated July 31, 2007.

- Treadwell & Rollo (2008), *Final Report, Geotechnical Services during Remedial Mass Grading, The Proposed Harbor Park Development, Pittsburg, California*, dated July 17, 2008.

The approximate locations of the borings and CPTs from their investigation are shown on their site plan in Appendix C. Subsurface data from the previous investigation used in our evaluation of subsurface conditions at the site are presented in Appendix C of this report, as well as the services during remedial grading report dated July 17, 2008.

4.0 FIELD INVESTIGATION AND LABORATORY TESTING

Our subsurface investigation consisted of performing eight CPTs, advancing three hand-auger borings to collect shallow soil samples, and excavating two shallow test pits. Prior to our field investigation, we contacted Underground Service Alert (USA) to notify them of our work, as required by law, and retained Precision Locating, LLC, a private utility locator, to check that the CPT and boring locations were clear of buried utilities. We also obtained a drilling permit from Contra Costa County Environmental Health Division (CCCEHD).

4.1 Cone Penetration Tests

The CPTs were performed to provide in-situ soil data at the approximate locations shown on Figure 2. The CPTs, designated as CPT-1 through CPT-8, were advanced to depths ranging from approximately 50 to 80 feet below the existing ground surface (bgs), except for CPT-3, which could not be advanced beyond a depth of approximately 3 feet bgs due to an obstruction.

The CPTs were performed by Gregg Drilling & Testing, Inc. of Martinez, California, on April 13, 2018. The CPTs were performed by hydraulically pushing a 1.7-inch-diameter cone-tipped probe with a projected area of 15 square centimeters into the ground. The cone-tipped probe measured tip resistance and the friction sleeve behind the cone tip measured frictional resistance. Electrical strain gauges within the cone continuously measured soil parameters for the entire depth advanced. Soil data, including tip resistance and frictional resistance, were recorded by a computer while the test was conducted. Accumulated data were processed by computer to

provide engineering information such as the soil behavior types and approximate strength characteristics of the soil encountered.

The CPT logs showing tip resistance and friction ratio, as well as interpreted soil behavior type, are presented in Appendix A on Figures A-1 through A-8. Upon completion, the CPTs were backfilled with cement grout.

4.2 Hand-Auger Borings

To supplement the CPT data and obtain soil samples for visual classification, we advanced three test borings, designated as HA-1 through HA-3, at the locations shown on the Site Plan, Figure 2. The borings were each advanced to depths of approximately 3 to 4 feet bgs using a three-inch-diameter hand auger. The borings could not be advanced beyond these depths due to gravel obstructions. Our field engineer obtained soil samples at several depths for visual classification and laboratory testing.

4.3 Laboratory Testing

Geotechnical laboratory tests were performed on selected soil samples to assess their engineering properties and physical characteristics. Soil samples were tested by B. Hillebrandt Soils Testing, Inc. of Alamo, California to measure moisture content, plasticity (Atterberg limits), and fines content. Corrosivity testing of a near-surface soil sample was performed by Project X Corrosion Engineering of Murrieta, California. The near-surface soil was also tested for resistance value (R-value) by Applied Materials Engineering, Inc. The results of the geotechnical laboratory tests are presented on the boring logs and in Appendix B.

5.0 SITE AND SUBSURFACE CONDITIONS

5.1 Site Conditions

The southernmost portion of the site, designated as the Plant Parcel, consists of a rectangular-shaped, vacant lot located at 420 East 3rd Street and is bordered by 3rd Street to the north, Harbor Street to the east, a park to the south, and a residential development to the west. The site is

relatively level with approximate plan dimensions of 630 by 1415 feet and includes a 10- to 15-foot-tall berm along the eastern perimeter of the site. The residential development along the western perimeter of the Plant Parcel is located at the top of an approximately 1.5:1 to 2:1 (horizontal:vertical) slope that is about 20 feet in height. Existing 3- to 4-foot-high wood retaining walls were observed along portions of the slope. According to the T&R 2006 report, a large deposit of loose sand is present at the southwest corner of the site near the top of the slope; the depth of the sand deposit is currently unknown.

The Plant Parcel was previously occupied by the Johns Manville manufacturing facility. The structures associated with this facility generally consisted of manufacturing buildings, rail spurs, and asphalt pavements, which were demolished in 2006. According to the T&R 2006 report, a former evaporation pond located at the southeastern corner of the parcel was filled in prior to their investigation. The fill and soil in this area were later removed and replaced with engineered fill during remedial grading. The fill compaction was observed and tested by T&R in 2007. The lateral extent of the remedial grading and the compaction test results of the fill are presented in the final report for geotechnical services during remedial mass grading prepared by T&R, dated July 17, 2008, which is presented in Appendix C at the end of this report.

The northernmost parcels, designated as the Tesoro Parcels, are located at 595 East 3rd Street, which is directly north of the proposed new campus. The Tesoro parcels are bordered by East 3rd Street and vacant lots to the south, a vacant lot to the west, a slough off the San Joaquin River known as the New York Slough to the north, and the Koch Carbon plant to the east. The site is an L-shaped lot with maximum plan dimensions of approximately 600 by 1,100 feet and is relatively level with elevations ranging from approximately 8 to 12 Feet (NAVD 88).

The property was previously occupied by a Tesoro petroleum coke storage facility generally consisting of one-story structures and storage tanks near the center and southeastern portion of the site. When the facility was in operation, petroleum coke was transported to the site by truck and subsequently shipped via the New York Slough. The facility structures have since been

demolished, except for a dilapidated dock along the shoreline and a retaining wall running long the easternmost portion of the Tesoro parcels.

5.2 Subsurface Conditions

Regional geologic information, as presented on Figure 3, indicates a majority of the site is underlain by Holocene-age alluvium (Qha) with artificial fill (af) underlying portions of the shoreline at the northeastern perimeter of the Tesoro Parcels. The field investigations performed at the site indicate the site is underlain by approximately 2 to 22 feet of heterogenous fill generally consisting of medium stiff to stiff clay and silt with varying sand and gravel content and loose to dense sand with varying fines content. Atterberg limits test results indicate the expansion potential of the near-surface clay material ranges from low to high. Abundant debris, including concrete and timber, was encountered in the fill at the Tesoro Parcels, as well localized areas of petroleum coke ash.

The fill is underlain by compressible clay deposits over most of the site, except for the westernmost portion of the Plant Parcel. The compressible clay deposits range from about 3 to 43 feet in thickness. The approximate boundary of the compressible clay deposits, as well as the approximate thickness of compressible clay encountered at each boring and CPT location at the Plant Parcel are presented on the site plan prepared by T&R site plan in Appendix C.

The fill and the compressible clay deposits, where encountered, are underlain by layers of medium dense to very dense sand with varying fines content and medium stiff to very stiff clay and silt with varying sand content to the maximum depth explored of 80 feet bgs.

5.3 Groundwater Conditions

The depth to groundwater was estimated using pore pressure dissipation test data at depths ranging from about 3.3 to 7.9 feet bgs (Elevations 2.2 to 5.5 feet – NAVD 88) in each of our CPTs performed at the Tesoro Parcels. Groundwater was encountered at depths of 4 to 30 feet bgs (Elevations 4.5 to 9.5 feet – datum unknown) in the borings and CPTs during the Plant Parcel investigation performed by T&R. It should be noted the groundwater level was likely not

given adequate time to stabilize at the time the measurements were taken at the T&R boring locations.

The estimated groundwater depths at the Tesoro and Plant parcels are presented in Table 1 and Table 2, respectively. The groundwater level was previously measured and reported in environmental reports by others at depths ranging from 5 to 10.5 feet bgs. The groundwater level at the site is expected to fluctuate several feet depending on tide and amount of rainfall.

TABLE 1
Depth to Groundwater: Tesoro Parcels

Location	Approximate Depth to Groundwater	Approximate Groundwater Elevation (NAVD 88)
CPT-1	6.5 feet bgs	5.5 feet
CPT-2	7.3 feet bgs	2.2 feet
CPT-4	3.6 feet bgs	5.4 feet
CPT-5	5.1 feet bgs	2.4 feet
CPT-6	7.9 feet bgs	2.1 feet
CPT-7	7.9 feet bgs	3.2 feet
CPT-8	3.3 feet bgs	4.2 feet

TABLE 2
Depth to Groundwater: Plant Parcel

Location	Approximate Depth to Ground Water
B-1	9 feet bgs
B-2	13-1/2 feet bgs
B-4	9 feet
B-9	25 to 30 feet bgs
B-10a	6-1/2 feet bgs
B-12	9 feet bgs
CPT-1	10 feet bgs
CPT-14	8 feet bgs
CPT-21	11-1/2 feet bgs
CPT-22	15-1/2 feet bgs
CPT-38	6 feet bgs
CPT-41	7-1/2 feet
CPT-43	4 feet bgs
CPT-45	4-1/2 feet bgs
CPT-50	7 feet bgs
CPT-51	6 feet bgs
CPT-53	6 feet bgs
CPT-54	5 feet bgs
CPT-56	6 feet bgs
CPT-59	8 feet bgs
CPT-61	8 feet bgs

6.0 SEISMIC CONSIDERATIONS

Because the project site is in a seismically active region, we evaluated the potential for earthquake-induced geologic hazards, including ground shaking, ground surface rupture, liquefaction[1], lateral spreading[2], and cyclic densification[3]. The results of our evaluation regarding seismic considerations for the project site are presented in the following sections.

6.1 Regional Seismicity

The major active faults in the area are the Great Valley Faults, Concord/Green Valley, Mount Diablo, and Calaveras faults. These and other faults of the region are shown on Figure 4. The fault systems in the Bay Area consist of several major right-lateral strike-slip faults that define the boundary zone between the Pacific and the North American tectonic plates. Numerous damaging earthquakes have occurred along these fault systems in recorded time. For these and other active faults within a 50-kilometer radius of the site, the distance from the site and estimated mean characteristic moment magnitude[4] [Working Group on California Earthquake Probabilities (WGCEP, 2008) and Cao et al. (2003)] are summarized in Table 3.

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1 Liquefaction is a phenomenon where loose, saturated, cohesionless soil experiences temporary reduction in strength during cyclic loading such as that produced by earthquakes

2 Lateral spreading is a phenomenon in which surficial soil displaces along a shear zone that has formed within an underlying liquefied layer. Upon reaching mobilization, the surficial blocks are transported downslope or in the direction of a free face by earthquake and gravitational forces.

3 Cyclic densification is a phenomenon in which non-saturated, cohesionless soil is compacted by earthquake vibrations, causing ground-surface settlement.

4 Moment magnitude is an energy-based scale and provides a physically meaningful measure of the size of a faulting event. Moment magnitude is directly related to average slip and fault rupture area.

TABLE 3
Regional Faults and Seismicity

Fault Segment	Approximate Distance from Site (km)	Direction from Site	Mean Characteristic Moment Magnitude
Great Valley 5, Pittsburg Kirby Hills	1.9	East	6.70
Green Valley Connected	15	West	6.80
Greenville Connected	17	South	7.00
Mount Diablo Thrust	22	Southwest	6.70
Total Calaveras	27	Southwest	7.03
Great Valley 4b, Gordon Valley	29	North	6.80
West Napa	35	West	6.70
Total Hayward	37	West	7.00
Total Hayward-Rodgers Creek	37	West	7.33
Great Valley 7	46	Southeast	6.90
Rodgers Creek	49	West	7.07

In the past 200 years, four major earthquakes (i.e., Magnitude > 6) have been recorded on the San Andreas Fault. In 1836, an earthquake with an estimated maximum intensity of VII on the Modified Mercalli (MM) Intensity Scale occurred east of Monterey Bay on the San Andreas Fault (Toppozada and Borchardt 1998). The estimated moment magnitude, M_w, for this earthquake is about 6.25. In 1838, an earthquake occurred on the Peninsula segment of the San Andreas Fault. Severe shaking occurred with an MM of about VIII-IX, corresponding to an M_w of about 7.5. The San Francisco Earthquake of 1906 caused the most significant damage in the history of the Bay Area in terms of loss of lives and property damage. This earthquake created a surface rupture along the San Andreas Fault from Shelter Cove to San Juan Bautista approximately 470 kilometers in length. It had a maximum intensity of XI (MM), an M_w of about 7.9, and was felt 560 kilometers away in Oregon, Nevada, and Los Angeles. The most

recent major earthquake to affect the Bay Area was the Loma Prieta Earthquake of October 17, 1989 with an M_w of 6.9. This earthquake occurred in the Santa Cruz Mountains about 111 kilometers southwest of the site.

In 1868, an earthquake with an estimated maximum intensity of X on the MM scale occurred on the southern segment (between San Leandro and Fremont) of the Hayward Fault. The estimated M_w for the earthquake is 7.0. In 1861, an earthquake of unknown magnitude (probably an M_w of about 6.5) was reported on the Calaveras Fault. The most recent significant earthquake on this fault was the 1984 Morgan Hill earthquake (M_w = 6.2).

On August 24, 2014 an earthquake with an estimated maximum intensity of VIII (severe) on the MM scale occurred on the West Napa fault. This earthquake was the largest earthquake event in the San Francisco Bay Area since the Loma Prieta Earthquake. The M_w of the 2014 South Napa Earthquake was 6.0.

The U.S. Geological Survey's 2014 Working Group on California Earthquake Probabilities has compiled the earthquake fault research for the San Francisco Bay area in order to estimate the probability of fault segment rupture. They have determined that the overall probability of moment magnitude 6.7 or greater earthquake occurring in the San Francisco Region during the next 30 years (starting from 2014) is 72 percent. The highest probabilities are assigned to the Hayward Fault, Calaveras Fault, and the northern segment of the San Andreas Fault. These probabilities are 14.3, 7.4, and 6.4 percent, respectively.

6.2 Geologic Hazards

During a major earthquake on a segment of one of the nearby faults, strong to very strong ground shaking is expected to occur at the project site. Strong shaking during an earthquake can result in ground failure such as that associated with soil liquefaction, lateral spreading, and cyclic densification. We used the results of the borings and CPTs performed within the site vicinity to evaluate the potential of these phenomena occurring at the project site.

6.2.1 Ground Shaking

The ground shaking intensity felt at the project site will depend on: 1) the size of the earthquake (magnitude), 2) the distance from the site to the fault source, 3) the directivity (focusing of earthquake energy along the fault in the direction of the rupture), and 4) subsurface conditions. The site is about 1.9 kilometers from a segment of the Coast Ranges-Central Valley Fault (Great Valley) system. Therefore, the potential exists for a large earthquake to induce strong to very strong ground shaking at the site during the life of the project.

6.2.2 Liquefaction and Associated Hazards

When a saturated, cohesionless soil liquefies, it experiences a temporary loss of shear strength created by a transient rise in excess pore pressure generated by strong ground motion. Soil susceptible to liquefaction includes loose to medium dense sand and gravel, low-plasticity silt, and some low-plasticity clay deposits. Flow failure, lateral spreading, differential settlement, loss of bearing strength, ground fissures and sand boils are evidence of excess pore pressure generation and liquefaction.

Liquefaction susceptibility was assessed using the software CLiq v2.2.0.32 (GeoLogismiki, 2016). CLiq uses measured field CPT data and assesses liquefaction potential given a user-defined earthquake magnitude and peak ground acceleration (PGA). Our liquefaction analyses were performed using the methodology proposed by Boulanger and Idriss (2014). We also used the relationship proposed by Zhang, Robertson, and Brachman (2002) to estimate post-liquefaction volumetric strains and corresponding ground surface settlement; a relationship that is an extension of the work by Ishihara and Yoshimine (1992).

Our analyses were performed using the approximate in-situ groundwater depths measured in our CPTs and a "during earthquake" groundwater depth of 3.3 feet bgs. In accordance with the 2016 CBC, we used a peak ground acceleration of 0.55 times gravity (g) in our liquefaction evaluation; this peak ground acceleration is consistent with the Maximum Considered Earthquake Geometric Mean (MCE_G) peak ground acceleration adjusted for site effects (PGA_M).

We also used a moment magnitude 6.7 earthquake, which is consistent with the mean characteristic moment magnitude for the Green Valley 6 Fault, as presented in Table 1.

Post-Liquefaction Settlement

Our analyses indicate there are potentially liquefiable soil layers underlying the site. The potentially liquefiable layers vary in depth and thickness and extend to a depth of approximately 40 feet bgs. In general, most of the potentially liquefiable layers are relatively thin, ranging from about 2 to 5 feet thick. We estimate total liquefaction-induced settlement at these locations will be on the order of about 1-1/2 to 2-1/2 inches with differential settlement of approximately one inch over a horizontal distance of 30 feet. We estimate up to approximately 5-1/2 inches of total liquefaction-induced settlement may occur in localized areas near boring B-2 and CPT-18 performed by T&R at the Plant Parcel and CPT-15 performed during our investigation of the Tesoro parcels.

As discussed in later sections of this report, we judge the anticipated differential settlements due to both static and seismic load conditions exceed the typical tolerance of a conventional shallow foundation system. The potential for liquefaction-induced settlement within the relatively shallow layers should be mitigated if the building is to be supported on a shallow foundation system. If the upper 40 feet of soil beneath the proposed new buildings is improved, we estimate that total building settlement associated with liquefaction of the remaining layers will be less than about 1/2 inch and liquefaction-induced differential settlement will be about 1/4 inch over a horizontal distance of 30 feet.

Liquefaction-Induced Ground Failure

The potential for liquefaction-induced ground failure depends on the thickness of the liquefiable soil layer relative to the thickness of the overlying non-liquefiable material. Ishihara (1985) presented an empirical relationship that provides criteria that can be used to evaluate whether liquefaction-induced ground failure, such as sand boils, would be expected to occur under a given level of shaking for a liquefiable layer of given thickness overlain by a resistant, or protective, surficial layer. In general, when there is a non-liquefied surface layer that is at least

10 feet thick overlying a liquefiable stratum, the potential for surface manifestations is low, provided there is no lateral spreading (discussed in more detail in the subsequent section).

Most of the potentially liquefiable soil layers encountered in the CPTs are at least 10 feet bgs, with a few exceptions. Our analysis indicates the non-liquefiable soil overlying the potentially liquefiable soil layers throughout a majority of the site is sufficiently thick and the potentially liquefiable layers are sufficiently thin such that the potential for surface manifestations from liquefaction, such as sand boils, and loss of bearing capacity for shallow foundations are low in areas not susceptible to lateral spreading (discussed in section below). Locations where the potential for surface manifestations from liquefaction and loss of bearing capacity for shallow foundations is greatest are CPT-16, CPT-17, CPT-18, CPT-21 and CPT-28 performed by T&R in 2006 at the Plant Parcel and CPT-5 performed during our site investigation at the Tesoro Parcel.

Lateral Spreading

Lateral spreading occurs when a continuous layer of soil liquefies at depth and the soil layers above move toward an unsupported face, such as a shoreline slope, or in the direction of a regional slope or gradient. Lateral spreading is generally the most damaging type of liquefaction-induced ground failure generated by earthquakes.

The waterfront is defined by a free face along the northeastern perimeter of the Tesoro Parcel. According to the Suisun Bay nautical charts published by the U.S Department of Commerce, the slough depth extends to approximately 45 to 50 feet measured at mean lower low water, corresponding to about 55 to 65 feet below existing site grade. Because of the presence of liquefiable soils and the topographic conditions, liquefaction-induced lateral spreading is a concern for this site. Potential lateral spread displacements are difficult to estimate, as they depend on numerous factors, such as the geometry and continuity of the liquefiable layers beneath the site, the topography and the stratigraphy of the subsurface materials offshore from the site, and the presence, geometry and integrity of structural systems, such as the existing retaining wall present along the easternmost portion of the shoreline. Although we do not currently have information regarding the design and construction of the waterfront retaining

structures, it is highly unlikely they are adequate to resist loads from liquefaction-induced lateral spreading.

Based on our analyses, we conclude the risk of lateral spreading to occur during a major seismic event is high. These deformations are most likely to occur along the waterfront, in areas where the undocumented fills are the thickest. Our analyses indicate that liquefaction-induced lateral displacements may be on the order of 15 to 20 feet in the vicinity of CPT-5. At other CPTs near the waterfront, our analyses indicate lateral spreading may be on the order of 2 to 5 feet.

Considering the site topography and the apparent discontinuous nature of many of the potentially liquefiable deposits, we conclude the risk of lateral spreading impacting structures planned at the Plant Parcel is generally low, especially if the structures are supported on improved ground, as discussed in more detail in Section 8.0.

6.2.3 Cyclic Densification

Cyclic densification (also referred to as differential compaction) of non-saturated sand (sand above groundwater table) can occur during an earthquake, resulting in settlement of the ground surface and overlying improvements.

We used the data collected in the CPTs and borings to evaluate the potential for settlement due to cyclic densification of the granular material above the water table. For our analysis, we used the same moment magnitude and peak ground acceleration that was used in our liquefaction analysis. Based on our analysis, we estimate total and differential settlement on the order of about 1/2 inch and 1/4 inch over a horizontal distance of 30 feet, respectively. If ground improvement is performed, the potential for cyclic densification would be mitigated.

6.2.4 Fault Rupture

Historically, ground surface displacements closely follow the trace of geologically young faults. The site is not within an Earthquake Fault Zone, as defined by the Alquist-Priolo Earthquake Fault Zoning Act, and no known active or potentially active faults exist on the site. We therefore

conclude the risk of fault offset at the site from a known active fault is low. In a seismically active area, the remote possibility exists for future faulting in areas where no faults previously exist; however, we conclude the risk of surface faulting and consequent secondary ground failure from previously unknown faults is also very low.

7.0 DISCUSSION AND CONCLUSIONS

From a geotechnical standpoint, we conclude the site can be developed as planned, provided the recommendations presented in this report are incorporated into the project plans and specifications and are implemented during construction. The primary geotechnical concerns at the project site include:

- settlement due to the underlying undocumented fill of varying thickness that blankets the site,
- settlement due to compression of the weak, compressible bay deposits underlying portions of the site,
- the potential for up to 5-1/2 inches of liquefaction-induced ground settlement in some areas,
- the potential for liquefaction-induced lateral spread displacements up to about 15 to 20 feet along the waterfront,
- the presence of subsurface obstructions that may interfere with future construction activities and affect the performance of new foundations,
- relatively shallow groundwater, and
- constraints associated with potentially contaminated soil and groundwater.

These and other geotechnical issues are discussed in more detail in the following sections

7.1 Settlement

In addition to the potential for liquefaction settlement, discussed above in Section 6.2.2 and 6.2.3, significant settlement may occur under new fill and/or building loads due to consolidation of the soft to medium stiff clay deposits underlying the Tesoro Parcel and portions of the Plant Parcel. The results of laboratory testing and the CPTs indicate the compressible clay deposits are lightly over-consolidated.

Constructing new structures with shallow foundations and/or placement of new fill at the site will begin a new cycle of consolidation settlement in the compressible clay deposits. The amount and time rate of consolidation settlement depend upon:

- the weight of any new fill and/or structural loads
- the thickness of the existing fill
- the thickness of the compressible deposits
- the presence of sand layers within the compressible clay layers
- the presence of existing foundations or other obstructions.

The thickness of the compressible clay deposits varies across the site. The new fill to be placed at the Tesoro Parcels will determined by the civil engineer and/or project architect during design of the proposed improvements. We understand minimal fill will be placed during grading and construction at the Plant Parcel.

We performed engineering analyses to estimate the amount of settlement expected at the site due to consolidation of the compressible clay deposits under new fill and foundation loads. For our analyses, we assumed the proposed one-story and two-story buildings would be supported on a shallow foundation system, such as a reinforced-concrete mat. If fill is required to raise site grades, we estimate approximately 1/2 inch of settlement will occur due to consolidation of the compressible clay deposits for every foot of fill placed at the site. We estimate additional total and differential settlement of the proposed new buildings supported on a shallow foundation system will be on the order of about one inch and 1/2 inch over a horizontal distance of 30 feet, respectively.

The amount of differential settlement that will occur at the site due to new fill loads will depend primarily on the differences in thickness of new fill and the compressible clay layers. Differential settlements can be estimated once preliminary grading plans are available. Differential settlement may be higher where buried foundations or foundation elements act as "hard points" beneath the new building.

Alternatively, the proposed new buildings may be supported on a deep foundation system such auger cast-in-place (ACIP) piles or Torque Down piles, both of which can be installed with minimal noise and vibrations. We can provide deep foundation recommendations upon request.

7.2 Slope Stability

7.2.1 Tesoro Parcels

The existing waterfront consists of a variety of systems, including rip-rap slopes and a concrete retaining wall along the westernmost portion of the shoreline. During our investigation we observed timber piles at the top of the concrete retaining wall spaced roughly 10 to 15 feet on center. We performed a static slope stability analysis using the data collected in our CPTs.

Based on the results of our analysis, we conclude the existing slope has a factor of safety at least 1.5 with respect to static loading conditions. As discussed above in Section 6.2.2., there is potential for slope instability and lateral spreading along the shoreline during a major earthquake.

7.2.2 Plant Parcel

The existing residential development located along the western perimeter of the Plant Parcel is at the top of an approximately 20-foot-high slope that is typically inclined at 1.5 to 2:1 (horizontal:vertical), although there are localized areas as steep as approximately 1:1 in areas where shallow sloughing has occurred. We believe the slope was likely cut during the development of the Johns Manville Manufacturing Facility. Based on our site reconnaissance, it appears most of the slope has been performing satisfactorily except for areas of localized surficial soil erosion and shallow soil slumps. The existing low retaining walls on the slope do not appear to have been engineered and several have rotated downslope.

We performed a slope stability analysis by incorporating the subsurface data and laboratory test results from borings B-9 and B-13 performed by T&R. In general, the slope is primarily composed of silt and clay with some sandy soil exposed on the face of the slope. Based on the results of our analysis, we conclude the existing slope has a factor of safety of at least 1.5 and

1.15 against deep rotational failure with respect to static and seismic loading conditions, respectively. Therefore, we conclude the potential for deep-seated slope instability is low; however, there is a moderate to high risk of erosion and shallow sloughing in the portions of the slope steeper than 2:1. Options (in order of increasing cost) to reduce the risk of surficial slope instability include: 1) compacting the surface of the existing slope, placing erosion control fabric, and planting erosion-resistant vegetation on the slope face: 2) Option #1 plus regrading the slope such that all of the slope is inclined at 2:1; this will require benching fill into the existing slope and will result in the toe of the slope moving outward to the east, or 3) Option #1 and Option #2 plus installation of a retaining wall at the base of the slope to minimize loss of buildable area.

7.3 Foundation Support

The primary geotechnical concern at the project site from a foundation standpoint is the presence of potentially liquefiable soil layers in combination with compressible clay deposits encountered throughout a majority of the site. The compressible clay deposits may be susceptible to settlement under new fill and foundation loads, as discussed in Section 7.1. We estimate additional settlement up to approximately 5-1/2 inches of due to liquefaction may occur following a major earthquake. Therefore, new structures supported on a shallow foundation system founded on non-improved soil may experience seismically induced settlement up to approximately 5-1/2 inches of due to post-liquefaction reconsolidation following a major earthquake.

If the estimated settlement (static plus seismic) cannot be tolerated by the structures, then the proposed new buildings may be supported on a shallow foundation system, such as footings or a mat, bearing on improved soil provided: (1) the soil improvement is implemented to mitigate liquefaction hazards, and (2) the soil improvement extends to a depth that would reduce differential settlement of the structure under seismic conditions to a tolerable amount. Based on our recent experience, we believe drilled displacement sand-cement (DDSC) columns or deep soil mixing (DSM) would be the most economical ground improvement methods; however, other soil improvement methods, such as rammed aggregate piers or stone columns, are also feasible. We anticipate the soil improvement will need to extend to a depth of about 40 to 50 feet bgs.

We consider soil-cement mix (SMX) columns or drilled displacement sand-cement (DDSC) columns to be the most appropriate ground improvement methods for this project. SMX columns are installed by injecting and blending cement into the soil using a drill rig equipped with single or multiple augers. DDSC columns are installed by advancing a hollow-stem auger that mostly displaces the soil and then pumping a sand-cement mixture into the hole under pressure as the auger is withdrawn. This system results in low vibration during installation and generates fewer drilling spoils for off-haul. DDSC columns and SMX columns are installed under design-build contracts by specialty contractors. The required size, spacing, length, and strength of columns should be determined by the design-build contractor, based on the desired level of improvement (i.e. the tolerable settlement and desired allowable bearing pressure), as determined by the structural engineer. If soil improvement is to be considered, we recommend a preliminary design, including calculations of static and seismic settlements, be prepared by the ground improvement contractor and submitted for review by us, as well as the structural engineer. For planning purposes, it may be assumed the ground improvement will limit total and differential settlement of buildings to less than one inch and 3/4 inch over a 30-foot horizontal distance for combined static and seismic loading.

7.5 Construction Considerations

We understand that historically, decommissioned facilities were often buried by fill and that some areas of the site are still underlain by remnants of old timber structures, foundation elements, abandoned utilities, riprap, and concrete rubble. We anticipate subsurface obstructions will be encountered in the fill layer that are associated with previous filling and development at the site. During our investigation, we observed significant debris including concrete rubble and riprap along the shoreline, as well as timber piles from the loading dock and within the retaining wall along the easternmost portion of the shoreline. Obstructions were also encountered during our investigation at a depth of about three feet bgs near CPT-3. These obstructions could interfere with pile driving or ground improvement, and depending on the size of the obstructions, it may be necessary to excavate and remove the obstructions during construction.

Prior to construction, we recommend a geophysical survey and potholing program be performed in key areas near the waterfront to help identify obstructions prior to construction. We also recommend allocating substantial budget for removal and disposal of debris to reduce the potential for impediments and delays to the ground improvement operation.

7.6 Soil Corrosivity

Laboratory testing was performed by Project X to evaluate the corrosivity of the sandy clay from Boring HA-3 at a depth of 2.5 feet bgs. The results of the tests are presented in Appendix B of this report. Based on the measured minimum resistivity of 938 ohm-centimeters, we conclude the soil at this site should be considered as "highly corrosive" to buried metal. Accordingly, all buried iron, steel, cast iron, ductile iron, galvanized steel and dielectric-coated steel or iron should be protected against corrosion depending upon the critical nature of the structure. If it is necessary to have metal in contact with soil, a corrosion engineer should be consulted to provide recommendations for corrosion protection. The chloride, sulfide, and pH of the soil do not present corrosion problems for buried iron, steel, mortar-coated steel or reinforced concrete structures. The sulfate ion concentration of 1,230 milligrams per kilogram (0.12%) is considered moderate. For sulfate ion concentrations between 1,000 and 2,000 mg/kg, Section 4.3 in the American Concrete Institute (ACI) 318 publication calls for the use of cement type II, a maximum water-cement ratio of 0.50, and a minimum unconfined compressive strength of 4,000 pounds per square inch (psi) for concrete in contact with the soil.

8.0 RECOMMENDATIONS

In accordance with our scope of services, the remainder of this report presents our recommendations for site preparation and grading, foundation support, flatwork and pavements, seismic design, and other geotechnical considerations.

8.1 Site Preparation, Grading, and Fill Placement

All areas to be graded should be stripped of significant vegetation, including bushes and tall grass. Site clearing should include removal of vegetation and organic topsoil where present in areas to receive improvements (i.e., building, pavement, and fill areas). Tree roots with a diameter greater than 1/2 inch within three feet of subgrade beneath proposed structures should be removed. In general, abandoned underground utilities, if any, should be removed to the property line or service connections and properly capped or plugged with concrete. Where existing utility lines are outside of the footprint of the proposed improvements and will not interfere with the proposed construction, they may be abandoned in-place provided the lines are filled with lean concrete or cement grout to the property line. Voids resulting from demolition activities should be properly backfilled with compacted fill under our direction following the recommendations provided later in this section.

The expansion potential of the near-surface clay at the site ranges from low to high. To mitigate the detrimental effects of expansive near-surface soil, building slab-on-grade floors should be underlain by at least 12 inches (measured from the bottom of capillary moisture break) of non-expansive soil consisting of select fill or lime-treated on-site soil. The non-expansive soil should extend at least five feet beyond the perimeter of the proposed buildings, except where constrained by the property line. In addition, the subgrade for proposed concrete flatwork should also be overexcavated to accommodate at least six inches of non-expansive soil.

If material to be used as fill is imported to the site, it should meet the requirements for select fill provided below in Section 8.1.1. A summary of the compaction requirements for the various types of fill that may be used at the site is presented in Table 4.

TABLE 4
Summary of Compaction Requirements

Location	Required Relative Compaction (percent)	Moisture Requirement
Building pads – expansive clay	88 – 92	3+% above optimum
Building pads – low plasticity	90+	Above optimum
Exterior slabs – expansive clay	88 – 92	3+% above optimum
Exterior slabs – low plasticity	90+	Above optimum
Pavements – expansive clay	90+	2+% above optimum
Pavements – low plasticity	95+	Above optimum
Pavements - aggregate base	95+	Near optimum
General fill – expansive clay	88 – 92	3+% above optimum
General fill – low-plasticity soil	90+	Above optimum
General fill – granular soil or fill thickness greater than 5 feet	95+	Near optimum
Utility trench backfill – expansive clay	88 – 92	3+% above optimum
Utility trench backfill – low-plasticity	90+	Above optimum
Utility trench - clean sand or gravel	95+	Near optimum

We recommend the upper eight inches of the soil subgrade beneath pavements be scarified, moisture-conditioned, and recompacted. The scarification and recompaction should extend at least two feet beyond the perimeters of the pavements, except where constrained by the property line. The scarified soil subgrade should be moisture-conditioned and compacted in accordance with the requirements provided in Table 4. The subgrade beneath pavements should be firm and non-yielding under construction equipment wheel loads.

8.1.1 Select Fill

Select fill should consist of imported soil or on-site soil that is free of organic matter, contain no rocks or lumps larger than three inches in greatest dimension, have a liquid limit less than 40 and plasticity index less than 15, and be approved by the Geotechnical Engineer. Select fill should be placed in lifts not exceeding eight inches in loose thickness, moisture-conditioned to near optimum moisture content, and compacted to at least 90 percent relative compaction. Samples of proposed select fill material should be submitted to the geotechnical engineer at least three business days prior to use at the site.

The grading contractor should provide analytical test results or other suitable environmental documentation indicating the imported fill is free of hazardous materials at least three days before use at the site. If this data is not provided, a minimum of two weeks will be required to perform any necessary analytical testing.

8.1.2 Lime Treatment

If the non-expansive soil to be placed beneath the building pads and exterior concrete flatwork is to consist of lime-treated on-site soil, the upper 12 inches of the soil subgrade should be treated in place with five percent dolomitic quicklime by dry weight of soil. The dry weight of soil should be assumed to be 110 pounds per cubic foot (pcf) for calculating lime quantities. A specialty subcontractor should perform the lime treatment. Prior to lime treatment, we recommend the site be graded to a level pad elevation in accordance with our previous recommendations and all below-grade obstructions removed. The soil treated with lime should be mixed and compacted in one lift. The lime should be thoroughly blended with the soil and allowed to set for 24 hours prior to remixing and compaction. The lime-treated soil should be moisture-conditioned to above optimum moisture content and compacted to at least 90 percent relative compaction.

It should be noted that disposal of lime-treated soil is typically expensive because of the high pH of the treated soil. In addition, lime-treated soil should be completely removed from landscaping areas.

8.1.3 Utility Trench Backfill

Excavations for utility trenches can be readily made with a backhoe. All trenches should conform to the current CAL-OSHA requirements. To provide uniform support, pipes or conduits should be bedded on a minimum of four inches of sand or fine gravel. After the pipes and conduits are tested, inspected (if required) and approved, they should be covered to a depth of six inches with sand or fine gravel, which should be mechanically tamped. Backfill for utility trenches and other excavations is also considered fill, and should be placed and compacted as according to the recommendations previously presented. If imported clean sand or gravel (defined as soil with less than 10 percent fines) is used as backfill, it should be compacted to at least 95 percent relative compaction. If fill thickness is five feet or greater, it should be compacted to at least 95 percent relative compaction. Jetting of trench backfill should not be permitted. Special care should be taken when backfilling utility trenches in pavement areas. Poor compaction may cause excessive settlements, resulting in damage to the pavement section.

8.1.4 Drainage and Landscaping

Positive surface drainage should be provided around the buildings to direct surface water away from the foundations. To reduce the potential for water ponding adjacent to the buildings, we recommend the ground surface within a horizontal distance of five feet from the buildings slope down away from the buildings with a surface gradient of at least two percent in unpaved areas and one percent in paved areas. In addition, roof downspouts should be discharged into controlled drainage facilities to keep the water away from the foundations. Retaining walls should be well drained in accordance with the recommendations presented in Section 8.5.

Care should be taken to minimize the potential for subsurface water to collect beneath non-permeable pavements and pedestrian walkways. Where landscape beds and tree wells are immediately adjacent to pavements and flatwork which are not designed as permeable systems, we recommend vertical cutoff barriers be incorporated into the design to prevent irrigation water from saturating the subgrade and AB. These barriers may consist of either flexible impermeable membranes or deepened concrete curbs.

Storm water treatment systems (infiltration basins, rain gardens, bio-retention systems, vegetated swales, flow-through planters, etc.) constructed at the site should be provided with underdrains, as well as impermeable liners where they will be within 10 feet of the buildings or pavement. Due to the low permeability of the upper clay, these systems should not be designed for exfiltration in to the subgrade soil. The drainage layer beneath the "treatment" soil should consist of a minimum 12-inch-thick layer of Caltrans Class 2 Permeable drainage material and include a minimum 4-inch-diameter perforated drain pipe placed with the perforations facing downward. An impermeable liner consisting of a high-density polyethylene liner (or equivalent) that is at least 10 mils thick should line the entire bottom and sides of the system, where required. In locations where treatment basins are not in close proximity to foundations, retaining walls, concrete flatwork, or pavements, the impermeable liner may be omitted; however, these should be assessed on a case-by-case basis.

8.1.4 Exterior Concrete Flatwork

We recommend exterior concrete flatwork, including sidewalks, be underlain by at least six inches of non-expansive soil consisting of select fill or lime-treated on-site soil. The non-expansive soil should extend at least six inches beyond the edges of the flatwork. Select fill and lime-treated on-site soil beneath exterior slabs-on-grade should be moisture-conditioned and compacted in accordance with the requirements provided above in Table 4. Prior to placement of aggregate base, the soil subgrade should be scarified to depth of at least eight inches, moisture-conditioned to at least three percent above optimum moisture content, and compacted in accordance with the requirements provided in Table 4.

Even with six inches of non-expansive soil, exterior slabs may experience some cracking due to shrinking and swelling of the underlying expansive soil. Thickening the slab edges and adding additional reinforcement will control this cracking to some degree. In addition, where slabs provide access to buildings, it would be prudent to dowel the entrance to the buildings to permit rotation of the slabs as the exterior ground shrinks and swells and to prevent a vertical offset at the entries.

8.2 Shoreline Stabilization

The existing waterfront consists of a variety of systems, including rip-rap slopes, driven timber piles, and a concrete retaining wall along the easternmost portion. Based on our experience, we believe the current shoreline structures are not designed to mitigate the effects of liquefaction, and therefore, some form of soil stabilization would be required if it is desired to reduce the potential for excessive vertical and lateral deformations. Structures and surface improvements in areas where lateral spreading occurs would likely experience severe damage.

Provided the issue of unknown buried obstructions is addressed, we conclude Deep Soil Mixing (DSM) is a viable method to stabilize the soft/compressible and liquefiable soils near the waterfront. DSM has successfully been used at other shoreline stabilization projects in the Bay Area with similar soil conditions and seismicity. For planning purposes, it should be assumed the DSM columns extend at least 10 feet into the stiff/dense soil below the soft clay and liquefiable soil and the width of the DSM buttress is equal to the length of the DSM columns. Based on the information from the shoreline CPTs, we estimate the buttress width would vary from about 40 to 75 feet. The DSM buttress should be designed by a design-build ground improvement contractor to provide minimum factors of safety of 1.5 and 1.15 for static and seismic load conditions, respectively.

8.3 Foundation Design

If the estimated total settlement (static plus seismic) discussed in Section 7.1 of this report is acceptable from a structural standpoint, the proposed new buildings may supported on mat foundations bearing on unimproved soil. If the estimated settlements are not acceptable, the proposed new structures should be supported on a shallow foundation system, such as footings or a mat, bearing on improved soil.

The foundations should be designed to resist the effects of expansive near-surface soil. The following section presents our recommendations for the design and construction of conventional spread footings bearing on unimproved soil and soil improved with DDSC or SMX columns.

We can also provide recommendations for other ground improvement methods or deep foundation systems upon request.

8.3.1 Mat Foundations on Unimproved Soil

Provided the estimated total settlement (static plus seismic) discussed in Section 7.1 of this report is acceptable from a structural standpoint, the proposed new buildings may supported on mat foundations bearing on unimproved soil. We recommend mat foundations supported on two feet of recompacted fill be designed using allowable bearing capacities of 2,500 pounds per square foot (psf) for dead-plus-live loads and 3,300 psf for total loads (including seismic and wind loads). To evaluate the pressure distribution beneath the mat foundation under static conditions, we recommend using a modulus of vertical subgrade reaction of 20 pounds per cubic inch (pci); this value has been reduced to account for the size of the mat. To check whether the mat is sufficiently stiff to adequately limit differential settlement during an earthquake, the deflection of the mat should be checked by assuming a five-foot-wide strip along the building perimeter with a reduced modulus of 5 pci and a modulus of 20 pci for the rest of the mat. The perimeter of the mat should be thickened to provide at least 18 inches of embedment below the lowest outside adjacent finished grade.

Lateral loads can be resisted by a combination of passive pressure on the vertical faces of the mat and friction along the bottom of the mat. Lateral resistance may be computed using an equivalent fluid weight (triangular distribution) of 270 pcf; the upper foot of soil should be ignored unless confined by a slab or pavement. Frictional resistance should be computed using a base friction coefficient of 0.30 where the mat is in contact with the soil. Where a vapor retarder is placed beneath the mat, a base friction coefficient of 0.20 should be used. The passive pressure and frictional resistance values include a factor of safety of at least 1.5.

The mat subgrade should be free of loose, weak, or disturbed material and should be kept in a moist condition until it is covered with the vapor retarder. We should check the foundation subgrade prior to placement of the vapor retarder.

Where water vapor transmission through the mat slabs is undesirable, we recommend installing a water vapor retarder beneath the mat. The vapor retarder may be placed directly on the smooth, compacted soil subgrade. The retarder should meet the requirements for Class A vapor retarders stated in ASTM E1745 and should be placed in accordance with the requirements of ASTM E1643. These requirements include overlapping seams by six inches, taping seams, and sealing penetrations in the vapor retarder. *If required by the structural engineer*, the vapor retarder may be covered with two inches of sand to aid in curing the concrete and to protect the vapor retarder during slab construction. The sand overlying the vapor retarder should be moist at the time concrete is placed. However, excess water trapped in the sand could eventually be transmitted as vapor through the slab. Therefore, if rain is forecast prior to pouring the slab, the sand should be covered with plastic sheeting to avoid wetting. If the sand becomes wet, concrete should not be placed until the sand has been dried or replaced.

Concrete mixes with high water/cement (w/c) ratios result in excess water in the concrete, which increases the cure time and results in excessive vapor transmission through the slab. Therefore, concrete for the mat foundations should have a low w/c ratio - less than 0.45. If necessary, workability should be increased by adding plasticizers. In addition, the mats should be properly cured. Before floor coverings, if any, are placed, the contractor should check that the concrete surface and the moisture emission levels (if emission testing is required) meet the manufacturer's requirements.

8.3.2 Spread Footings on Improved Soil

The proposed buildings may be supported on spread footings bearing on improved ground. Individual spread footings may be used at interior column locations; a continuous, deepened perimeter footing should be used around the perimeter of the building. The perimeter footings should be deepened to act as barriers to reduce the potential for moisture change beneath the slab-on-grade floors.

Continuous footings should be at least 16 inches wide and isolated spread footings should be at least 24 inches wide. Perimeter footings should be bottomed at least 30 inches below the lowest

adjacent outside grade. The perimeter footing embedment depth may be decreased by six inches where pavement or concrete flatwork is adjacent to the new building. Interior footings should extend at least 24 inches below the bottom of the capillary moisture break.

For preliminary design of a spread footings bearing on improved ground, we recommend assuming ground improvement elements will extend into the stiff to very stiff clay beneath the compressible clay deposits and potentially liquefiable soil layers, which extend to depths ranging from about 40 to 50 feet bgs. Based on our experience, we anticipate the ground improvement system, if properly designed, should be capable of increasing the allowable bearing pressure for spread footings to approximately 5,000 psf for dead-plus-live-loads and limiting combined static and seismic total settlement to less than one inch. The actual design allowable bearing pressures and estimated settlements should be evaluated by the design-build ground improvement contractor, as they will be based on the diameter, depth, and spacing of the ground improvement elements

Lateral loads may be resisted by a combination of passive pressure on the vertical faces of the footings and friction between the bottoms of the footings and the supporting soil. To compute passive resistance, we recommend using an allowable equivalent fluid weight of 270 pcf. The upper foot of soil should be ignored unless confined by a slab or pavement. Allowable frictional resistance along the base of the footings should be calculated based on parameters provided by the design-build ground improvement contractor. For preliminary design, frictional resistance should be computed using a base friction coefficient of 0.35; this value includes an approximate factor of safety of 1.5. The passive pressure and frictional resistance values include a factor of safety of at least 1.5 and may be used in combination without reduction.

Footing excavations should be free of standing water, debris, and disturbed materials prior to placing concrete. The bottoms and sides of the footing excavations should be moistened following excavation and maintained in a moist condition until concrete is placed. We should check footing excavations prior to placement of reinforcing steel to confirm the presence of the ground improvement elements and to check the footing excavation bottom has been properly prepared, including moisture-conditioning as necessary to prevent desiccation cracks from

forming. If the footings will be constructed during the winter, we strongly recommend a "mud slab" consisting of two inches of unreinforced concrete be placed in the footing excavation bottoms to prevent softening of the footing subgrade if exposed to rain.

8.4 Concrete Floor Slabs

For buildings supported on spread footings founded on improved soil, slab-on-grade floors may be used for these structures; however, the floor slabs may settle differentially up to 5-1/2 inches relative to the footings following a major earthquake. If the potential for this differential settlement is not acceptable, the floor slab should be designed to span between ground improvement elements. As discussed in Section 8.1, the slab-on-grade floors for the buildings should be underlain by at least 12 inches of non-expansive soil consisting of either imported select fill or lime-treated on-site soil. The capillary break material discussed below should not be counted as part of the non-expansive soil.

To reduce water vapor transmission through the floor slabs, we recommend installing a capillary moisture break and water vapor retarder beneath the slabs. A capillary moisture break consists of at least four inches of clean, free-draining gravel or crushed rock. The vapor retarder should meet the requirements for Class A vapor retarders stated in ASTM E1745. The vapor retarder should be placed in accordance with the requirements of ASTM E1643. These requirements include overlapping seams by six inches, taping seams, and sealing penetrations in the vapor retarder.

Where mat foundations are used, a capillary break is not required and the vapor retarder may be placed directly on the compacted subgrade beneath the mat foundation.

If required by the structural engineer, the vapor retarder may be covered with two inches of sand to aid in curing the concrete and to protect the vapor retarder during slab construction. The sand overlying the vapor retarder should be moist at the time concrete is placed. However, excess water trapped in the sand could eventually be transmitted as vapor through the slab. Therefore, if rain is forecast prior to pouring the slab, the sand should be covered with plastic sheeting to avoid wetting. If the sand becomes wet, concrete should not be placed until the sand has been

dried or replaced. The particle size of the capillary break material and sand (if used) should meet the gradation requirements presented in Table 5.

TABLE 5
Gradation Requirements for Capillary Moisture Break

Sieve Size	Percentage Passing Sieve
Gravel or Crushed Rock	
1 inch	90 – 100
3/4 inch	30 – 100
1/2 inch	5 – 25
3/8 inch	0 – 6
Sand	
No. 4	100
No. 200	0 – 5

Concrete mixes with high water/cement (w/c) ratios result in excess water in the concrete, which increases the cure time and results in excessive vapor transmission through the slab. Therefore, concrete for the floor slab should have a low w/c ratio - less than 0.50. If the concrete is poured directly over the vapor retarder, we recommend the w/c ratio of the concrete not exceed 0.45. In either case, water should not be added to the concrete mix in the field. If necessary, workability should be increased by adding plasticizers. In addition, the slab should be properly cured. Before the floor covering is placed, the contractor should check that the concrete surface and the moisture emission levels (if emission testing is required) meet the manufacturer's requirements.

8.5 Permanent Retaining Walls

Permanent walls should be designed to resist lateral earth pressure imposed by the retained soil and bedrock. Where permanent walls will be restrained from movement at the top and/or sides, they should be designed for at-rest conditions. We recommend restrained walls at the site, including elevator pit and other below-grade walls, be designed using an at-rest equivalent fluid

weight of 60 pcf. Unrestrained walls (i.e. cantilevered retaining walls) should be designed for active earth conditions using equivalent fluid weight of 40 pcf in soil.

Because the site is in a seismically active area, the retaining walls will experience additional seismic forces during a strong event on a nearby fault. To evaluate permanent walls for seismic loading, we recommend using an active equivalent fluid weight plus a seismic increment. The recommended seismic increments are 9 and 22 pcf for unrestrained and restrained walls, respectively. Where the wall will be less than six feet tall and a factor of safety of 1.5 is used by the structural engineer for the design of the wall, we judge that the potential for damage due to soil-related failure or slope stability is low and no additional seismic increment would be required.

The recommended lateral earth pressures above are based on a level backfill condition with no additional surcharge loads. Where walls will be subject to traffic loading within a horizontal distance equal to the height of the wall, an additional uniform lateral pressure of 100 psf, applied to the upper 10 feet of the wall, should be used. Where existing or new foundations are supported above a "zone-of-influence" line extending up from a retaining wall at an inclination of 1.5:1 (horizontal: vertical), the wall should be designed for a surcharge pressure. We can provide the surcharge pressure once the dimensions and depth of the foundation are known.

To protect against moisture migration, below-grade walls adjacent to finished interior spaces should be waterproofed and water stops should be placed at all construction joints. The design pressures recommended for above the design water level are based on fully drained walls. Although the retaining walls will be above the groundwater level, water can accumulate behind the walls from other sources, such as rainfall, irrigation, and broken water lines, etc. One acceptable method for backdraining the walls is to place a prefabricated drainage panel (Miradrain 6000 or equivalent) against the shoring or the back of the walls. The drainage panel should extend down to a four-inch-diameter perforated PVC collector pipe at the base of the retaining wall footing. The pipe should be surrounded on all sides by at least four inches of Caltrans Class 2 permeable material (see Caltrans Standard Specifications Section 68-1.025) or 3/4-inch drain rock wrapped in filter fabric (Mirafi 140NC or equivalent). The pipe should be

connected to a suitable discharge point. We should check the manufacturer's specifications regarding the proposed prefabricated drainage panel material to verify it is appropriate for its intended use.

If backfill is required behind retaining walls, the walls should be braced, or hand compaction equipment used, to prevent unacceptable surcharges on walls (as determined by the structural engineer).

8.6 Pavement Design

8.6.1 Flexible (Asphalt Concrete) Pavement

The State of California flexible pavement design methods was used to develop the recommended asphalt concrete (AC) pavement sections. The final soil subgrade in asphalt-paved areas may consist of recompacted on-site fill or engineered fill placed during grading. The resistance value (R-value) test results from our test pits indicate the upper on-site soil has an R-value of approximately 66. Due to the highly variable fill content, we conservatively assumed a design R-value of 25 for on-site soil. If imported fill is placed beneath the proposed pavements, an R-value test should be run on the material. Recommended pavement sections for traffic indices ranging from 4.5 to 6.5 are presented in Table 6.

TABLE 6
Asphalt-Concrete Pavement Sections

TI	Asphaltic Concrete (inches)	Class 2 Aggregate Base R = 78 (inches)
4.5	2.5	4.5
5.0	3.0	4.5
5.5	3.0	6.0
6.0	3.5	6.5

For regular garbage truck traffic (two garbage trucks making three site visits per week), we recommend a traffic index of 5.5 be used for flexible pavement design. The upper six inches of

the subgrade should be moisture-conditioned and compacted in accordance with requirements presented in Table 2 in Section 8.1. The subgrade should be proof-rolled to confirm it is non-yielding prior to placement of the aggregate base. The aggregate base should be moisture-conditioned to near optimum and compacted to at least 95 percent relative compaction. The aggregate base should also be proof-rolled to confirm it is non-yielding prior to paving.

To prevent irrigation water from entering the pavement section, curbs adjacent to landscaped areas should extend through the base rock and at least three inches into the underlying clay. Where pavement is constructed near bio-swales or other storm water treatment areas, curbs should be deepened so that the base is founded below an imaginary line extending up at an inclination of 1.5:1 (horizontal: vertical) from the base of the bio-swale/treatment area.

8.6.2 Rigid (Portland Cement Concrete) Pavement

Concrete pavement design is based on a maximum single-axle load of 20,000 pounds and a maximum tandem axle load of 32,000 pounds and light truck traffic (i.e., a few trucks per week). The recommended rigid pavement section for these axle loads is 6-1/2 inches of Portland cement concrete over six inches of Class 2 aggregate base. Where fire truck traffic is expected, the pavement section should consist of seven inches of Portland cement concrete over six inches of Class 2 aggregate base.

The modulus of rupture of the concrete should be at least 500 psi at 28 days. Contraction joints should be constructed at 15-foot spacing. Where the outer edge of a concrete pavement meets asphalt concrete pavement, the concrete slab should be thickened by 50 percent at a taper not to exceed a slope of 1 in 10. For areas that will receive weekly garbage truck traffic, we recommend the slab be reinforced with a minimum of No. 4 bars at 16-inch spacing in both directions.

The upper six inches of the subgrade should be moisture-conditioned and compacted in accordance with requirements presented in Section 8.1. The aggregate base should be moisture-conditioned to near optimum and compacted to at least 95 percent relative compaction.

If pavements are adjacent to irrigated landscaped areas (including infiltration basins), curbs adjacent to those areas should extend through the aggregate base and at least three inches into the underlying soil to reduce the potential for irrigation water to infiltrate into the pavement section. If drip irrigation is used in the landscaping adjacent to the pavement, however, the deepened curb is not required.

8.7 Seismic Design

We understand the proposed new structures will be designed using the seismic provisions in the 2016 CBC. The latitude and longitude of the site are 38.0335° and -121.8770°, respectively. Section 1613A of the 2016 California Building Code (CBC) and Section 20.3.1 of ASCE 7-10 indicate if liquefiable soil is present at a site, it is classified as Site Class F and a site-specific response study is required; however, if the period of the structure is less than 0.5 second, the site class can be determined from Section 20.3 of ASCE 7-10. If the period of the proposed buildings will be less than 0.5 second (structural engineer should confirm), we recommend Site Class E be used. Hence, in accordance with the 2016 CBC, we recommend the following:

- S_S = 1.34 g, S_1 = 0.59 g
- S_{MS} = 1.47 g, S_{M1} = 1.43 g
- S_{DS} = 0.98 g, S_{D1} = 0.95 g
- PGA_M = 0.55g
- Seismic Design Category D for Risk Categories I, II, and III.

9.0 GEOTECHNICAL SERVICES DURING CONSTRUCTION

Prior to construction, Rockridge Geotechnical should review the project plans and specifications to verify that they conform to the intent of our recommendations. During construction, our field engineer should provide on-site observation and testing during site preparation, placement and compaction of fill and aggregate base, ground improvement, and installation of foundations. These observations will allow us to compare actual with anticipated soil conditions and to verify that the contractor's work conforms to the geotechnical aspects of the plans and specifications.

10.0 LIMITATIONS

This geotechnical study has been conducted in accordance with the standard of care commonly used as state-of-practice in the profession. No other warranties are either expressed or implied. The recommendations made in this report are based on the assumption that the subsurface conditions do not deviate appreciably from those disclosed in the exploratory CPTs and borings. If any variations or undesirable conditions are encountered during construction, we should be notified so that additional recommendations can be made. The foundation recommendations presented in this report are developed exclusively for the proposed development described in this report and are not valid for other locations and construction in the project vicinity.

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A new seamless, high-resolution digital elevation model of the San Francisco Bay-Delta Estuary, California Open-File Report 2017-1067

ROCKRIDGE GEOTECHNICAL

FIGURES



Base map: Google Map, 2017

0 400 800 Feet

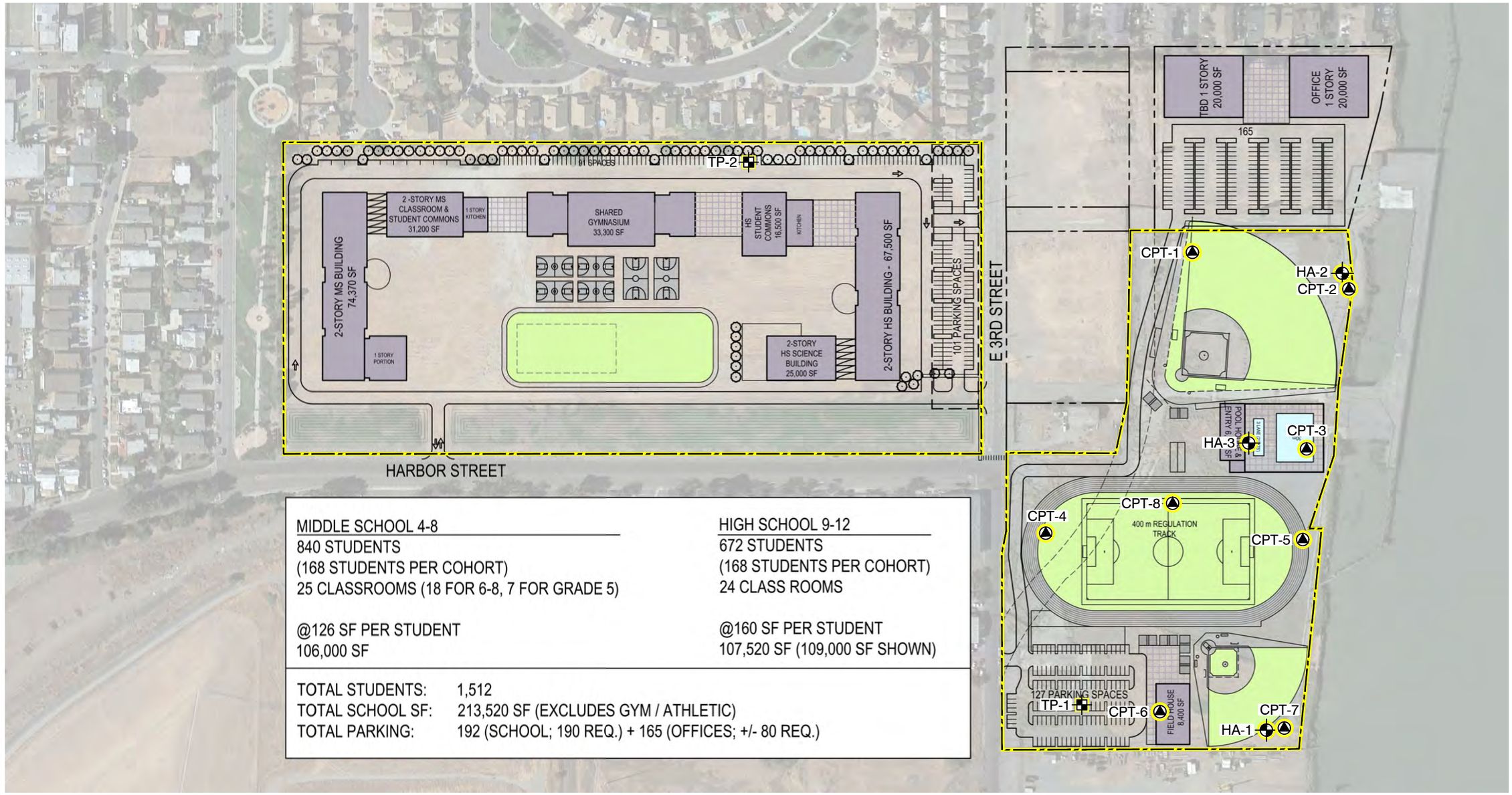
Approximate scale

MAKING WAVES ACADEMY
Pittsburg, California

ROCKRIDGE GEOTECHNICAL

SITE LOCATION MAP

Date 05/09/18	Project No. 18-1477	Figure 1



MIDDLE SCHOOL 4-8	HIGH SCHOOL 9-12
840 STUDENTS	672 STUDENTS
(168 STUDENTS PER COHORT)	(168 STUDENTS PER COHORT)
25 CLASSROOMS (18 FOR 6-8, 7 FOR GRADE 5)	24 CLASS ROOMS
@126 SF PER STUDENT	@160 SF PER STUDENT
106,000 SF	107,520 SF (109,000 SF SHOWN)

TOTAL STUDENTS:	1,512
TOTAL SCHOOL SF:	213,520 SF (EXCLUDES GYM / ATHLETIC)
TOTAL PARKING:	192 (SCHOOL; 190 REQ.) + 165 (OFFICES; +/- 80 REQ.)

EXPLANATION

CPT-1 — Approximate location of cone penetration test by Rockridge Geotechnical Inc., April 13, 2018

HA-1 — Approximate location of hand-auger boring by Rockridge Geotechnical Inc., April 13, 2018

TP-1 — Approximate location of test pit by Rockridge Geotechnical Inc., April 13, 2018

Project limits

0 200 Feet

Approximate scale

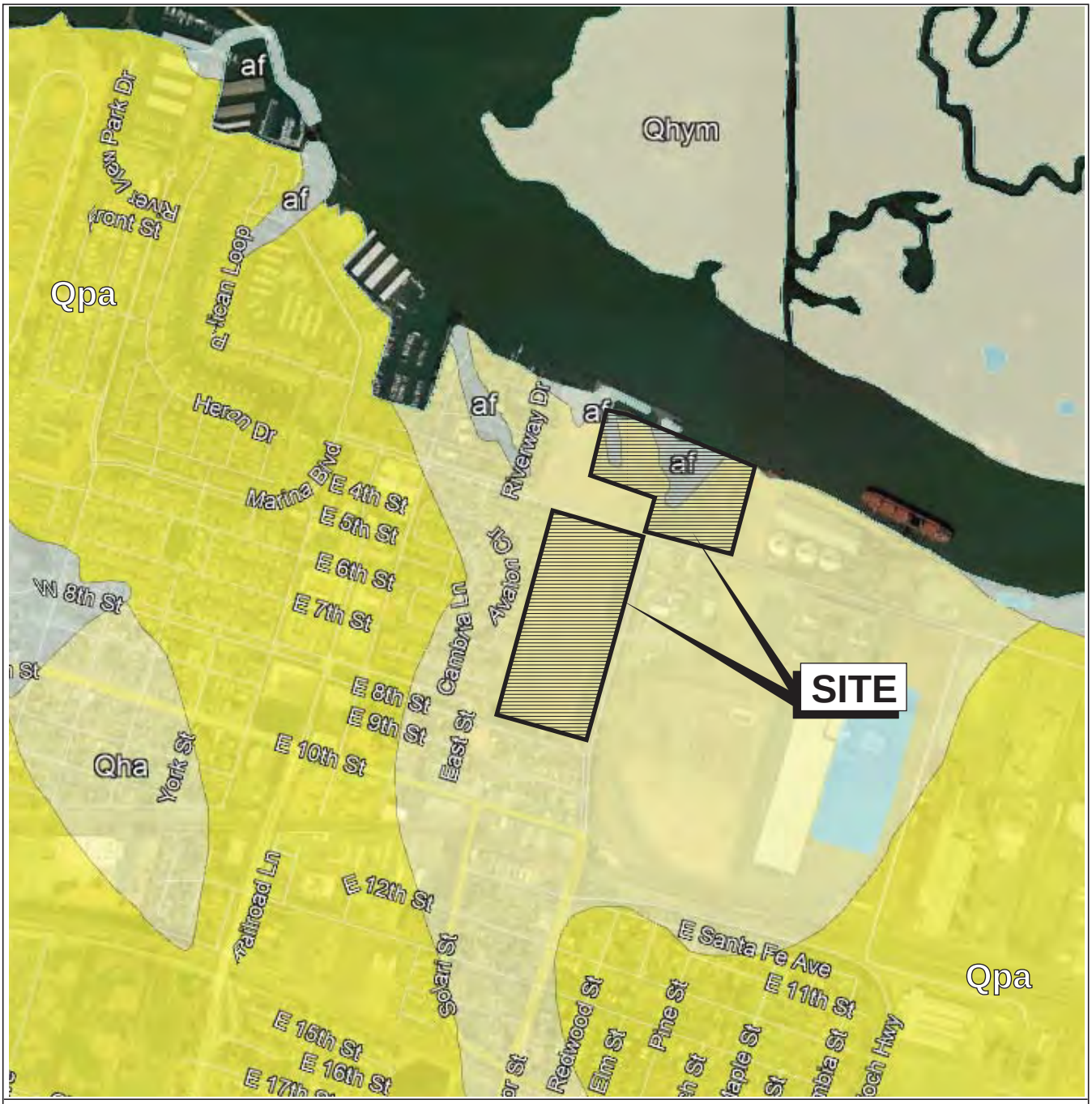
Reference: Base map from a drawing titled "Site Plan", by Studio Bondy Architecture, dated October 3, 2017.

MAKING WAVES ACADEMY
Pittsburg, California

SITE PLAN

Date 05/09/18 | Project No. 18-1477 | Figure 2

ROCKRIDGE GEOTECHNICAL



Base map: Google Earth with U.S. Geological Survey (USGS), Contra Costa County, 2017.

EXPLANATION

af	Artificial Fill
Qhym	Mud deposits (late Holocene)
Qha	Alluvium (Holocene)
Qpa	Alluvium (Pleistocene)

Geologic contact: dashed where approximate and dotted where concealed, queried where uncertin

0 1,000 2,000 Feet

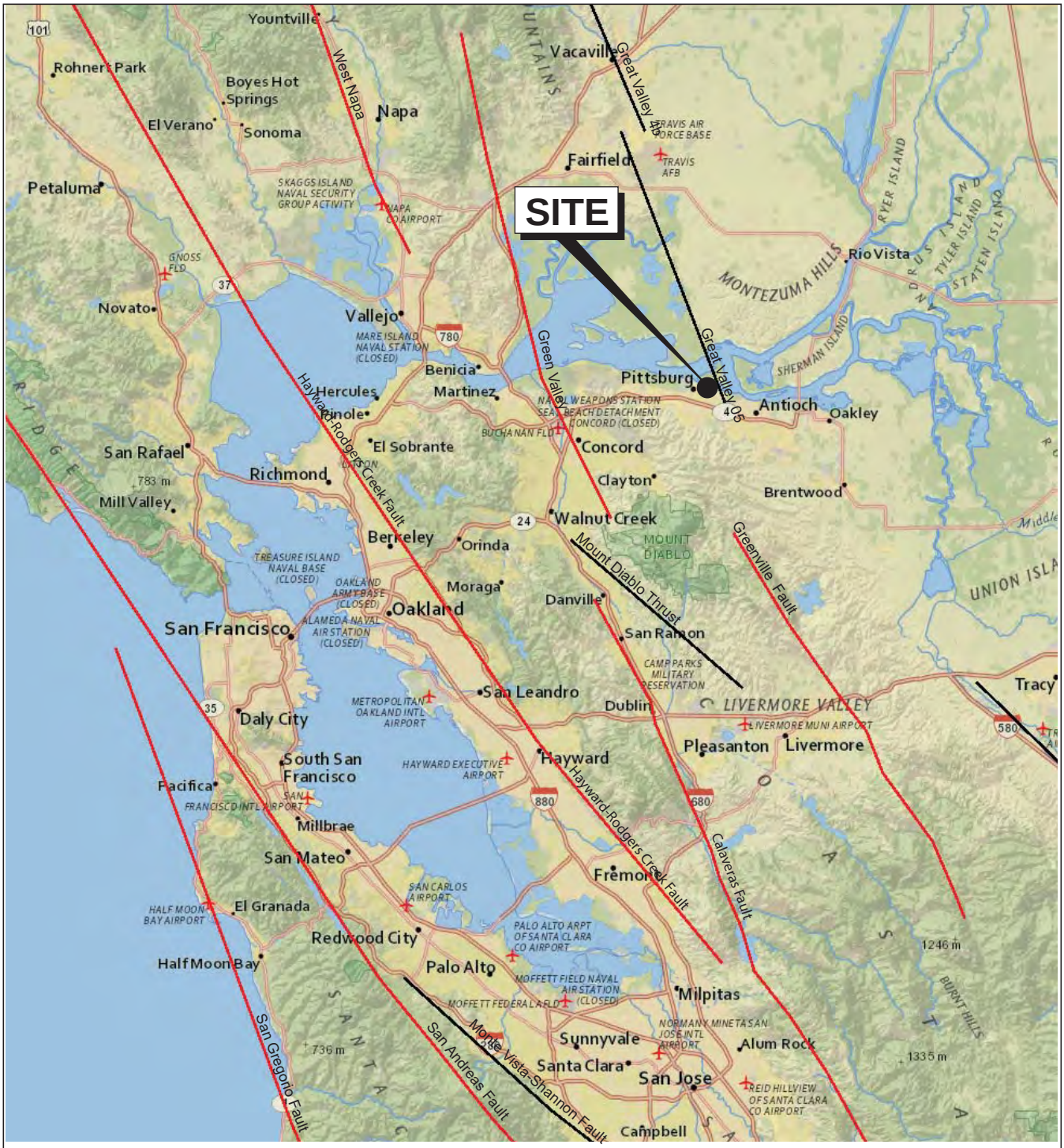
Approximate scale

MAKING WAVES ACADEMY
Pittsburg, California

REGIONAL GEOLOGIC MAP

ROCKRIDGE GEOTECHNICAL

Date 05/09/18 | Project No. 18-1477 | Figure 3



Base Map: U.S. Geological Survey (USGS), National Seismic Hazards Maps - Fault Sources, 2008.

EXPLANATION

- Strike slip
- Thrust (Reverse)
- Normal

N

0 5 10 Miles

Approximate scale

MAKING WAVES ACADEMY
Pittsburg, California

REGIONAL FAULT MAP

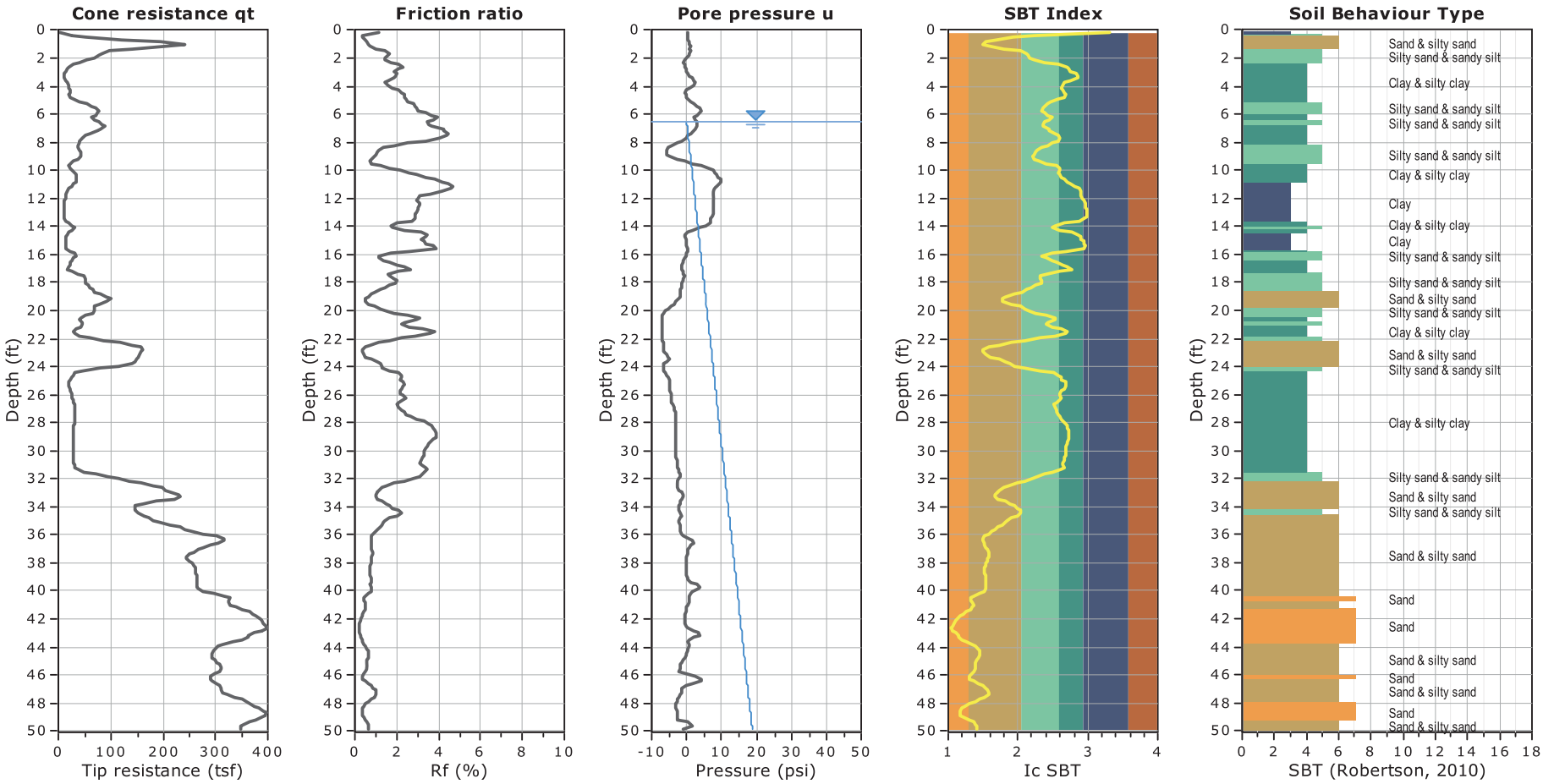
ROCKRIDGE GEOTECHNICAL

Date 05/09/18	Project No. 18-1477	Figure 4

ROCKRIDGE GEOTECHNICAL

APPENDIX A

Cone Penetration Test Results



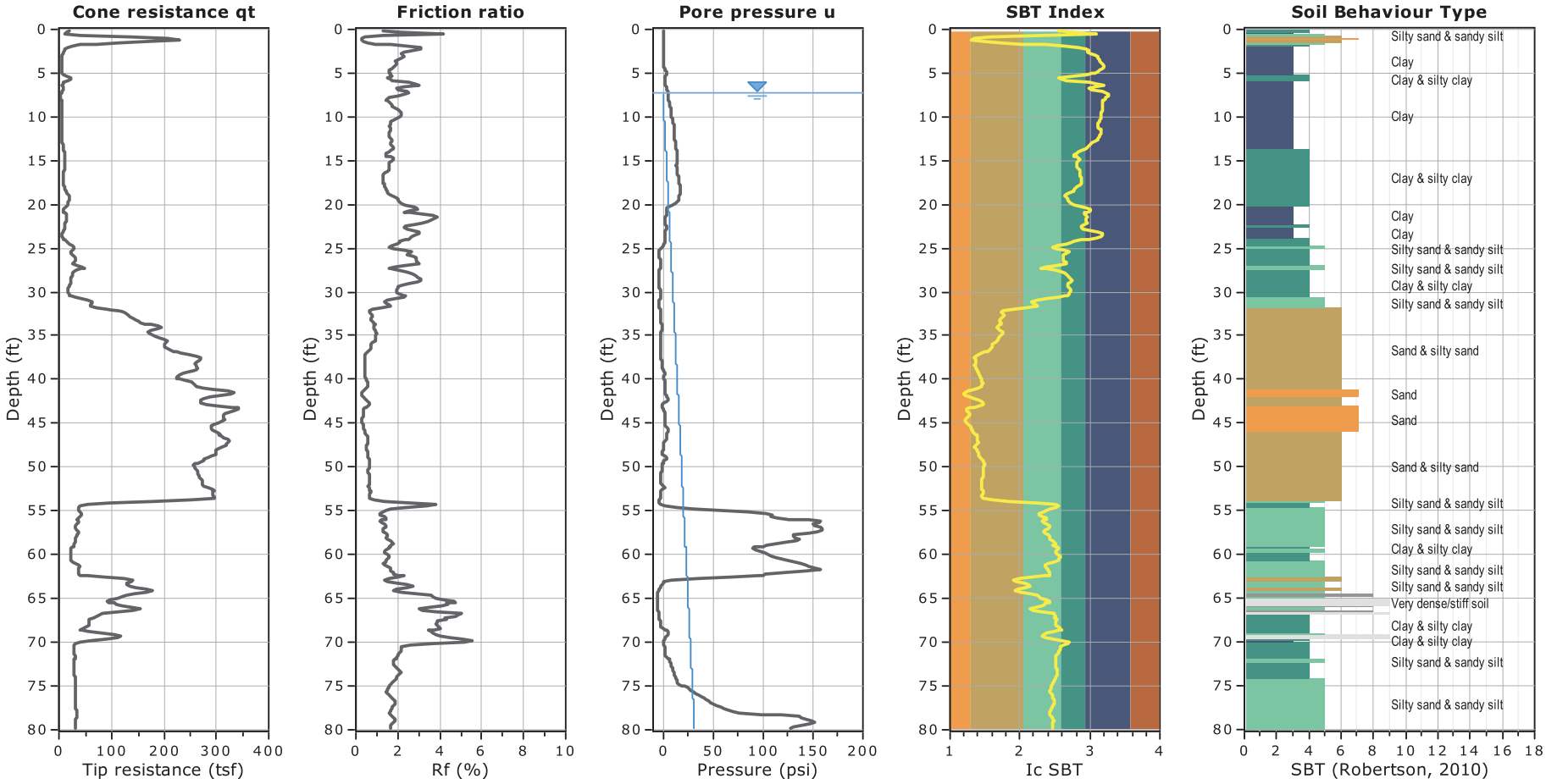
Total depth: 49.87 ft, Date: 4/17/2018
Estimated Groundwater Depth: 6.5 feet bgs
Approximate Ground Surface Elevation: 12.0 Feet (NAVD 88)
Cone Operator: Gregg Drilling & Testing, Inc.

MAKING WAVES ACADEMY
Pittsburg, California

ROCKRIDGE GEOTECHNICAL

CONE PENETRATION TEST RESULTS
CPT-1

Date 05/09/18	Project No. 18-1477	Figure A-1



SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty clay
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to clayey sand
9. Very stiff fine grained

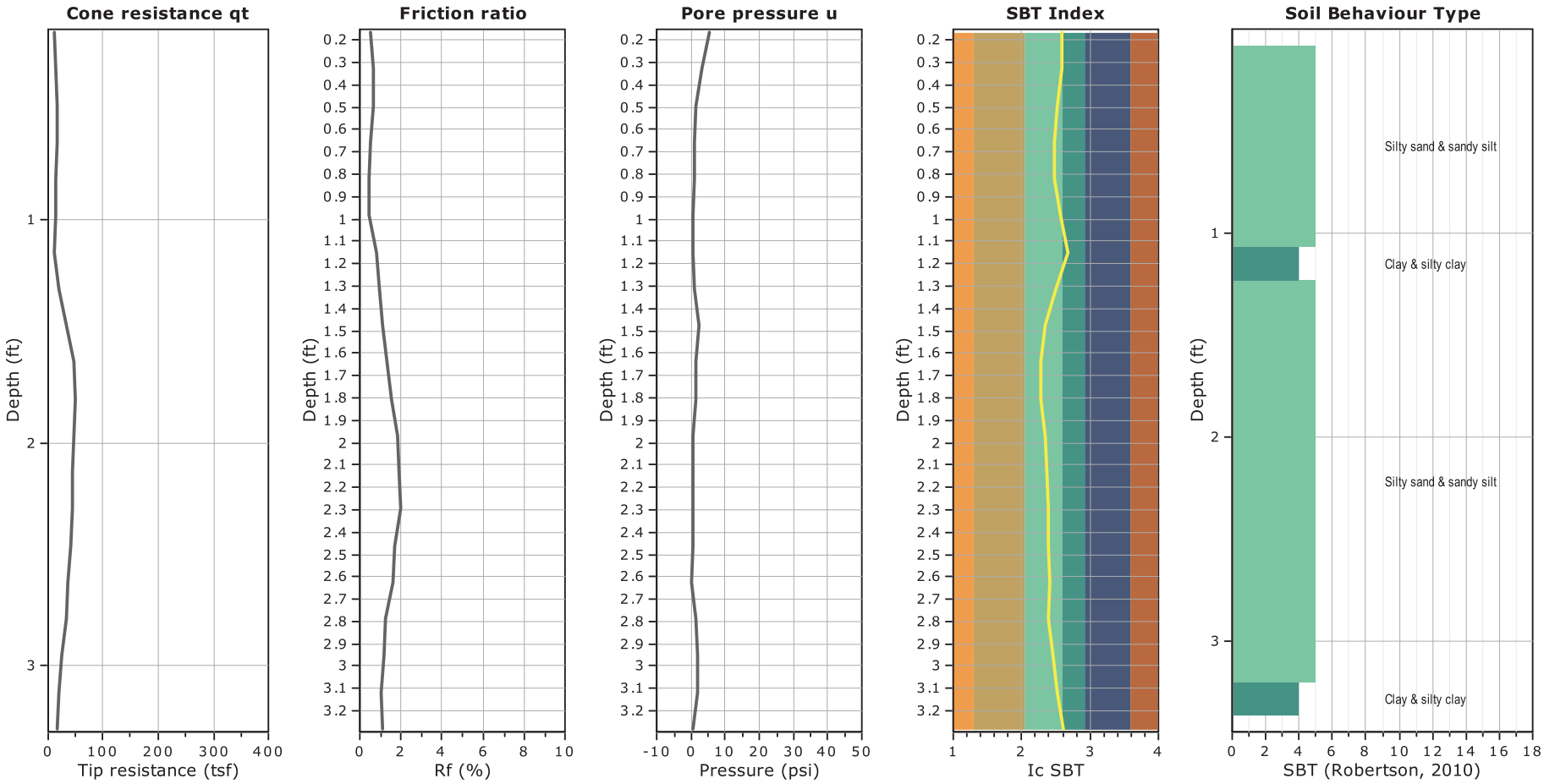
Total depth: 79.89 ft, Date: 4/13/2018
Estimated Groundwater Depth: 7.3 feet bgs
Approximate Ground Surface Elevation: 9.5 Feet (NAVD 88)
Cone Operator: Gregg Drilling & Testing, Inc.

MAKING WAVES ACADEMY
Pittsburg, California

ROCKRIDGE GEOTECHNICAL

CONE PENETRATION TEST RESULTS
CPT-2

Date 05/09/18	Project No. 18-1477	Figure A-2



SBT legend

- 1. Sensitive fine grained
- 2. Organic material
- 3. Clay to silty clay
- 4. Clayey silt to silty clay
- 5. Silty sand to sandy silt
- 6. Clean sand to silty sand
- 7. Gravely sand to sand
- 8. Very stiff sand to clayey sand
- 9. Very stiff fine grained

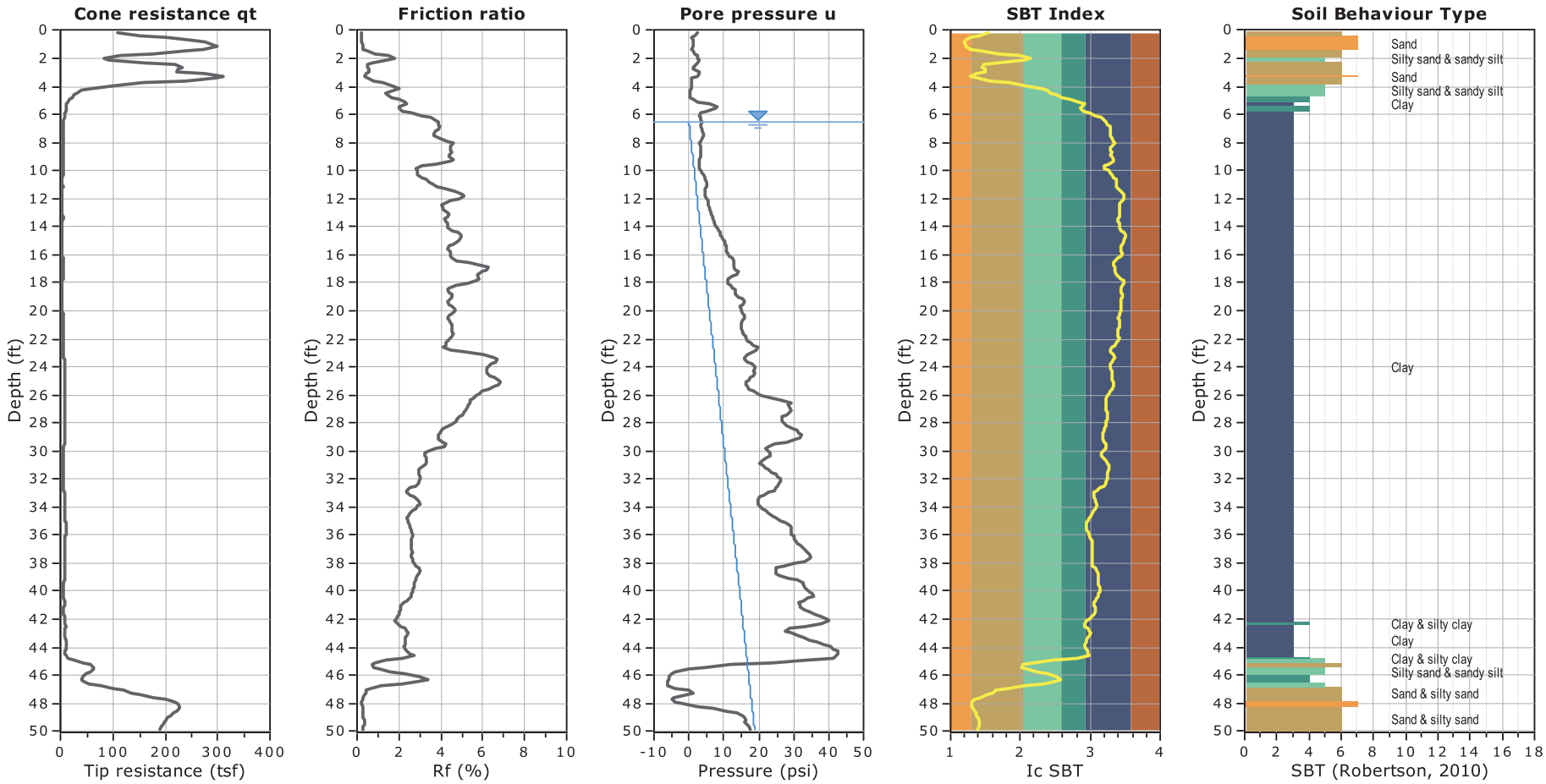
Total depth: 3.28 ft, Date: 4/13/2018
Estimated Groundwater Depth: No GW encountered
Approximate Ground Surface Elevation: 8.0 Feet (NAVD 88)
Cone Operator: Gregg Drilling & Testing, Inc.

MAKING WAVES ACADEMY
Pittsburg, California

ROCKRIDGE GEOTECHNICAL

CONE PENETRATION TEST RESULTS
CPT-3

Date 05/09/18	Project No. 18-1477	Figure A-3



SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty clay
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to clayey sand
9. Very stiff fine grained

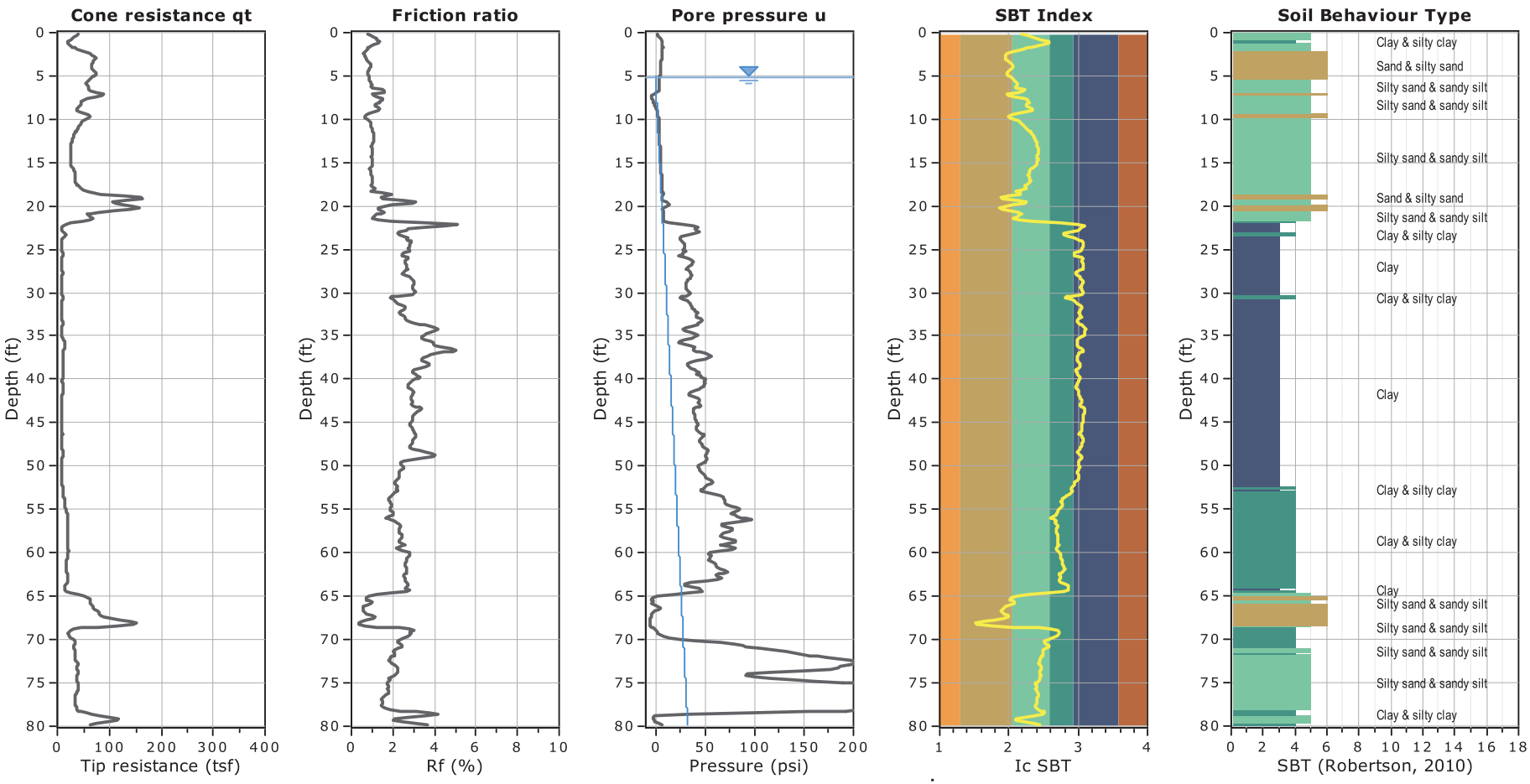
Total depth: 49.87 ft, Date: 4/13/2018
Estimated Groundwater Depth: 3.6 feet bgs
Approximate Ground Surface Elevation: 9.0 Feet (NAVD 88)
Cone Operator: Gregg Drilling & Testing, Inc.

MAKING WAVES ACADEMY
Pittsburg, California

ROCKRIDGE GEOTECHNICAL

CONE PENETRATION TEST RESULTS
CPT-4

Date 05/09/18	Project No. 18-1477	Figure A-4



SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty clay
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to clayey sand
9. Very stiff fine grained

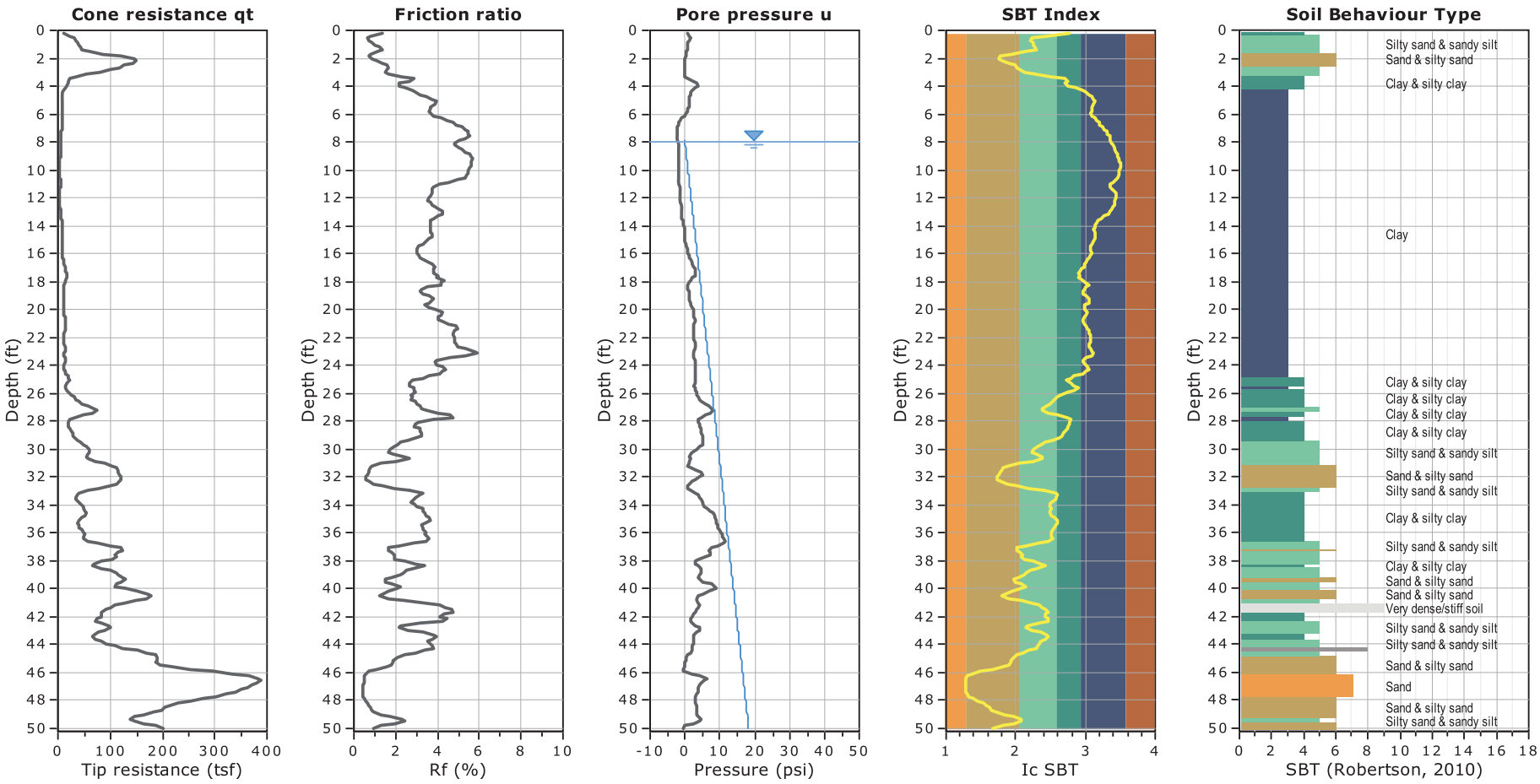
Total depth: 79.89 ft, Date: 4/13/2018
Estimated Groundwater Depth: 5.1 feet bgs
Approximate Ground Surface Elevation: 7.5 Feet (NAVD 88)
Cone Operator: Gregg Drilling & Testing, Inc.

MAKING WAVES ACADEMY
Pittsburg, California

ROCKRIDGE GEOTECHNICAL

CONE PENETRATION TEST RESULTS
CPT-5

Date 05/09/18	Project No. 18-1477	Figure A-5



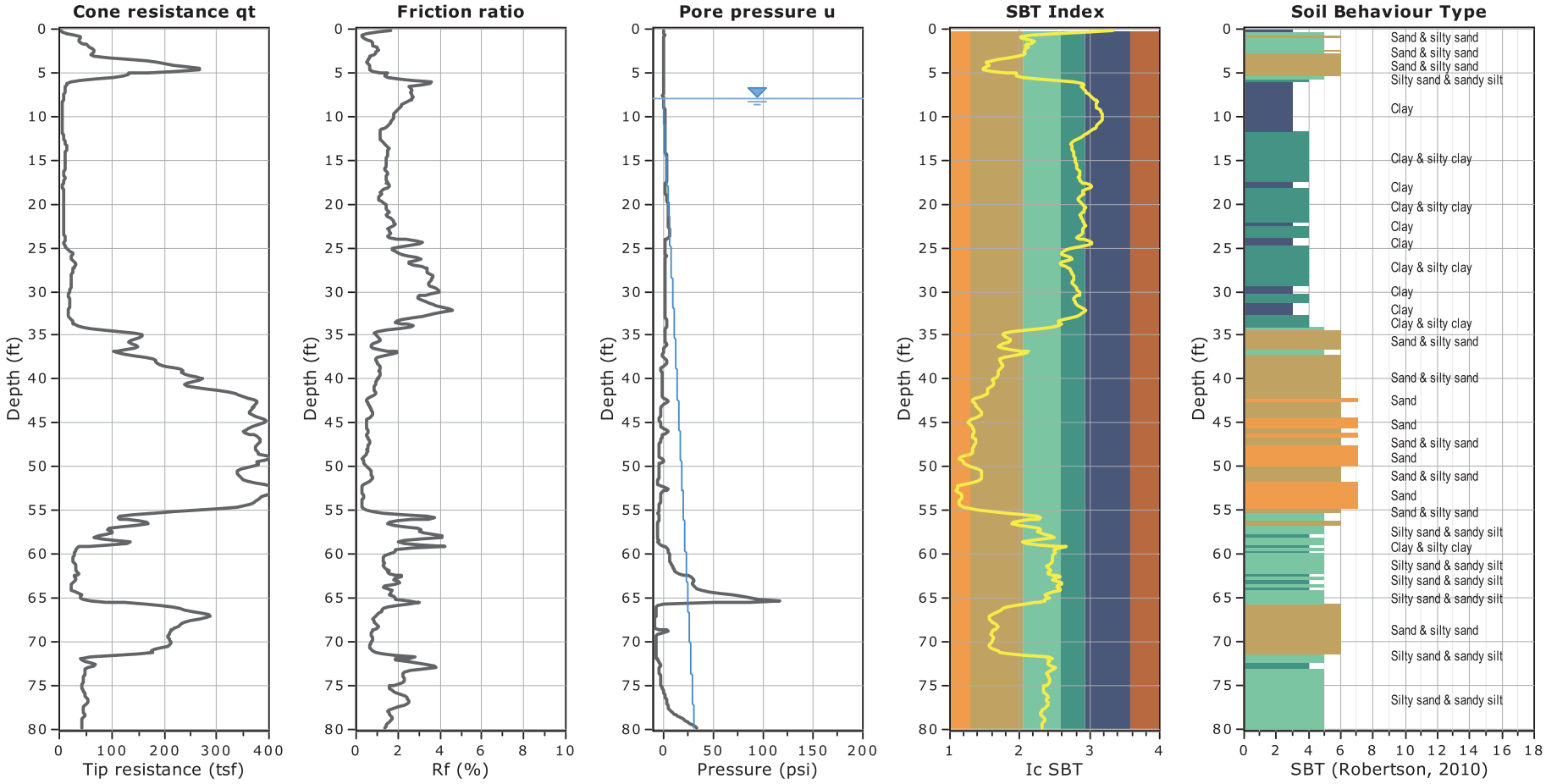
Total depth: 50.03 ft, Date: 4/13/2018
Estimated Groundwater Depth: 7.9 feet bgs
Approximate Ground Surface Elevation: 10.0 Feet (NAVD 88)
Cone Operator: Gregg Drilling & Testing, Inc.

MAKING WAVES ACADEMY
Pittsburg, California

ROCKRIDGE GEOTECHNICAL

CONE PENETRATION TEST RESULTS
CPT-6

Date 05/09/18	Project No. 18-1477	Figure A-6



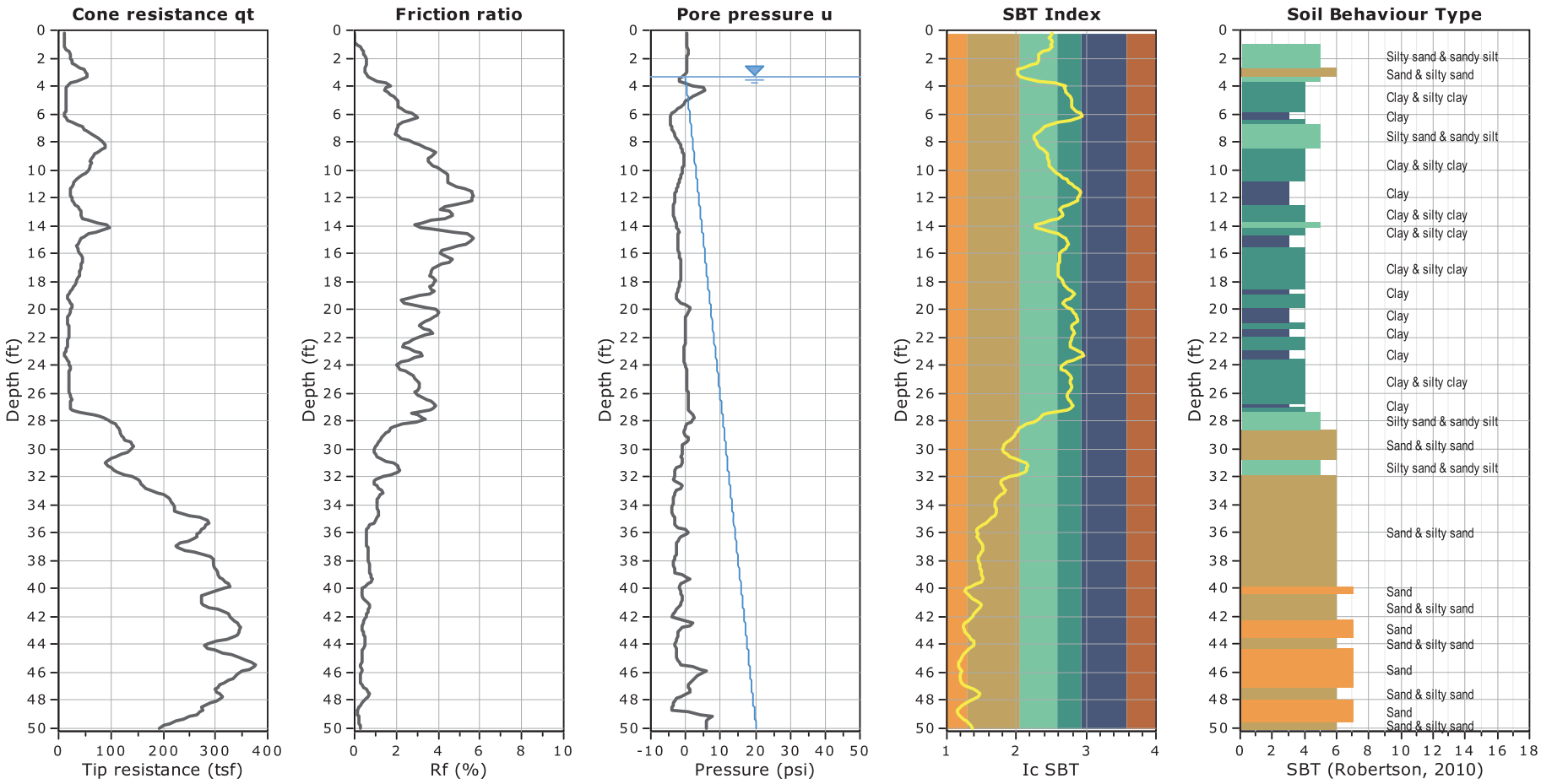
Total depth: 79.89 ft, Date: 4/13/2018
Estimated Groundwater Depth: 7.9 feet bgs
Approximate Ground Surface Elevation: 11.1 Feet (NAVD 88)
Cone Operator: Gregg Drilling & Testing, Inc.

MAKING WAVES ACADEMY
Pittsburg, California

ROCKRIDGE GEOTECHNICAL

CONE PENETRATION TEST RESULTS
CPT-7

Date 05/09/18	Project No. 18-1477	Figure A-7



SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty clay
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to clayey sand
9. Very stiff fine grained

Total depth: 50.03 ft, Date: 4/13/2018
Estimated Groundwater Depth: 3.3 feet bgs
Approximate Ground Surface Elevation: 7.0 Feet (NAVD 88)
Cone Operator: Gregg Drilling & Testing, Inc.

MAKING WAVES ACADEMY
Pittsburg, California

ROCKRIDGE GEOTECHNICAL

CONE PENETRATION TEST RESULTS
CPT-8

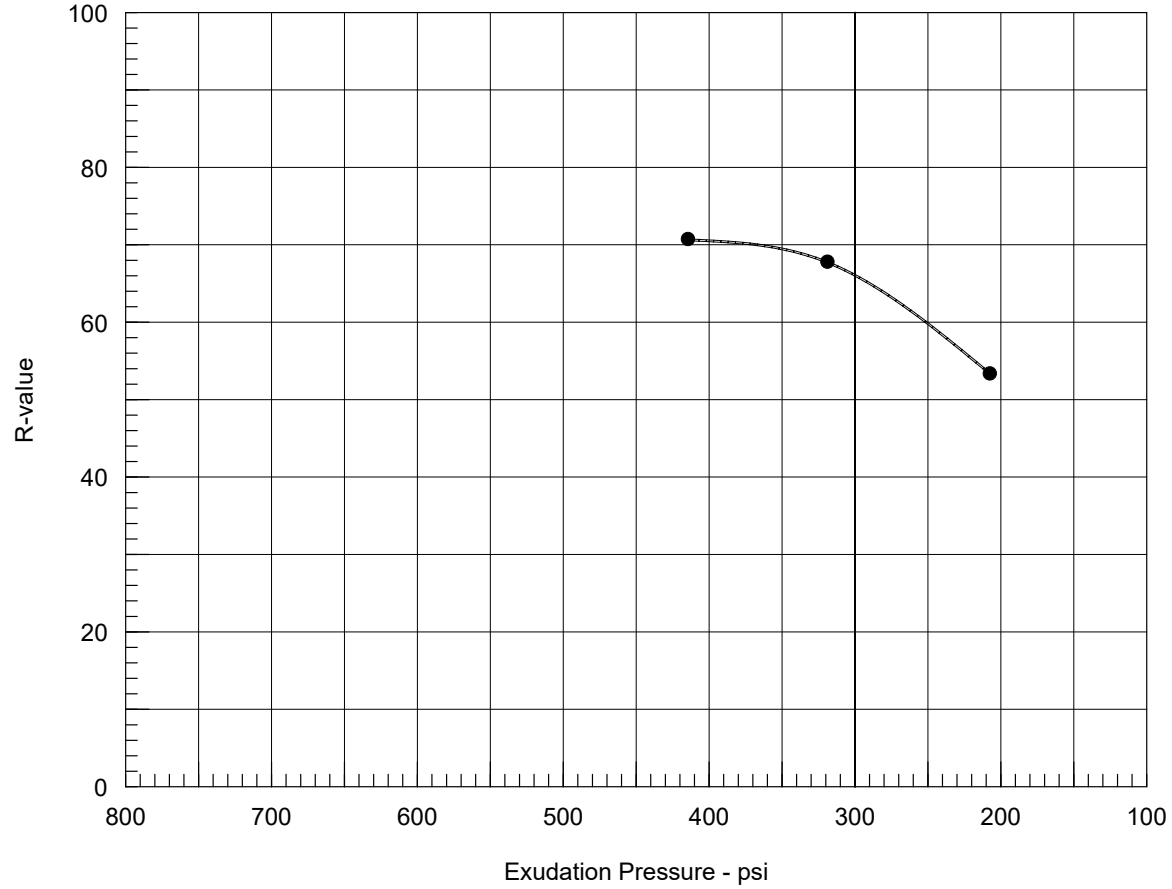
Date 05/09/18	Project No. 18-1477	Figure A-8

ROCKRIDGE GEOTECHNICAL

APPENDIX B

Laboratory Test Results

R-VALUE TEST REPORT



Resistance R-Value and Expansion Pressure - Cal Test 301

No.	Compact. Pressure psi	Density pcf	Moist. %	Expansion Pressure psf	Horizontal Press. psi @ 160 psi	Sample Height in.	Exud. Pressure psi	R Value	R Value Corr.
1	350	137.6	9.0	0	48	2.35	207	57	53
2	350	132.3	8.2	0	36	2.48	318	68	68
3	350	132.4	8.0	0	33	2.48	414	71	71

Test Results	Material Description
R-value at 300 psi exudation pressure = 66	Sandy clay with rock

Project No.: 1180307C

Project: 18-1477 Making Waves Academy, Pittsburg, CA

Source of Sample: Native **Depth:** 0-2

Sample Number: 1

Date: 5/1/2018

Tested by: J. Gapuz

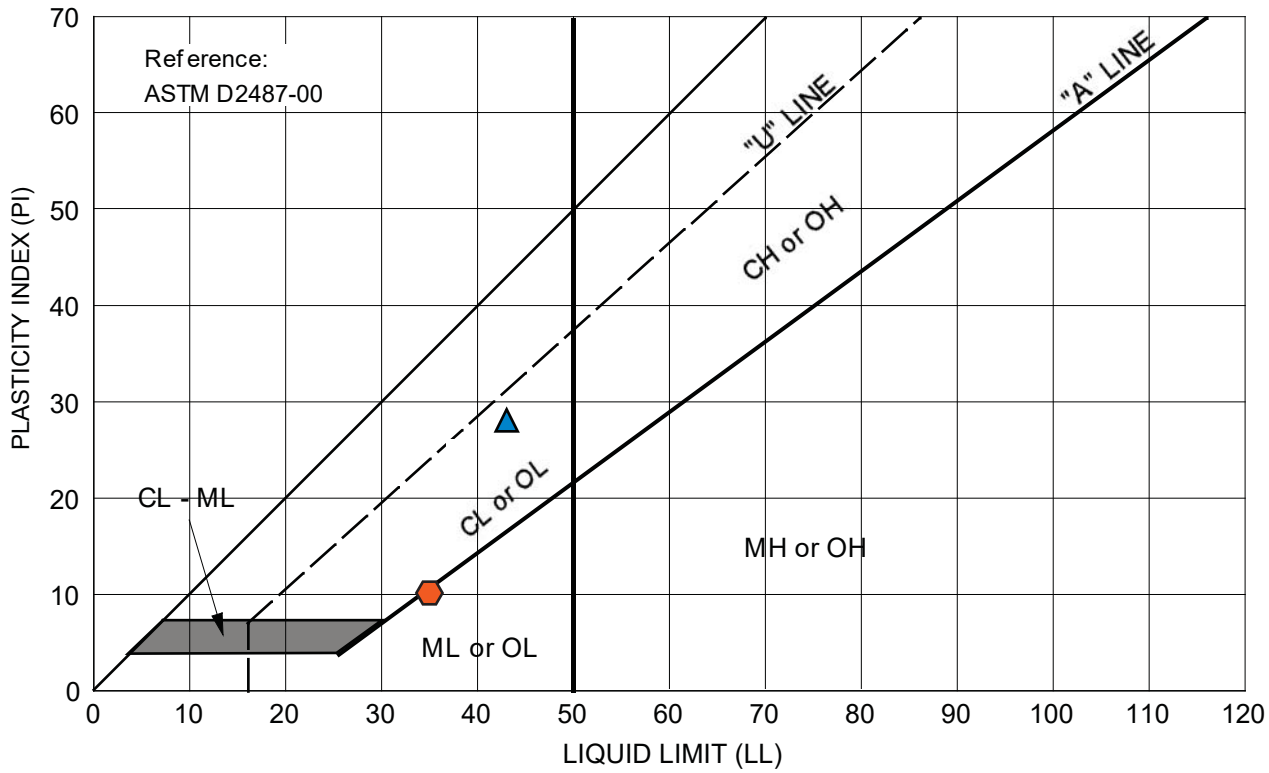
Checked by: J. Gapuz

Remarks:
8.2% scalped on the 3/4"

R-VALUE TEST REPORT

Applied Materials & Engineering, Inc.

Figure 1



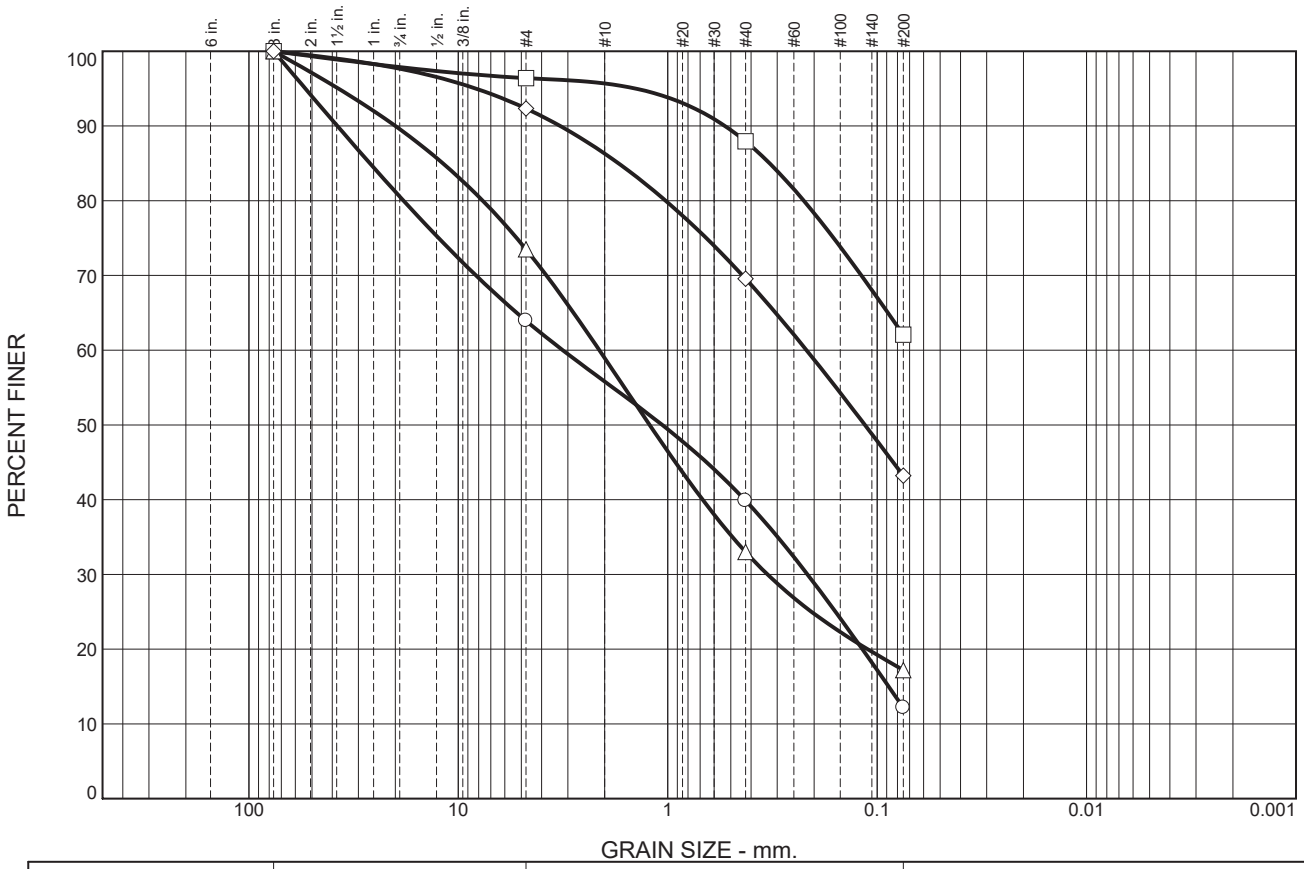
Symbol	Source	Description and Classification	Natural M.C. (%)	Liquid Limit (%)	Plasticity Index (%)	% Passing #200 Sieve
●	TP-1 at 1.5 feet	SILTY SAND with GRAVEL (SM), dark gray	10.0	22	NP	12.2
▲	TP-2 at 1.5 feet	SANDY CLAY (CL), olive-brown	18.8	43	28	62.1
■	HA-2 at 3.0 feet	PEAT (PT), dark gray	NP	NV	NP	17.2
⬢	HA-3 at 2.5 feet	SILTY SAND (SM), olive-brown	23.0	35	10	43.2

MAKING WAVES ACADEMY
Pittsburg, California

ROCKRIDGE GEOTECHNICAL

PLASTICITY CHART

Date 05/09/18 | Project No. 18-1477 | Figure B-1



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	19.4	16.7	8.1	15.9	27.7	12.2	
□	0.0	2.1	1.5	0.7	7.8	25.8	62.1	
△	0.0	10.4	16.1	14.6	25.9	15.8	17.2	
◇	0.0	2.3	5.4	6.0	16.7	26.4	43.2	

SOIL DATA

SYMBOL	SOURCE	DEPTH (ft.)	Material Description	USCS
○	TP-1	1.5'	SILTY SAND with GRAVEL , dark gray	SM
□	TP-2	1.5'	SANDY CLAY, olive-brown	CL
△	HA-2	3.0'	PEAT, dark gray	PT
◇	HA-3	2.5'	SILTY SAND, olive-brown	SM

MAKING WAVES ACADEMY
Pittsburg, California

ROCKRIDGE GEOTECHNICAL

PARTICLE SIZE DISTRIBUTION REPORT

Date 05/09/18 | Project No. 18-1477 | Figure B-2

Results Only Soil Testing for Making Waves Pittsburg

April 23, 2018

Prepared for:
Tessa Williams
Rockridge Geotechnical
270 Grand Ave,
Oakland, CA 94610
tewilliams@rockridgegeo.com

Project X Job#: S180419A
Client Job or PO#: 18-1477

Soil Analysis Lab Results

Client: Rockridge Geotechnical
Job Name: Making Waves Pittsburg
Client Job Number: 18-1477
Project X Job Number: S180419A
April 23, 2018

	Method	ASTM G187		ASTM D516		ASTM D512B		SM 4500-NO3-E	SM 4500-NH3-C	SM 4500-S2-D	ASTM G200	ASTM G51
Bore# / Description	**Depth**	**Resistivity** As Rec'd	Minimum	**Sulfates**		**Chlorides**		**Nitrate**	**Ammonia**	**Sulfide**	**Redox**	**pH**
	(ft)	(Ohm-cm)	(Ohm-cm)	(mg/kg)	(wt%)	(mg/kg)	(wt%)	(mg/kg)	(mg/kg)	(mg/kg)	(mV)	
HA-3-2	2.5	938	737	1230	0.1230	12	0.0012	15	0.5	0.03	247	7.45

Unk = Unknown
NT = Not Tested
ND = 0 = Not Detected
mg/kg = milligrams per kilogram (parts per million) of dry soil weight
Chemical Analysis performed on 1:3 Soil-To-Water extract

Please call if you have any questions.

Prepared by,

Ernesto Padilla, BSME
Field Engineer

Respectfully Submitted,



Eddie Hernandez, M.Sc., P.E.
Sr. Corrosion Consultant
NACE Corrosion Technologist #16592
Professional Engineer
California No. M37102
ehernandez@projectxcorrosion.com

Project X
Corrosion Engineering
Corrosion Control - Soil, Water, and Metallurgy Lab

Lab Request Sheet Chain of Custody
Phone: (213) 928-7213 · Fax (951) 226-1720 · www.projectxcorrosion.com
Ship Samples To: 29970 Technology Dr, Suite 105F, Murrieta, CA 92563

Project X Job Number 5180419A ROCKRIDGE 18-1477 1 FULL

IMPORTANT: Please complete Project and Sample Identification Data as you would like it to appear in report & include this form with samples.

Company Name:	Rockridge Geotechnical	Contact Name:	Tessa Williams — Phone No. : 510-326-1131
Mailing Address:	276 Grand Avenue, Oakland 94610	Contact Email:	tewilliams@rockridgegeo.com
Accounting Contact:	Kate Schenk	Invoice Email:	kaschenk@rockridgegeo.com
Client Project No:	18-1477	P.O. #:	
Project Name:	Making Waves Pittsburg		

	5 Day Normal	3 Day RUSH 75% mark-up	2 Day RUSH 100% mark-up
Turn Around Time:	✓		

Results By: ☐ Phone ☐ Fax ☑ Email ☐ Mail ☐ Overnight Mail (charges apply)

Date & Received by : — Default Method

SPECIAL INSTRUCTIONS:

	SAMPLE ID - BORE #	DESCRIPTION	DEPTH (ft)	DATE COLLECTED	CORROSION SERIES	Soil Resistivity	pH	Sulfate	Chloride	Redox Potential	BiCarbonate	Alkalinity	Acidity	Nitrate	Ammonia	Sulfide	Moisture Content	Soil Corrosivity Evaluation Report	Metallurgical Analysis	NOTES
					Min. Resistivity, Sulfate, Chloride, Sulfide, Redox, pH, Ammonia, Nitrate	ASTM G187	Caltrans CTM643 / AASHTO T288	Caltrans CTM643 / AASHTO T289	Caltrans CTM417 / AASHTO T290	Caltrans CTM422 / AASHTO T291	SM 2580B	SM 2320B	SM 2520B	SM 2510B	Hach 8354 / SM 4500-NO3	Hach 8038 / SM 4500-NH3	SM 4500-S2	ASTM D2216			
1	HA-3-2	Sandy Clay w/Gravel (CL)	2.5	04/13/18	✓															
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				

ROCKRIDGE GEOTECHNICAL

APPENDIX C

Cone Penetration Test Results, Boring Logs, and Laboratory Test Results by Others

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-1

Boring location: See Site Plan, Figure 2 | Logged by: M. Zinsley

Date started: 8/18/05 | Date finished: 8/18/05

Drilling method: Rotary wash

Hammer weight/drop: 140 lbs./30 inches | Hammer type: Automatic hammer

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION (Ground Surface Elevation: 102 feet[2])	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
0					Asphalt concrete						
1	S&H		8	ML	SILT with SAND (ML) gray-brown, medium stiff to stiff, moist						
2					FILL						
3	S&H		9	CL	CLAY (CL) gray-brown, stiff, moist LL = 34, PI = 16; see Figure C-7					19.4	107
4					CLAY with SAND (CL) yellow-brown, medium stiff, moist						
5				CL	Consolidation Test, see Figure C-1						
6	S&H		8							23.6	103
7					SANDY CLAY (CL) yellow-brown, stiff, moist						
8											
9				CL	▽ (8/19/05, 7:00 AM, 12:25 PM)						
10											
11	S&H		6			TxUU	1,100	870		22.6	103
12					CLAY with SAND (CL) yellow-brown, medium stiff, wet						
13											
14											
15					stiff						
16	S&H		10		Consolidation Test, see Figure C-2	TxUU	1,600	580		26.2	98
17											
18				CL							
19											
20											
21	S&H		18		very stiff					24.1	95
22											
23											
24											
25											
26	S&H		17							28.9	92
27					CLAYEY SAND (SC) yellow-brown, medium dense, wet						
28				SC							
29					SAND with SILT (SP-SM)						
30											

Treadwell&Rollo

Project No.: 4245.02 | Figure: A-1a

TEST GEOTECH LOG 424502_B-1_GPJ TR GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-1

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		36	SP-SM	SAND with SILT (SP-SM) (continued) olive, dense, wet, with flecks of pyrite						
32											
33					SAND (SP) olive, very dense, wet, with flecks of pyrite						
34											
35											
36	S&H		52	SP							
37											
38											
39											
40					olive-gray						
41	S&H		48								
42											
43					CLAYEY SAND (SC) olive, dense, wet						
44											
45											
46	SPT		35	SC							
47											
48											
49											
50					SAND with CLAY (SP) olive, very dense, wet						
51	SPT		53	SP							
52											
53											
54											
55											
56											
57											
58											
59											
60											

Boring terminated at a depth of 51.5 feet.
Boring backfilled with cement grout.
Groundwater encountered at a depth of 9 feet.

[1] S&H blow counts converted using a factor of 0.7.
[2] Elevation based on ALTA LAND Title Survey performed by Renner Group dated 20 May 2005

Treadwell&Rollo

Project No.: 4245.02

Figure: A-1b

TEST GEOTECH LOG 424502_B-1_GPJ_TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-2

Boring location: See Site Plan, Figure 2 | Logged by: M. Zinsley

Date started: 8/19/05 | Date finished: 8/19/05

Drilling method: Rotary wash

Hammer weight/drop: 140 lbs./30 inches | Hammer type: Automatic hammer

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION (Ground Surface Elevation: 108 feet[2])	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
1	S&H		24	CL	Asphalt concrete SANDY CLAY with GRAVEL (CL) black, very stiff, moist, with glass fragments						
2					becoming gray-brown at 2 feet						
3	S&H		19		LL = 33, PI = 12; see Figure C-7						
4				CH	CLAY with SAND (CH) olive-brown with yellow-brown mottling, very stiff, moist						
5											
6	S&H		9	CL	CLAY (CL) dark brown, stiff, moist	TxUU	550	1,940		24.6	100
7											
8											
9					CLAY (CL) yellow-brown, medium stiff, wet						
10											
11	S&H		5								
12											
13				CL	▽ (8/19/05, 12:30 PM)						
14											
15											
16	S&H		5								
17					CLAYEY SAND (SC) yellow-brown, loose, wet, interbedded fine and coarse sand						
18											
19											
20											
21	S&H		7	SC					40		
22											
23											
24											
25					SANDY CLAY (CL) brown, medium stiff to stiff, wet						
26	SPT		8						50.3		
27				CL							
28											
29											
30				SC	CLAYEY SAND (SC)						

FILL

Treadwell&Rollo

Project No.: 4245.02 | Figure: A-2a

TEST GEOTECH LOG 424502 B-1 .GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-2

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		8	SC	CLAYEY SAND (SC) yellow-brown, loose, wet, varying clay content				23.8		
32											
33											
34											
35				CL	SANDY CLAY (CL) olive, very stiff, wet						
36	S&H		17						58.1		
37											
38				SP	SAND (SP) olive, medium dense, wet, some gravel						
39											
40											
41	S&H		19	GP-GC	GRAVEL with SAND and CLAY (GP-GC) brown, medium dense, wet				15.6		
42											
43											
44				SP	SAND (SP) olive with yellow-brown mottling, dense, wet, with pyrite flecks						
45											
46	S&H		41								
47											
48											
49											
50					gravelly lens						
51	SPT		46								
52											
53											
54											
55											
56											
57											
58											
59											
60											

Boring terminated at a depth of 51.5 feet.
Boring backfilled with cement grout.
Groundwater encountered at a depth of 13.5 feet.

[1] S&H blow counts converted using a factor of 0.7.
[2] Elevation based on ALTA LAND Title Survey performed by Renner Group dated 20 May 2005

Treadwell&Rollo

Project No.: 4245.02

Figure: A-2b

TEST GEOTECH LOG 424502_B-1_GPJ TR GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-3

Boring location: See Site Plan, Figure 2 | Logged by: M. Zinsley

Date started: 8/19/05 | Date finished: 8/19/05

Drilling method: Rotary wash

Hammer weight/drop: 140 lbs./30 inches | Hammer type: Automatic hammer

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION (Ground Surface Elevation: 103 feet[2])	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
1	S&H		13	SC	Asphalt concrete over aggregate base						
				CL	SANDY CLAY (CL) mottled brown and yellow-brown, stiff, moist, fine sand						
2					FILL						
3	S&H		6	CL	CLAY (CL) olive-brown, medium stiff, moist LL = 31, PI = 16; see Figure C-7				88		
4					SILT with CLAY (ML) yellow-brown, very stiff, moist, trace sand						
5											
6	S&H		13	ML	increasing sand content	TxUU	600	2,750	82.6	17.3	113
7											
8											
9					SANDY CLAY (CL) yellow-brown, stiff, moist						
10											
11	S&H		12	CL							
12					decreasing sand content						
13											
14					CLAY (CL) yellow-brown, stiff to very stiff, moist						
15											
16	S&H		15								
17											
18				CL							
19											
20											
21	S&H		9		stiff						
22					increasing sand content (fine)						
23					SILTY SAND (SM) yellow-brown, medium dense, wet						
24				SM							
25											
26	S&H		13								
27				SP-SM	SAND with SILT (SP-SM) yellow-brown, medium dense, wet						
28											
29				CH	CLAY (CH) yellow-brown, stiff, wet, varying amounts of fine sand, some fine angular gravel at 31.5 feet						
30											

TEST GEOTECH LOG 424502_B-1_GPJ_TR.GDT 6/12/06

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Project No.: 4245.02 | Figure: A-3a

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-3

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	SPT		9	CH	CLAY (CH) (continued)						
33					SANDY CLAY (CL) olive with black specks, stiff, wet, fine sand						
35	S&H		13	CL							
40	S&H		36	SC	CLAYEY SAND (SC) light olive interbedded with dark brown, dense, wet, with pyrite flecks						
45	SPT		14		medium dense, olive-brown, fine sand						
47				SP-SM	SAND with SILT (SP-SM) olive-brown with red-brown mottling, medium dense to dense, wet						
51	S&H		29	CL-ML	SILTY CLAY (CL-ML) yellow-brown, some sand in sampler tip						
60											

Boring terminated at a depth of 51.5 feet.
Boring backfilled with cement grout.
Drilling method obscured groundwater level. Boring grouted immediately after drilling; groundwater level not measured due to drilling fluid in borehole.

[1] S&H blow counts converted using a factor of 0.7.
[2] Elevation based on ALTA LAND Title Survey performed by Renner Group dated 20 May 2005

Treadwell&Rollo

Project No.: 4245.02 | Figure: A-3b

TEST GEOTECH LOG 424502_B-1_GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-4

Boring location: See Site Plan, Figure 2
Logged by: M. Zinsley
Date started: 8/18/05 Date finished: 8/18/05
Drilling method: Rotary wash
Hammer weight/drop: 140 lbs./30 inches Hammer type: Automatic hammer
Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION (Ground Surface Elevation: 102 feet[2])	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
0					Asphalt concrete over concrete						
1–3	S&H		4	CL	CLAY with SAND and SILT (CL) olive-brown mottled with yellow-brown, soft, moist LL = 33, PI = 16; see Figure C-7					20.8	103
0–3					FILL						
4–5				CL	CLAY (CL) yellow-brown, stiff, moist	PP		1,500			
5–6	S&H		9			PP		1,500			
6–8				CH	CLAY (CH) dark gray-brown, stiff, moist, slight organic odor						
8–9					SANDY CLAY (CL) ▽ olive with yellow-brown mottling, stiff, wet (8/19/05, 7:00 AM, 12:20 PM)						
9–11	S&H		6			PP		2,000			
11–15				CL	yellow-brown						
15–16	S&H		12			PP		3,000			
16–20											
20–21	S&H		15	CL	CLAY (CL) yellow-brown, stiff to very stiff, wet						
21–23					SANDY CLAY (CL) yellow-brown, stiff, wet, fine sand						
23–26	S&H		13	CL							
26–30											

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Project No.: 4245.02 Figure: A-4a

TEST GEOTECH LOG 424502_B-1_GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-4

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		20	CL	SANDY CLAY (CL) (continued) light olive, very stiff to hard	PP		>4000			
32											
33											
34				SP	SAND (SP) brown, dense, wet, pyrite flecks						
35											
36	S&H		44		olive						
37											
38											
39											
40					very dense, with thin clay seams						
41	SPT		53								
42											
43											
44											
45											
46	SPT		43		olive-brown, dense						
47											
48											
49											
50					very dense						
51	S&H		60								
52											
53											
54											
55											
56											
57											
58											
59											
60											

Boring terminated at a depth of 51.5 feet.
Boring backfilled with cement grout.
Groundwater encountered at a depth of 9 feet.

[1] S&H blow counts converted using a factor of 0.7.
[2] Elevation based on ALTA LAND Title Survey performed by Renner Group dated 20 May 2005

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Project No.: 4245.02
Figure: A-4b

TEST GEOTECH LOG 424502_B-1_GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-5

Boring location: See Site Plan, Figure 2
Logged by: L. Medeiros
Date started: 12/20/05 Date finished: 12/20/05
Drilling method: Rotary Wash
Hammer weight/drop: 140 lb./30 inches Hammer type: Automatic
Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION (Ground Surface Elevation: 104 feet[2])	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
1–2				ML	SANDY SILT (ML) brown, stiff, moist FILL						
3	S&H		15								
3–5				SP	SAND (SP) brown, medium dense, moist						
6	S&H		18						5.3	20.7	96
7–8											
9				SM	SILTY SAND (SM) gray-brown, medium dense, wet						
10–11	S&H		18								
12				ML	SANDY SILT (ML) yellow-brown, very stiff, wet, with pockets of red-brown coarse SAND (SP)						
13–15				SP	SAND (SP) olive-brown, dense, wet						
16	S&H		32								
17–20											
21	SPT		24								
22				SC	CLAYEY SAND with SILT (SC) olive mottled with red-brown, medium dense, wet						
23–24				SP	SAND (SP) olive-brown with seams of red-brown, dense, wet						
26	S&H		44								
27–30											

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

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Project No.: 4245.02
Figure: A-5a

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-5

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	SPT		45	SP	SAND (SP) (continued) olive-gray with seams of red-brown, occasional seams of fine gravel						
32											
33											
34					no gravel						
35											
36	SPT		35								
37											
38											
39											
40											
41	SPT		35								
42											
43											
44				ML	SILT with SAND and CLAY (ML) yellow-brown, very stiff, wet, with occasional seams of olive-brown SAND (SP)						
45											
46	SPT		22								
47											
48											
49				CL	CLAY (CL) olive-gray with yellow-brown mottling, very stiff, wet						
50											
51	S&H		18								
52											
53											
54											
55											
56											
57											
58											
59											
60											

Boring terminated at a depth of 51.5 feet bgs.
Boring backfilled with cement grout.
Groundwater not measured due to drilling mud.

[1] S&H blow counts converted to SPT N-value using a correction factor of 0.7
[2] Elevation based on ALTA LAND Title Survey performed by Renner Group dated 20 May 2005

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Project No.: 4245.02
Figure: A-5b

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-6

Boring location: See Site Plan, Figure 2 | Logged by: L. Medeiros

Date started: 12/20/05 | Date finished: 12/20/05

Drilling method: Rotary Wash

Hammer weight/drop: 140 lb./30 inches | Hammer type: Automatic

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION (Ground Surface Elevation: 102 feet[2])	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
1–4				SM	SILTY SAND (SM) yellow-brown, dense, moist Driller lost fluid in upper 3 feet casing driven to about 5 feet						
5–6	S&H		27	SM	medium dense						
7–8				SM							
9–10				ML	SANDY SILT (ML) yellow-brown, very stiff, wet						
11	S&H		15	ML		PP		2,750		21.1	107
12–13				CL	SANDY CLAY (CL) yellow-brown, very stiff, wet						
14–15				CL							
16	S&H		15	CL-SC	increased sand content grading to CLAYEY SAND (SC) yellow-brown, medium dense, wet	PP		2,500			
17–18				CL	SANDY CLAY (CL) yellow-brown, stiff to very stiff, wet						
19–20				CL							
21	S&H		15	CL						21.6	108
22–24				CL							
25–26	S&H		7	CL	CLAY (CL) yellow-brown, medium stiff, wet some thin seams of fine sand						
27–28				SM	SILTY SAND (SM) olive-gray with brown mottling and black inclusions, medium dense, wet, fine sand						
29–30				SM							

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Project No.: 4245.02 | Figure: A-6a

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-6

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		16	ML	SANDY SILT (ML) brown, stiff to very stiff, wet fine sand, non-plastic, see Figure C-23				69.2	26.9	99
32											
33											
34											
35											
36	SPT		25		SILT with SAND (ML) gray interbedded with red-brown sand, very stiff, wet						
37											
38				ML							
39											
40					olive-gray mottled with red-brown						
41	SPT		21	SP	SAND (SP) red-brown, medium dense, wet						
42				ML	SILT with SAND (ML) olive-gray mottled with red-brown, very stiff, wet						
43					SAND (SP) olive-gray, dense, wet						
44											
45											
46	SPT		43								
47				SP							
48											
49											
50					medium dense						
51	SPT		29								
52											
53											
54											
55											
56											
57											
58											
59											
60											

Boring terminated at a depth of 51.5 feet bgs.
Boring backfilled with cement grout.
Groundwater not measured due to drilling mud.

[1] S&H blow counts converted to SPT N-value using a correction factor of 0.7
[2] Elevation based on ALTA LAND Title Survey performed by Renner Group dated 20 May 2005

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Project No.: 4245.02
Figure: A-6b

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-7

Boring location: See Site Plan, Figure 2
Logged by: L. Medeiros
Date started: 12/21/05 Date finished: 12/21/05
Drilling method: Rotary Wash
Hammer weight/drop: 140 lb./30 inches Hammer type: Automatic
Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT), Dames & Moore (D&M)

Ground Surface Elevation: 102 feet[2]

DEPTH (feet)	Sampler Type	Sample	SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
1					2 inches asphalt concrete over 5 inches aggregate base						
2				SP	SAND (SP) black, loose, moist, manufactured for roofing tiles driller indicated red cuttings at about 2.5 feet						
3					GRAVEL (GP) black-gray, with crushed red brick, very loose, wet, angular						
4	S&H		2	GP	FILL						
5											
6	S&H		2		CLAY with SILT (CL) dark olive-gray, soft, wet, (disturbed sample from shoe)						
7											
8											
9											
10					olive-gray						
11	S&H		2			TxUU PP	1,000	600 500		43.9	77
12											
13											
14				CL							
15											
16	S&H		3		gray Consolidation Test, see Figure C-8	PP		500		58.1	66
17											
18											
19											
20											
21	D&M	•			no recovery						
22											
23					driller noted stiffer more sandy material at about 23 feet						
24					SANDY CLAY (CL) dark gray to black, soft, wet, with decomposing organics, stong odor						
25											
26	S&H		4	CL	Consolidation Test, see Figure C-9 LL = 38, PI = 18, see Figure C-23					35.7	84
27											
28											
29				SC	CLAYEY SAND (SC) gray, loose, wet, high clay content, few gravels						
30											

LABORATORY TEST DATA

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Project No.: 4245.02 Figure: A-7a

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-7

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		5	SC	CLAYEY SAND (SC) (continued) gray, disturbed sample fell out of sampler LL = 25, PI = 8, see Figure C-23				7.5	23.3	105
32											
33	S&H		4								
34				SC	CLAYEY SAND with GRAVEL (SC) gray with pockets of brown clay, medium dense, wet, max gravel diameter about 1 inch						
35											
36	S&H		15								
37											
38											
39				SP-SM	SAND with SILT (SP-SM) gray, loose, wet						
40											
41	SPT		10								
42				MH	SILT (ML) olive-gray, stiff, wet						
43											
44				CL	CLAY (CL) gray, stiff, wet						
45											
46	SPT		17	SM	SILTY SAND (SM) gray, medium dense, wet						
47				MH	SILT (MH) gray, very stiff, wet						
48											
49				SP	SAND (SP) olive-gray, medium dense, wet						
50											
51	SPT		29								
52											
53											
54											
55											
56											
57											
58											
59											
60											

Boring terminated at a depth of 51.5 feet bgs.
Boring backfilled with cement grout.
Groundwater not measured due to drilling mud

[1] S&H blow counts converted to SPT N-value using a correction factor of 0.7
[2] Elevation based on ALTA LAND Title Survey performed by Renner Group dated 20 May 2005

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Project No.: 4245.02 | Figure: A-7b

TEST GEOTECH LOG 4245I2.GPJ TR GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-8

Boring location: See Site Plan, Figure 2
Logged by: L. Medeiros
Date started: 12/21/05 Date finished: 12/21/05
Drilling method: Rotary Wash
Hammer weight/drop: 140 lb./30 inches Hammer type: Automatic
Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
					Ground Surface Elevation: 106 feet[2]						
1					3 inches of asphalt						
					GRAVEL with CLAY and SAND (GP-GC) gray, dense, wet, crushed aggregate						
4	S&H		39	GP-GC							
5					FILL						
6	S&H		14		no recovery, possibly wood blocking sampler						
7					wood and metal in cuttings						
8					SANDY CLAY (CL) dark gray, medium stiff, wet trace organics						
11	S&H		7			PP		750			
15				CL	gray mottled with yellow-brown, stiff	TxUU	1,500	1,400		22.8	104
16	D&M				Consolidation Test, see Figure C-10					24.1	102
20					olive-brown, medium stiff	TxUU	2,000	740		26.6	99
21	D&M				Consolidation Test, see Figure C-11					26.6	97
23					CLAYEY SAND (SC) brown, loose, wet, occasional gravel						
25				SC	LL = 25, PI = 7; see Figure C-23						
26	S&H		6			PP		1,000	42.5		
28					SANDY CLAY (CL) yellow-brown, medium stiff, wet						
29				CL							
30											

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

Treadwell&Rollo

Project No.: 4245.02 Figure: A-8a

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-8

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		7	CL	SANDY CLAY (CL) (continued)						
32											
33											
34				ML	SANDY SILT (ML) light brown mottled with yellow-brown, very stiff, wet, some seams of brown SILTY SAND (SM)						
35											
36	S&H		20								
37											
38											
39				SP	SAND with SILT (SP) brown, dense, wet						
40											
41	S&H		32								
42											
43											
44				SP	SAND (SP) olive mixed with red-brown mottling, medium dense, wet						
45											
46	SPT		28								
47											
48											
49											
50					dense						
51	SPT		38								
52											
53											
54											
55											
56											
57											
58											
59											
60											

Boring terminated at a depth of 51.5 feet bgs.
Boring backfilled with cement grout.
Groundwater not measured due to drilling mud.

[1] S&H blow counts converted to SPT N-value using a correction factor of 0.7
[2] Elevation based on ALTA LAND Title Survey performed by Renner Group dated 20 May 2005

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Project No.: 4245.02
Figure: A-8b

TEST GEOTECH LOG 424502.GPJ TR GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-9

Boring location: See Site Plan, Figure 2
Logged by: L. Medeiros
Date started: 2/2/06 Date finished: 2/2/06
Drilling method: Solid Stem Augers
Hammer weight/drop: 140 lb./30 inches Hammer type: Rope and Cathead
Sampler: Sprague & Henwood (S&H)

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION (Ground Surface Elevation: 122 feet[2])	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
1–4	S&H		28	CL	CLAY with SAND (CL) brown, very stiff, moist, with roots						
5–8	S&H		28	CL	CLAY (CL) olive, very stiff, moist, pockets of white						
9–14	S&H		28	ML	SILT (ML) light olive with yellow-brown mottling and dark brown inclusions, very stiff, moist						
15–18	S&H		22	ML	olive, no dark brown inclusions, some roots	TxUU	1,600	3,100		17.7	93
19–20				SC	CLAYEY SAND (SC) olive-brown, dense, moist						
21	S&H		33	CL	SANDY CLAY (CL) olive with yellow-brown, hard, moist						
22				SP	SAND (SP) light gray, dense, moist						
23–24				SM	SILTY SAND (SM) red-brown, dense, moist						
25–27	S&H		26	CL	SANDY CLAY (CL) olive mottled with yellow-brown, very stiff, moist, with seams of silty sand, red-brown, moist	TxUU	2,600	2,100		22.1	102
28–30				SP	SAND (SP)						

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Project No.: 4245.02 Figure: A-9a

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-9

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		30/ 4"	SP	SAND (SP) (continued) brown, very dense, wet						
32											
33											
34											
35											
36											
37											
38											
39											
40											
41											
42											
43											
44											
45											
46											
47											
48											
49											
50											
51											
52											
53											
54											
55											
56											
57											
58											
59											
60											

Boring terminated at a depth of 36.0 feet bgs.
Boring backfilled with cement grout.
Groundwater encountered between 25 and 30 feet, not measured due to caving hole.

[1] S&H blow counts converted to SPT N-value using a correction factor of 0.6
[2] Elevation based on ALTA LAND Title Survey performed by Renner Group dated 20 May 2005

Treadwell&Rollo

Project No.: 4245.02
Figure: A-9b

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-10a

Boring location: See Site Plan, Figure 2
Logged by: L. Medeiros
Date started: 2/6/06 Date finished: 2/6/06
Drilling method: Hollow Stem Auger
Hammer weight/drop: 140 lb./30 inches Hammer type: Automatic
Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
					Ground Surface Elevation: 104 feet[2]						
1				SC	CLAYEY SAND (SC) yellow-brown, loose, moist						
2					SAND (SP) olive-brown, medium dense, moist						
3	SPT		12								
4					yellow-brown mottled with gray, coarse sand						
5	SPT		15								
6				SP	▽ 9:00 am						
7											
8											
9					gray with trace of yellow-brown, wet						
10	SPT		17								
11											
12					SAND wtih CLAY (SP-SC) olive-gray, medium dense, wet						
13											
14											
15	SPT		24	SP-SC							
16											
17					flowing sands in augers						
18											
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											

Boring terminated at a depth of 19.0 feet bgs.
Boring backfilled with cement grout.
Groundwater encountered at a depth of 6.5 feet during drilling.

[1] S&H blow counts converted to SPT N-value using a correction factor of 0.7
[2] Elevation based on ALTA LAND Title Survey performed by Renner Group dated 20 May 2005

Treadwell&Rollo

Project No.: 4245.02
Figure: A-10

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-10b

Boring location: See Site Plan, Figure 2
Logged by: L. Medeiros
Date started: 2/7/06 Date finished: 2/7/06
Drilling method: Rotary Wash
Hammer weight/drop: 140 lb./30 inches Hammer type: Automatic
Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

Ground Surface Elevation: 104 feet [2]

DEPTH (feet)	Sampler Type	Sample	SPT N-Value [1]	LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
1				SC	CLAYEY SAND (SC) yellow-brown, medium dense, moist						
2					SILTY SAND (SM) interbedded olive, gray, and yellow-brown, medium dense, moist						
3	SPT		26								
4				SM							
5					red-brown with gray, wet Non-plastic, see Figure C-23						
6	SPT		25						18.6	15.7	
7											
8					SAND (SP) gray-brown, medium dense, wet						
9											
10											
11	SPT		22								
12											
13											
14											
15					gray						
16	SPT		20						5.3		
17											
18				SP	driller noted clayey cuttings						
19											
20					olive-gray with red-brown inclusions, dense						
21	S&H		36								
22											
23											
24											
25					gray with yellow-brown seams						
26	SPT		30								
27											
28					driller noted harder drilling clay and fine gravel in cuttings						
29				ML	SANDY SILT (ML) yellow-brown with red inclusions, very stiff, wet, varying fine sand content						
30											

LABORATORY TEST DATA

Treadwell&Rollo

Project No.: 4245.02 Figure: A-11a

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-10b

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		16	ML	SANDY SILT (ML) (continued) LL = 33, PI = 9; see Figure C-23						
32											
33					CLAY (CL) olive, very stiff, wet, with silt						
34											
35											
36	S&H		22	CL	olive-brown LL = 43, PI = 17; see Figure C-23					31.6	89
37											
38											
39											
40					hard, with thin lenses of silty sand						
41	S&H		31		SILTY SAND (SM) olive-brown, dense, wet, with thin seams of silt						
42											
43											
44											
45											
46	S&H		18	SM	medium dense LL = 26, PI = 2; see Figure C-23				43.3	29.2	
47											
48											
49											
50											
51	SPT		23		olive, high fines content						
52											
53											
54											
55											
56											
57											
58											
59											
60											

Boring terminated at a depth of 51.5 feet bgs.
Boring backfilled with cement grout.
Groundwater not measured due to drilling mud.

[1] S&H blow counts converted to SPT N-value using a correction factor of 0.7
[2] Elevation based on ALTA LAND Title Survey performed by Renner Group dated 20 May 2005

Treadwell&Rollo

Project No.: 4245.02
Figure: A-11b

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-11

Boring location: See Site Plan, Figure 2 | Logged by: L. Medeiros

Date started: 2/6/06 | Date finished: 2/6/06

Drilling method: Hollow Stem Auger

Hammer weight/drop: 140 lb./30 inches | Hammer type: Automatic

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT), Dames & Moore (D&M)

Ground Surface Elevation: 102 feet [2]

DEPTH (feet)	Sampler Type	Sample	SPT N-Value [1]	LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
					LABORATORY TEST DATA						
0				GP	GRAVEL, railroad ballast						
1				CL	SANDY CLAY (CL) dark brown, medium stiff, moist						
2											
3	S&H		8		brown, medium stiff to stiff						
4					CLAY (CL) brown, medium stiff, with silt, moist						
5	S&H		7							32.4	85
6				CL							
7											
8											
9											
10	S&H		3		CLAY (CH) gray mottled with yellow-brown, soft, wet [Bay Mud]						
11											
12											
13				CH							
14											
15	D&M				gray, medium stiff LL = 61, PI = 44, see Figure C-23 Consolidation test, see Figure C-12	TxUU	1,400	690		35.9 38.4	86 82
16											
17											
18					CLAY with SAND (CL) blue-gray, soft to medium stiff, wet						
19											
20	S&H		4		sampled disturbed						
21	S&H		6		trace organics	TxUU	2,150	1,000		28.2	97
22											
23				CL							
24											
25	S&H		6		medium stiff, increased sand content						
26											
27											
28											
29											
30	S&H		23	SP	SAND (SP)						

FILL

Treadwell&Rollo

Project No.: 4245.02 | Figure: A-12a

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-11

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		23	SP	SAND (SP) (continued) gray, medium dense, wet, some silt Non-plastic, see Figure C-24				4.1		
32											
33											
34											
35											
36											
37											
38											
39											
40											
41											
42											
43											
44											
45											
46											
47											
48											
49											
50											
51											
52											
53											
54											
55											
56											
57											
58											
59											
60											

Boring terminated at a depth of 34.0 feet bgs.
Boring backfilled with cement grout.
Groundwater not measured at time of drilling.

[1] S&H blow counts converted to SPT N-value using a correction factor of 0.7
[2] Elevation based on ALTA LAND Title Survey performed by Renner Group dated 20 May 2005

Treadwell&Rollo

Project No.: 4245.02

Figure: A-12b

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-12

Boring location: See Site Plan, Figure 2 | Logged by: L. Medeiros

Date started: 2/6/06 | Date finished: 2/6/06

Drilling method: Hollow Stem Auger

Hammer weight/drop: 140 lb./30 inches | Hammer type: Automatic

Sampler: Sprague & Henwood (S&H), Dames & Moore (D&M)

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
					Ground Surface Elevation: 102 feet[2]						
1–4	S&H		11	CL	CLAY with SAND (CL) dark brown, stiff, moist						
5–7	S&H		10	CL	yellow-brown	TxUU	500	1,450		23.0	102
8–12	S&H		16	CL	SANDY CLAY (CL) yellow-brow, very stiff, wet ▽ Consolidation test, see Figure C-13 3:15 pm					23.6	102
13–20	S&H		25	CL	CLAY (CL) yellow-brown, very stiff, wet, with silt						
21–25	S&H		16	CL	stiff					28.0	88
26–30	S&H		9	SM	SILTY SAND (SM) light-olive-brown, loose, wet LL = 27, PI = 2; see Figure C-24					28.4	99

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

Treadwell&Rollo

Project No.: 4245.02 | Figure: A-13a

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-12

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		7	SM	SILTY SAND (SM) (continued)						
32											
33				SM	SILTY SAND (SM) light-gray, mottled with red-brown, medium dense, wet, high fines content Non-plastic, see Figure C-24				46.4		
34											
35	S&H		29								
36											
37											
38											
39											
40											
41											
42											
43											
44											
45											
46											
47											
48											
49											
50											
51											
52											
53											
54											
55											
56											
57											
58											
59											
60											

Boring terminated at a depth of 35.5 feet bgs.
Boring backfilled with cement grout.
Groundwater encountered at a depth of 9 feet during drilling.

[1] S&H blow counts converted to SPT N-value using a correction factor of 0.7
[2] Elevation based on ALTA LAND Title Survey performed by Renner Group dated 20 May 2005

Treadwell&Rollo

Project No.: 4245.02

Figure: A-13b

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-13

Boring location: See Site Plan, Figure 2 | Logged by: L. Medeiros

Date started: 2/7/06 | Date finished: 2/7/06

Drilling method: Rotary Wash

Hammer weight/drop: 140 lb./30 inches | Hammer type: Automatic

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

Ground Surface Elevation: 103 feet[2]

DEPTH (feet)	Sampler Type	Sample	SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
1				SC	CLAYEY SAND (SC) yellow-brown, medium dense, moist						
2				SM	SILTY SAND (SM) brown, medium dense, moist						
3	SPT		21								
4				ML	SILT with SAND (ML) olive-gray with yellow-brown mottling, very stiff, wet						
5											
6	SPT		20								
7				SM	SILTY SAND (SM) red-brown with gray mottling, medium dense, wet						
8					Non-plastic, see Figure C-24						
9				SP	SAND with SILT (SP) olive-brown, very dense, wet						
10					Non-plastic, see Figure C-24						
11	SPT		27						6.3	20.8	
12											
13				ML	SANDY SILT (ML) light brown with yellow-brown and dark brown, medium stiff and dense, wet						
14											
15											
16	S&H		22		LL = 38, PI = 13; see Figure C-17	TxUU	1,500	2,110	82.4	31.8	92
17											
18				SP	SAND (SP) gray with seams of red-brown, dense, wet, gravelly seams						
19											
20											
21	SPT		35								
22											
23					driller noted fine gravel in cuttings						
24											
25				CL	CLAY (CL) olive-gray with brown seams, very stiff, wet						
26	SPT		22								
27											
28				ML	SILT (ML) olive-gray, with red-brown inclusions, very stiff, wet						
29											
30											

LABORATORY TEST DATA

Treadwell&Rollo

Project No.: 4245.02 | Figure: A-14a

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

PROJECT: **HARBOR PARK**
Pittsburg, California

Log of Boring B-13

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		17	ML	SILT (ML) (continued) LL = 32, PI = 5, see Figure C-24						
32											
33											
34				ML	SANDY SILT (ML) olive-brown, hard, wet						
35											
36	S&H		35								
37				SM	SILT SAND (SM) olive-brown, dense, wet						
38											
39											
40					SANDY SILT (ML) olive with brown seams, very stiff, wet						
41	SPT		21								
42											
43											
44											
45				ML	hard, varying sand content						
46	SPT		38								
47											
48											
49											
50											
51	SPT		31								
52											
53											
54											
55											
56											
57											
58											
59											
60											

Boring terminated at a depth of 51.5 feet bgs.
Boring backfilled with cement grout.
Groundwater not measured due to drilling mud.

[1] S&H blow counts converted to SPT N-value using a correction factor of 0.7
[2] Elevation based on ALTA LAND Title Survey performed by Renner Group dated 20 May 2005

Treadwell&Rollo

Project No.: 4245.02

Figure: A-14b

TEST GEOTECH LOG 424502.GPJ TR.GDT 6/12/06

UNIFIED SOIL CLASSIFICATION SYSTEM

Major Divisions		Symbols	Typical Names
Coarse-Grained Soils (more than half of soil > no. 200 sieve size	Gravels (More than half of coarse fraction > no. 4 sieve size)	GW	Well-graded gravels or gravel-sand mixtures, little or no fines
		GP	Poorly-graded gravels or gravel-sand mixtures, little or no fines
		GM	Silty gravels, gravel-sand-silt mixtures
		GC	Clayey gravels, gravel-sand-clay mixtures
	Sands (More than half of coarse fraction < no. 4 sieve size)	SW	Well-graded sands or gravelly sands, little or no fines
		SP	Poorly-graded sands or gravelly sands, little or no fines
		SM	Silty sands, sand-silt mixtures
		SC	Clayey sands, sand-clay mixtures
Fine -Grained Soils (more than half of soil < no. 200 sieve size)	Silts and Clays LL = < 50	ML	Inorganic silts and clayey silts of low plasticity, sandy silts, gravelly silts
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, lean clays
		OL	Organic silts and organic silt-clays of low plasticity
	Silts and Clays LL = > 50	MH	Inorganic silts of high plasticity
		CH	Inorganic clays of high plasticity, fat clays
		OH	Organic silts and clays of high plasticity
Highly Organic Soils		PT	Peat and other highly organic soils

GRAIN SIZE CHART

Classification	Range of Grain Sizes	
	U.S. Standard Sieve Size	Grain Size in Millimeters
Boulders	Above 12"	Above 305
Cobbles	12" to 3"	305 to 76.2
Gravel	3" to No. 4	76.2 to 4.76
coarse	3" to 3/4"	76.2 to 19.1
fine	3/4" to No. 4	19.1 to 4.76
Sand	No. 4 to No. 200	4.76 to 0.074
coarse	No. 4 to No. 10	4.76 to 2.00
medium	No. 10 to No. 40	2.00 to 0.420
fine	No. 40 to No. 200	0.420 to 0.074
Silt and Clay	Below No. 200	Below 0.074

Unstabilized groundwater level

Stabilized groundwater level

SAMPLE DESIGNATIONS/SYMBOLS

Sample taken with split-barrel sampler other than Standard Penetration Test sampler. Darkened area indicates soil recovered

Classification sample taken with Standard Penetration Test sampler

Undisturbed sample taken with thin-walled tube

Disturbed sample

Sampling attempted with no recovery

Core sample

Analytical laboratory sample

Sample taken with Direct Push sampler

SAMPLER TYPE

C Core barrel

CA California split-barrel sampler with 2.5-inch outside diameter and a 1.93-inch inside diameter

D&M Dames & Moore piston sampler using 2.5-inch outside diameter, thin-walled tube

O Osterberg piston sampler using 3.0-inch outside diameter, thin-walled Shelby tube

PT Pitcher tube sampler using 3.0-inch outside diameter, thin-walled Shelby tube

S&H Sprague & Henwood split-barrel sampler with a 3.0-inch outside diameter and a 2.43-inch inside diameter

SPT Standard Penetration Test (SPT) split-barrel sampler with a 2.0-inch outside diameter and a 1.5-inch inside diameter

ST Shelby Tube (3.0-inch outside diameter, thin-walled tube) advanced with hydraulic pressure

HARBOR PARK
Pittsburg, California

CLASSIFICATION CHART

Treadwell&Rollo

Date 02/03/06 | Project No. 4245.02 | Figure A-15

Treadwell&Rollo

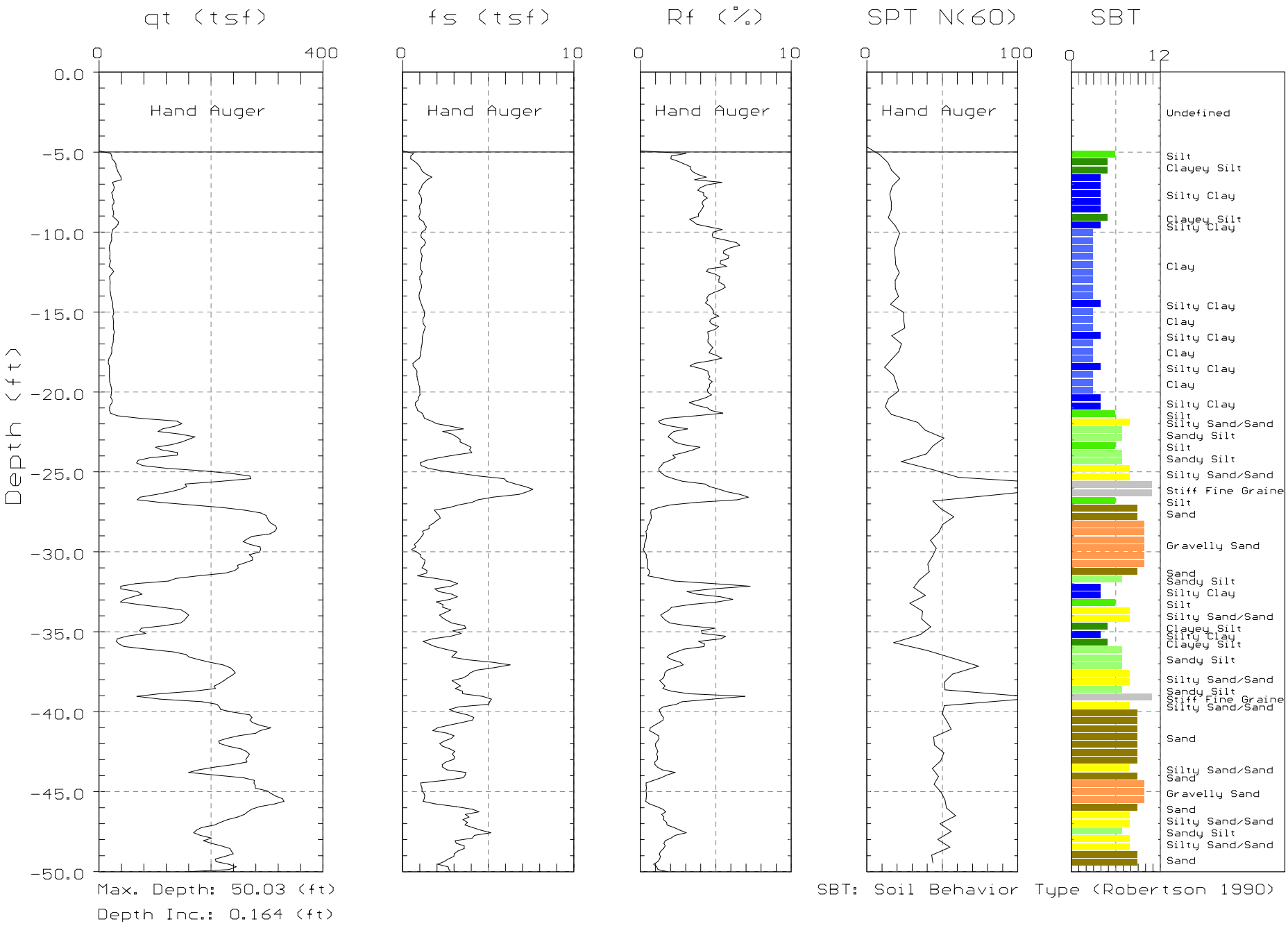
APPENDIX B
Cone Penetration Test Results
(on CD ROM)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-01

Engineer: C.HALL
Date: 08:19:05 15:19



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

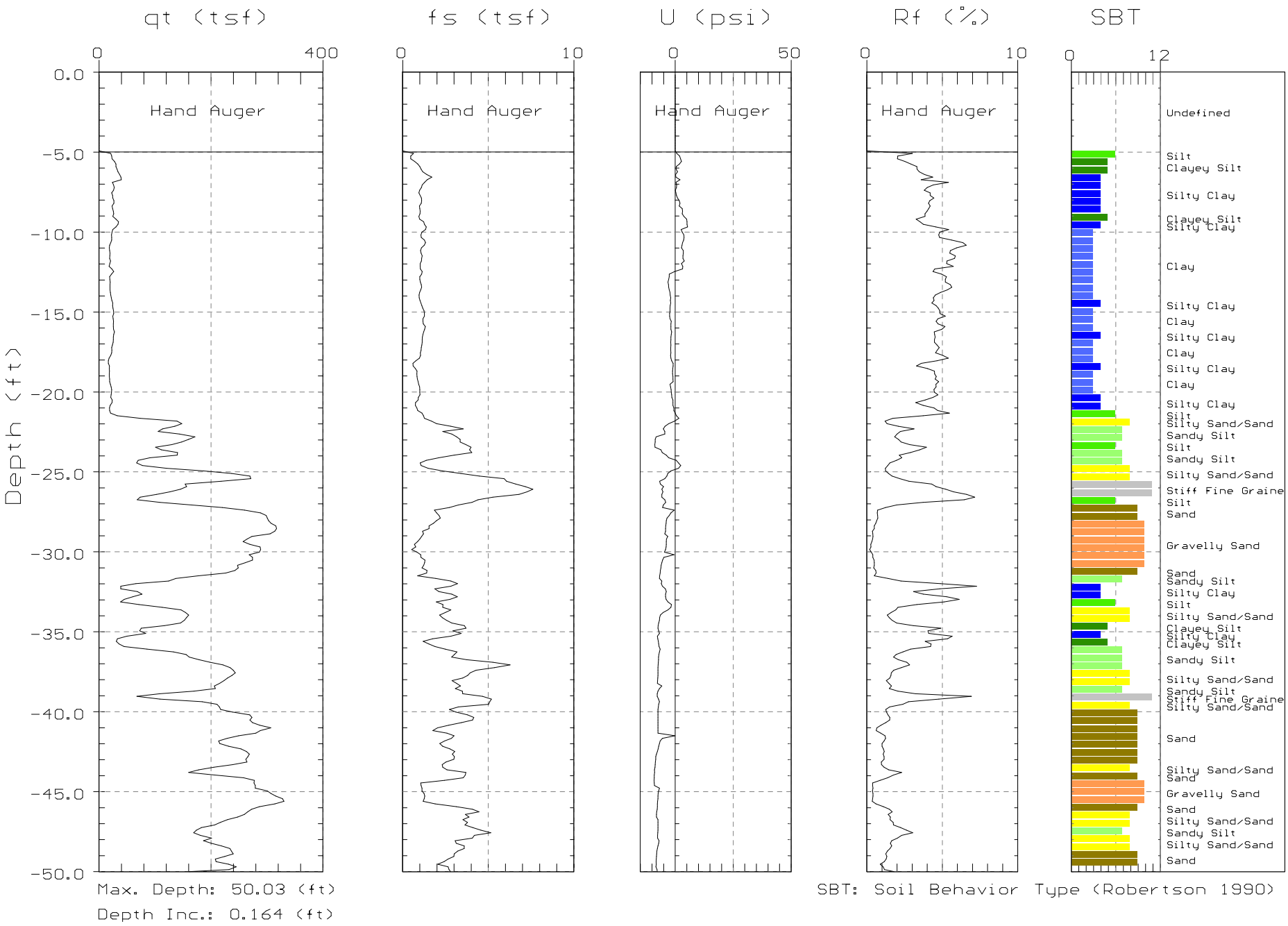
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-01

Engineer: C.HALL
Date: 08:19:05 15:19



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

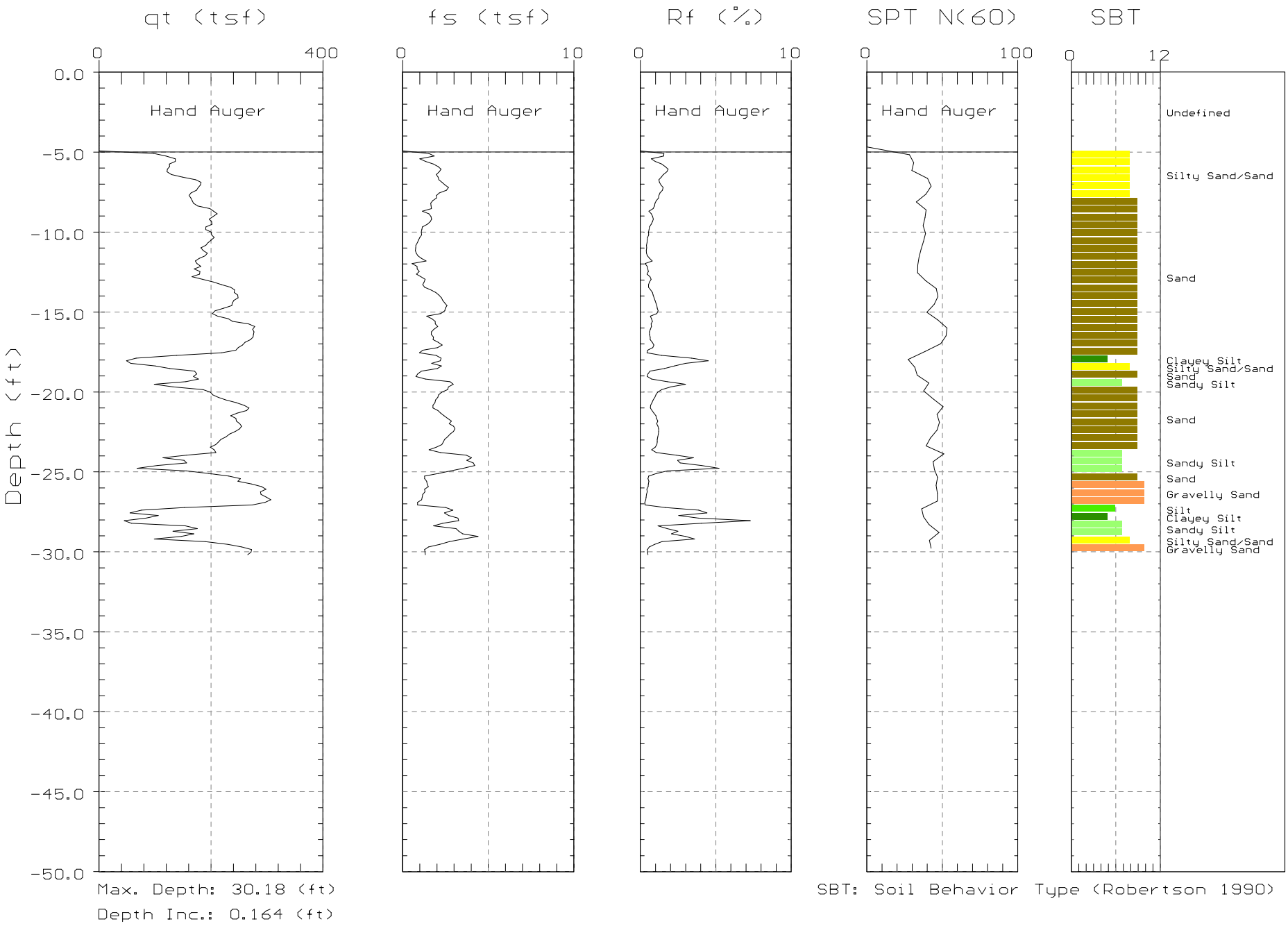
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-02

Engineer: C.HALL
Date: 08:19:05 19:42



Max. Depth: 30.18 (ft)
Depth Inc.: 0.164 (ft)

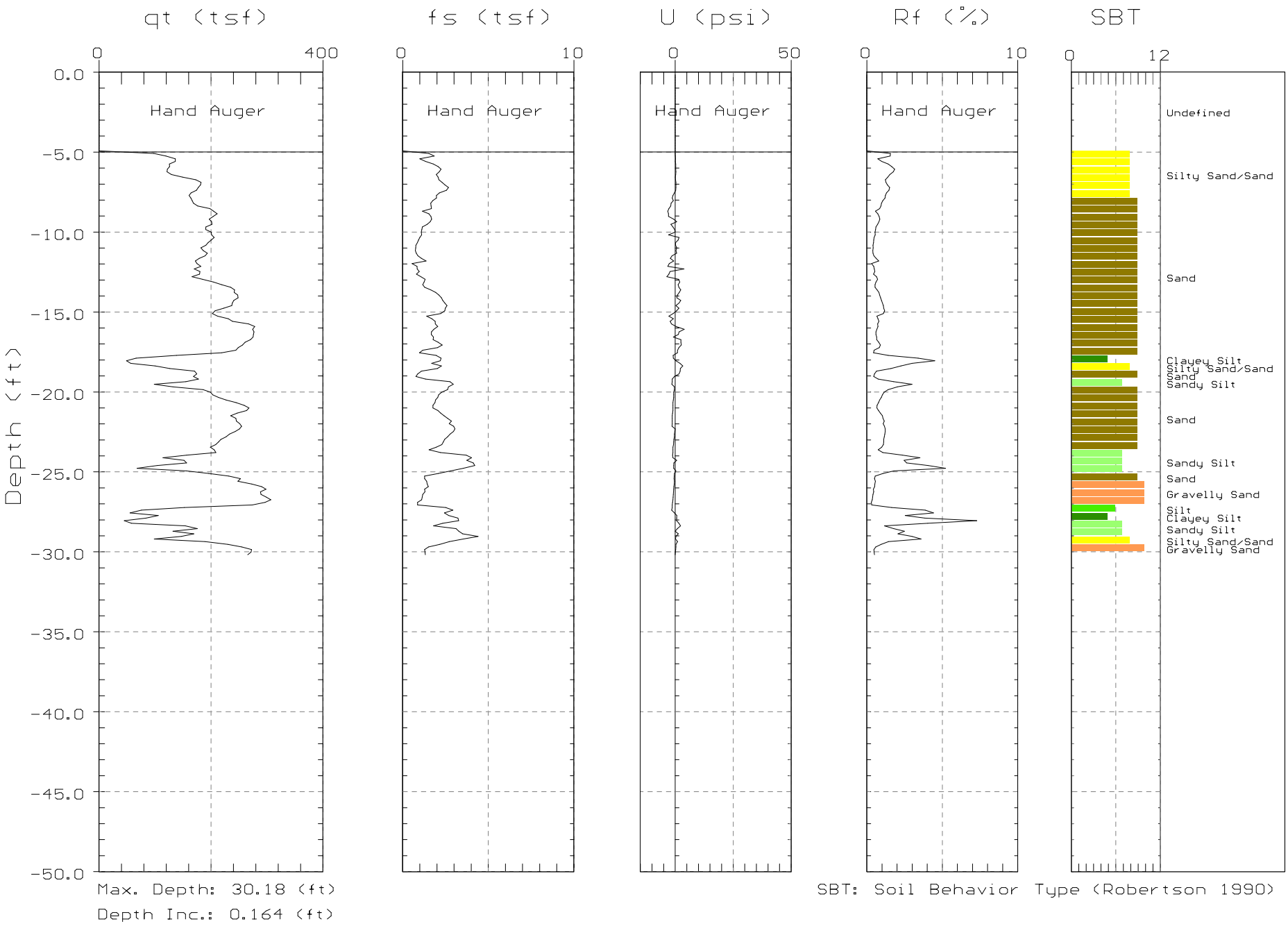
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-02

Engineer: C.HALL
Date: 08:19:05 19:42



Max. Depth: 30.18 (ft)
Depth Inc.: 0.164 (ft)

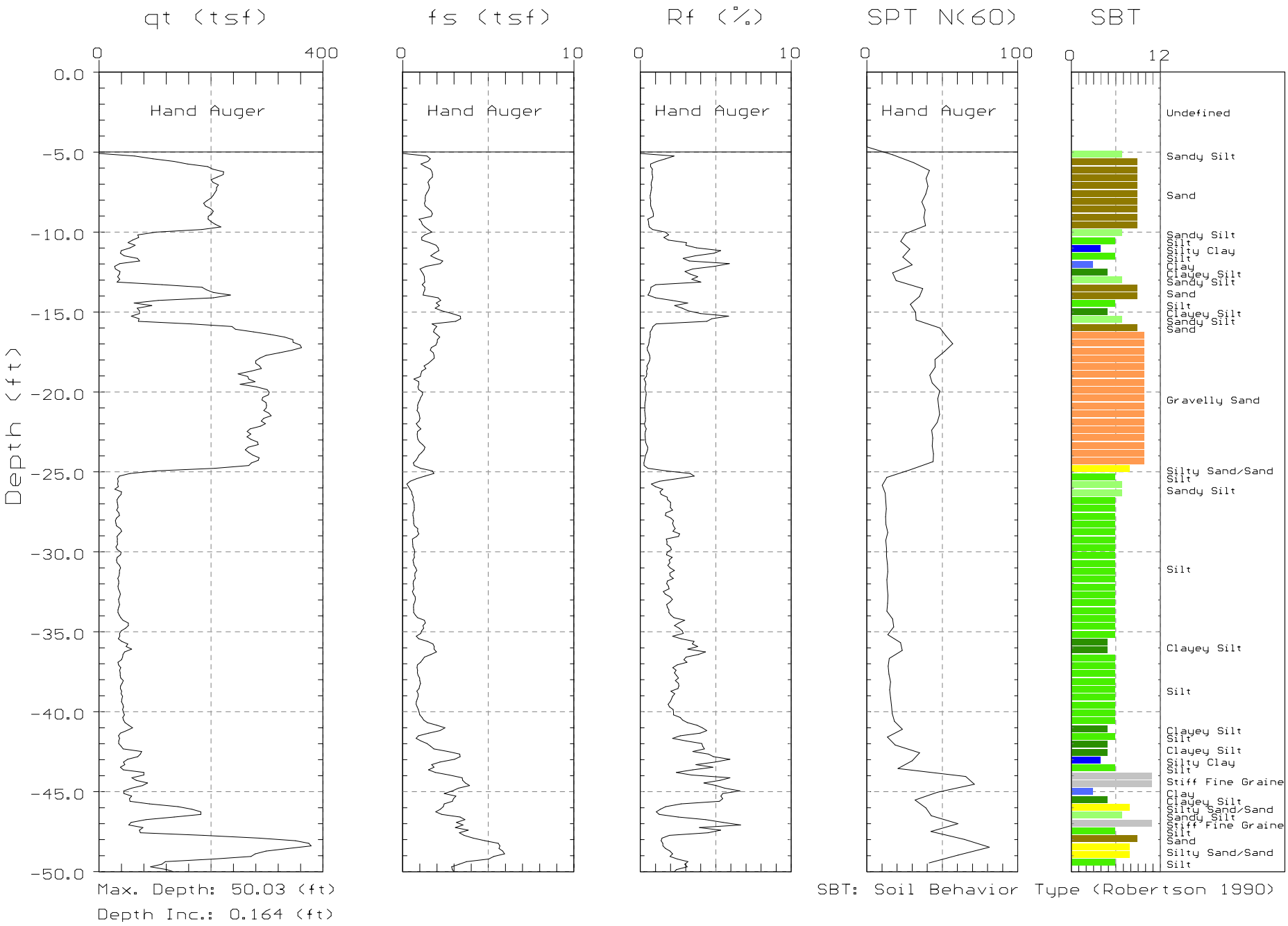
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-03

Engineer: C.HALL
Date: 08:19:05 18:54



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

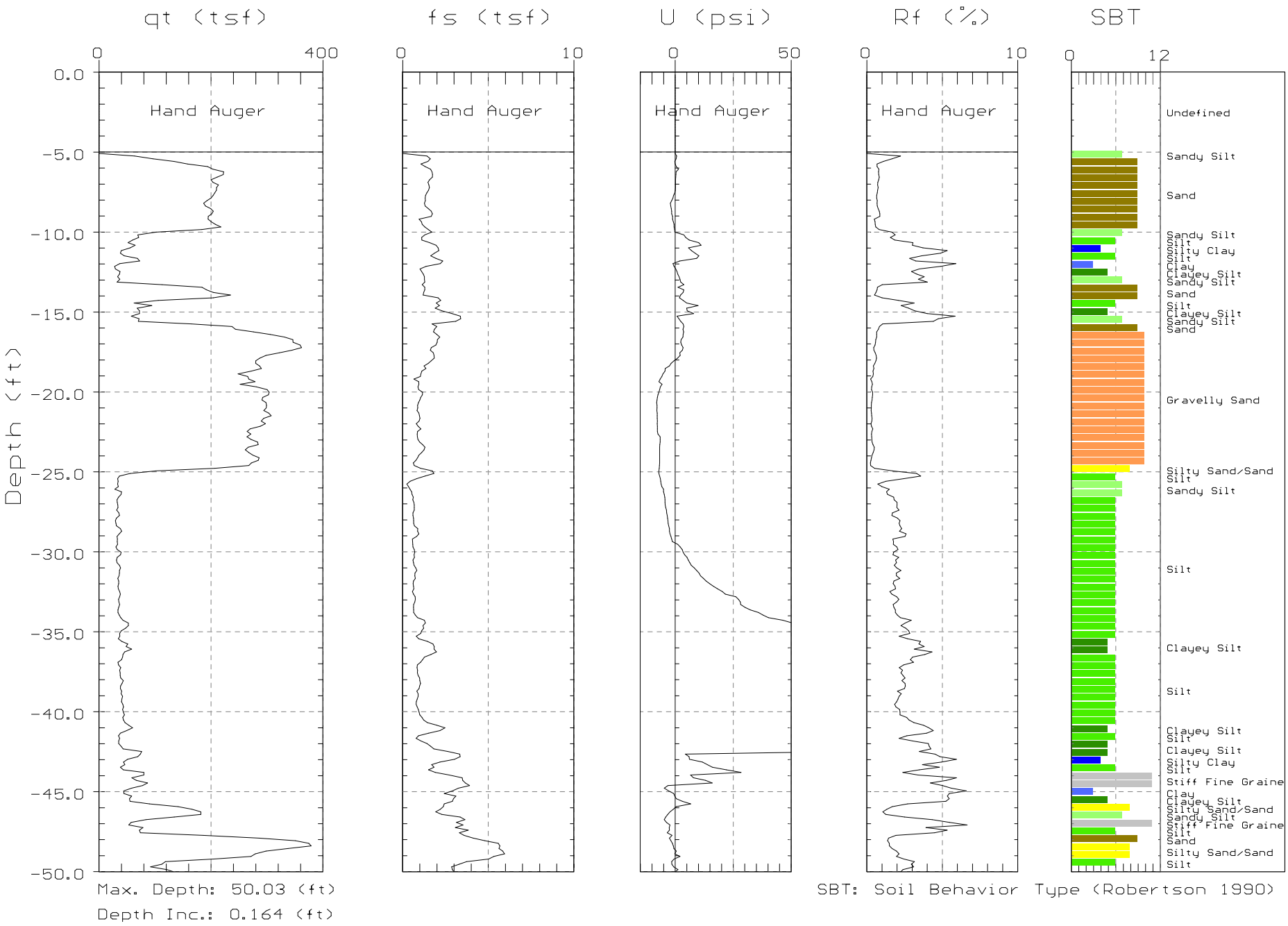
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-03

Engineer: C.HALL
Date: 08:19:05 18:54



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

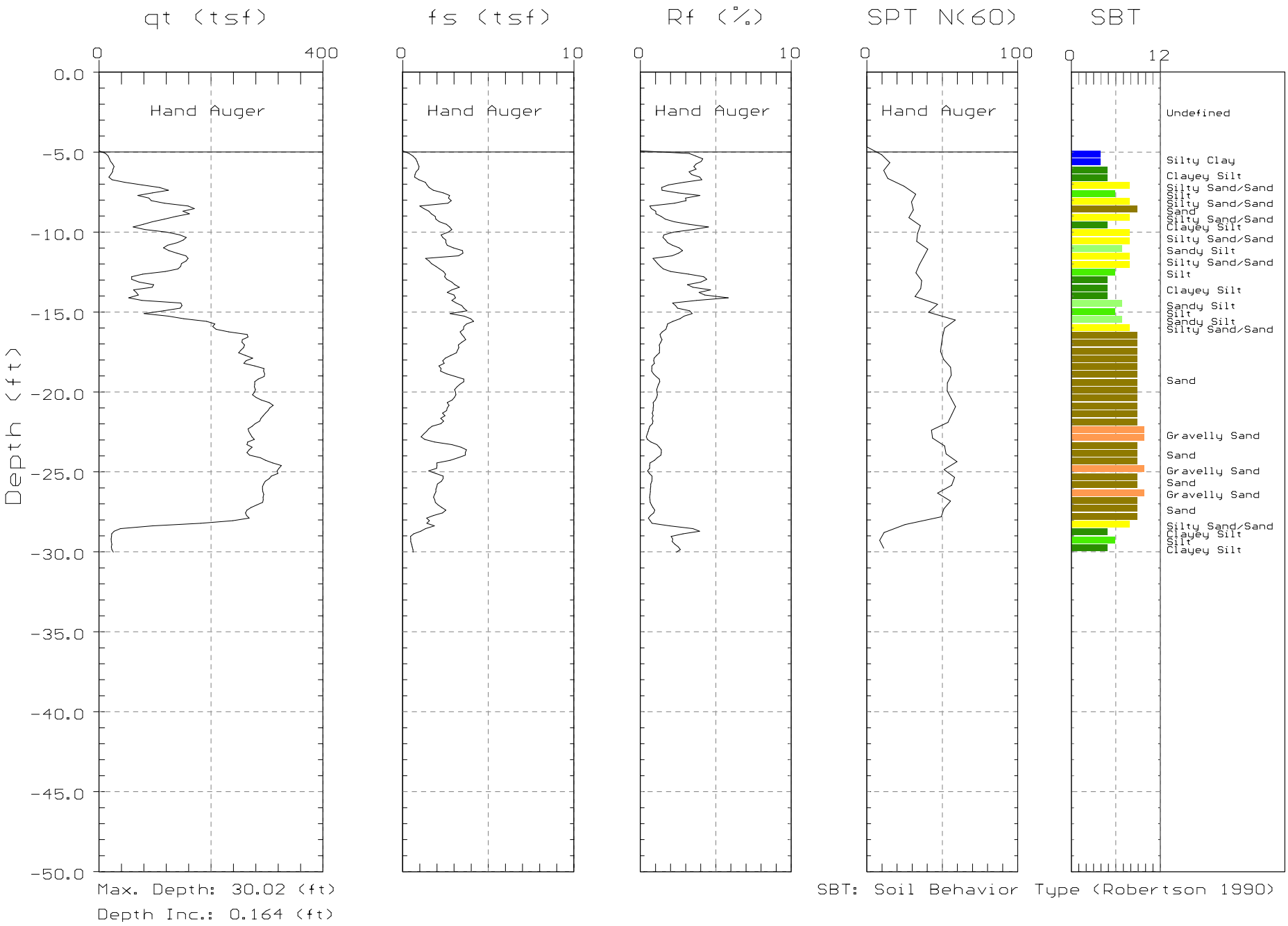
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-04

Engineer: C.HALL
Date: 08:19:05 17:54

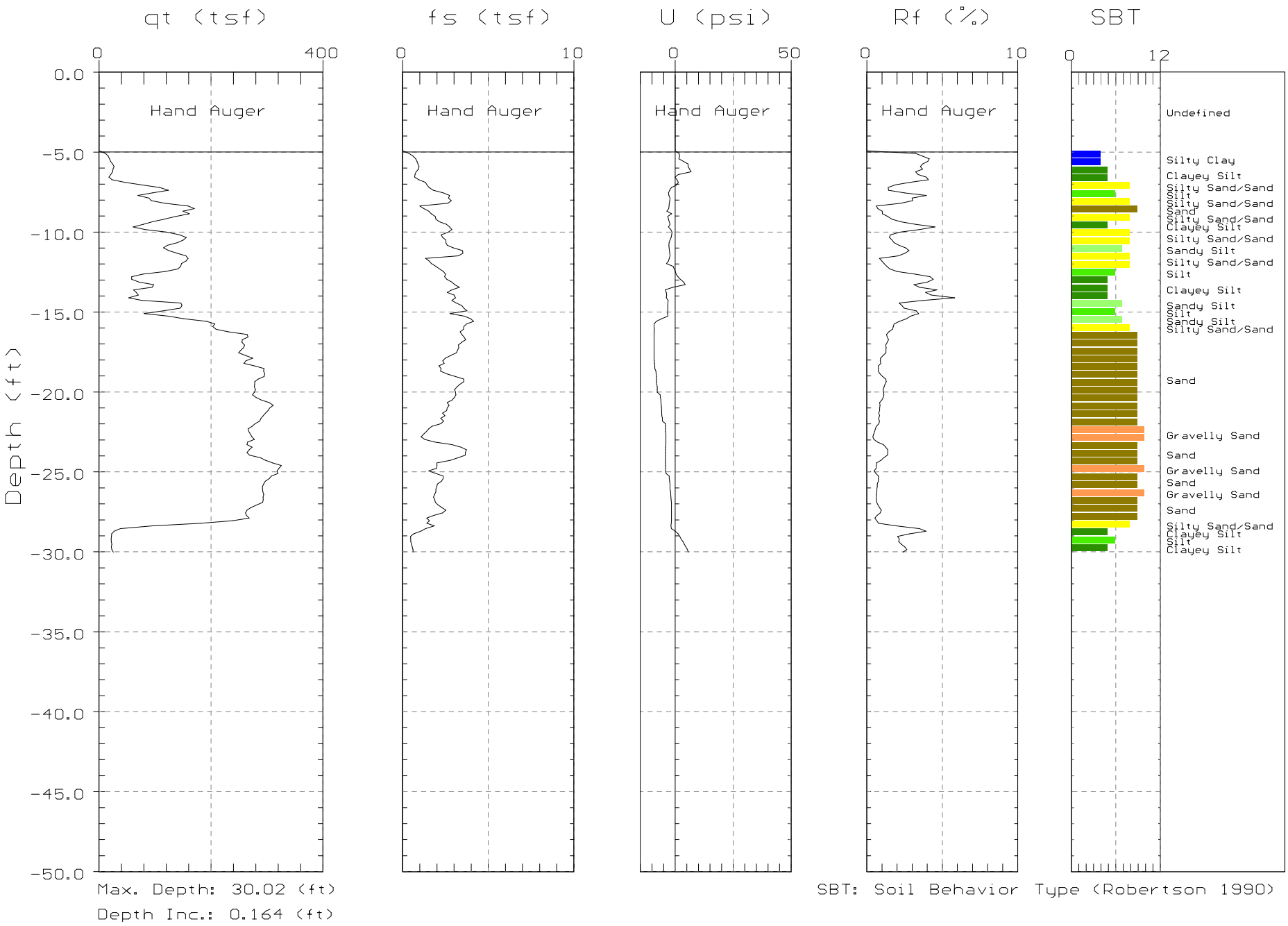


GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-04

Engineer: C.HALL
Date: 08:19:05 17:54



Max. Depth: 30.02 (ft)
Depth Inc.: 0.164 (ft)

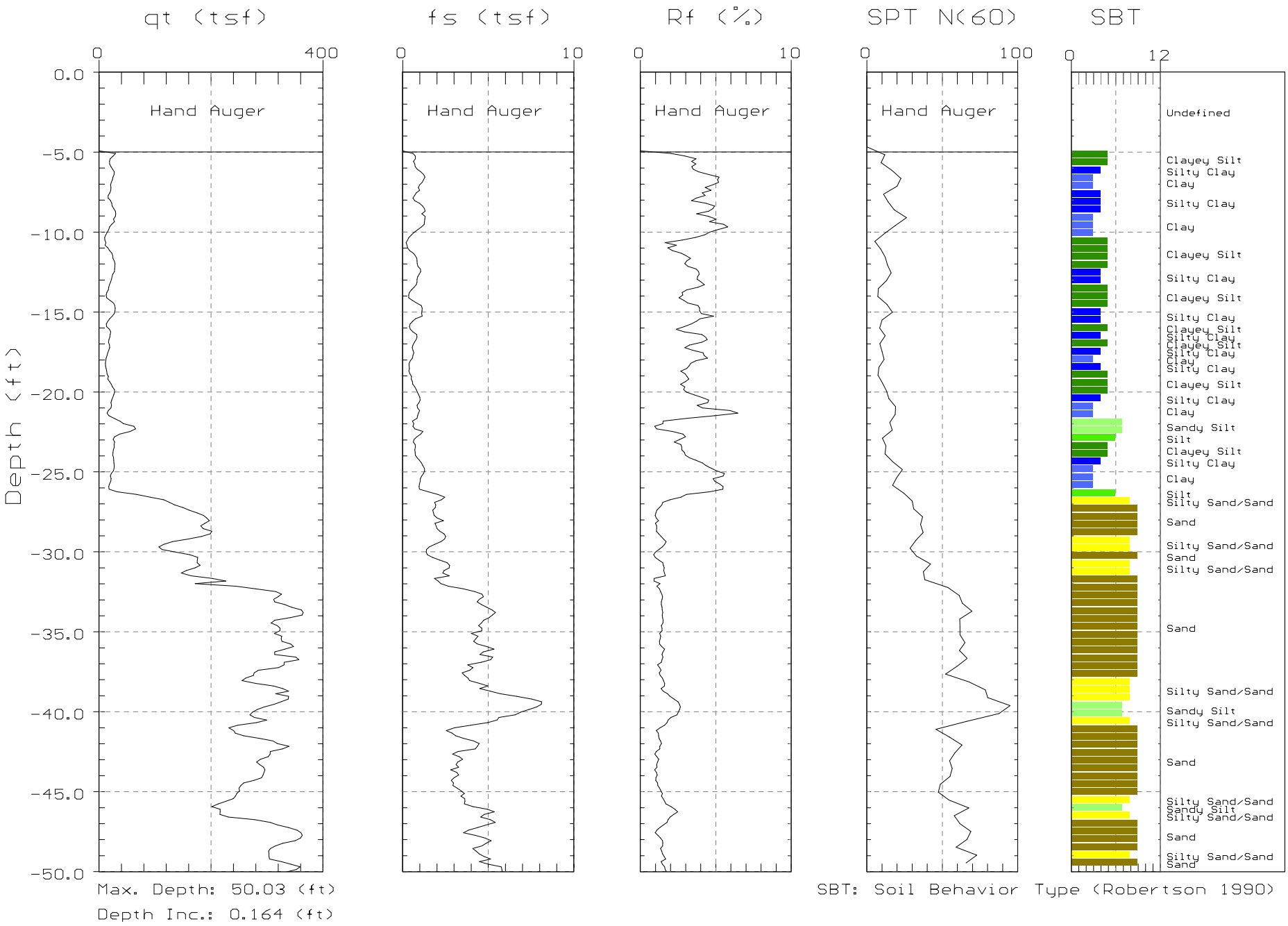
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-05

Engineer: C.HALL
Date: 08:22:05 14:18

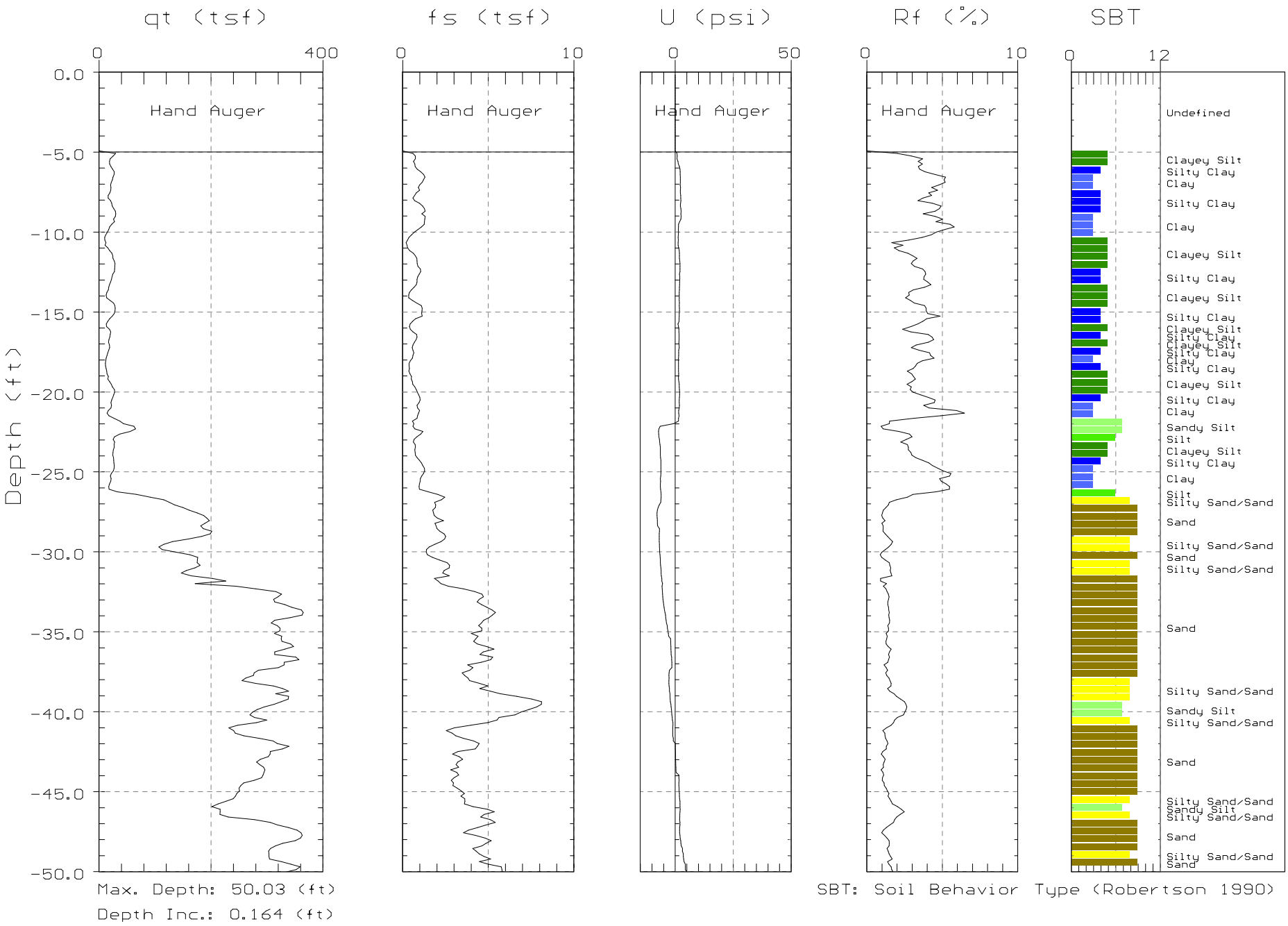


GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-05

Engineer: C.HALL
Date: 08:22:05 14:18



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

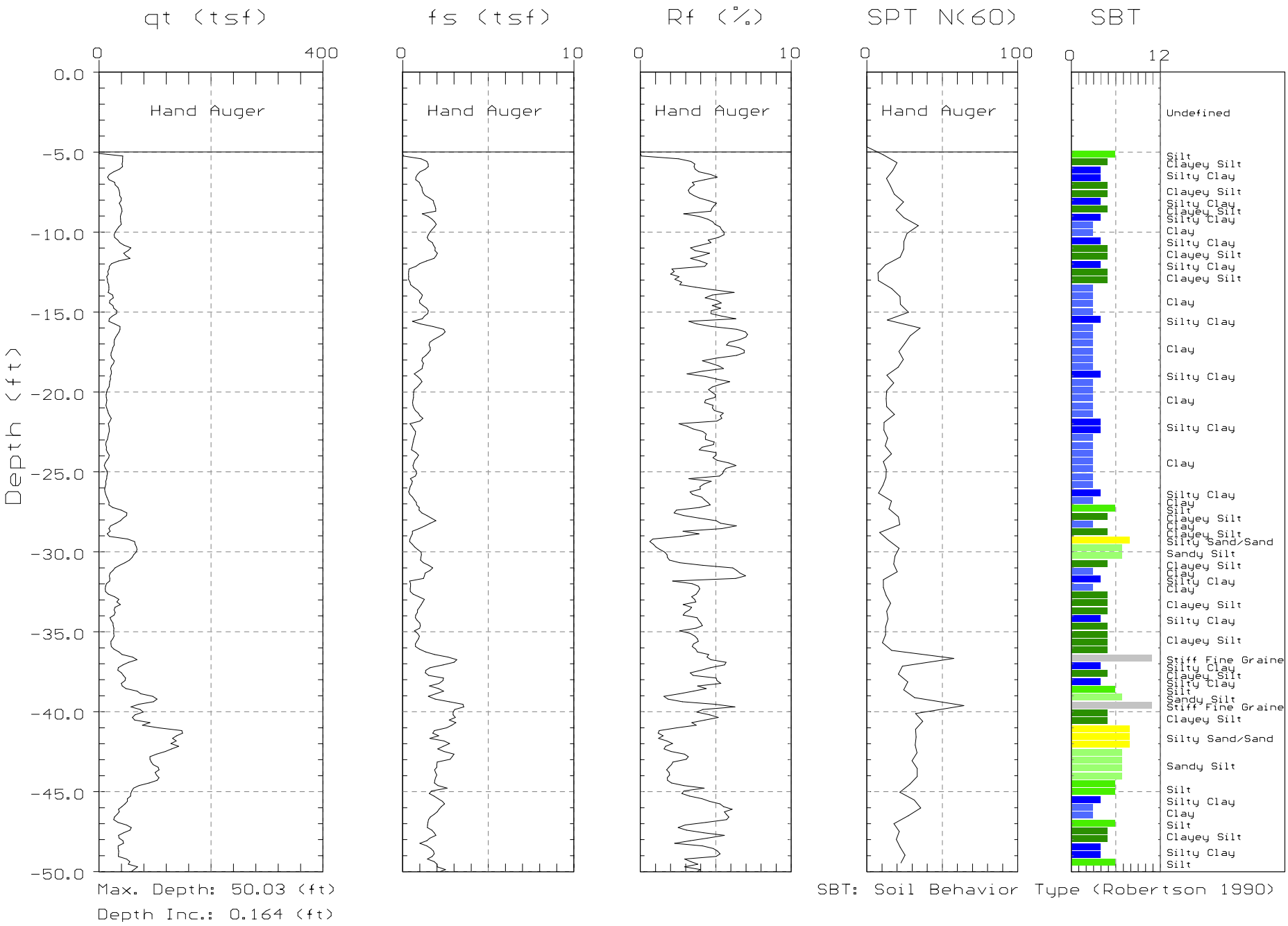
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-06

Engineer: C.HALL
Date: 08:22:05 10:59

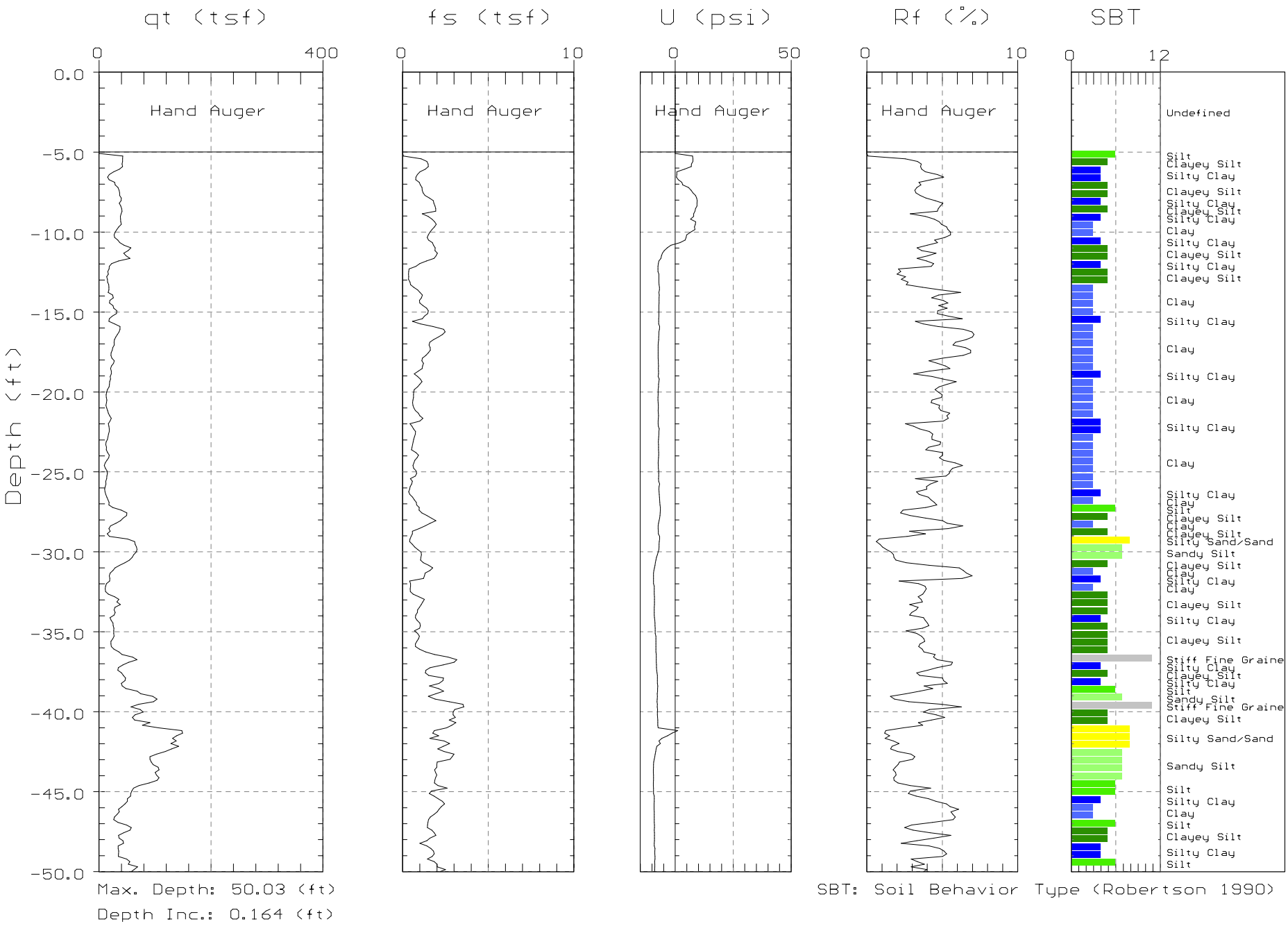


GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-06

Engineer: C.HALL
Date: 08:22:05 10:59



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

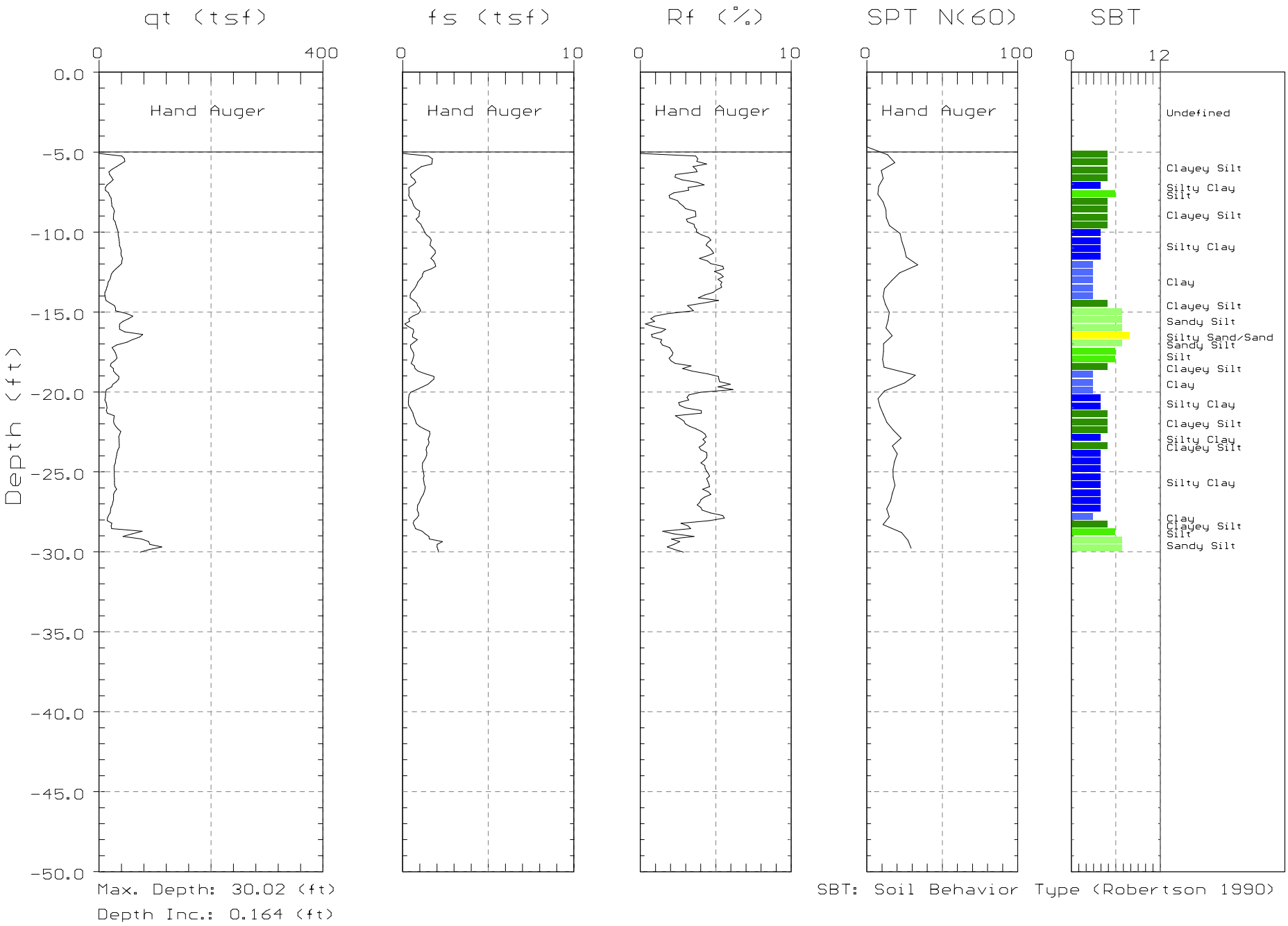
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-07

Engineer: C.HALL
Date: 08:22:05 13:15



Max. Depth: 30.02 (ft)
Depth Inc.: 0.164 (ft)

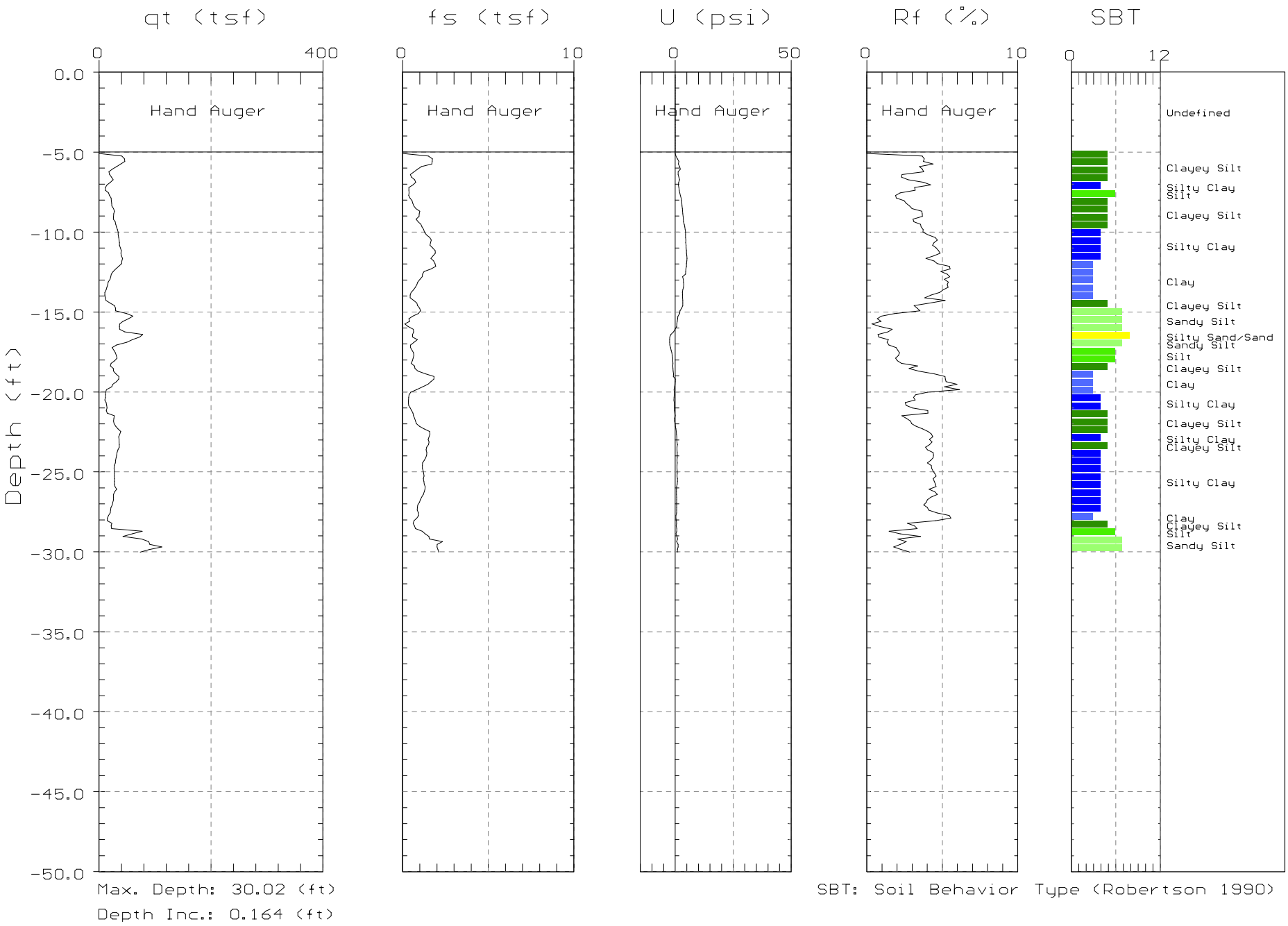
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-07

Engineer: C.HALL
Date: 08:22:05 13:15



Max. Depth: 30.02 (ft)
Depth Inc.: 0.164 (ft)

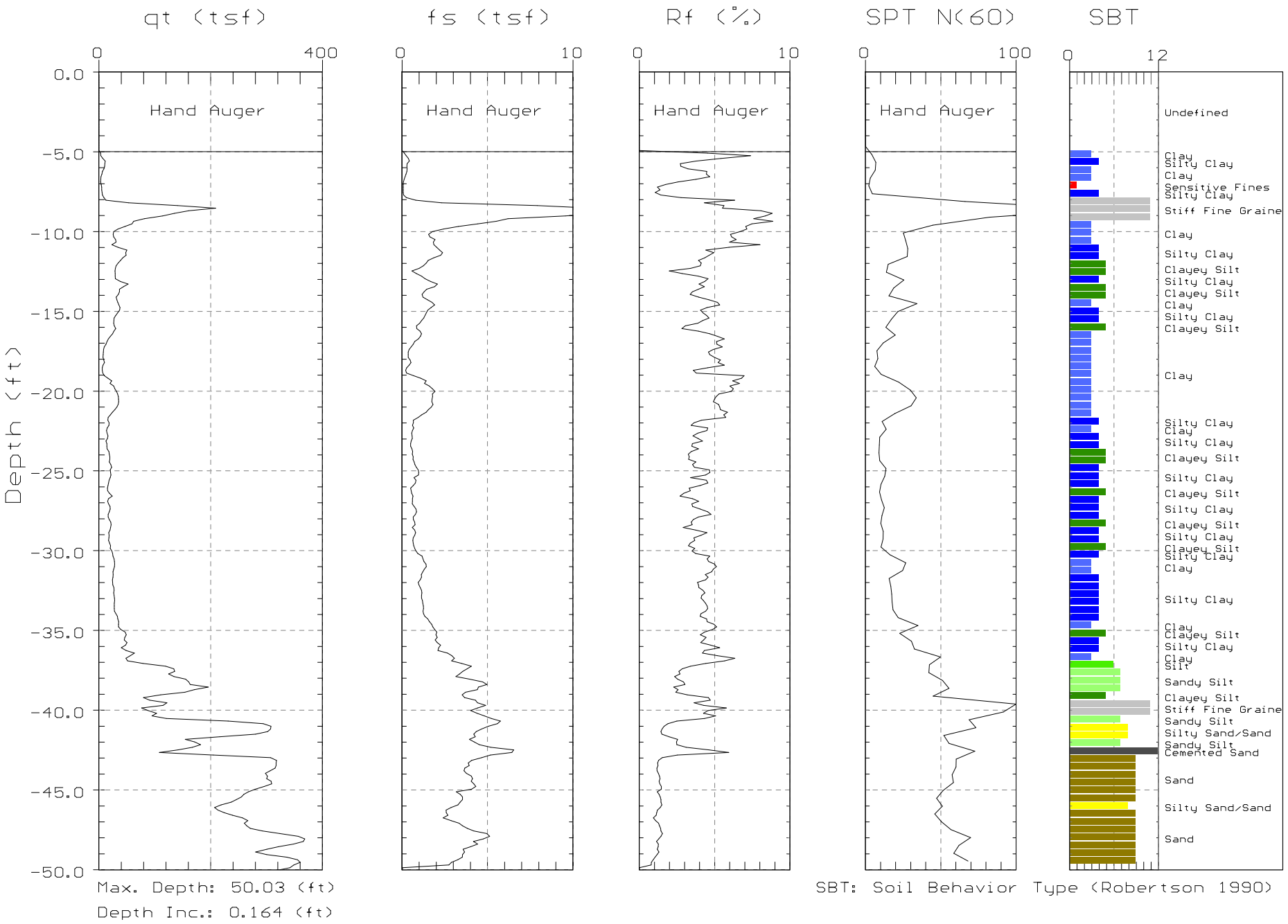
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-08

Engineer: C.HALL
Date: 08:22:05 15:10



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

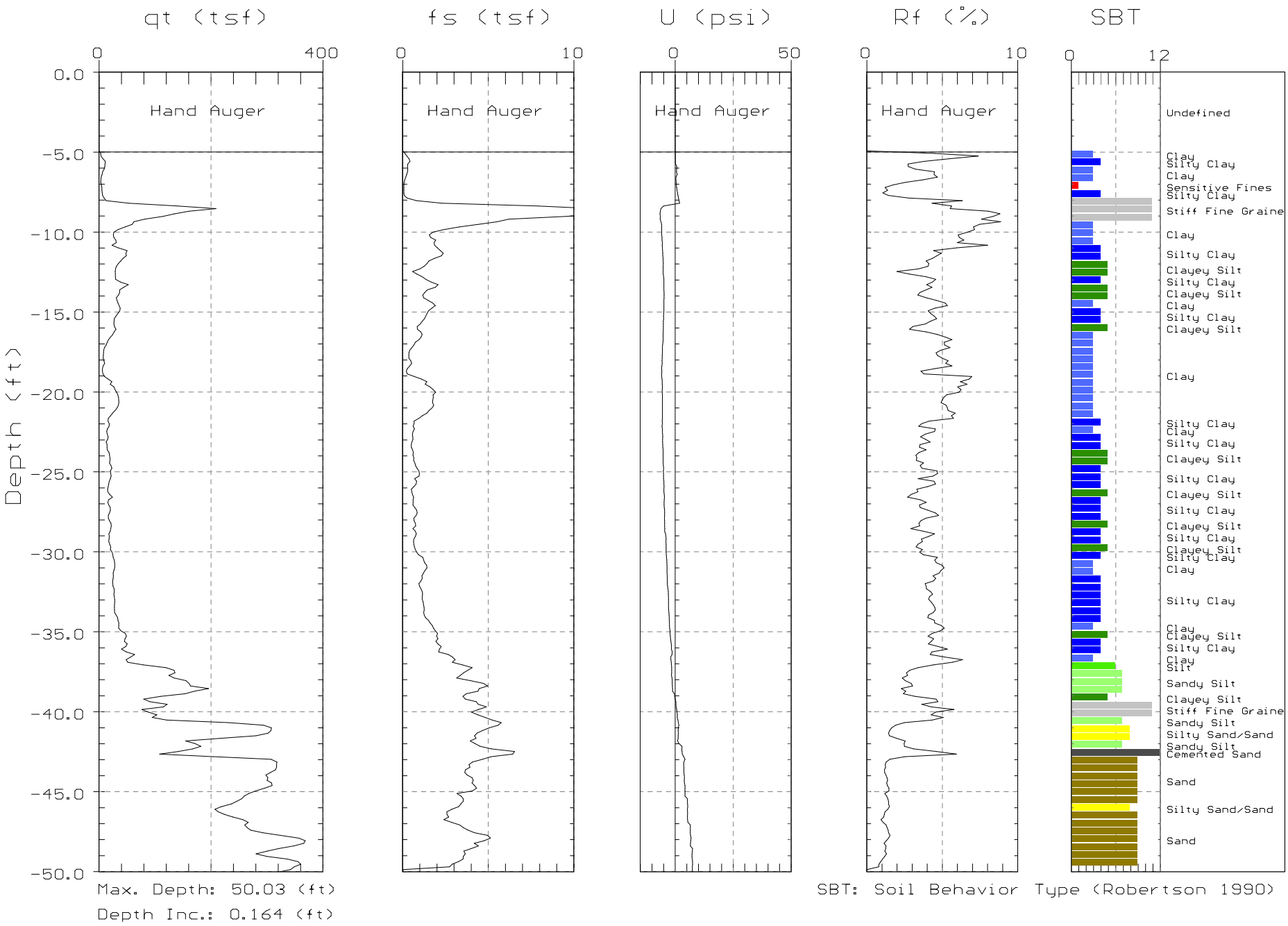
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-08

Engineer: C.HALL
Date: 08:22:05 15:10



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

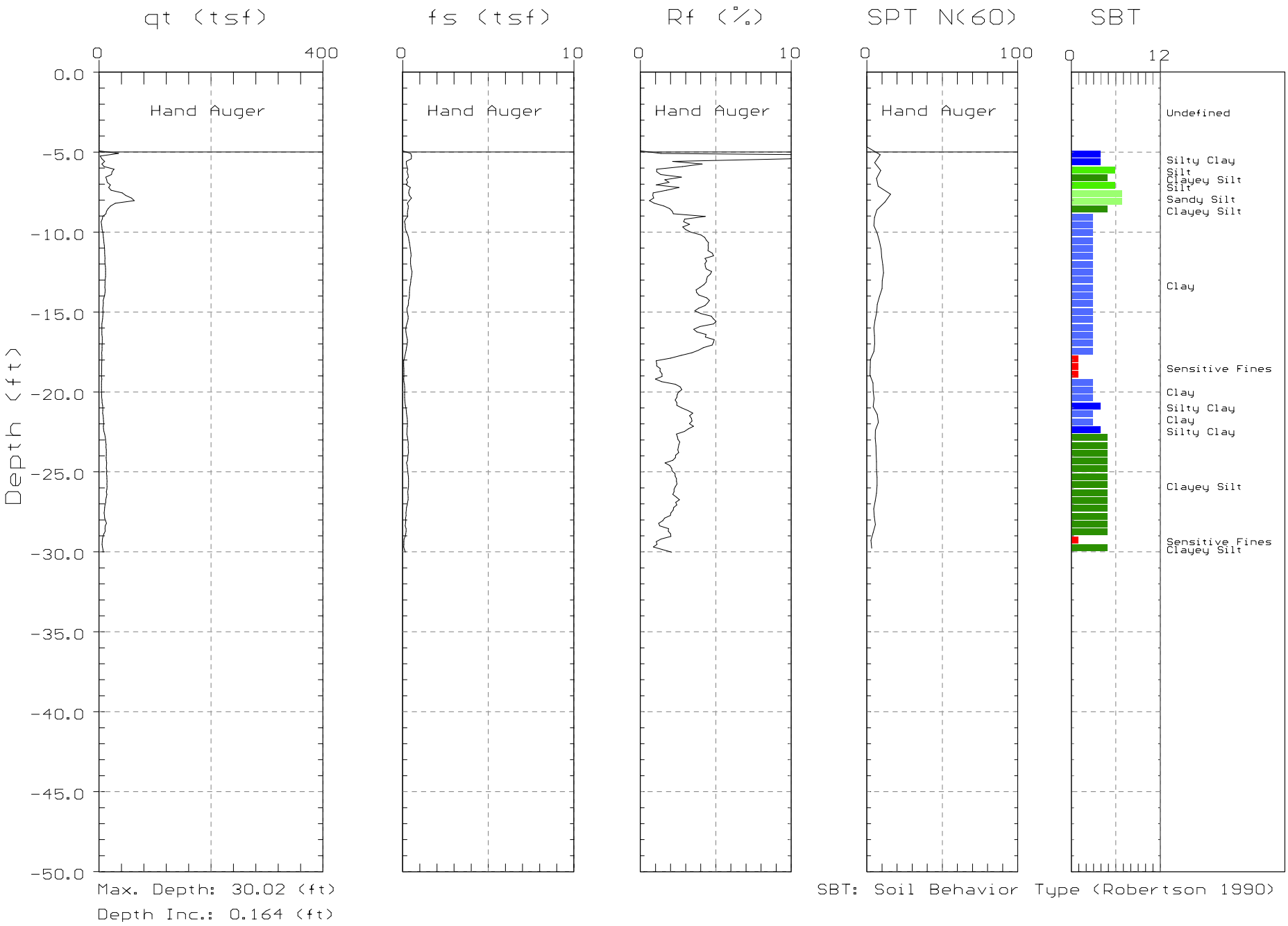
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-09

Engineer: C.HALL
Date: 08:19:05 14:16



Max. Depth: 30.02 (ft)
Depth Inc.: 0.164 (ft)

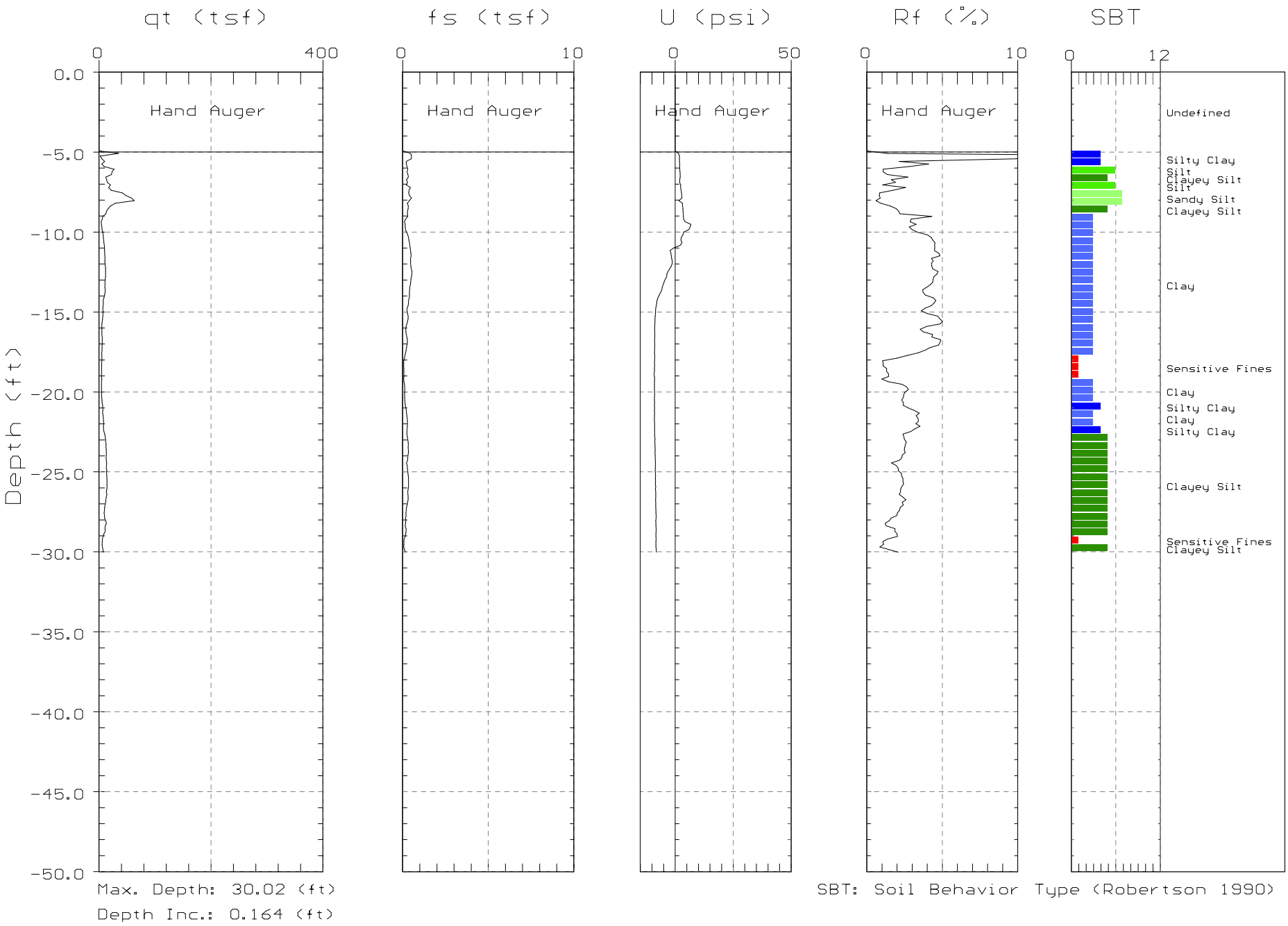
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-09

Engineer: C.HALL
Date: 08:19:05 14:16



Max. Depth: 30.02 (ft)
Depth Inc.: 0.164 (ft)

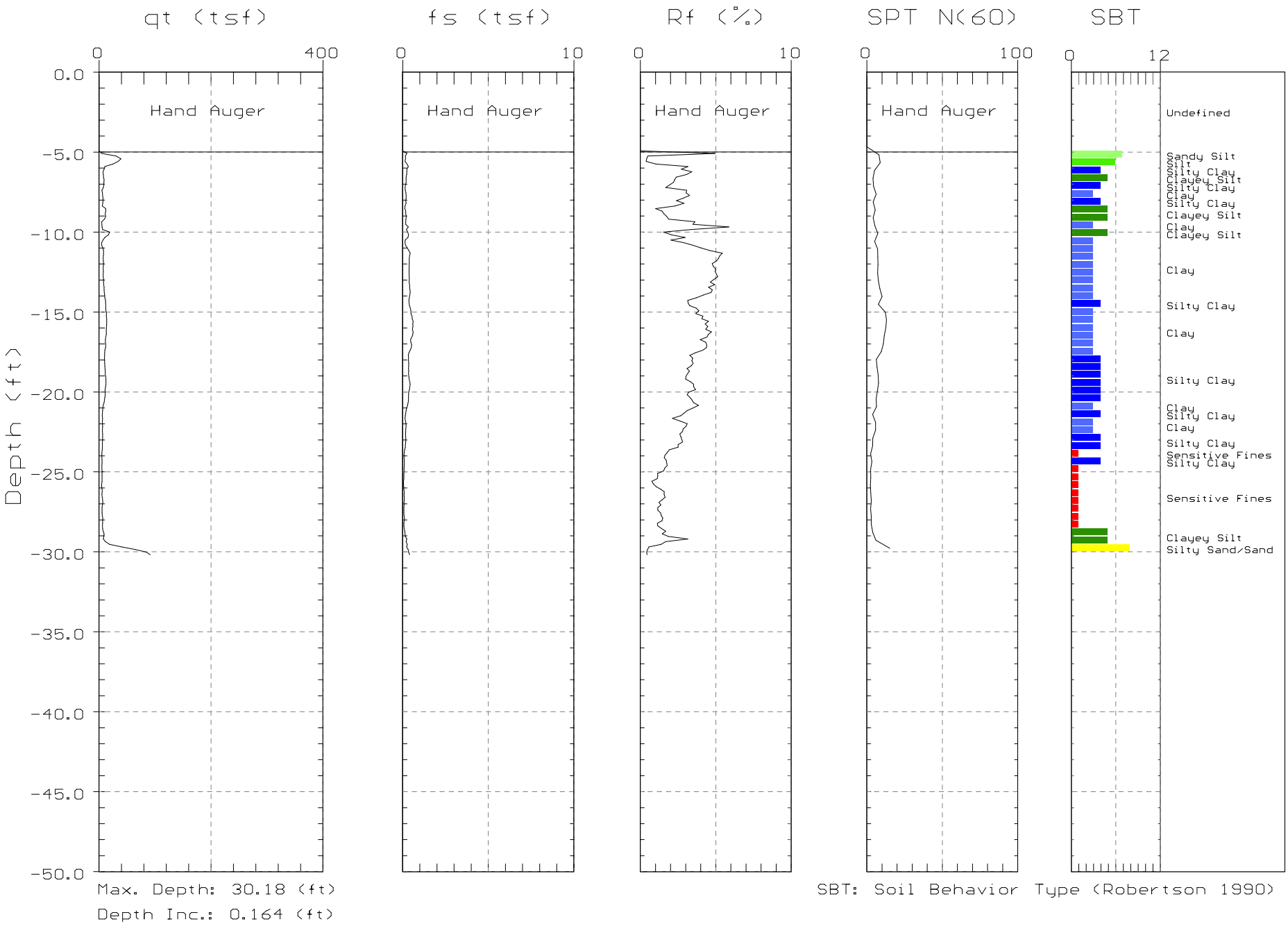
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-10

Engineer: C.HALL
Date: 08:19:05 17:10



Max. Depth: 30.18 (ft)
Depth Inc.: 0.164 (ft)

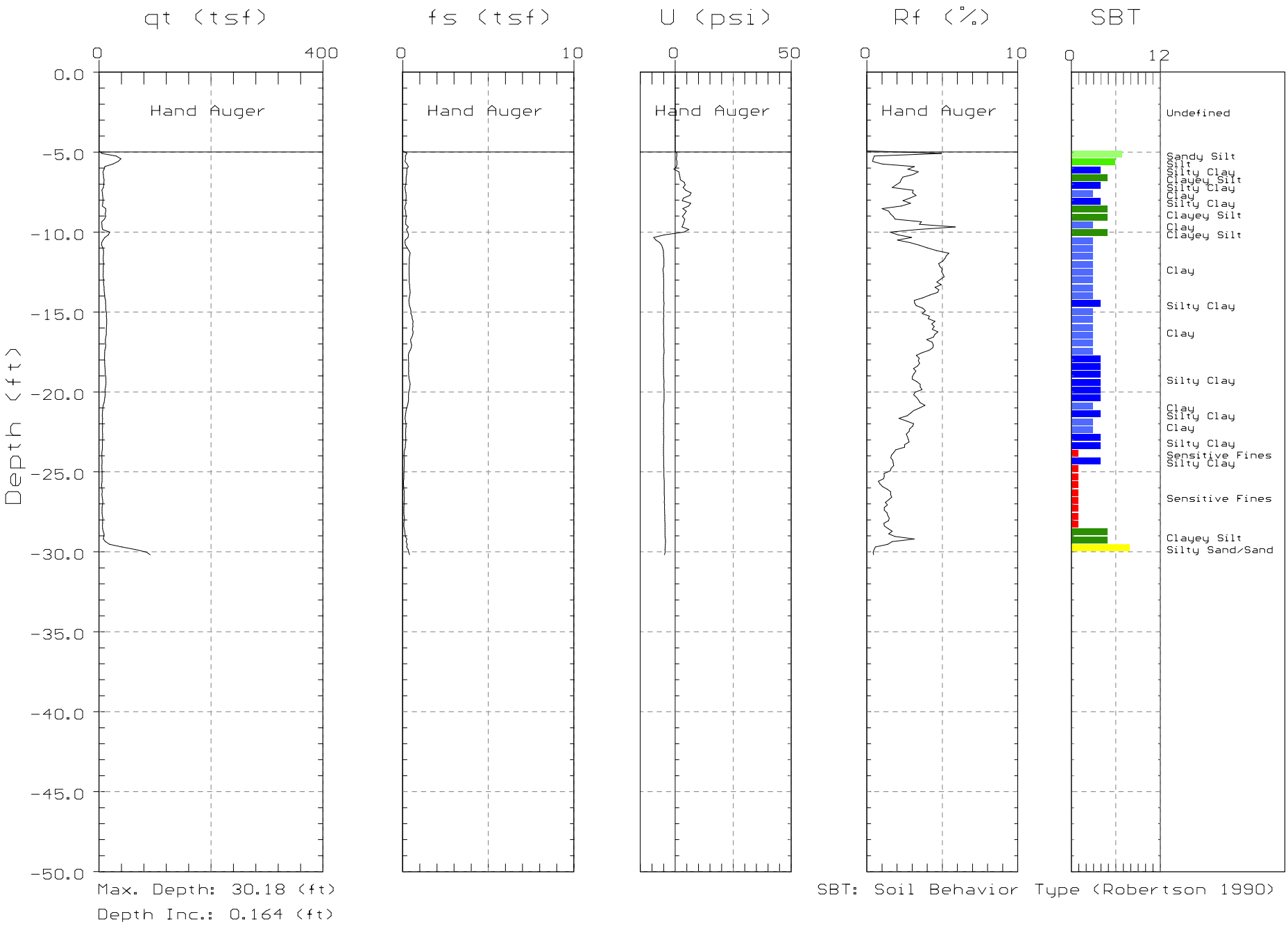
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-10

Engineer: C.HALL
Date: 08:19:05 17:10



Max. Depth: 30.18 (ft)
Depth Inc.: 0.164 (ft)

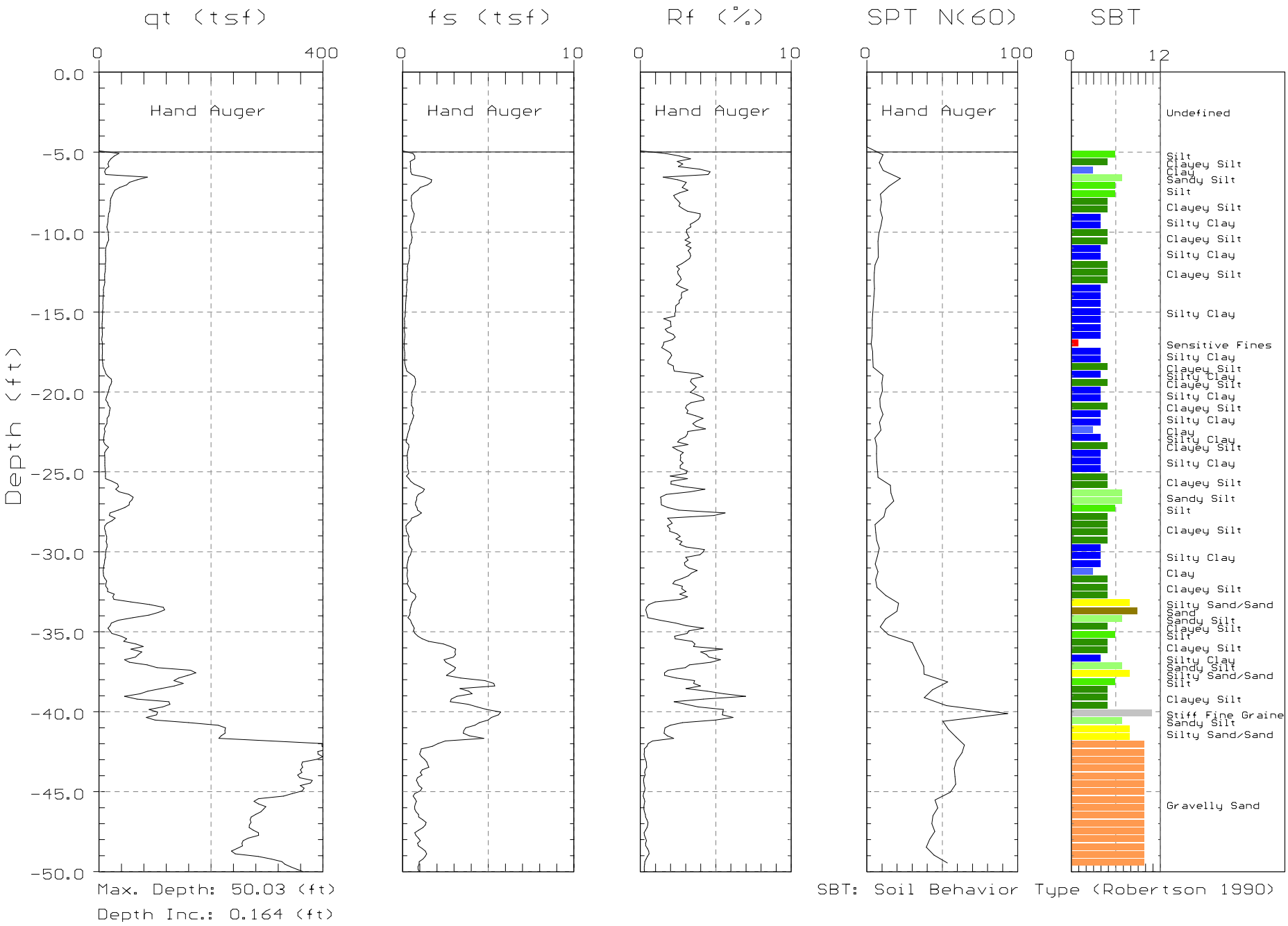
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-11

Engineer: C.HALL
Date: 08:19:05 11:56



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

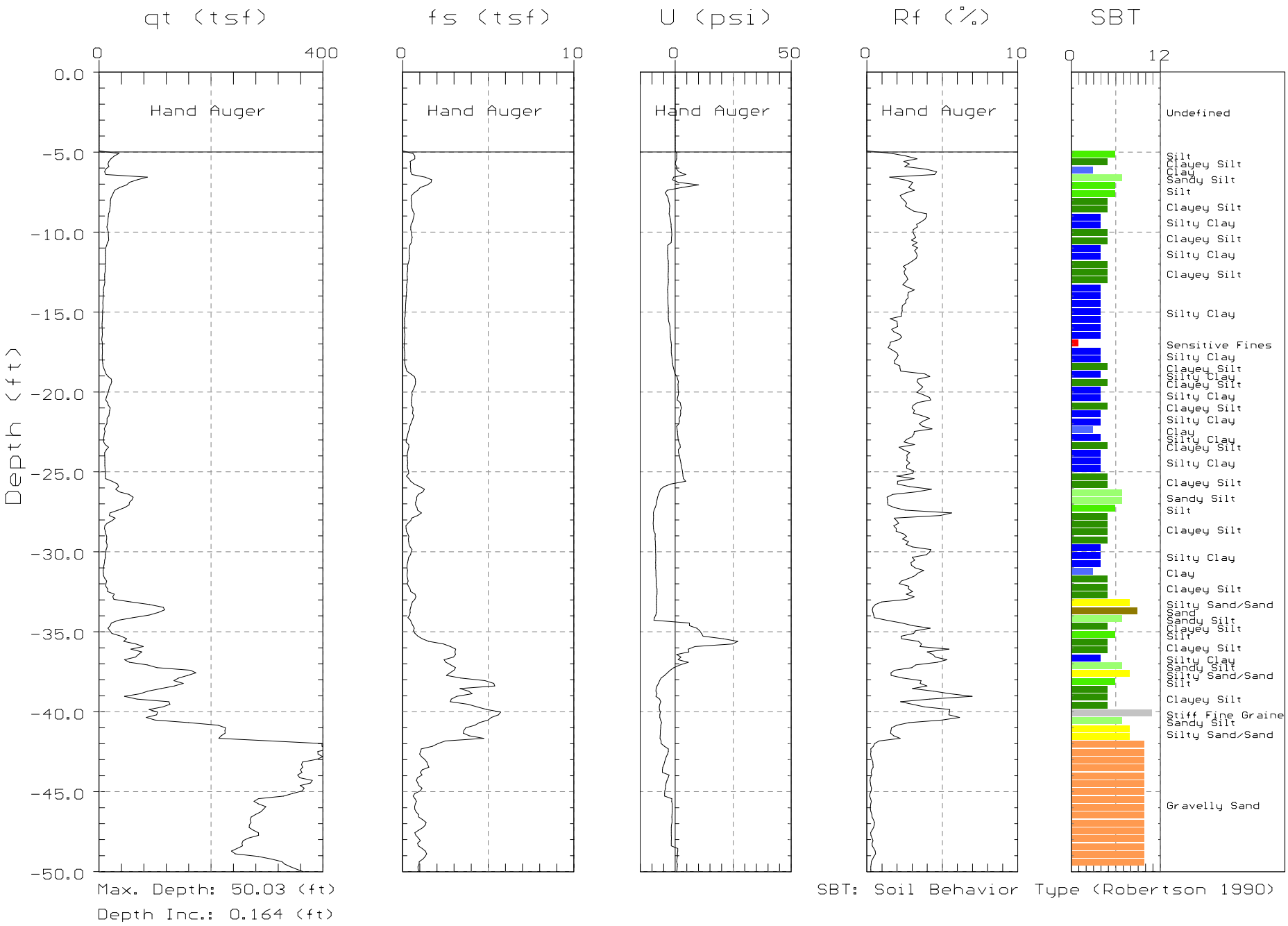
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-11

Engineer: C.HALL
Date: 08:19:05 11:56



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

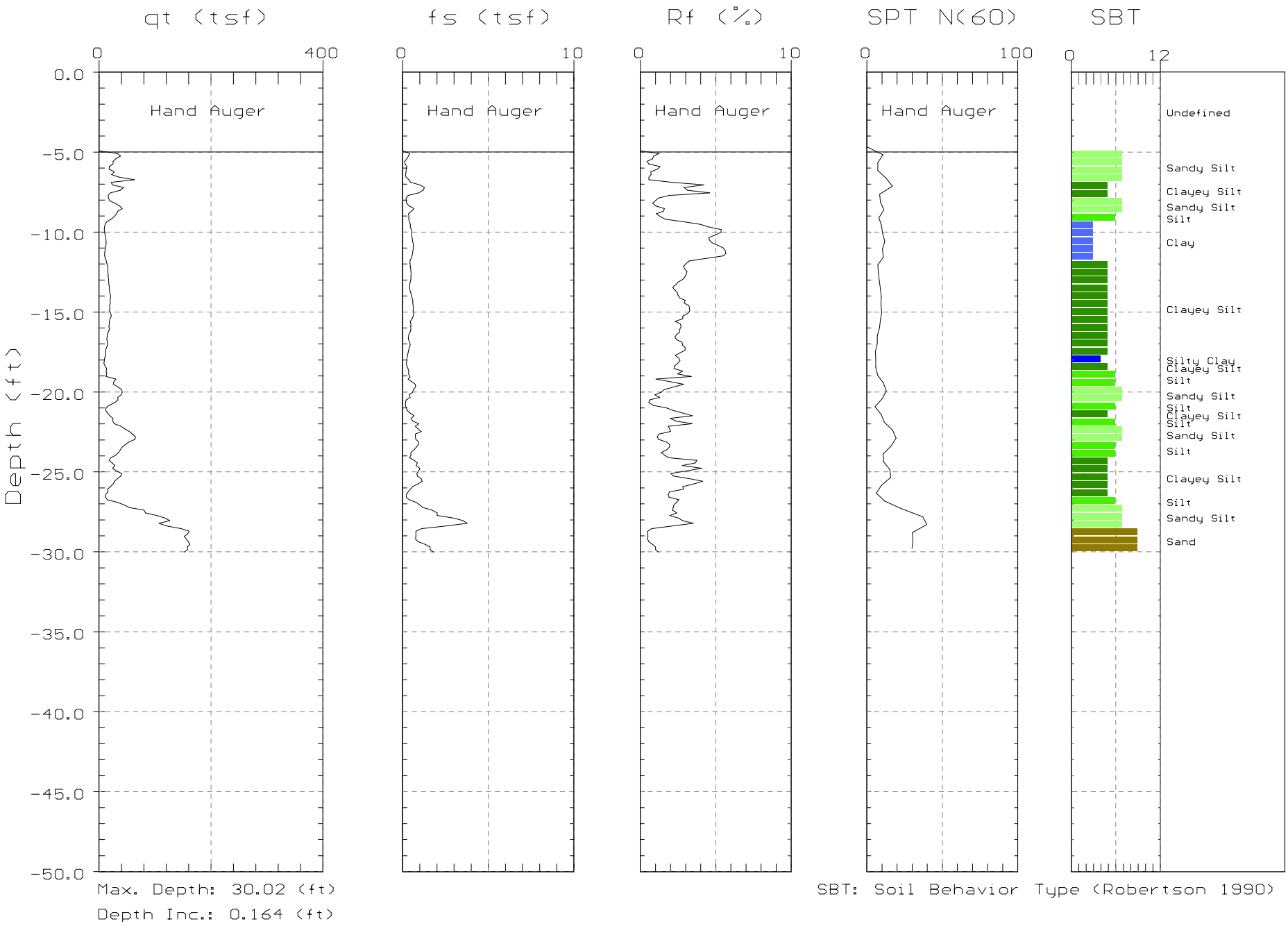
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-12

Engineer: C.HALL
Date: 08:19:05 13:12



Max. Depth: 30.02 (ft)
Depth Inc.: 0.164 (ft)

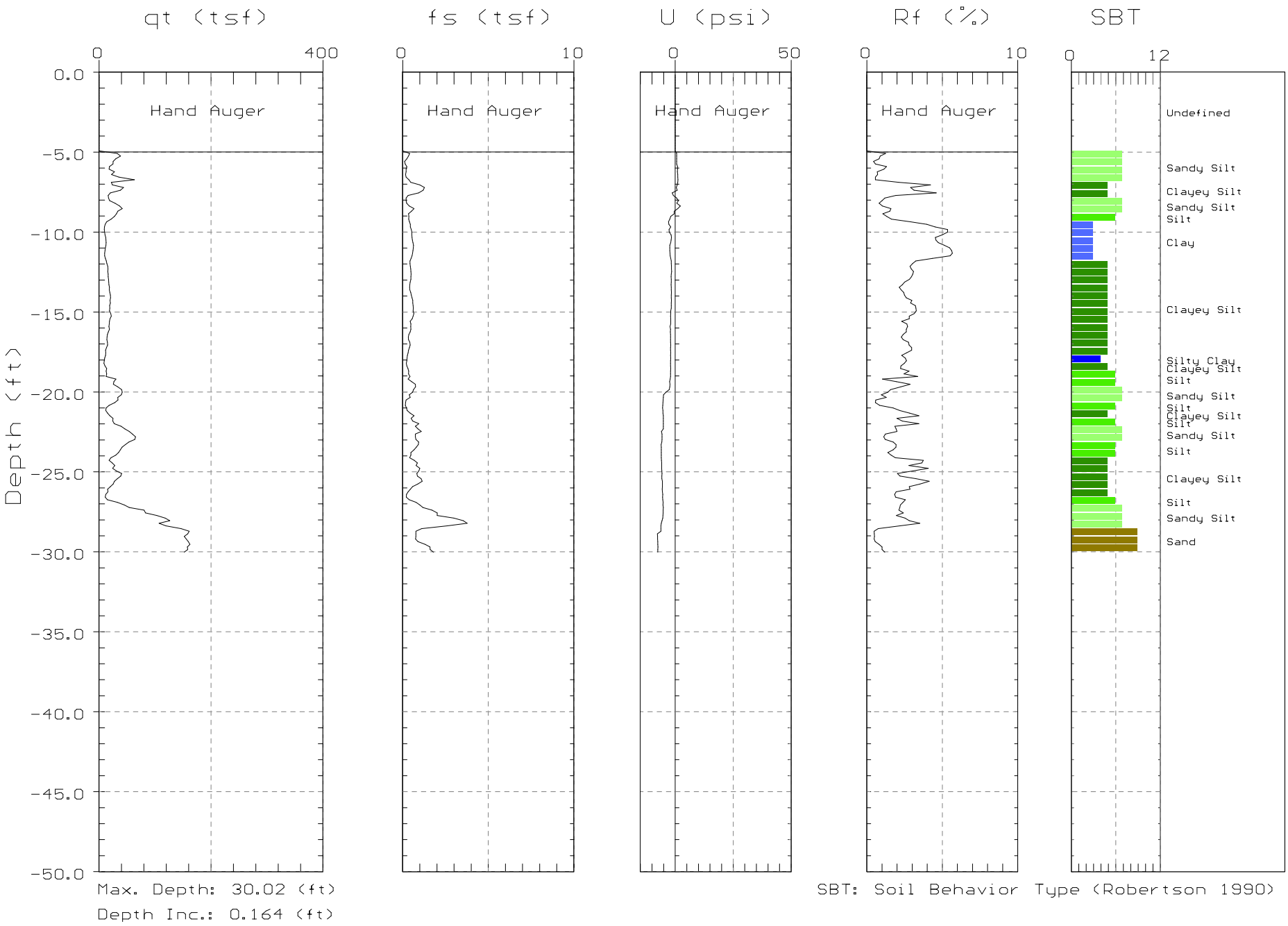
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-12

Engineer: C.HALL
Date: 08:19:05 13:12



Max. Depth: 30.02 (ft)
Depth Inc.: 0.164 (ft)

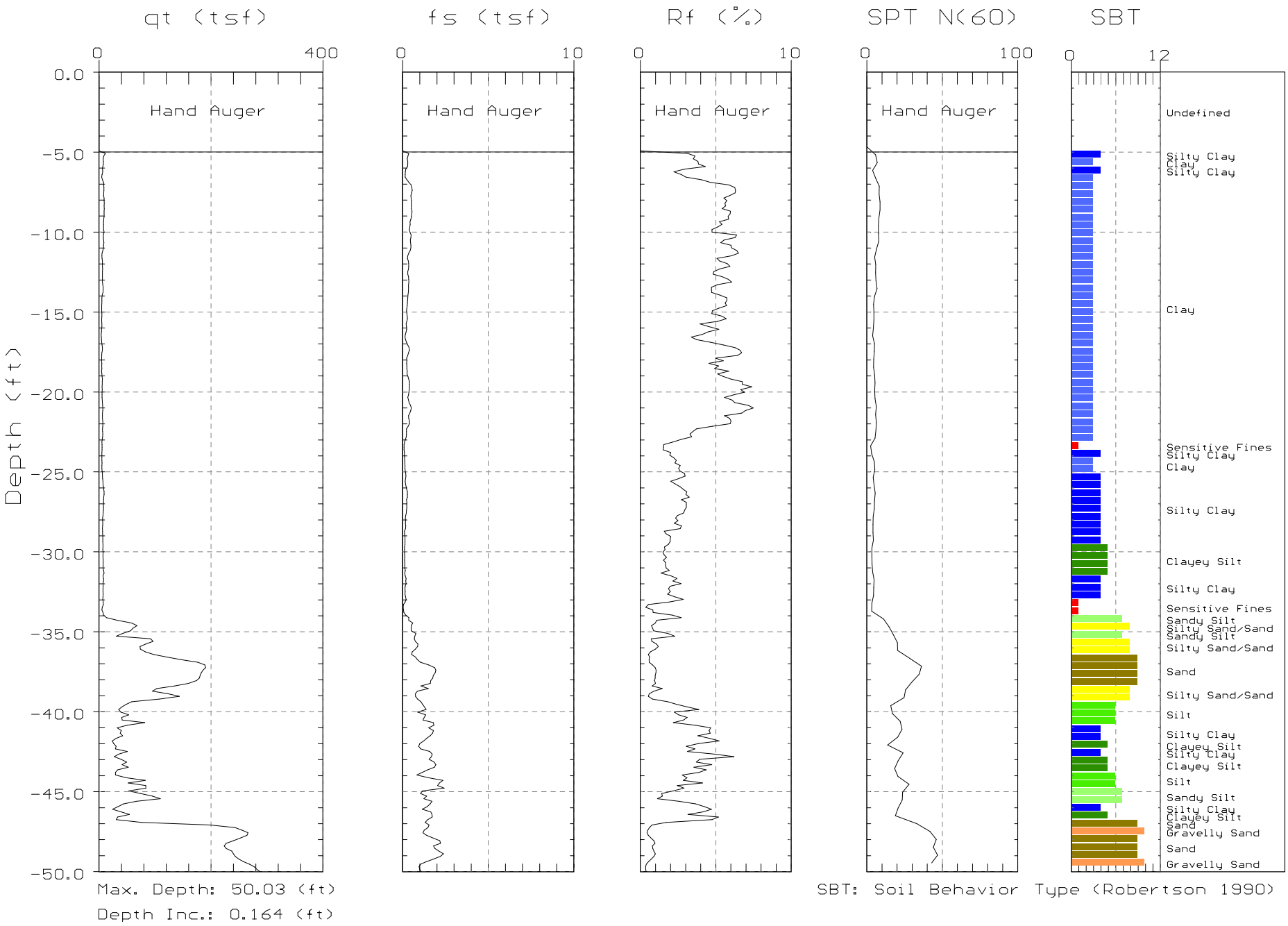
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-13

Engineer: C.HALL
Date: 08:22:05 12:12



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

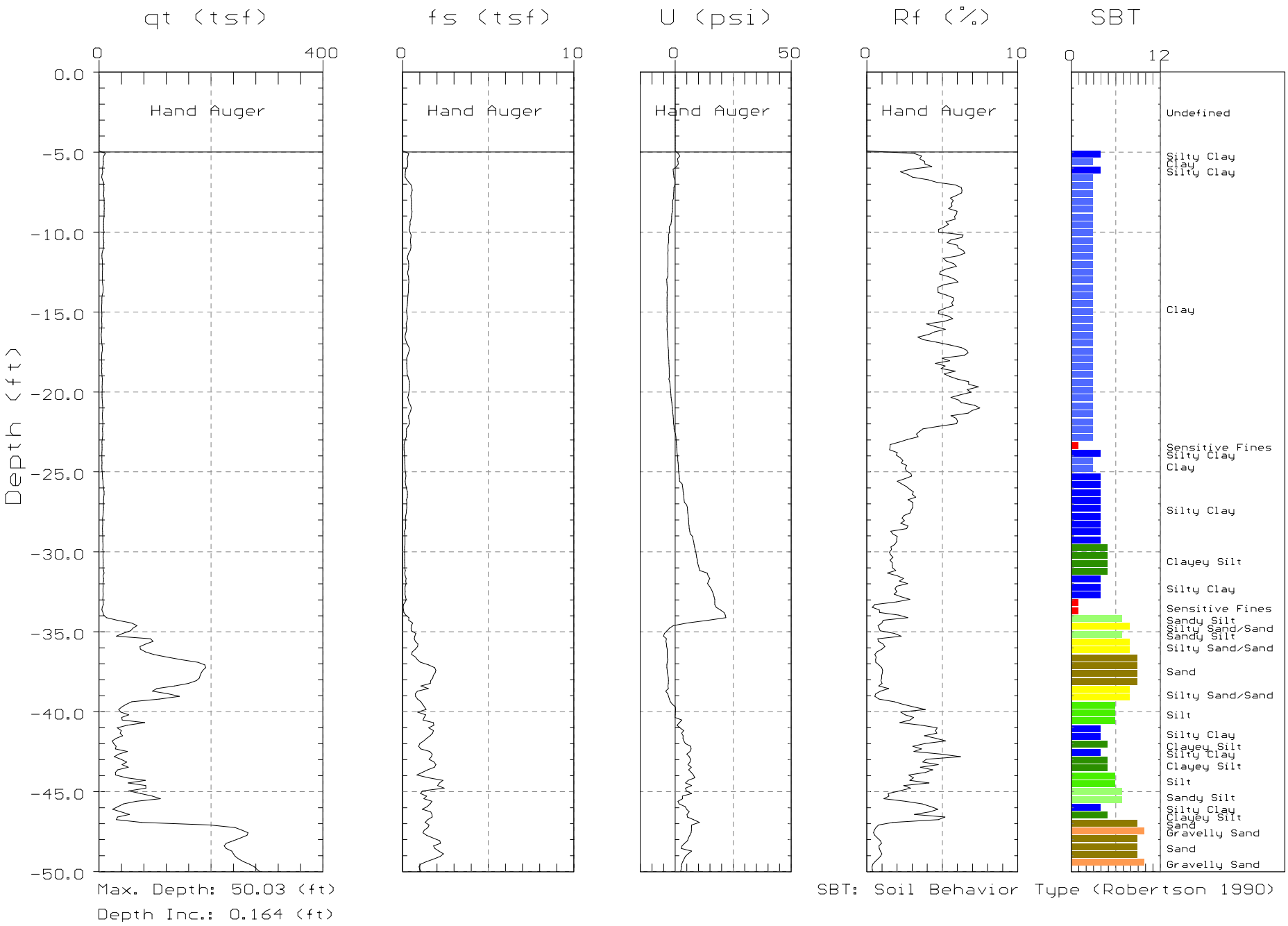
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR BAY
Location: CPT-13

Engineer: C.HALL
Date: 08:22:05 12:12



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

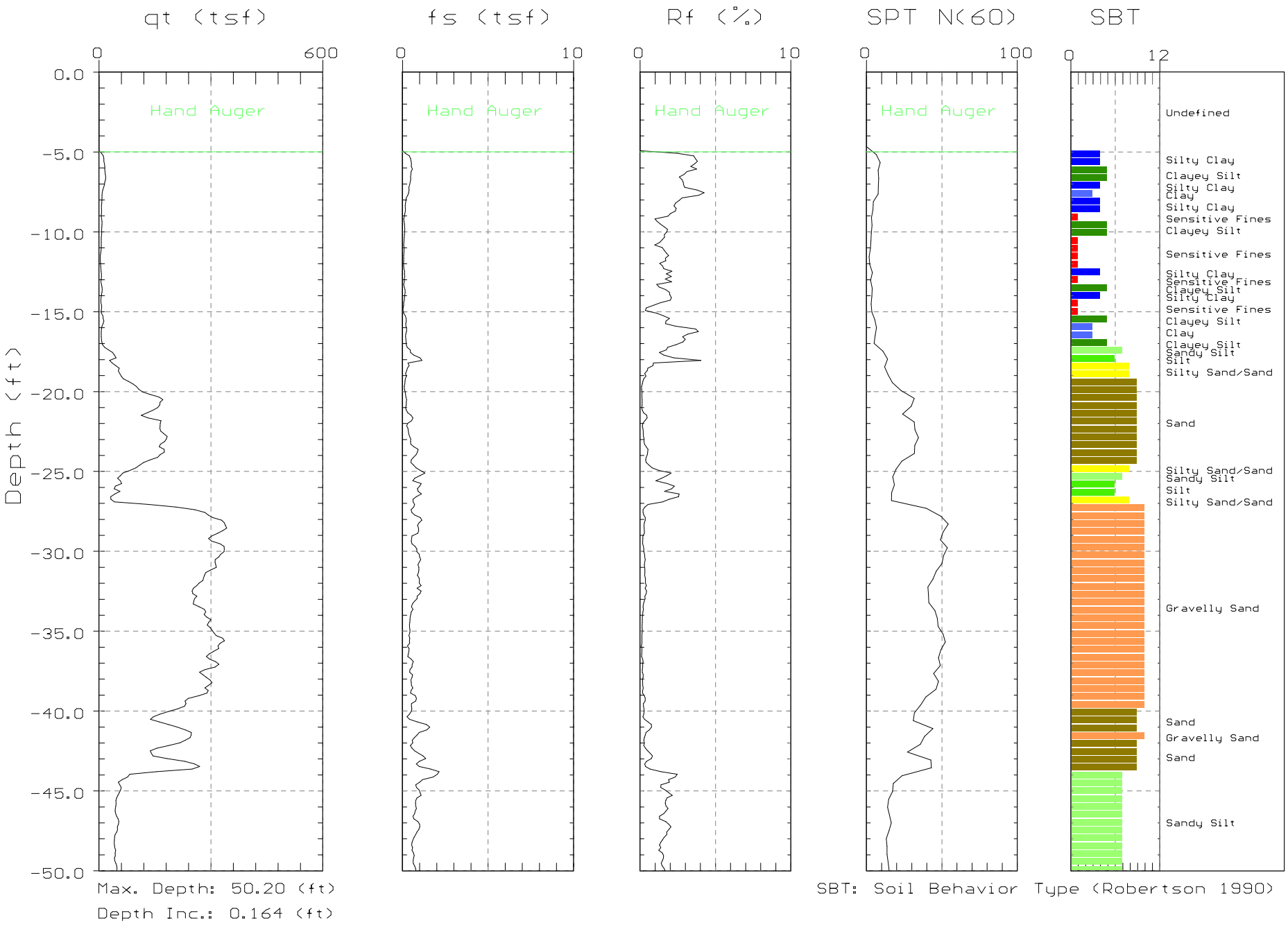
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-14

Engineer: H.RODGERS
Date: 12:15:05 12:39



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

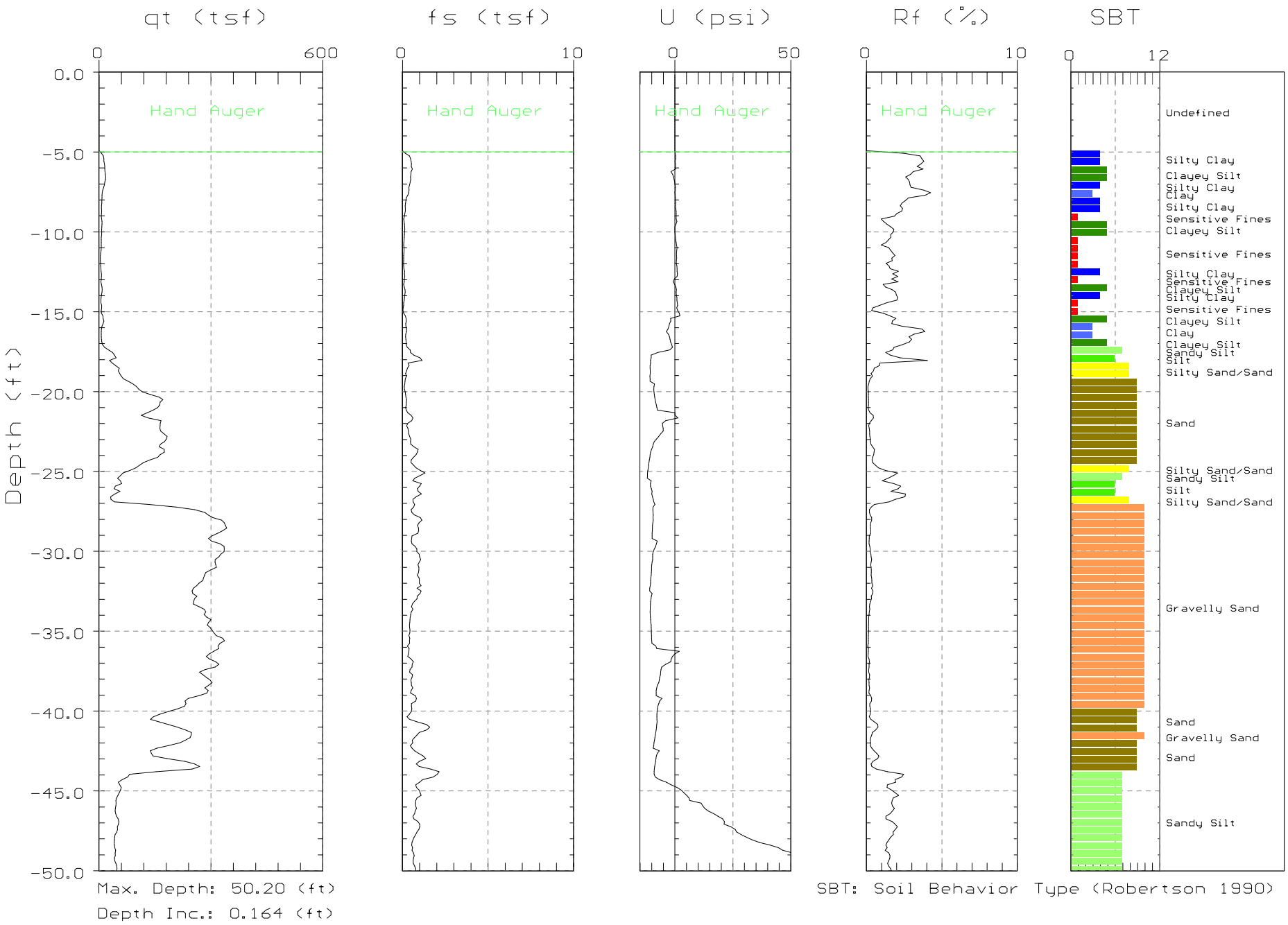
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-14

Engineer: H.RODGERS
Date: 12:15:05 12:39



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

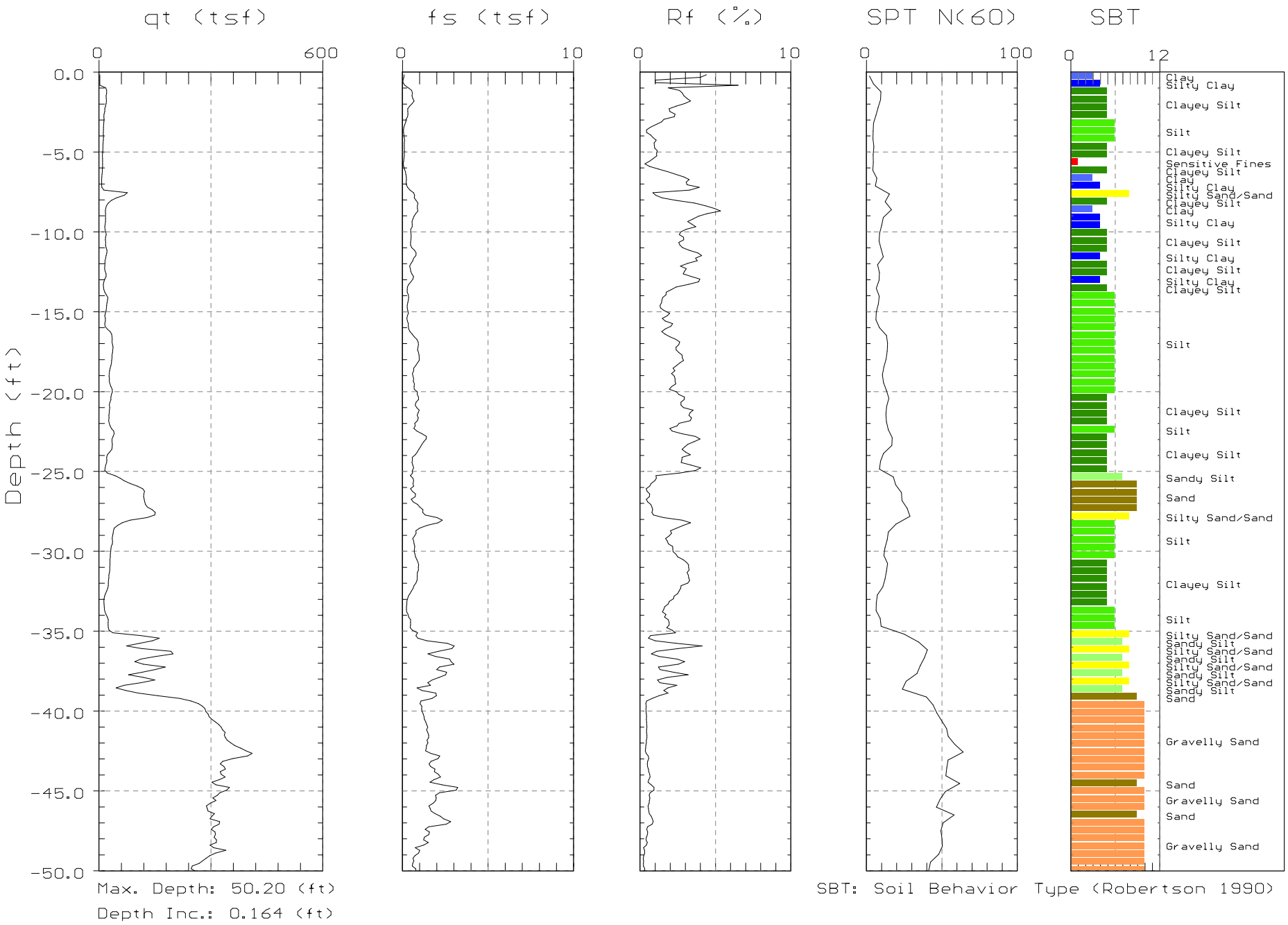
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-15

Engineer: H.RODGERS
Date: 12:15:05 14:36



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

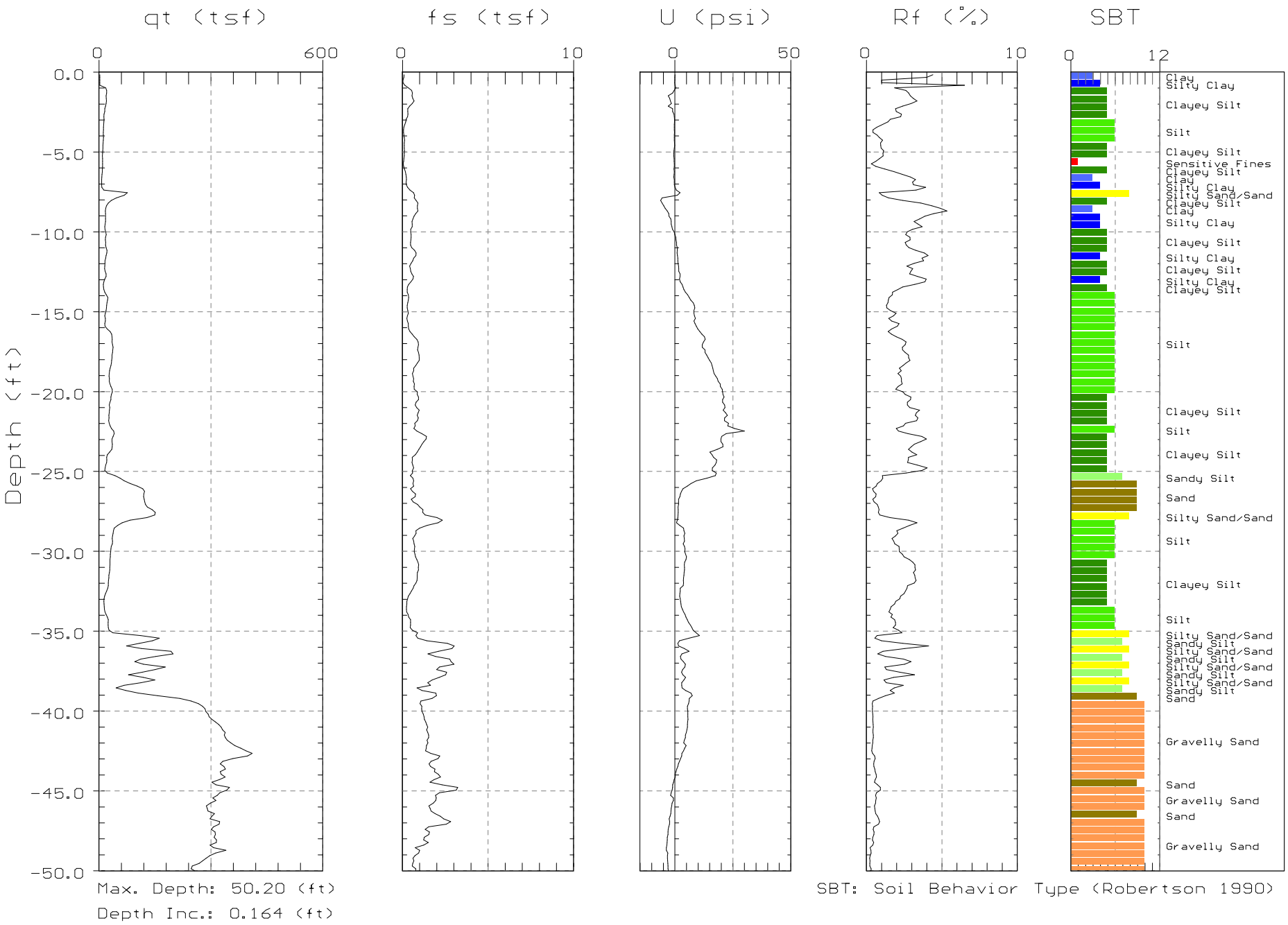
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-15

Engineer: H.RODGERS
Date: 12:15:05 14:36



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

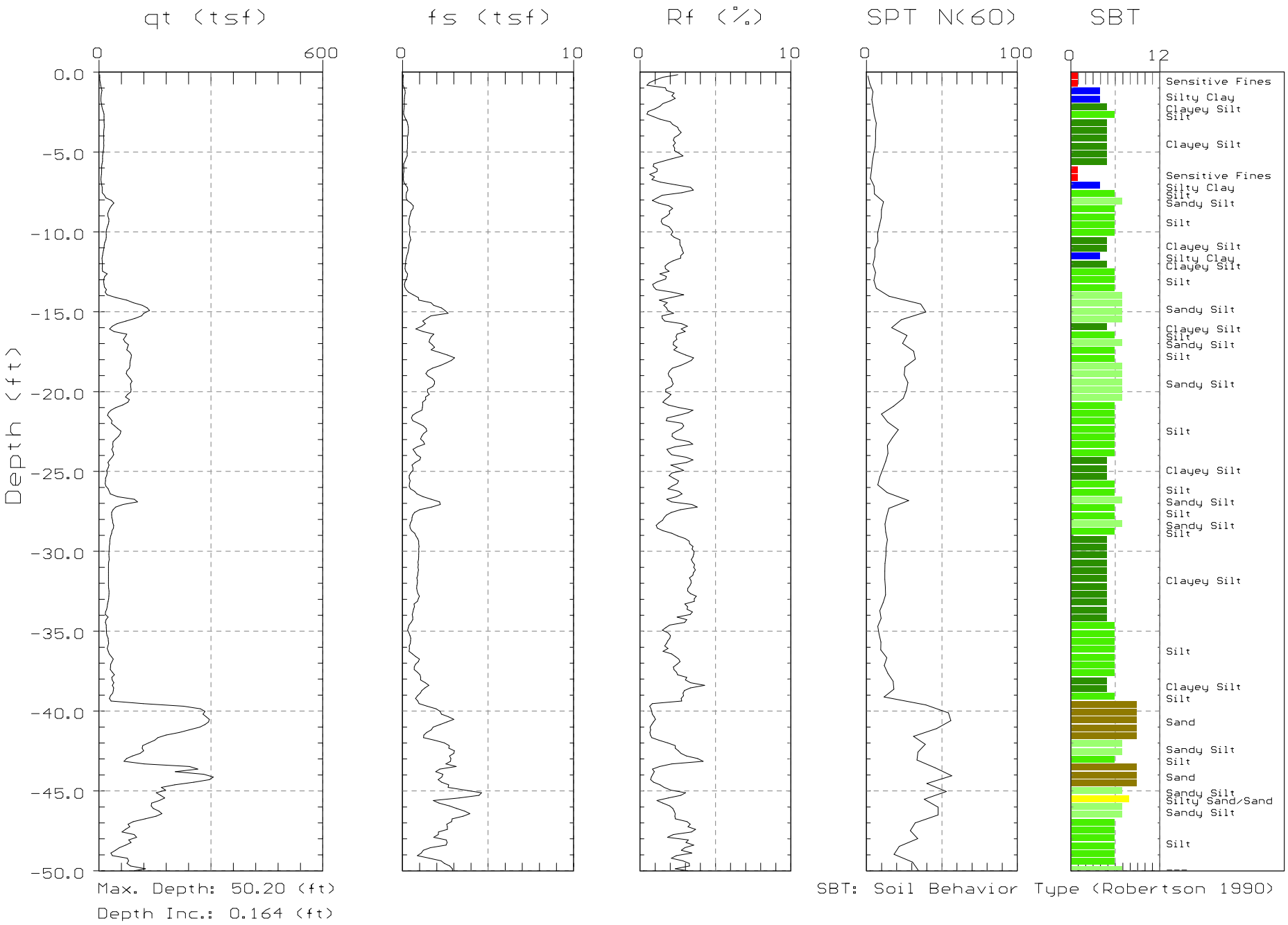
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-16

Engineer: H.RODGERS
Date: 12:15:05 15:25



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

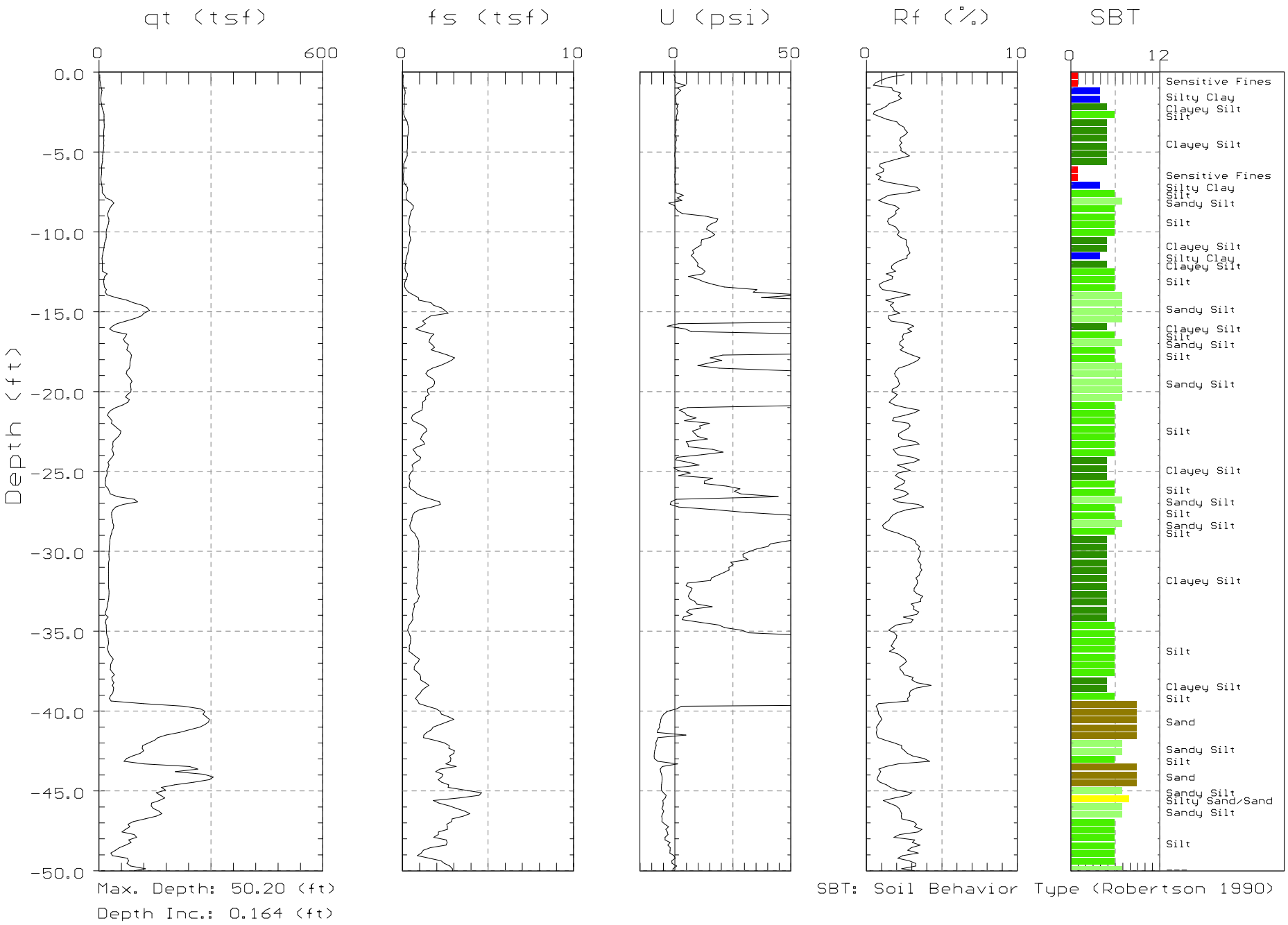
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-16

Engineer: H.RODGERS
Date: 12:15:05 15:25



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

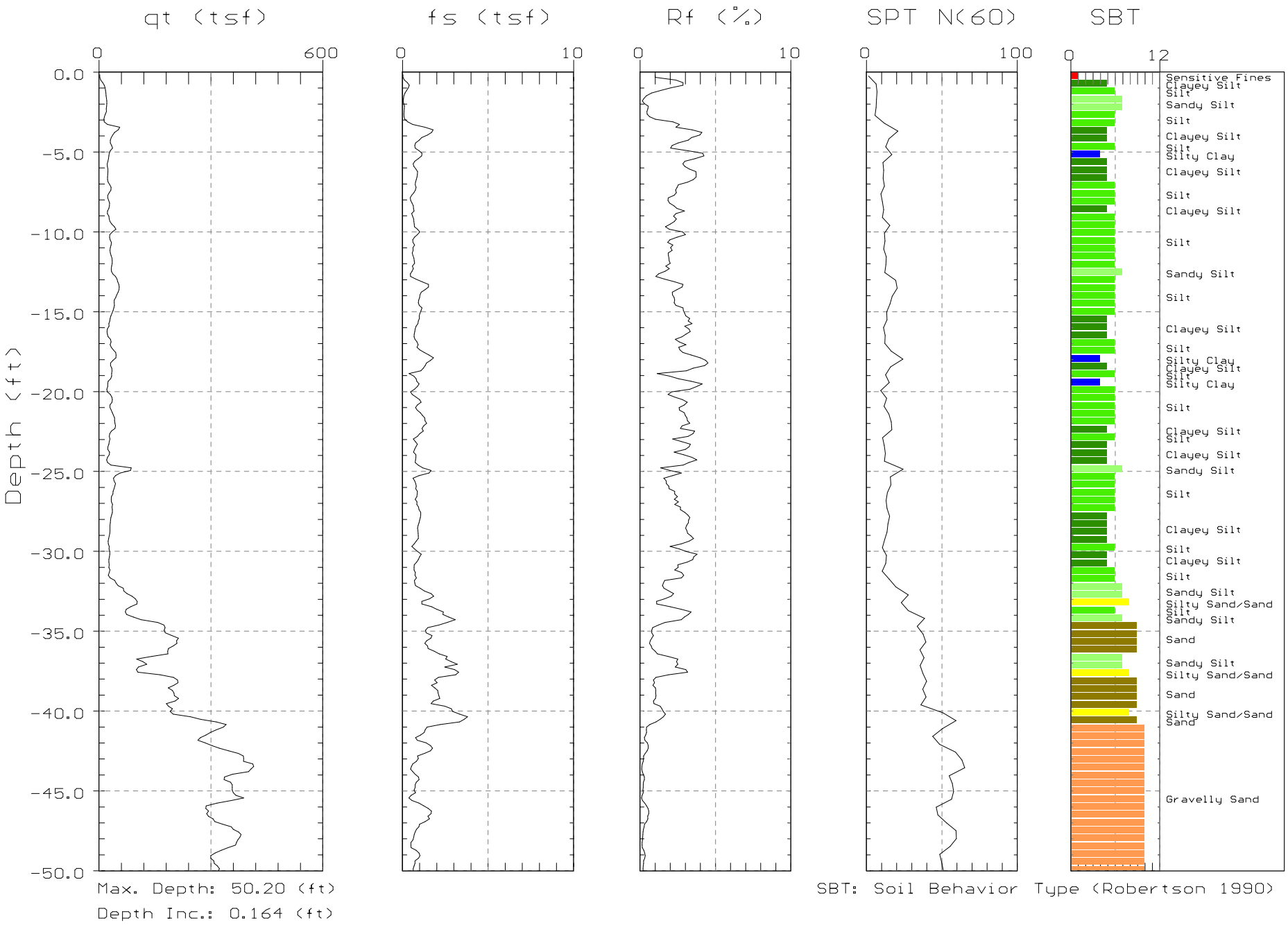
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-17

Engineer: H.RODGERS
Date: 12:15:05 17:13



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

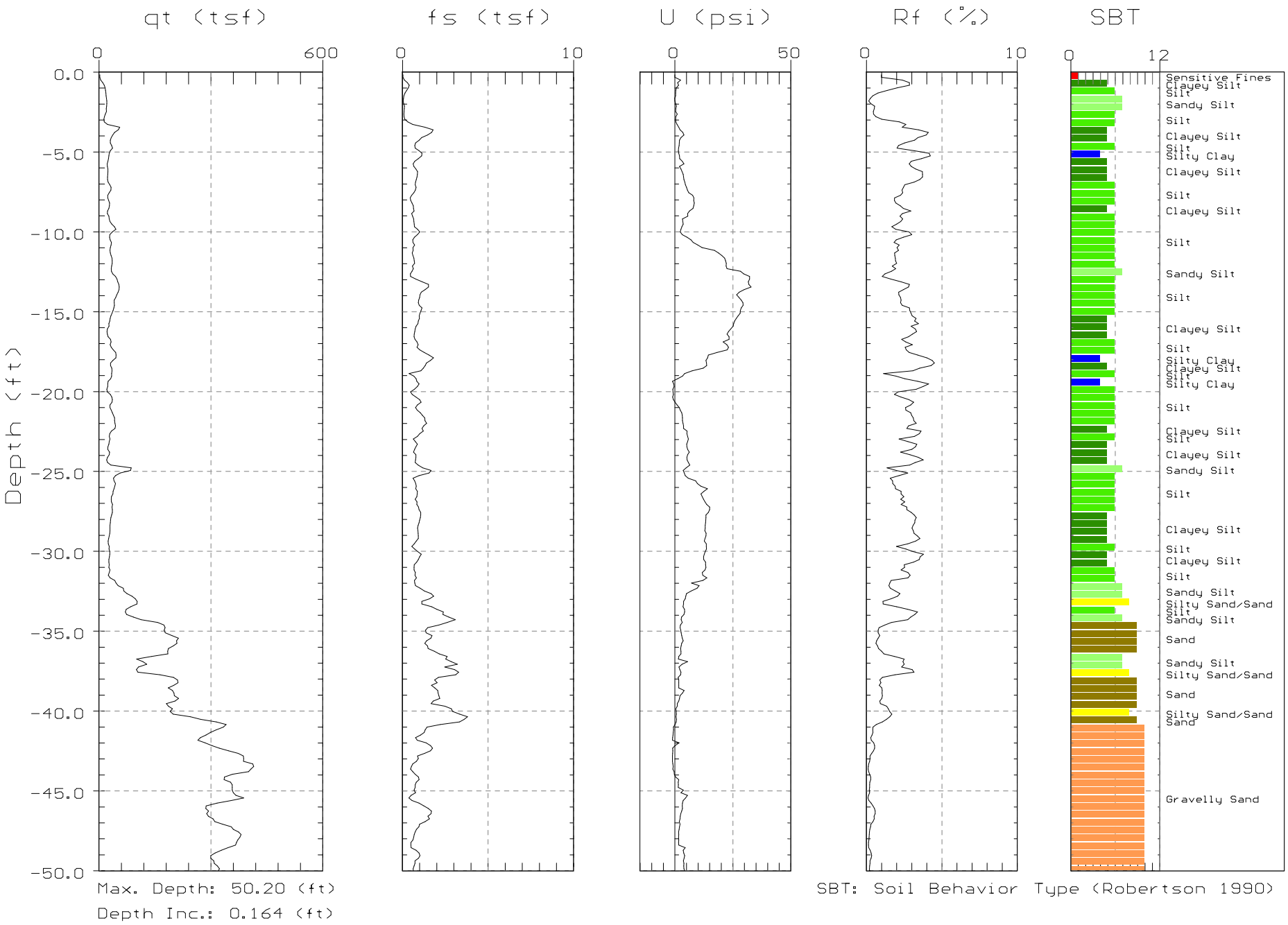
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-17

Engineer: H.RODGERS
Date: 12:15:05 17:13



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

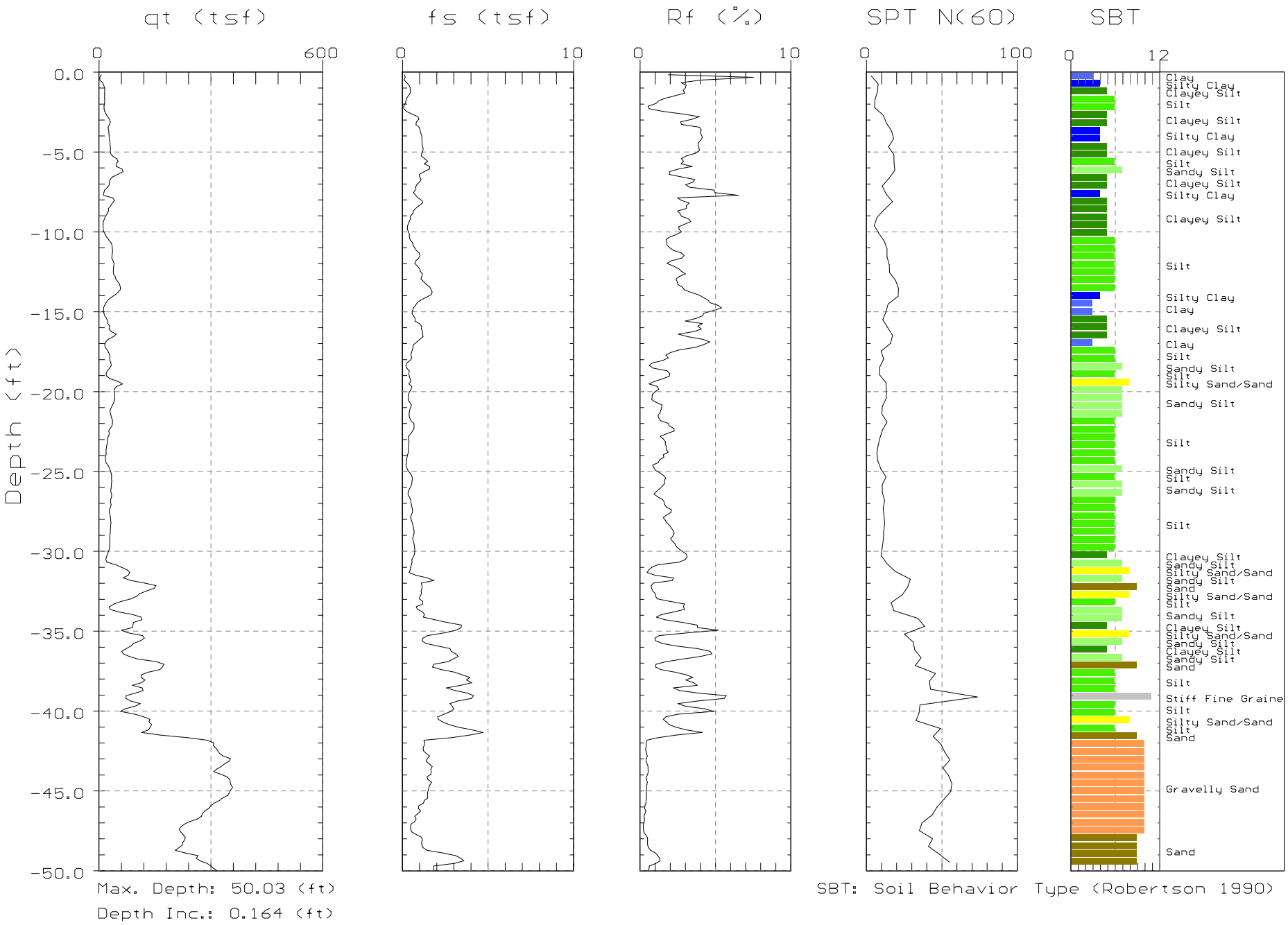
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-18

Engineer: H.RODGERS
Date: 12:15:05 17:59



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

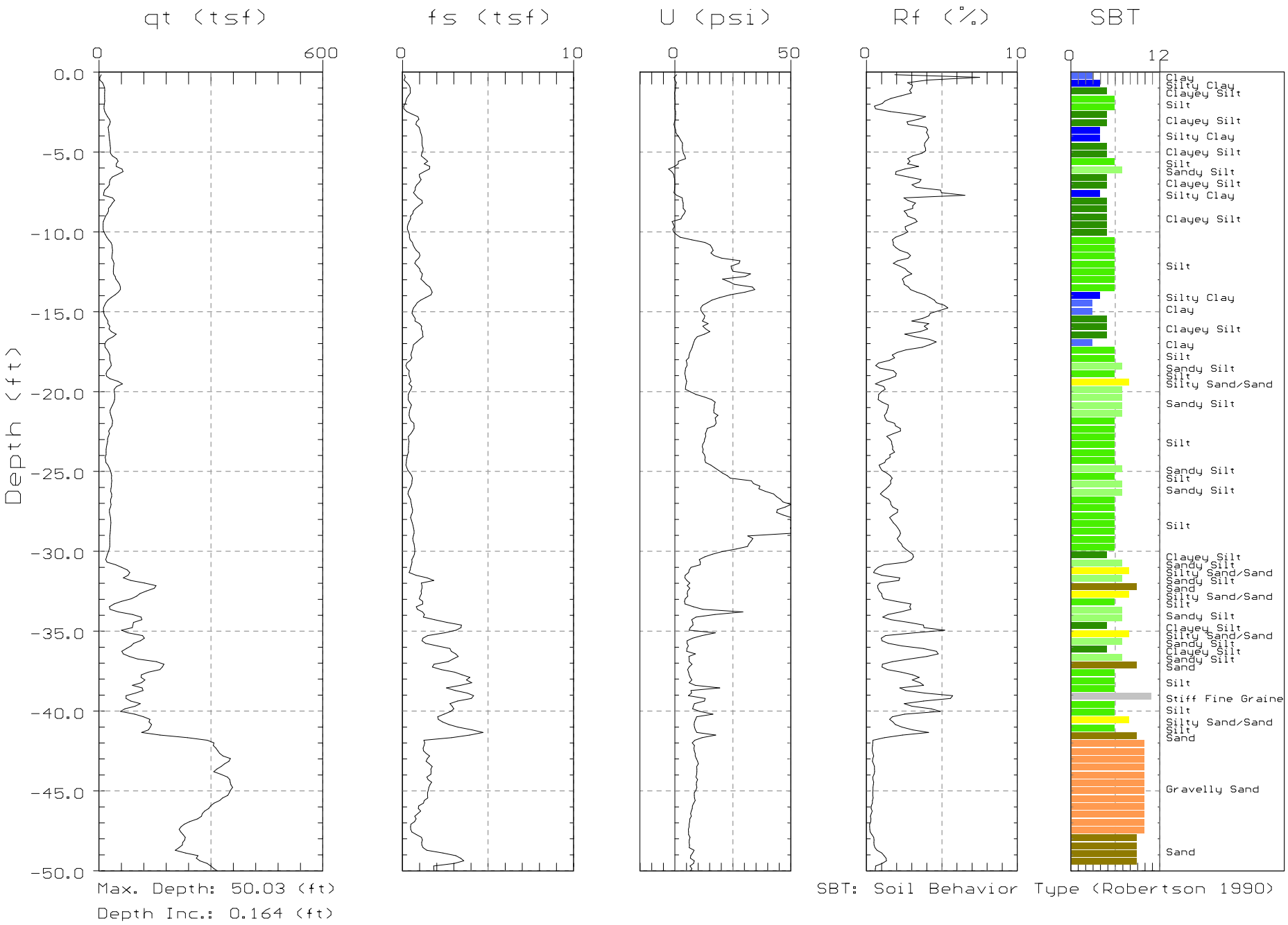
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-18

Engineer: H.RODGERS
Date: 12:15:05 17:59



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

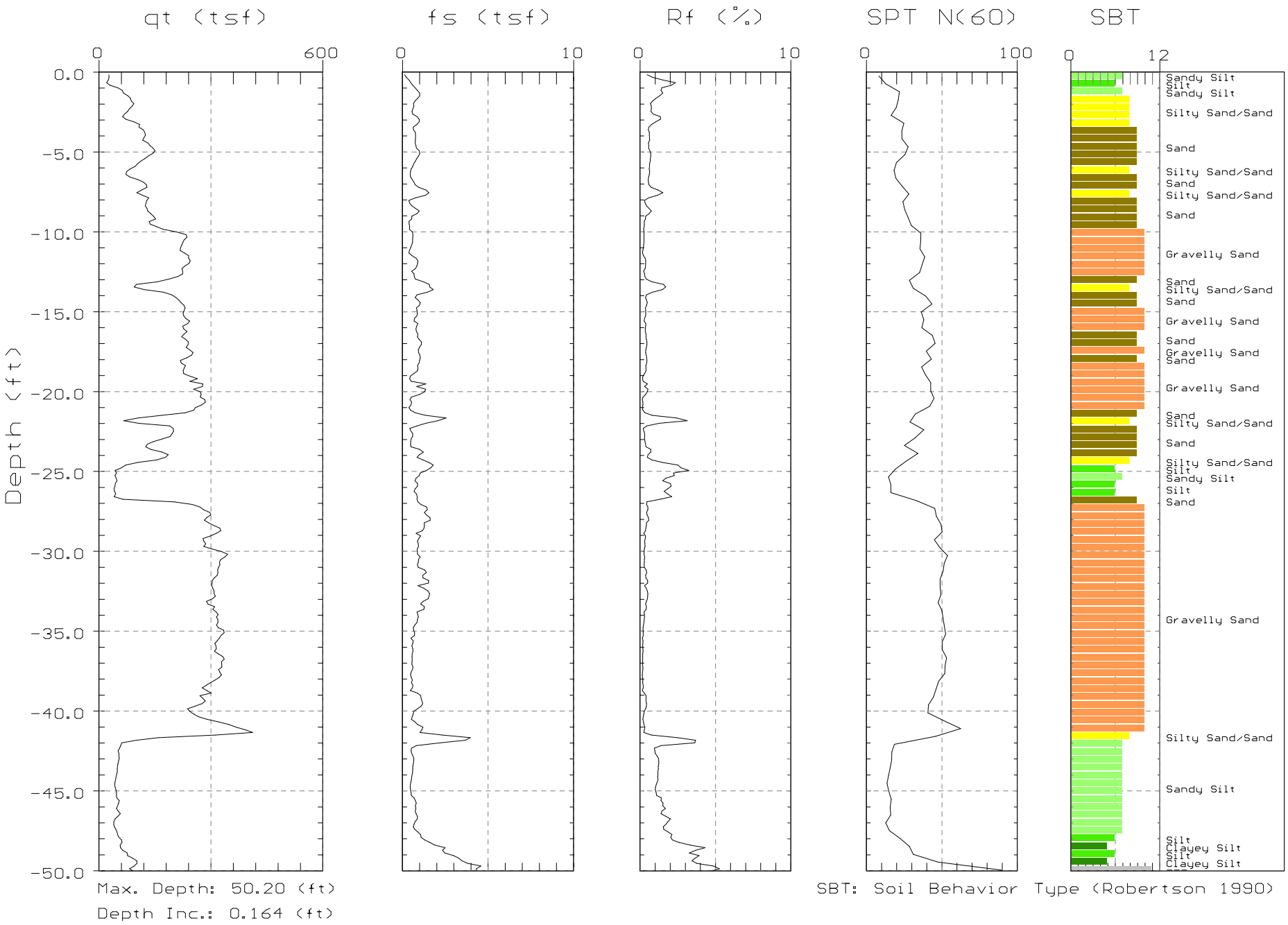
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-19

Engineer: H.RODGERS
Date: 12:15:05 18:56



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

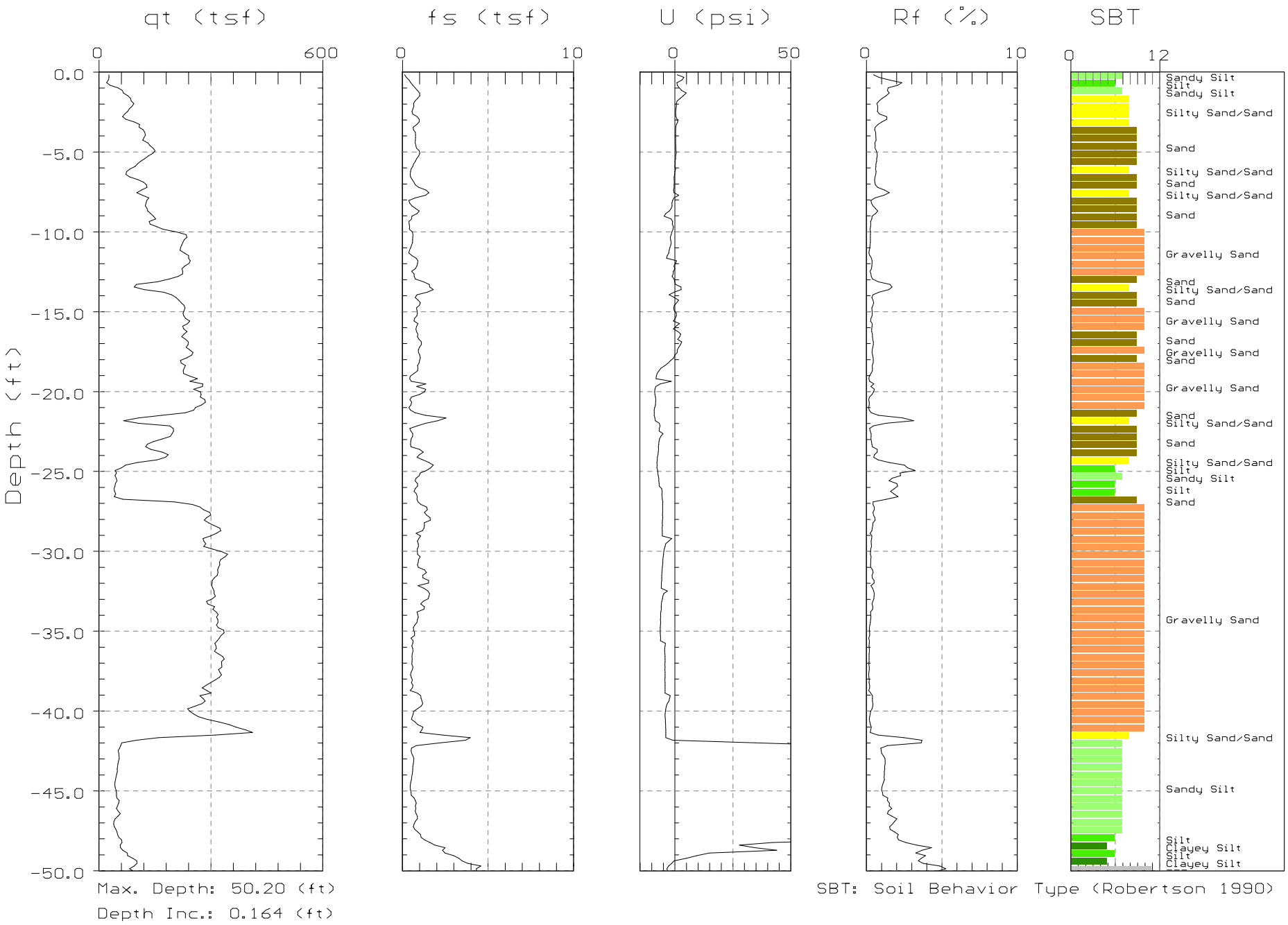
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-19

Engineer: H.RODGERS
Date: 12:15:05 18:56



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

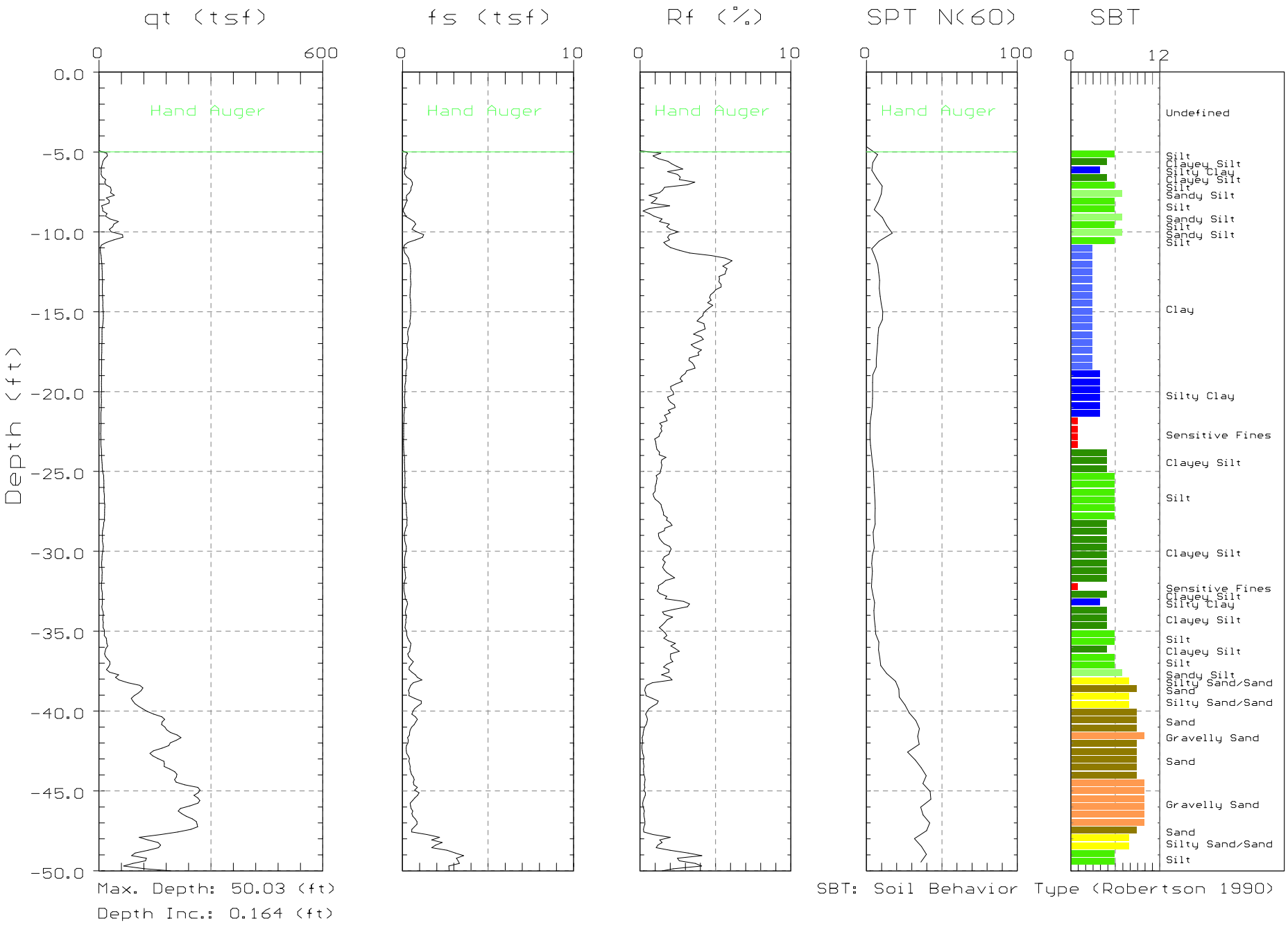
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-20

Engineer: H.RODGERS
Date: 12:15:05 20:02



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

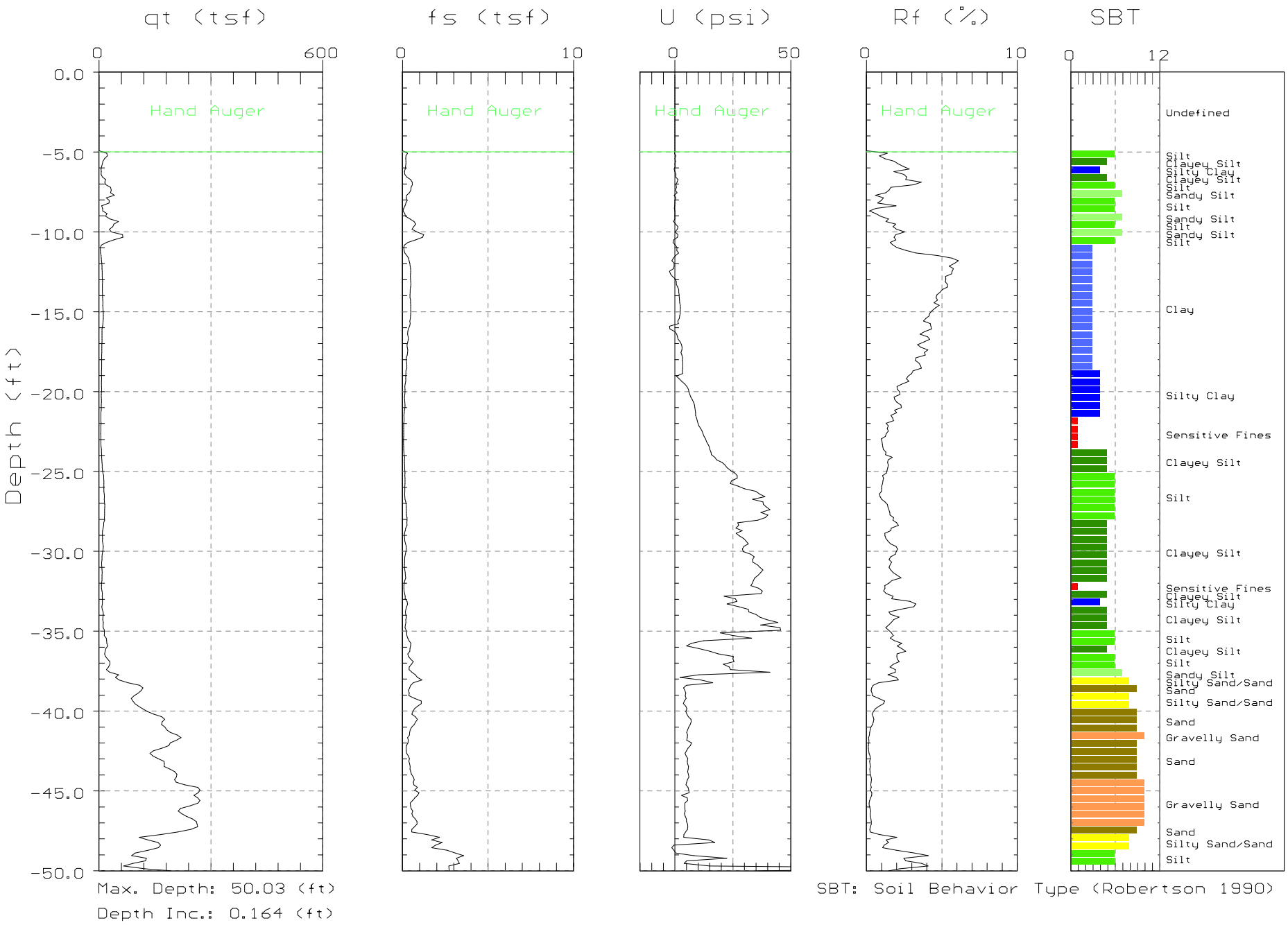
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-20

Engineer: H.RODGERS
Date: 12:15:05 20:02



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

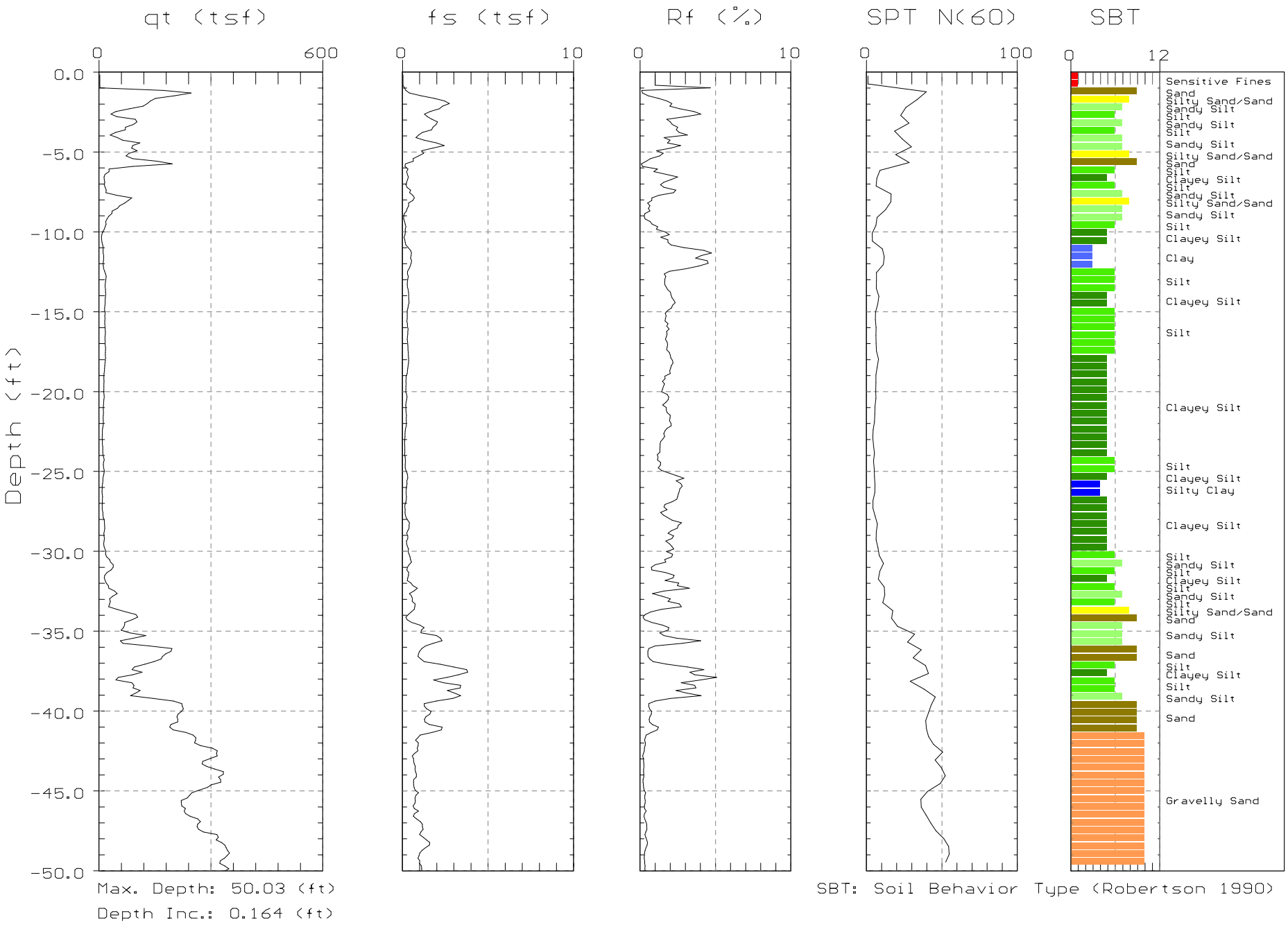
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-21

Engineer: H.RODGERS
Date: 12:16:05 11:44



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

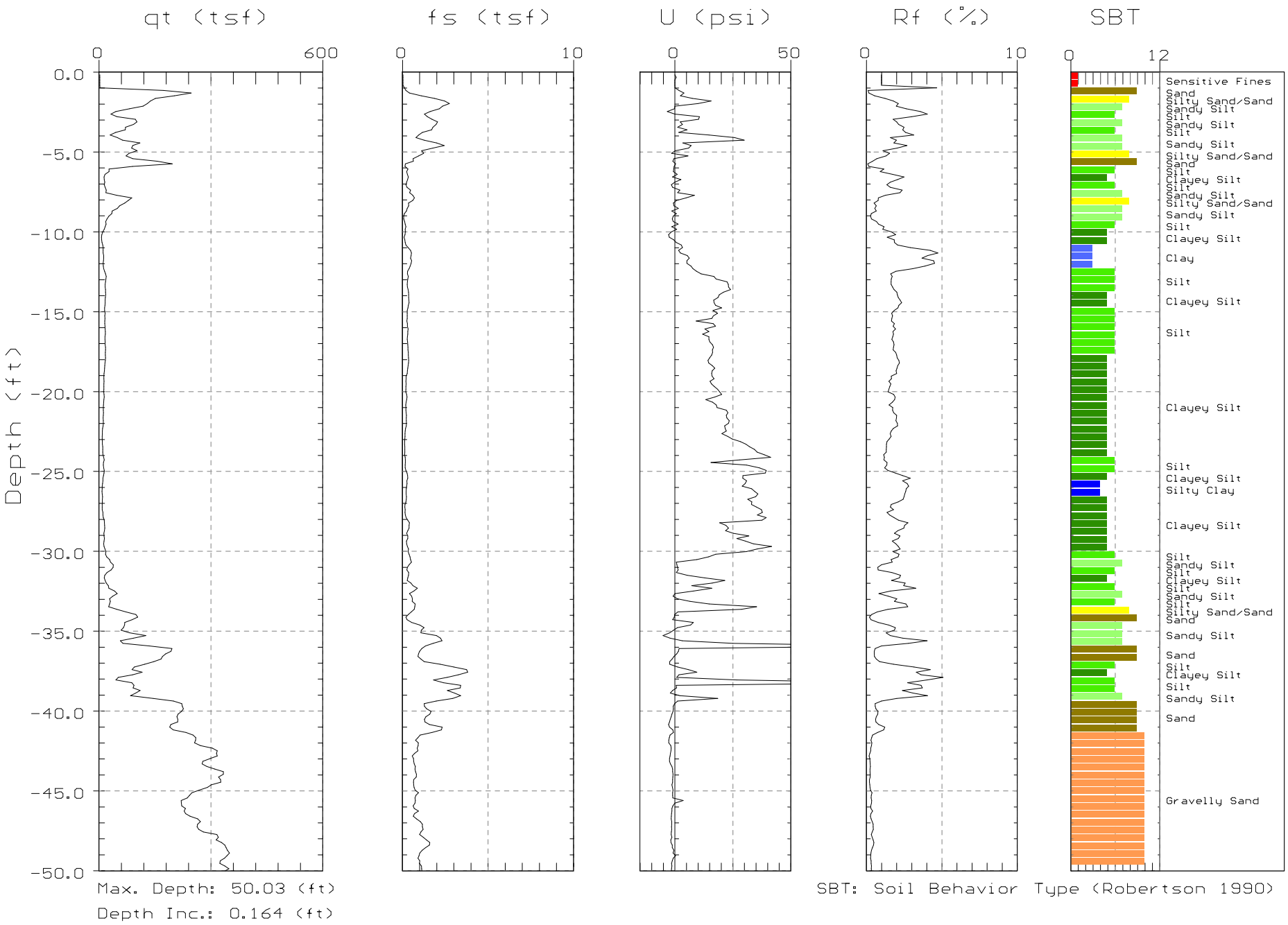
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-21

Engineer: H.RODGERS
Date: 12:16:05 11:44



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

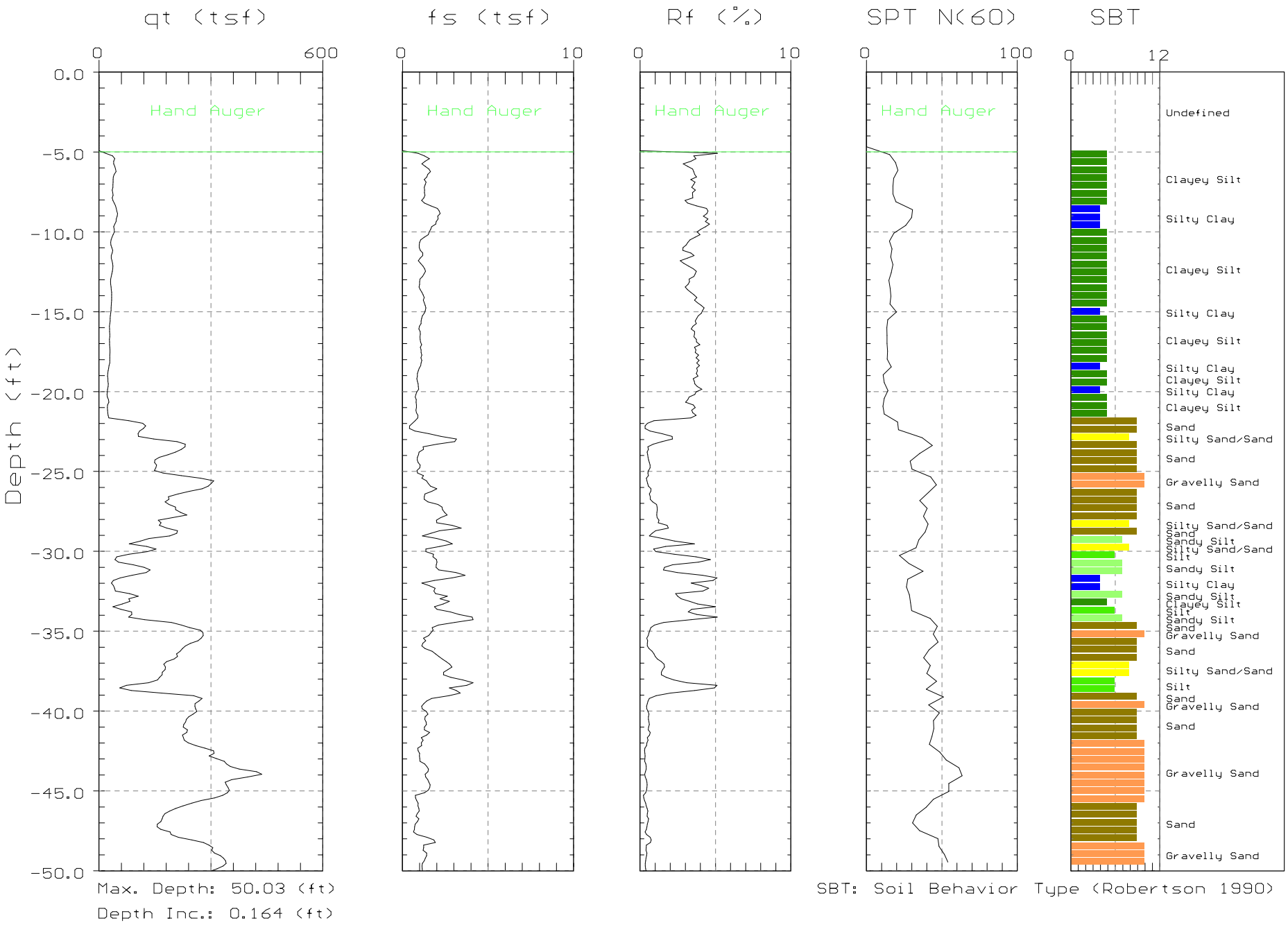
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-22

Engineer: H.RODGERS
Date: 12:16:05 13:10



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

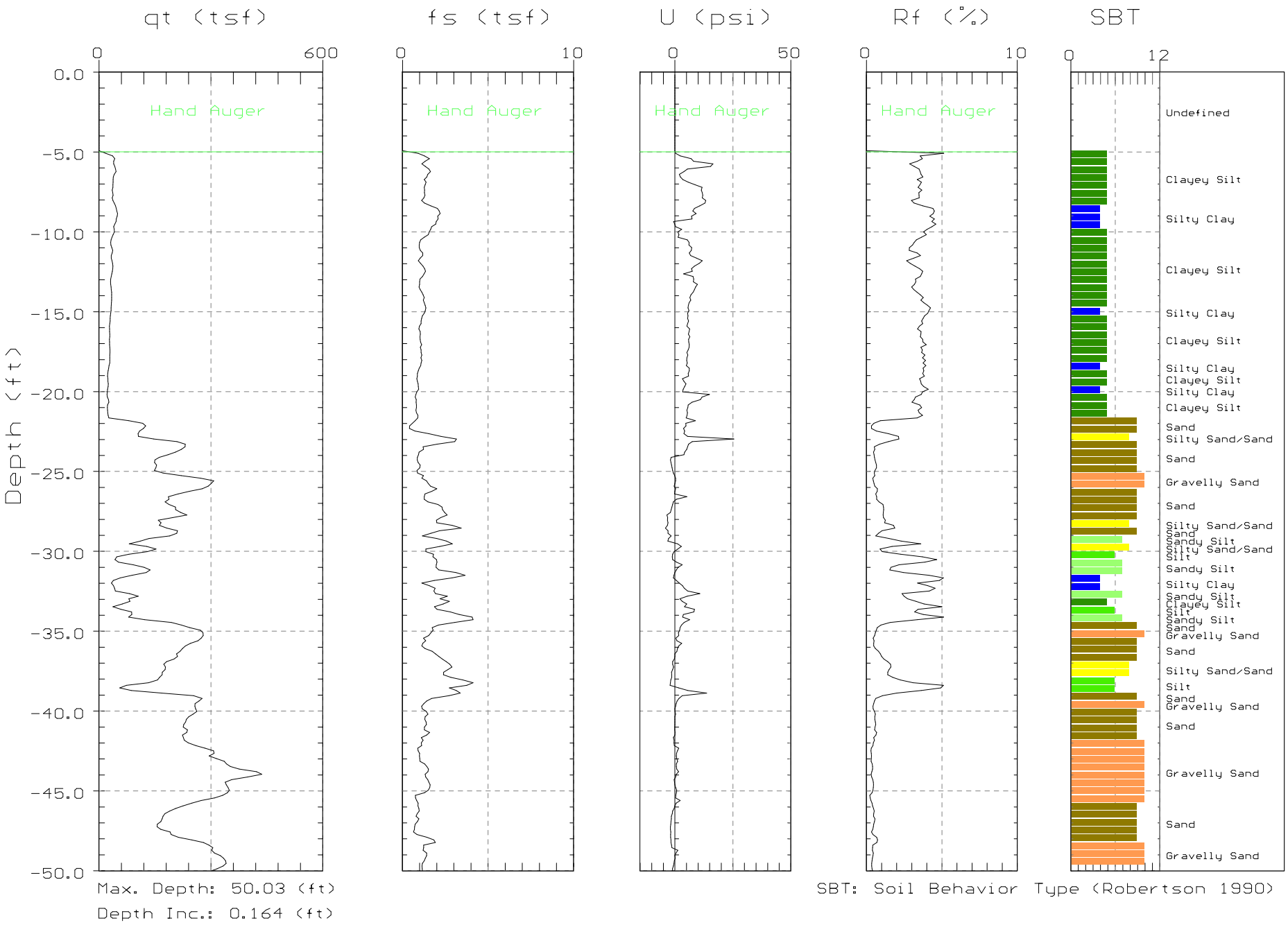
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-22

Engineer: H.RODGERS
Date: 12:16:05 13:10



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

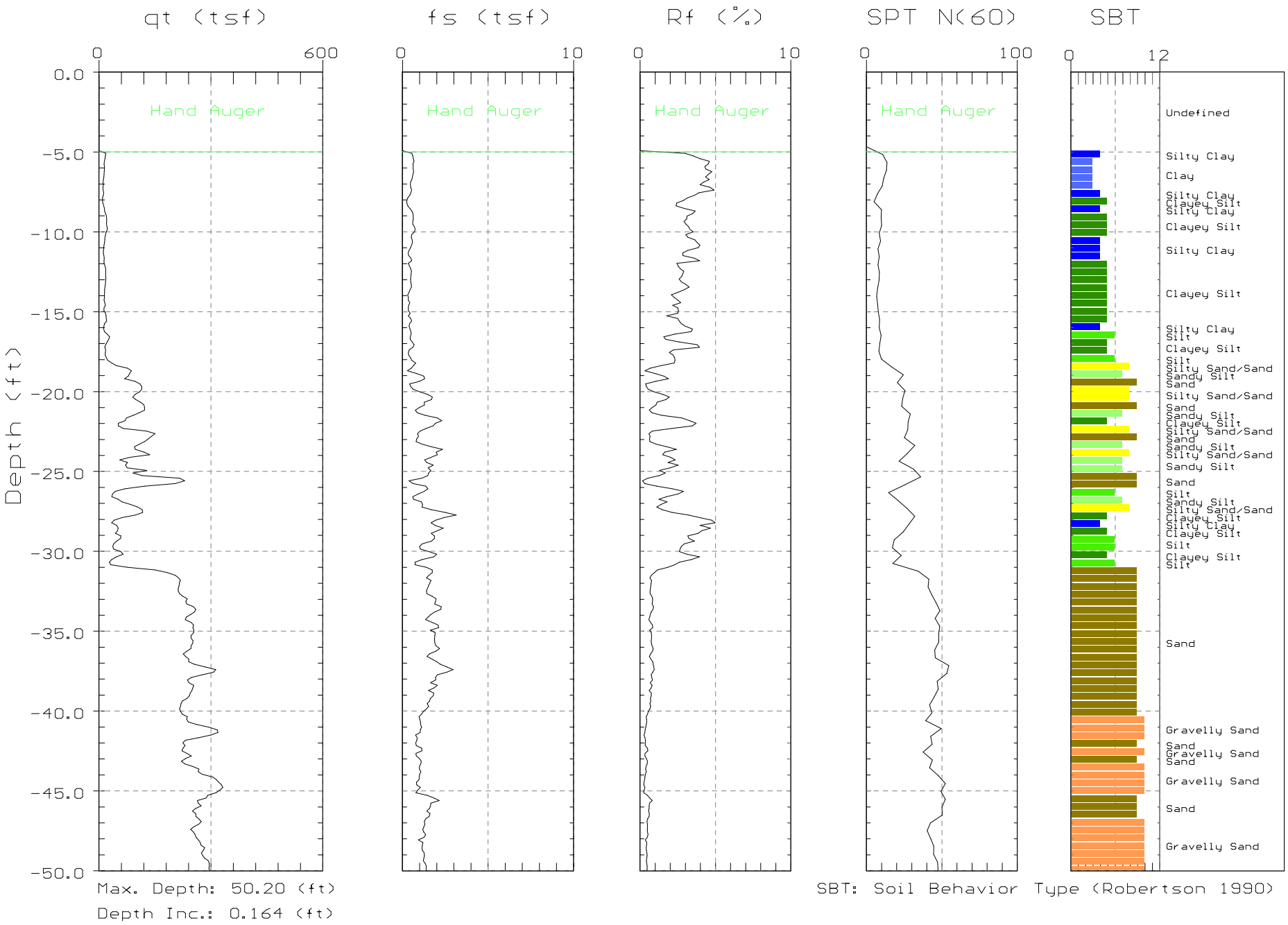
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-23

Engineer: H.RODGERS
Date: 12:16:05 14:25



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

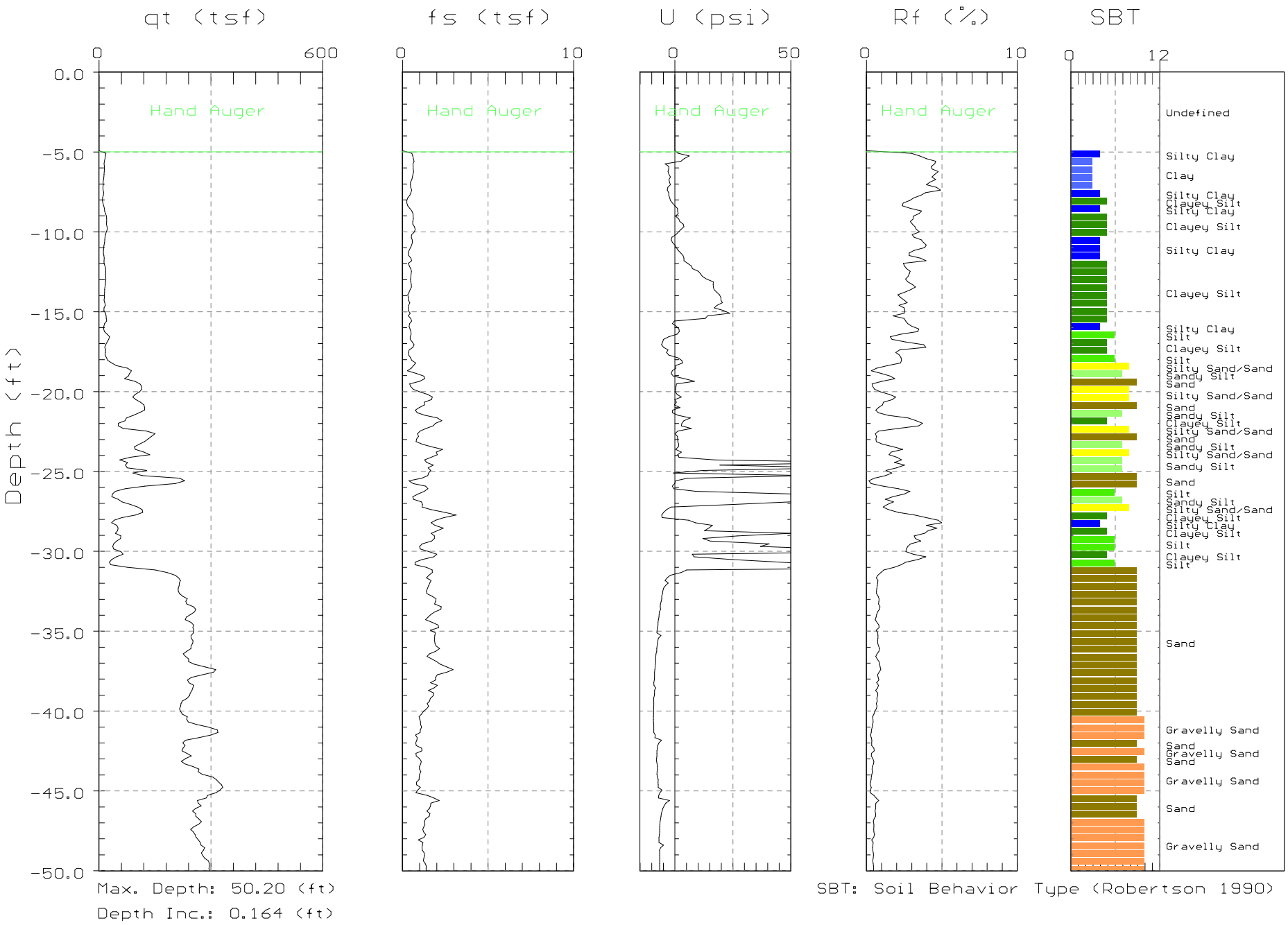
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-23

Engineer: H.RODGERS
Date: 12:16:05 14:25



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

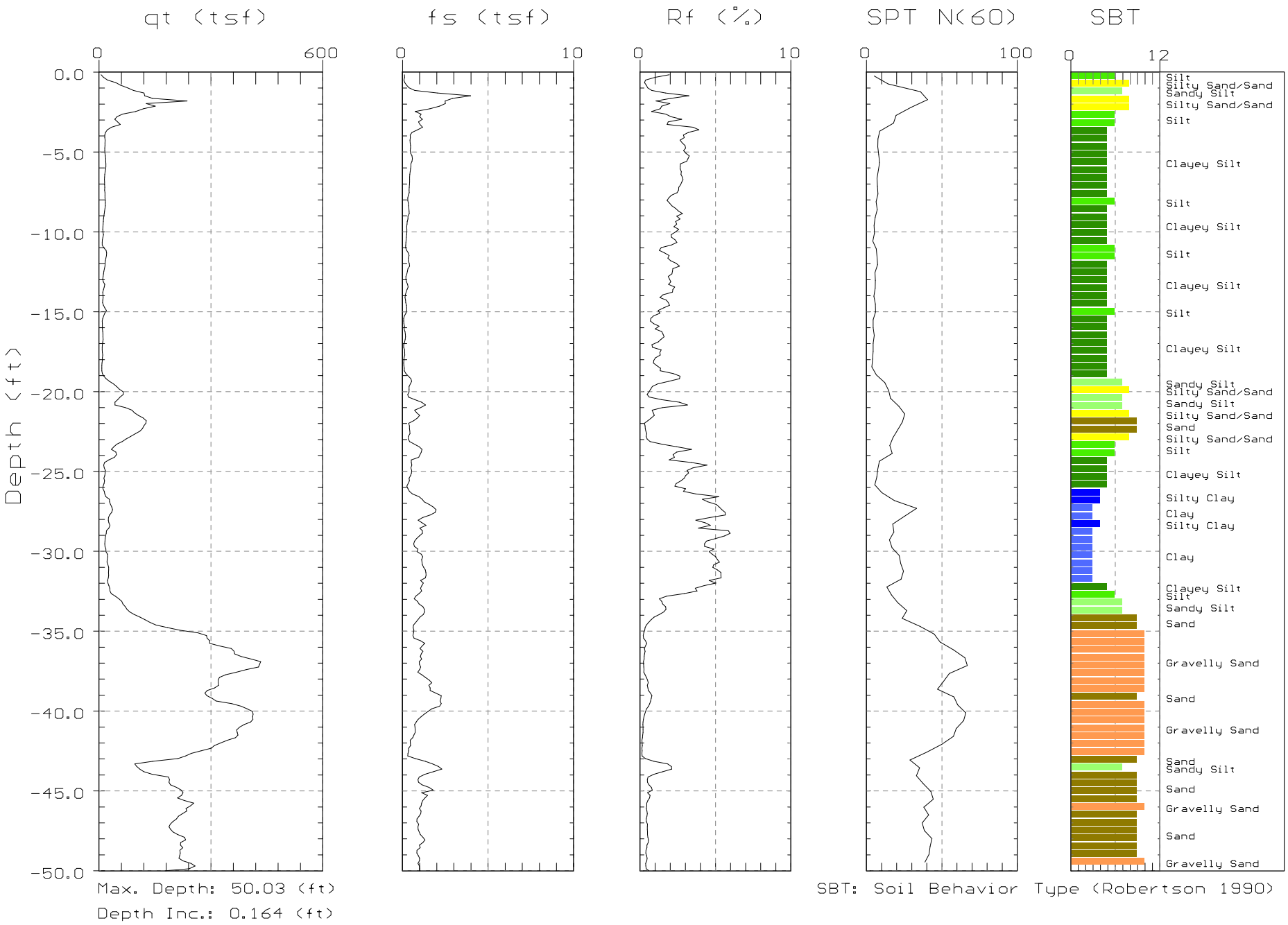
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-24

Engineer: H.RODGERS
Date: 12:16:05 15:03



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

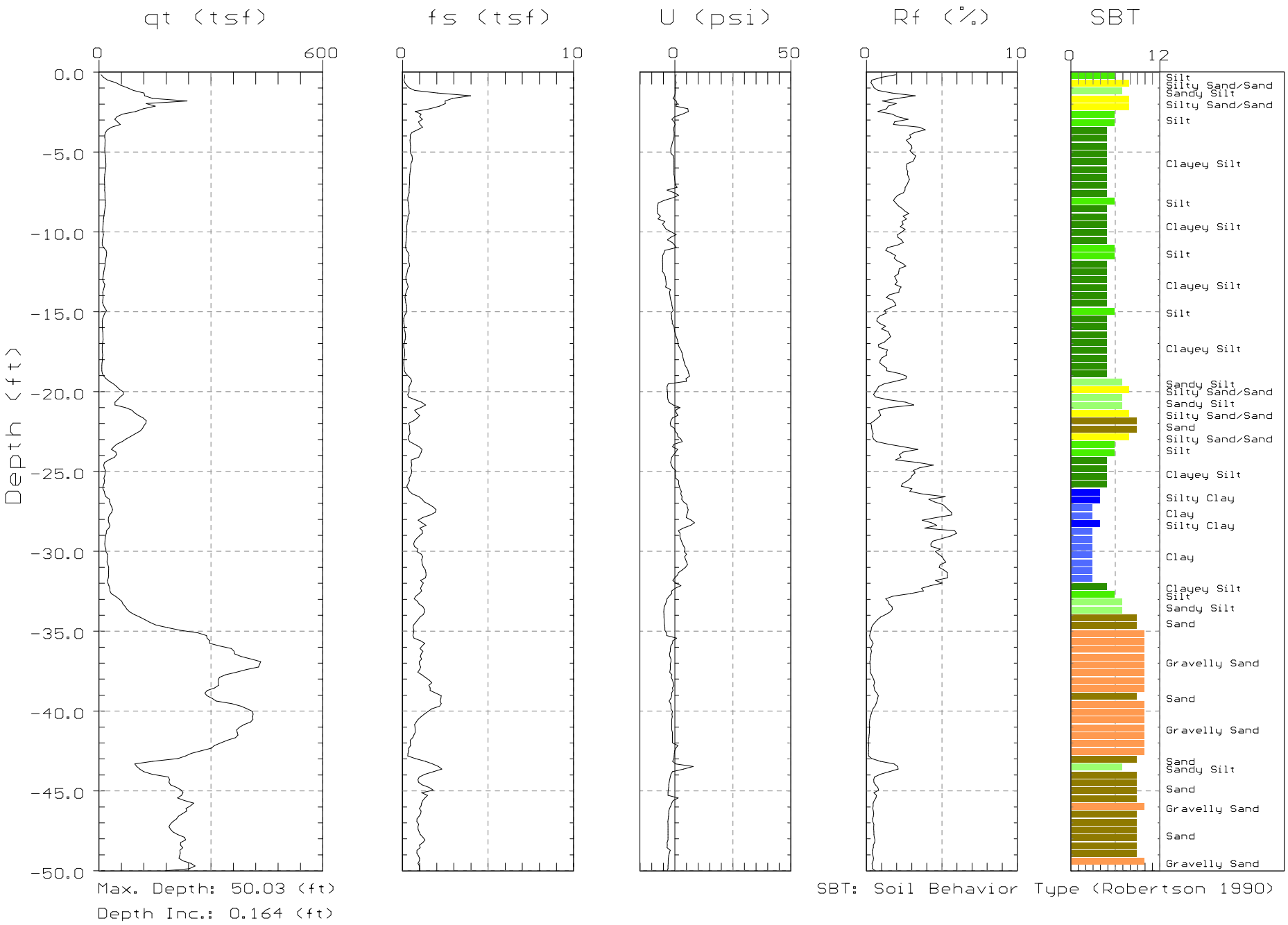
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-24

Engineer: H.RODGERS
Date: 12:16:05 15:03



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

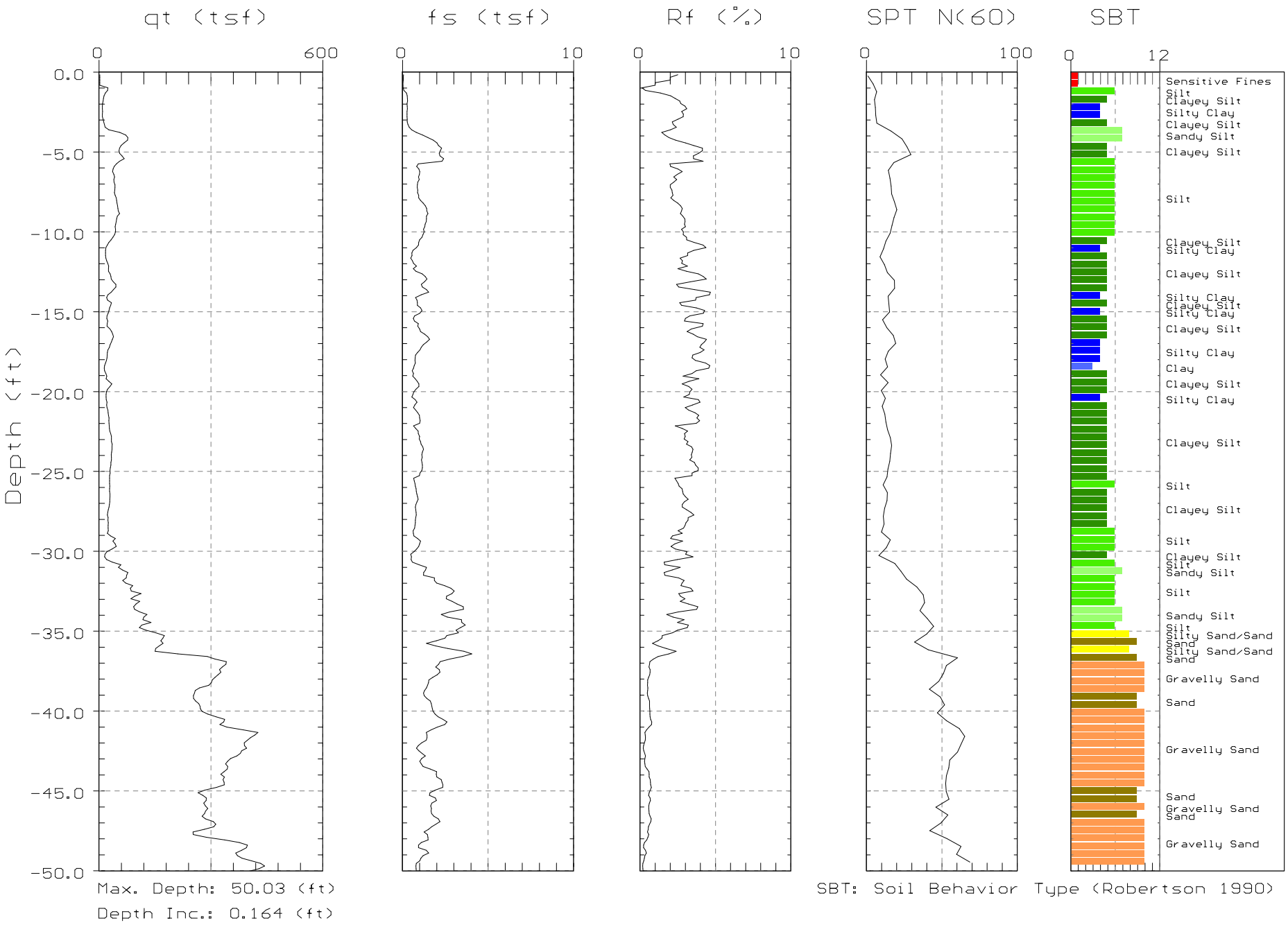
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-25

Engineer: H.RODGERS
Date: 12:16:05 16:59



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

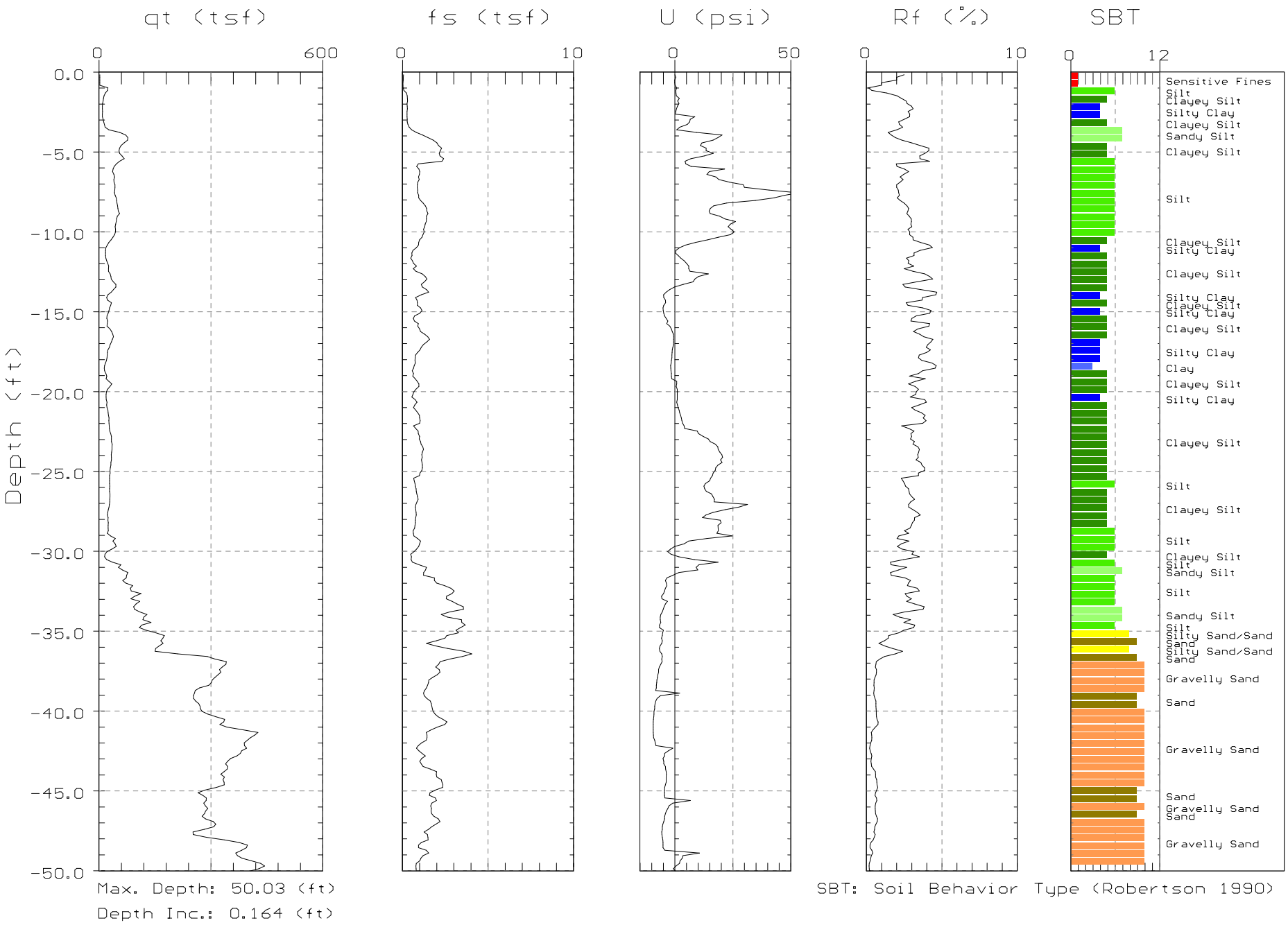
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-25

Engineer: H.RODGERS
Date: 12:16:05 16:59



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

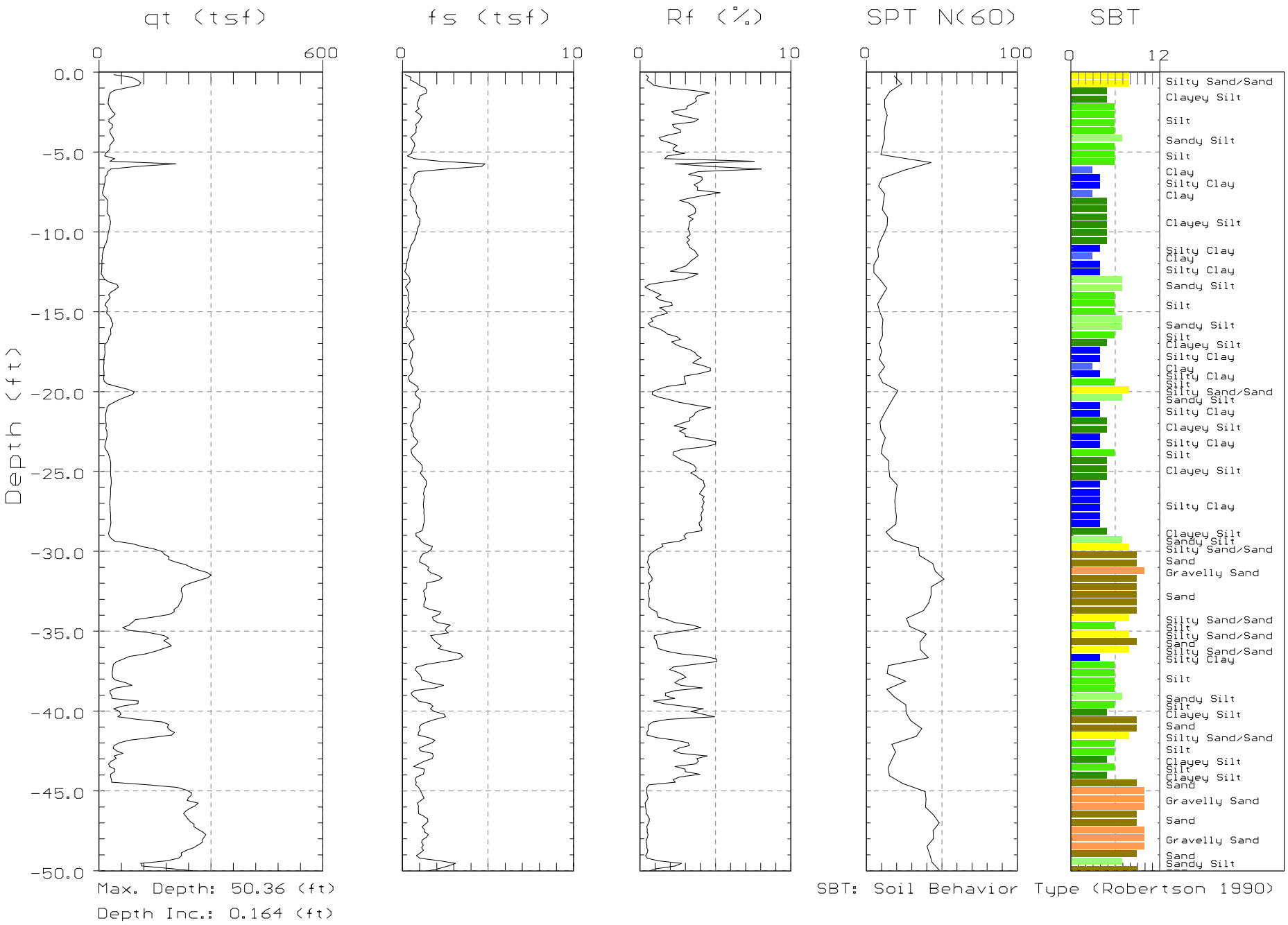
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-26

Engineer: H.RODGERS
Date: 12:16:05 17:56



Max. Depth: 50.36 (ft)
Depth Inc.: 0.164 (ft)

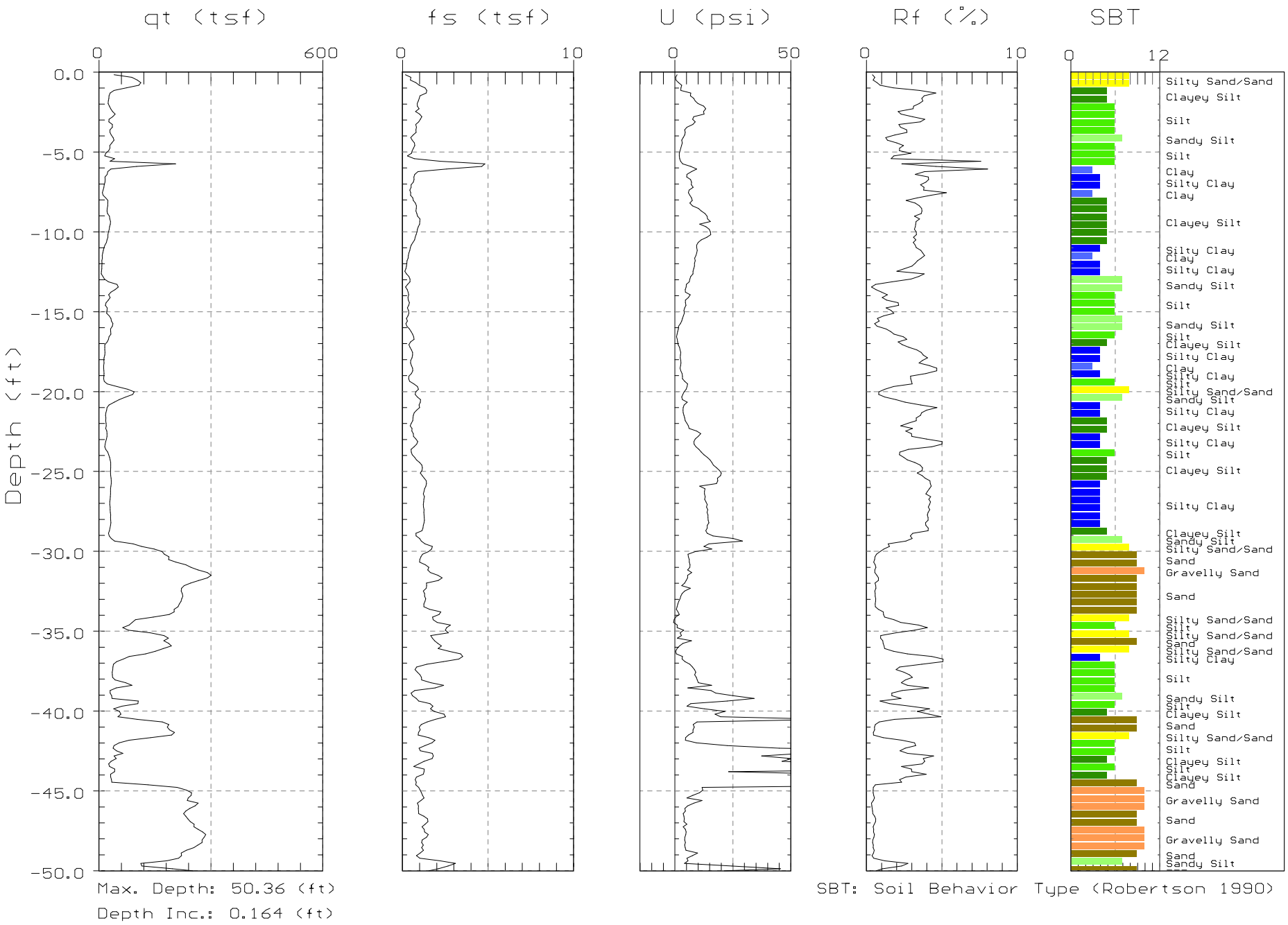
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-26

Engineer: H.RODGERS
Date: 12:16:05 17:56



Max. Depth: 50.36 (ft)
Depth Inc.: 0.164 (ft)

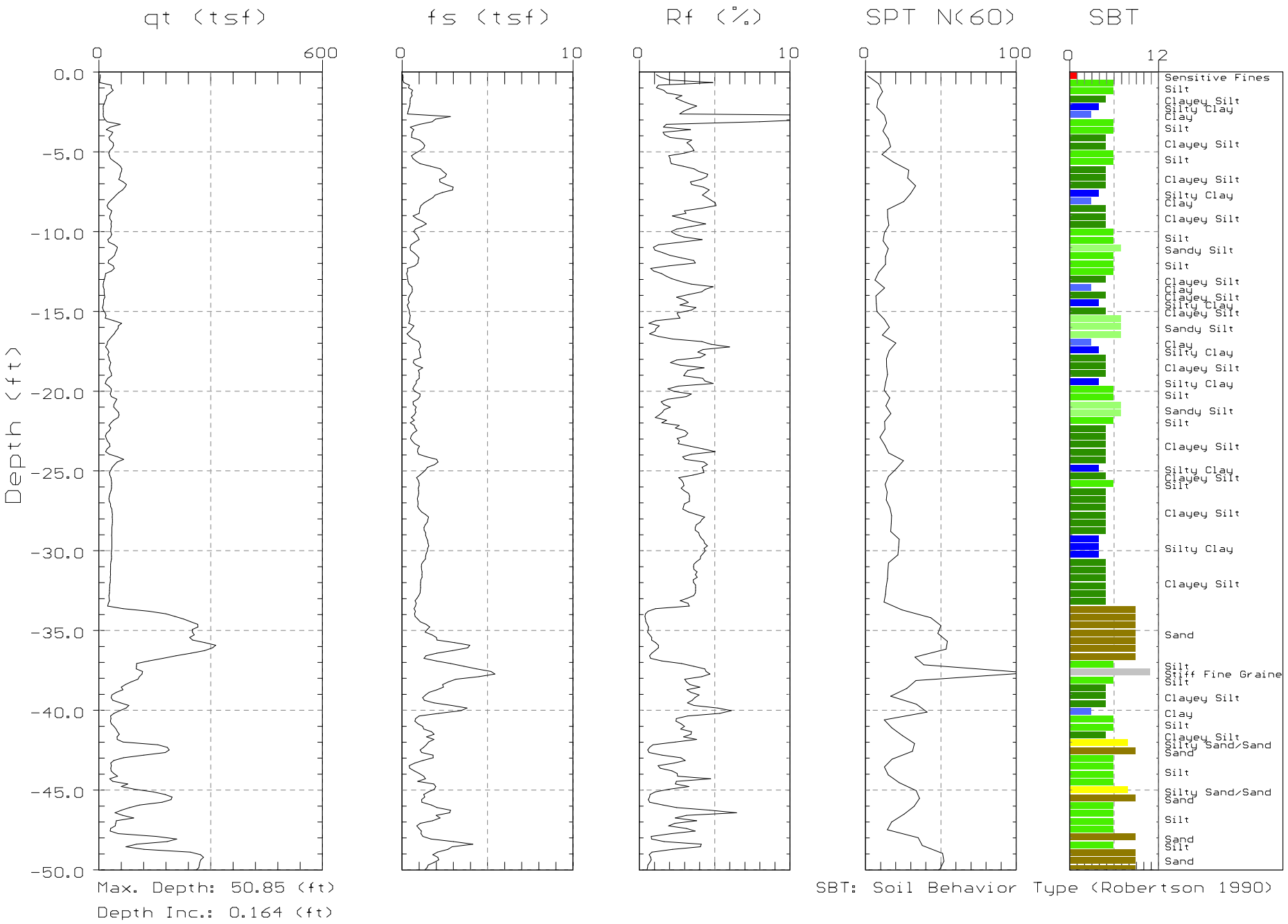
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-27

Engineer: H.RODGERS
Date: 12:16:05 18:38



Max. Depth: 50.85 (ft)
Depth Inc.: 0.164 (ft)

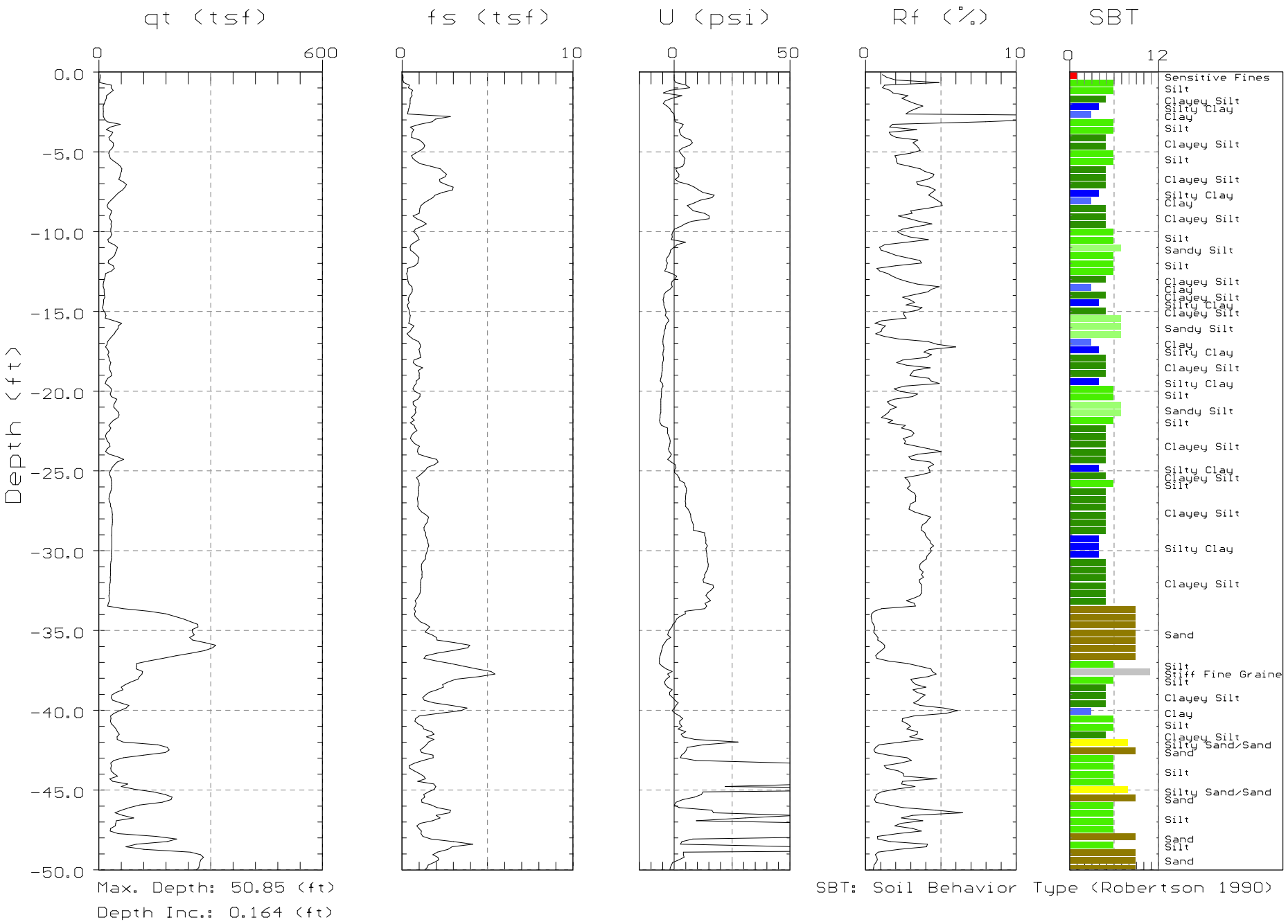
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-27

Engineer: H.RODGERS
Date: 12:16:05 18:38



Max. Depth: 50.85 (ft)
Depth Inc.: 0.164 (ft)

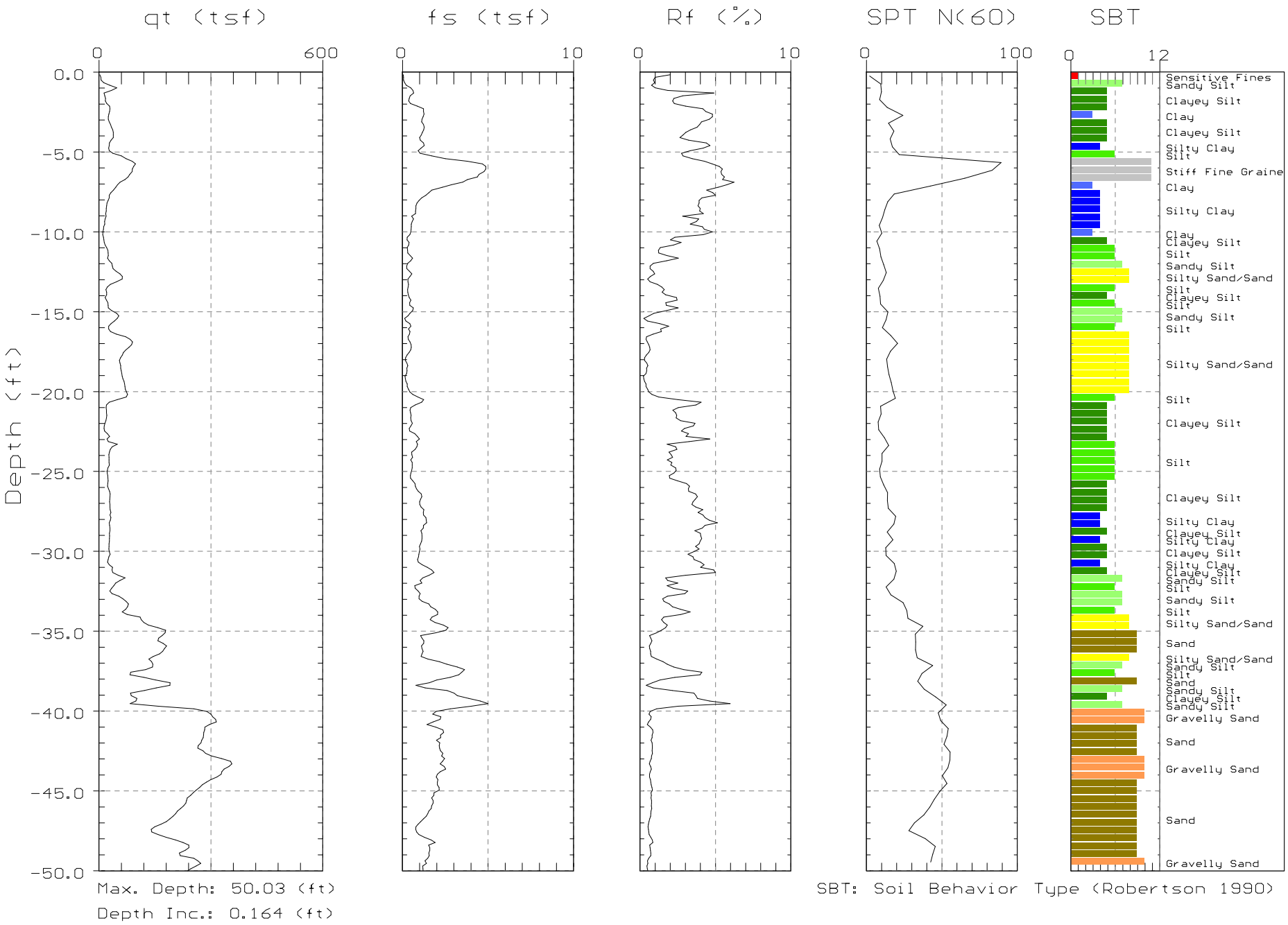
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-28

Engineer: H.RODGERS
Date: 12:16:05 19:16



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

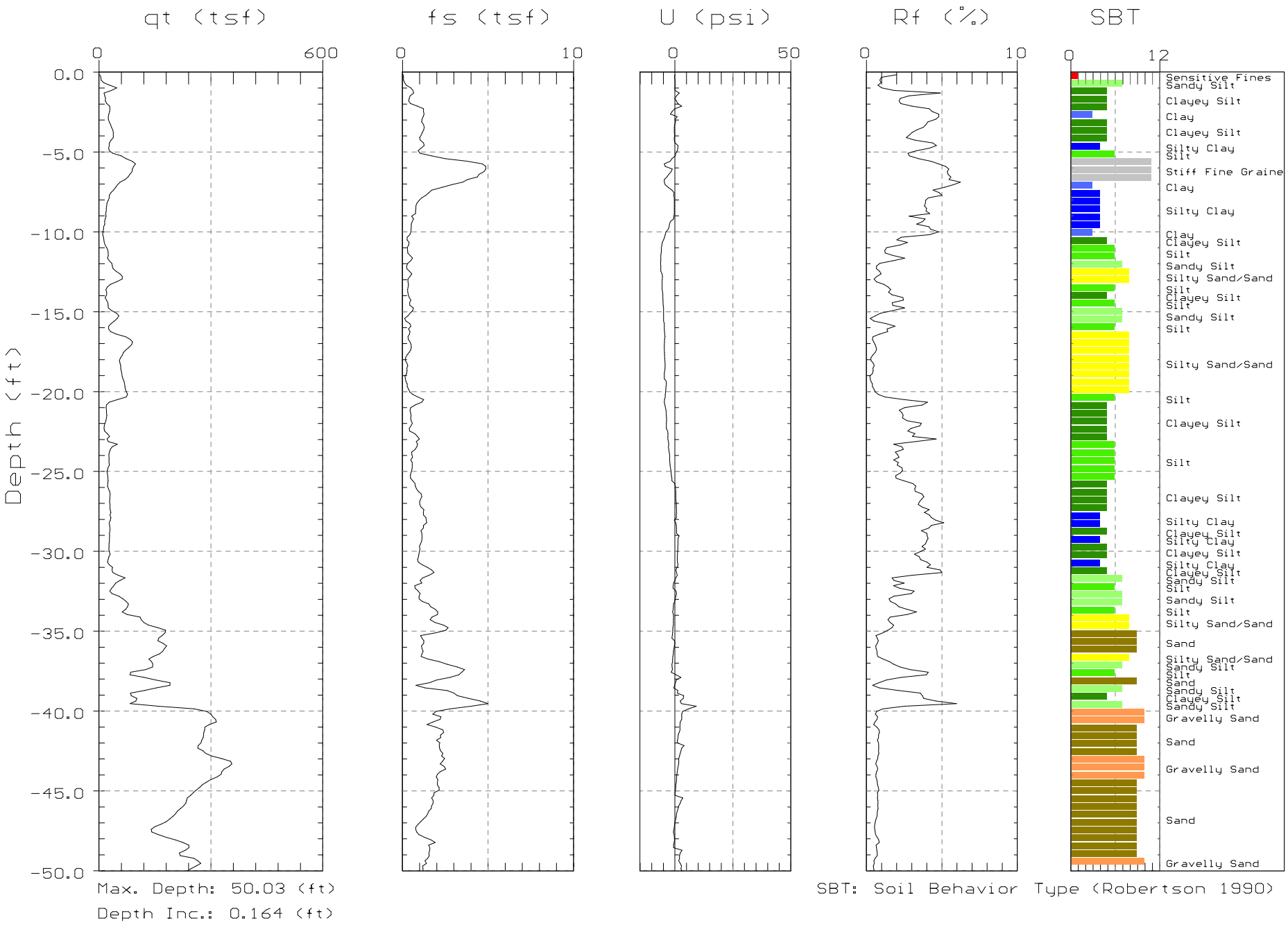
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-28

Engineer: H.RODGERS
Date: 12:16:05 19:16



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

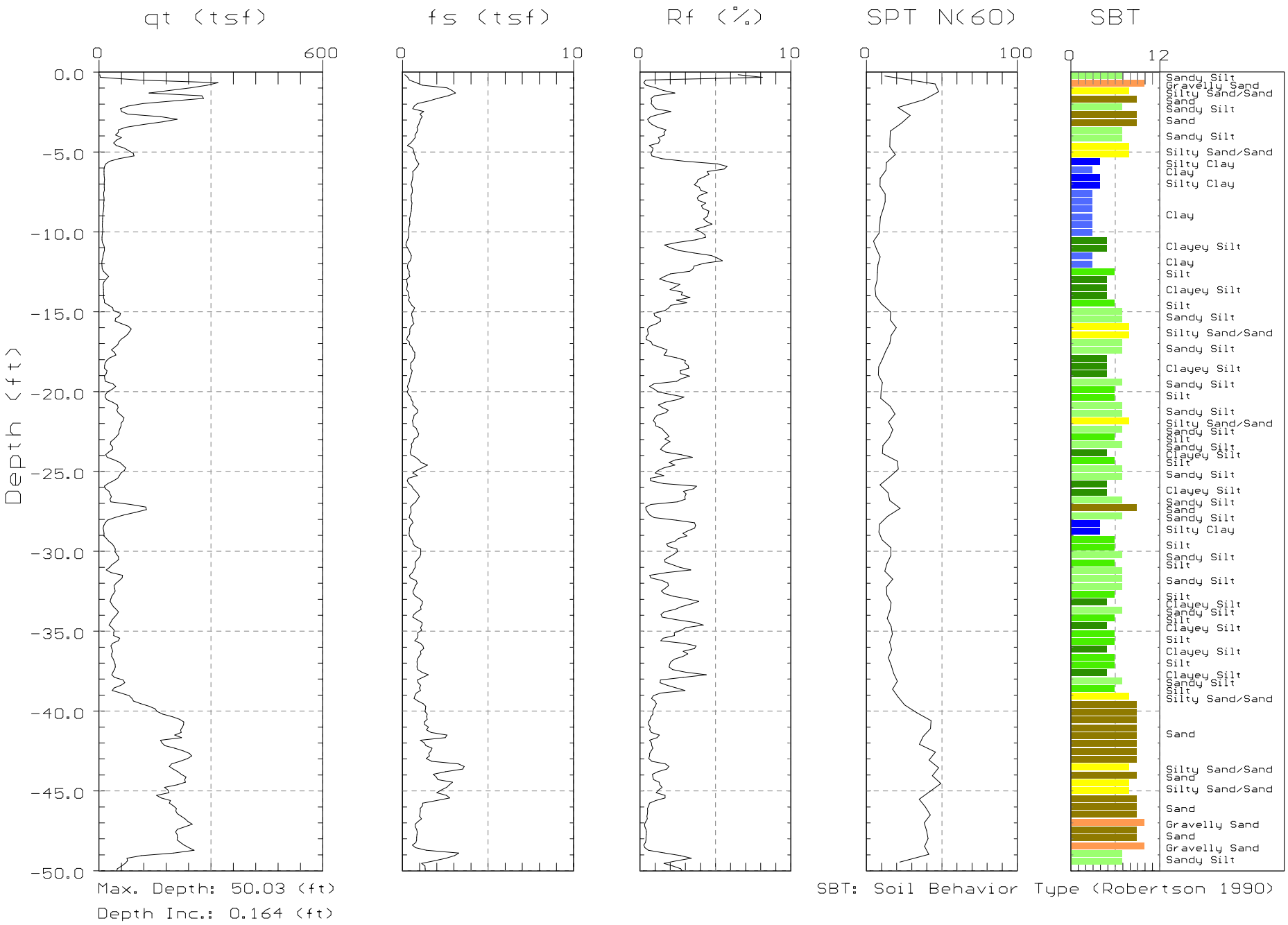
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-29

Engineer: H.RODGERS
Date: 12:19:05 04:30



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

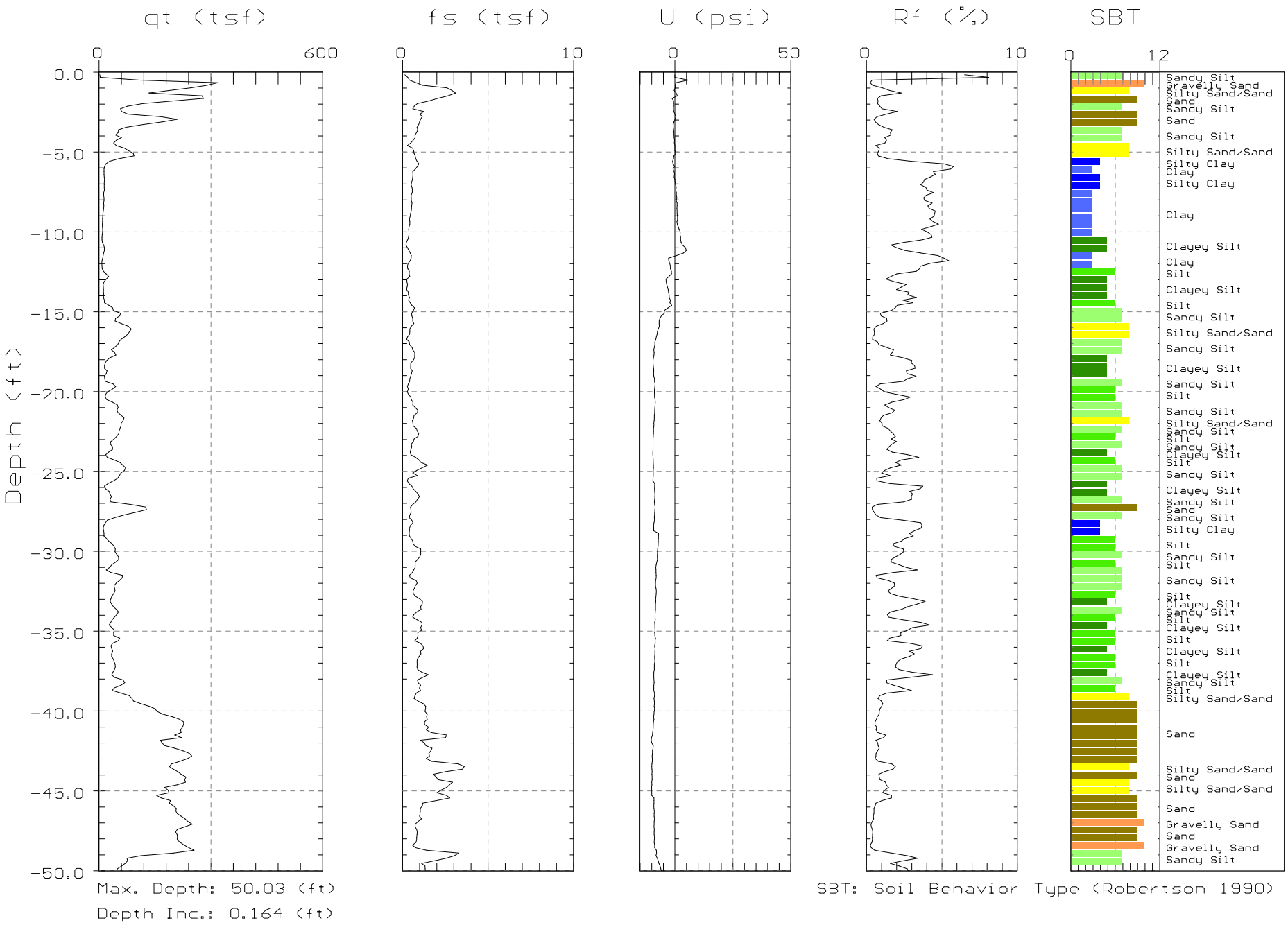
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-29

Engineer: H.RODGERS
Date: 12:19:05 04:30



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

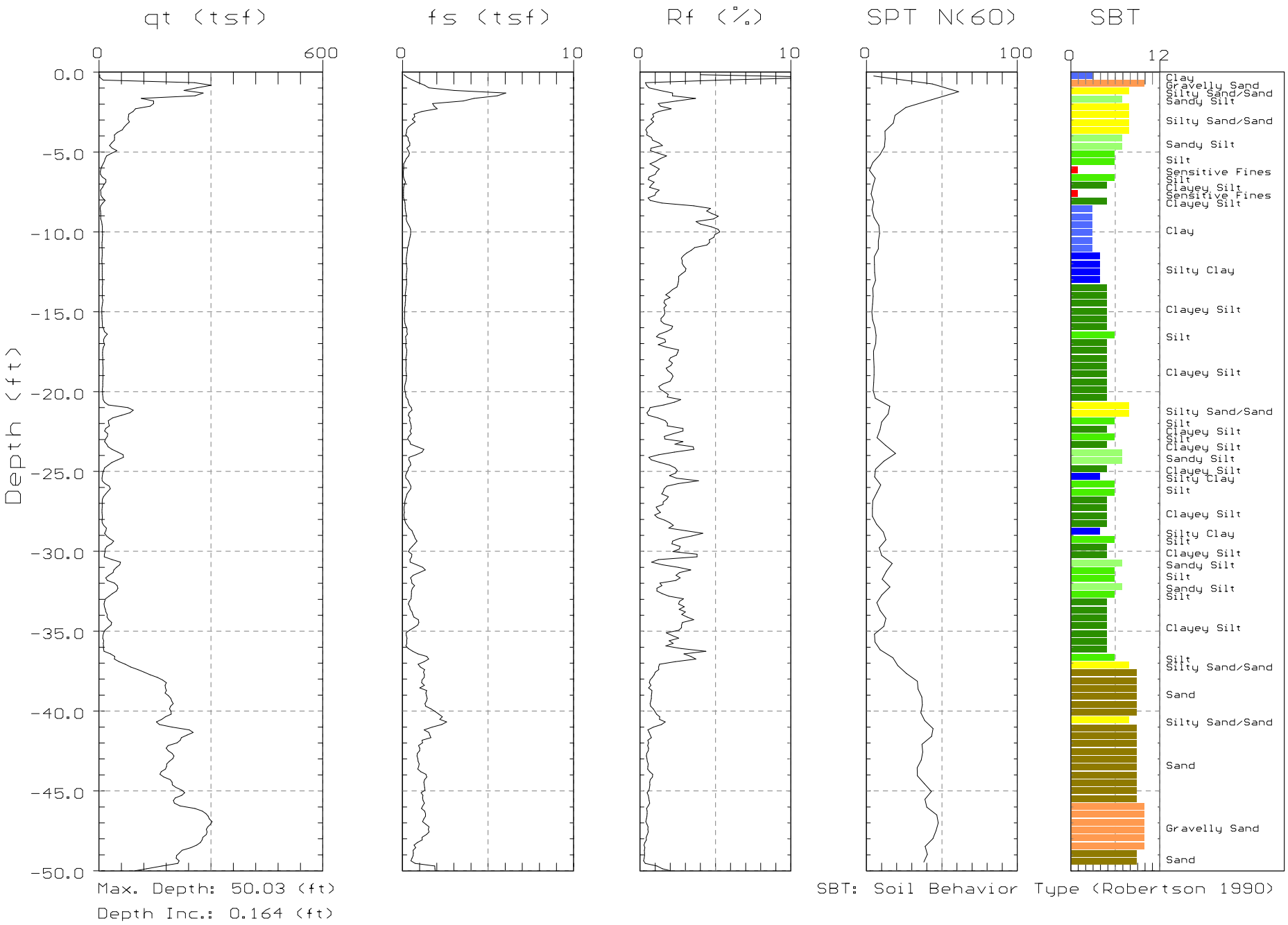
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-30

Engineer: H.RODGERS
Date: 12:19:05 05:20



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

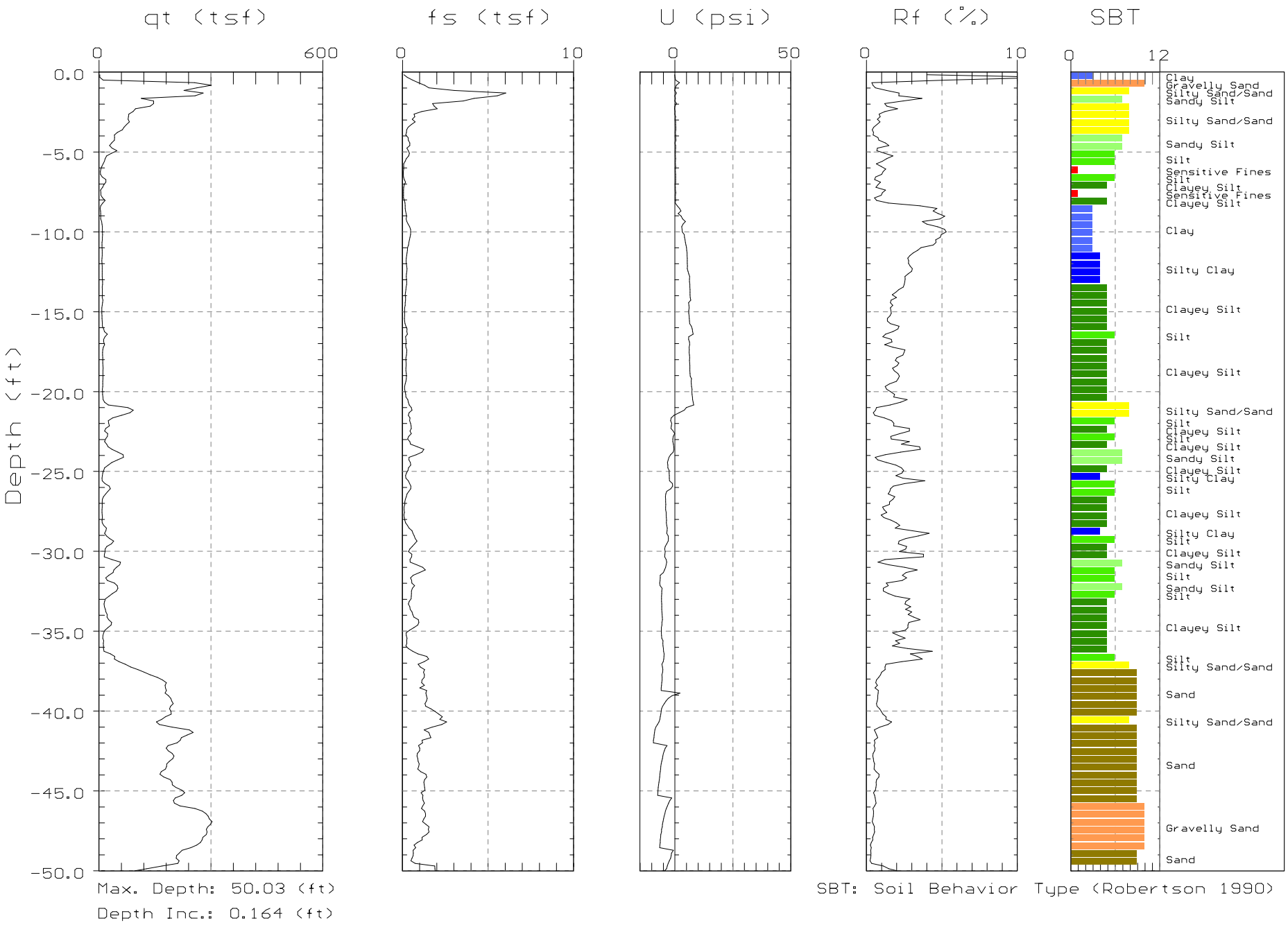
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-30

Engineer: H.RODGERS
Date: 12:19:05 05:20



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

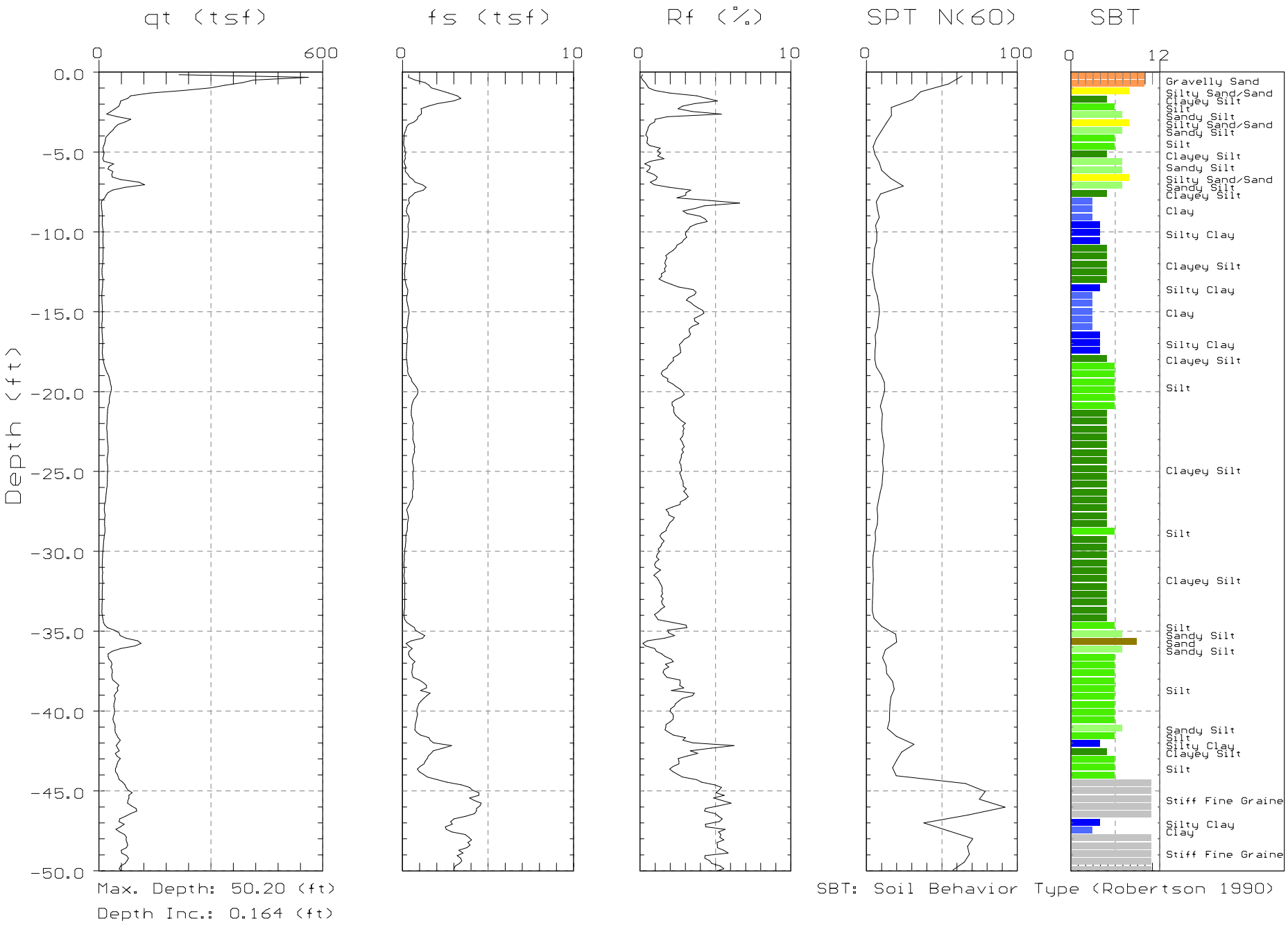
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-31

Engineer: H.RODGERS
Date: 12:19:05 06:45



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

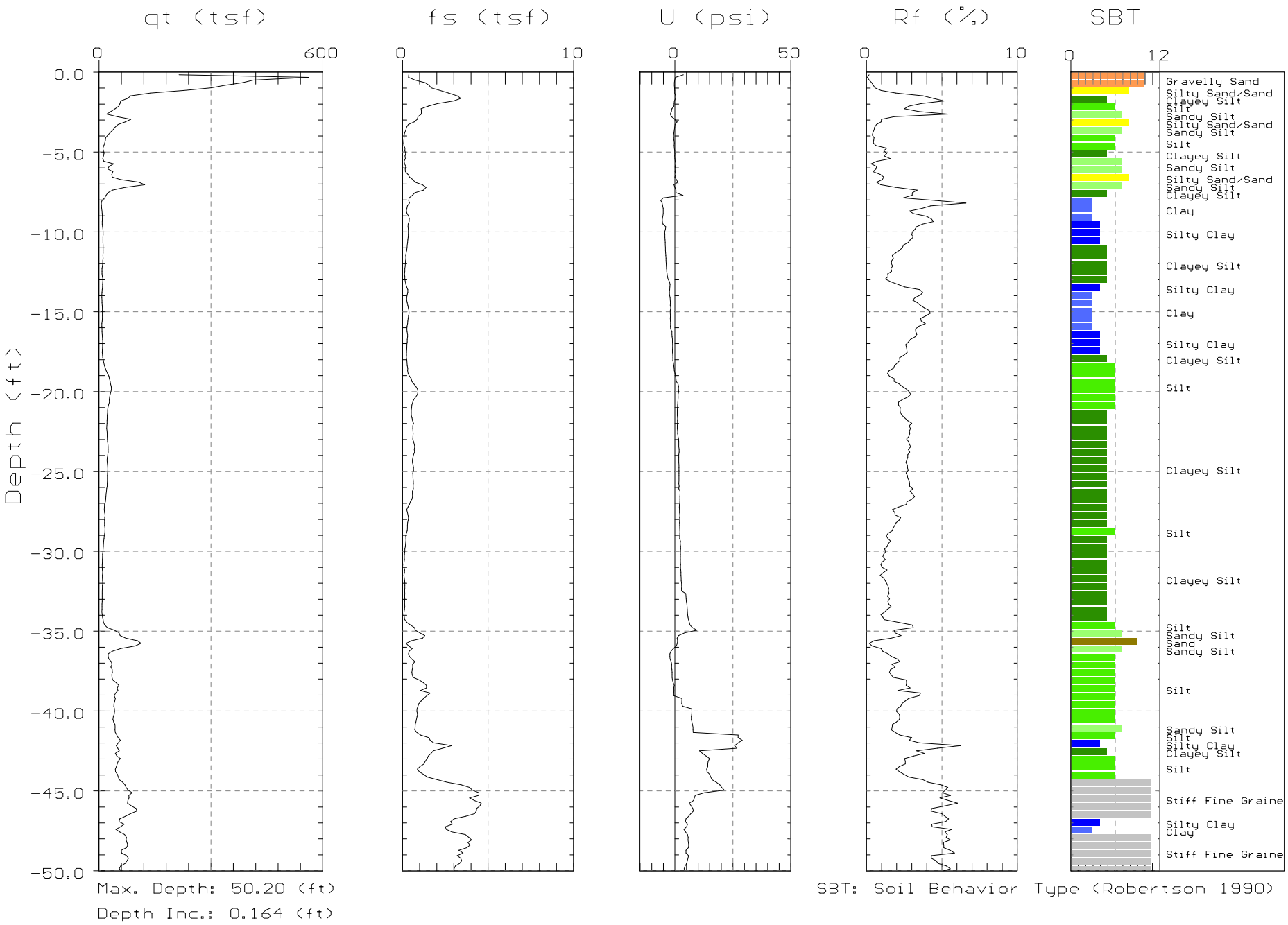
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-31

Engineer: H.RODGERS
Date: 12:19:05 06:45



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

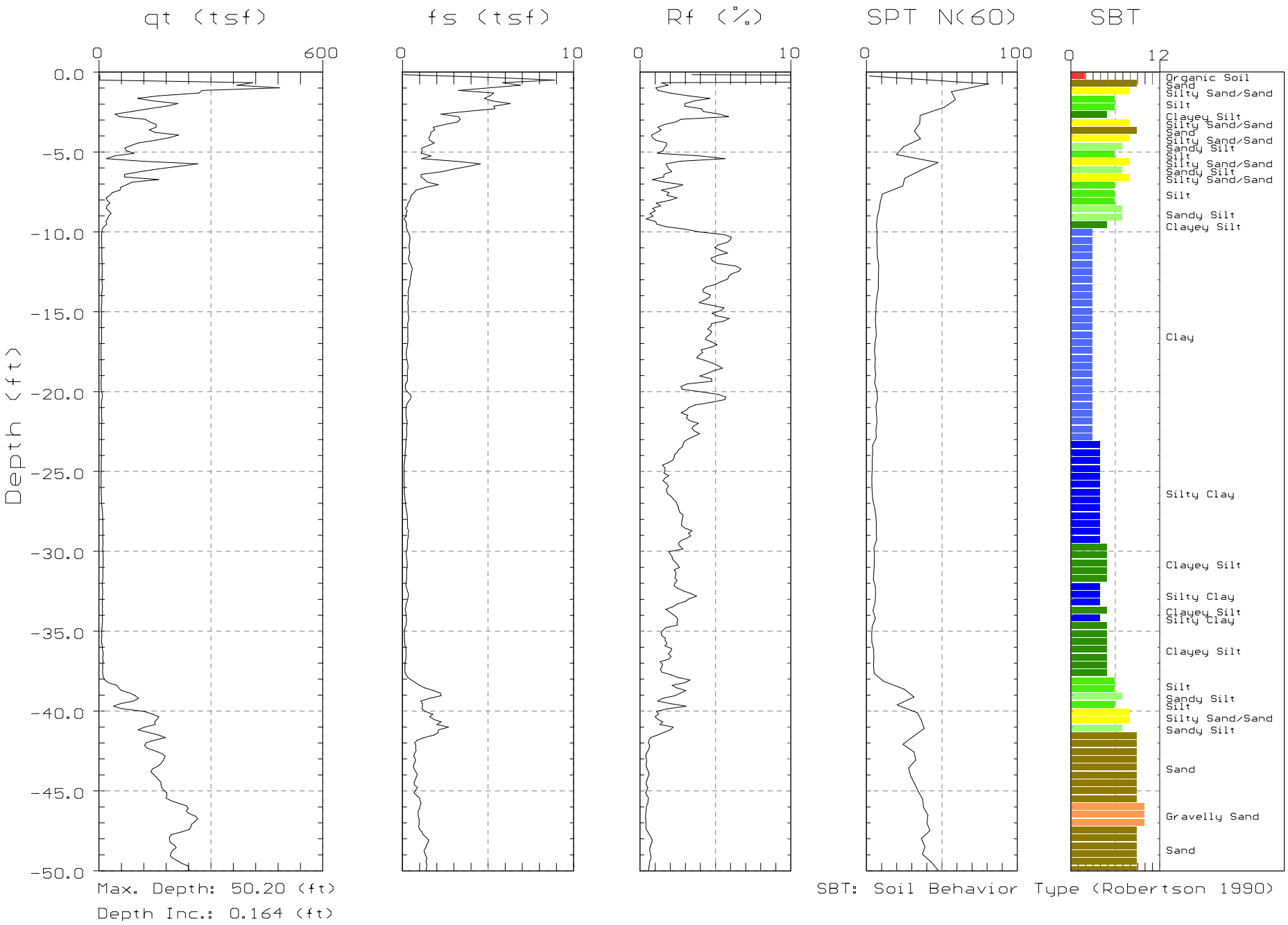
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-32

Engineer: H.RODGERS
Date: 12:19:05 10:13



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

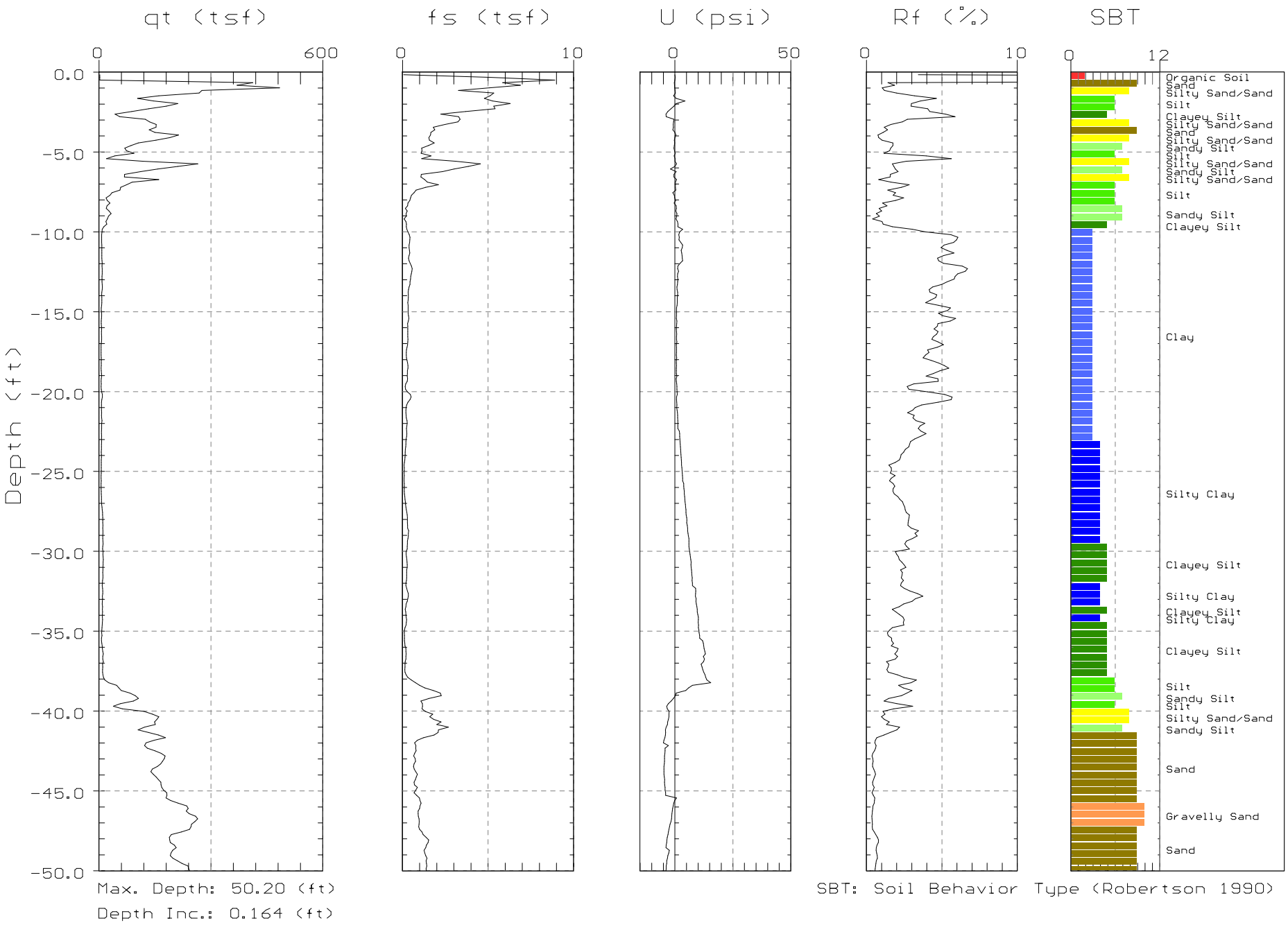
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-32

Engineer: H.RODGERS
Date: 12:19:05 10:13



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

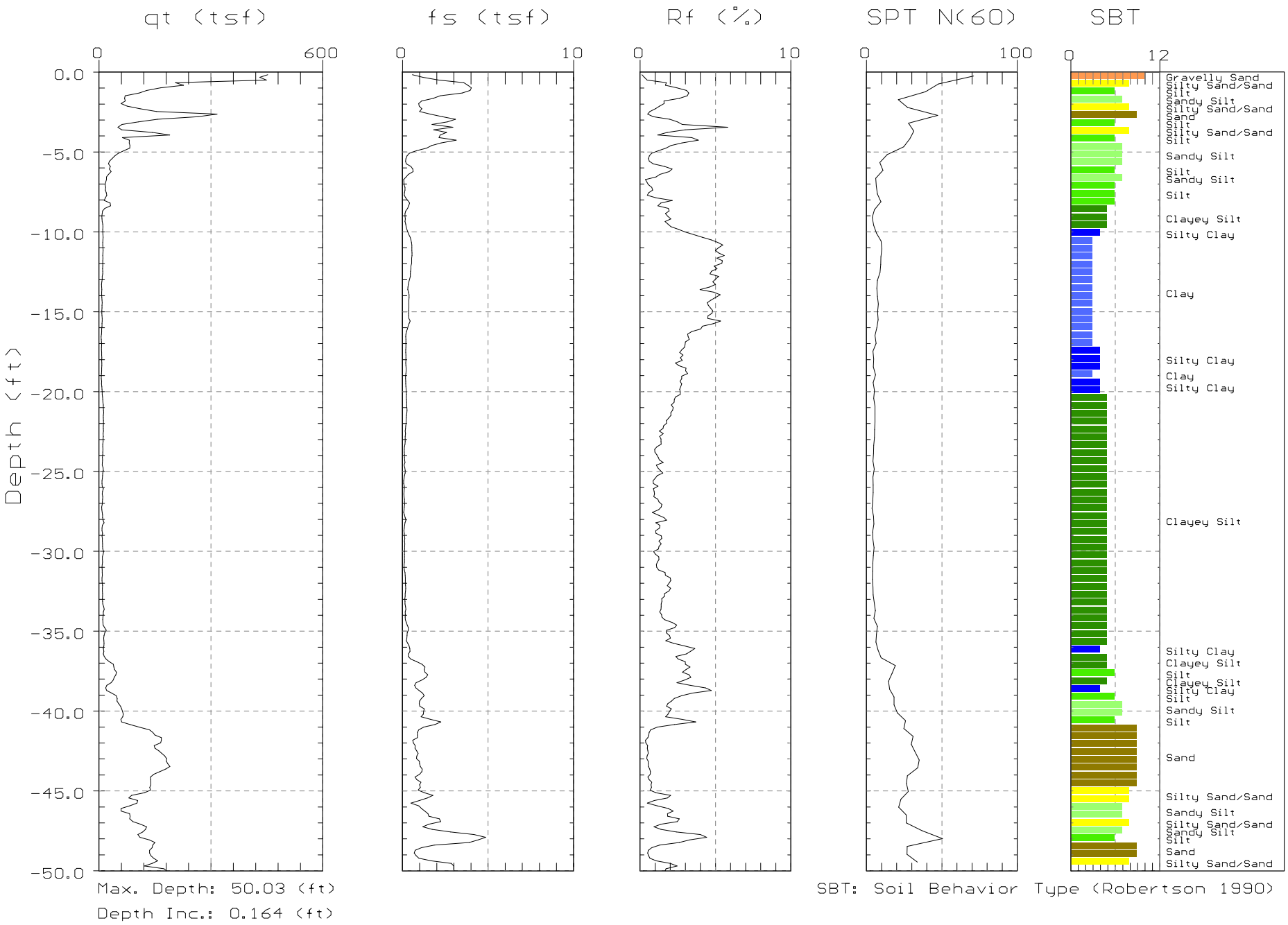
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-33

Engineer: H.RODGERS
Date: 12:19:05 11:00



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

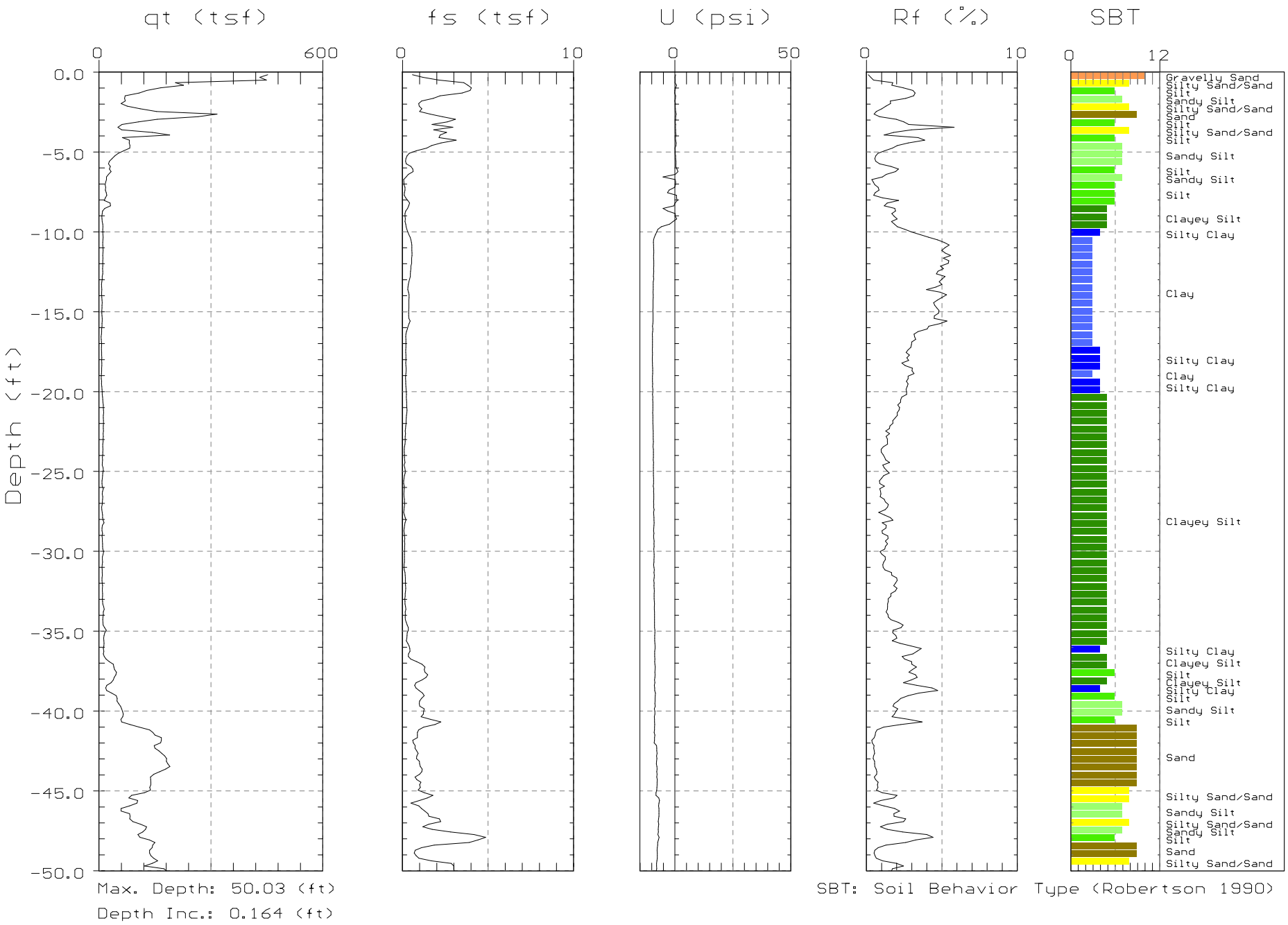
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-33

Engineer: H.RODGERS
Date: 12:19:05 11:00



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

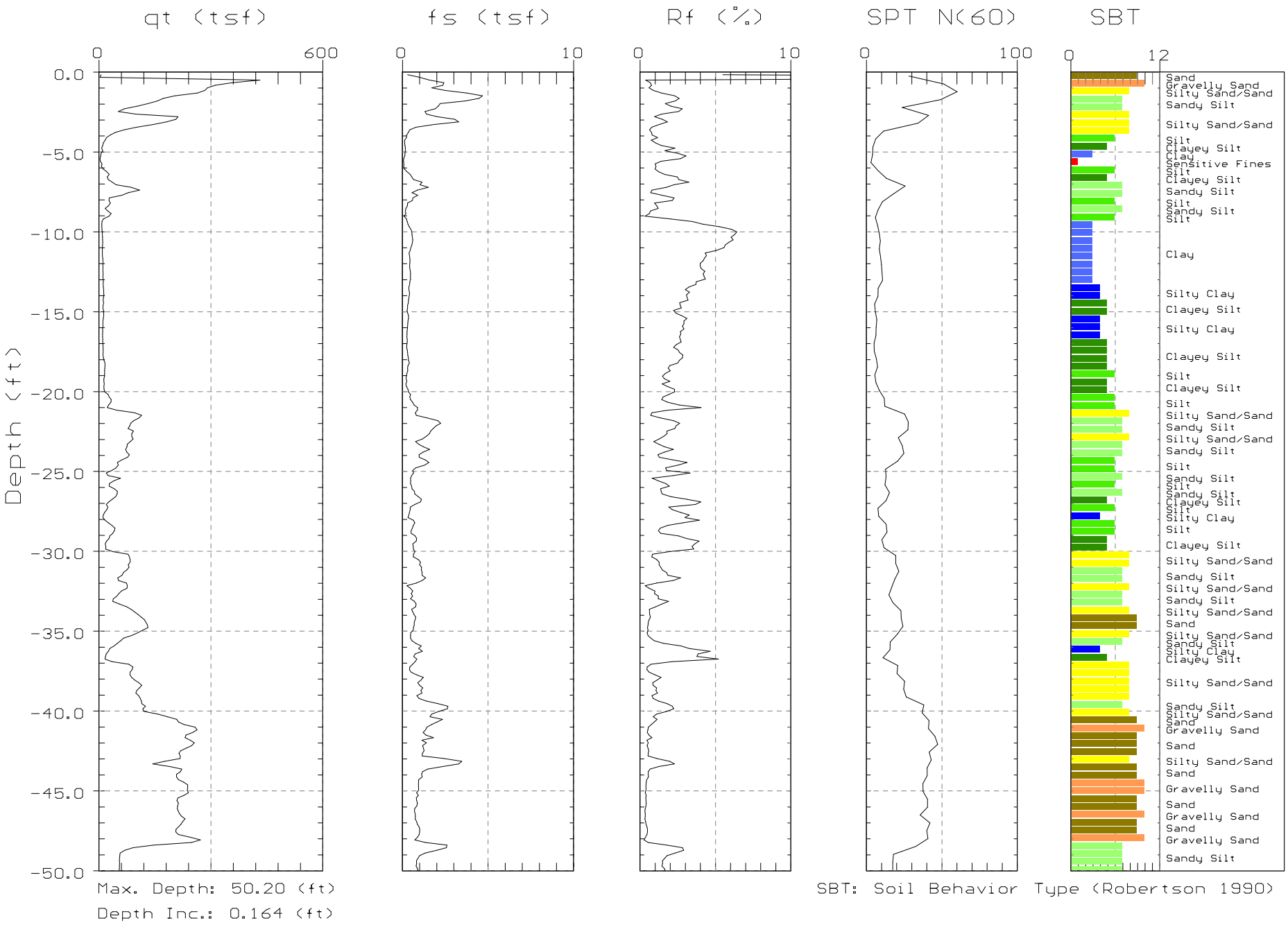
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-34

Engineer: H.RODGERS
Date: 12:19:05 11:51



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

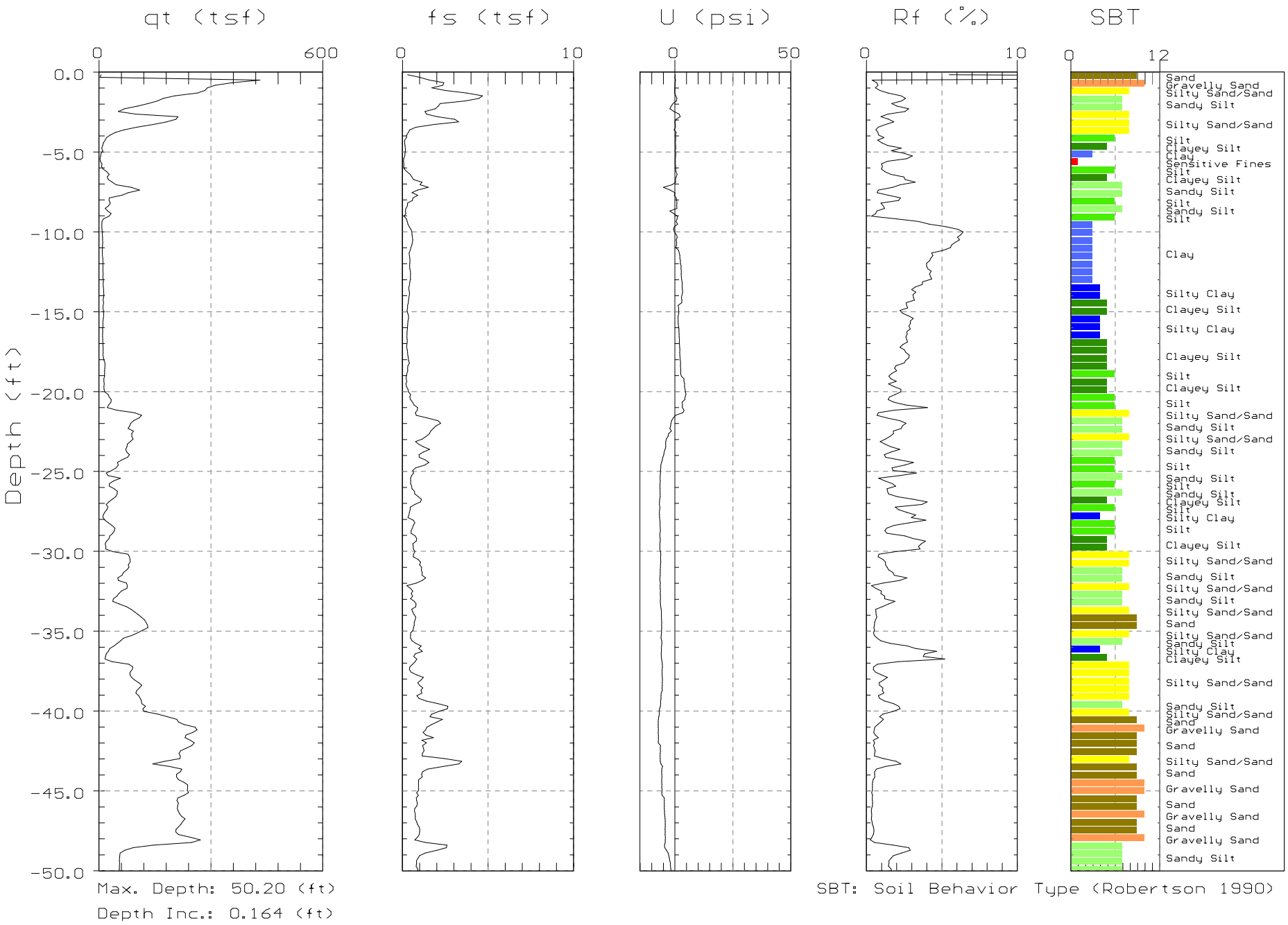
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-34

Engineer: H.RODGERS
Date: 12:19:05 11:51



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

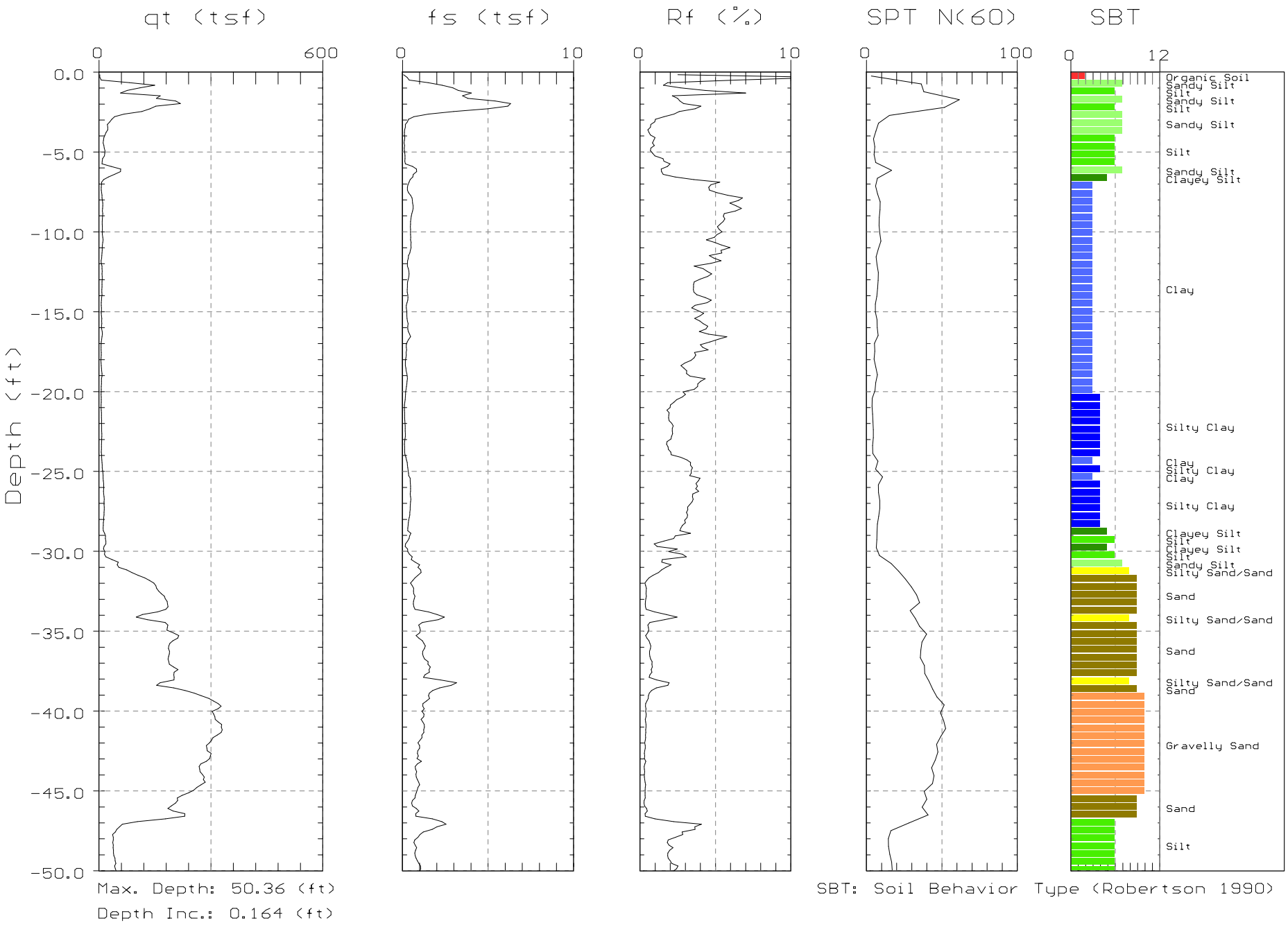
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-35

Engineer: H.RODGERS
Date: 12:20:05 04:04



Max. Depth: 50.36 (ft)
Depth Inc.: 0.164 (ft)

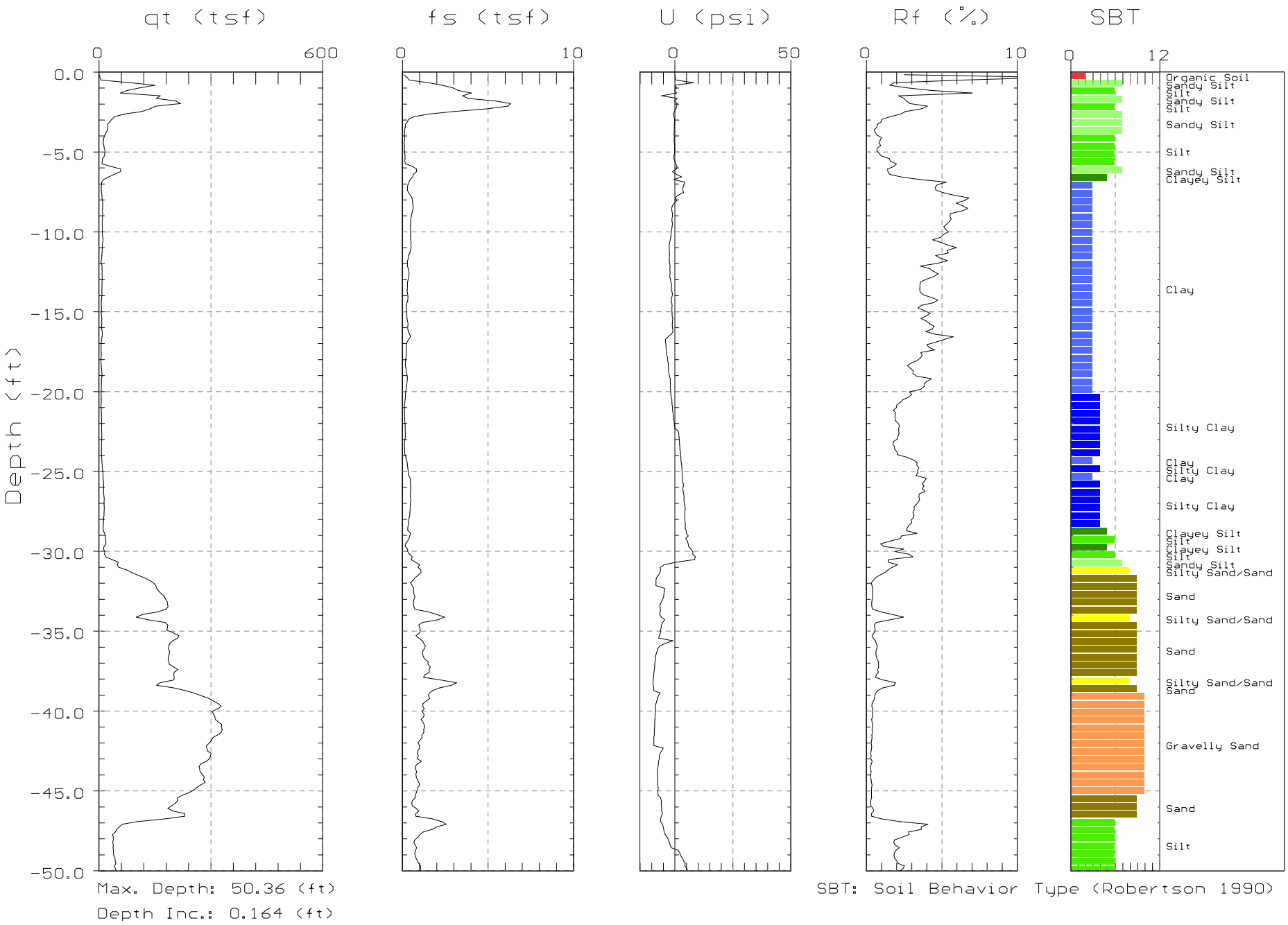
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-35

Engineer: H.RODGERS
Date: 12:20:05 04:04



Max. Depth: 50.36 (ft)
Depth Inc.: 0.164 (ft)

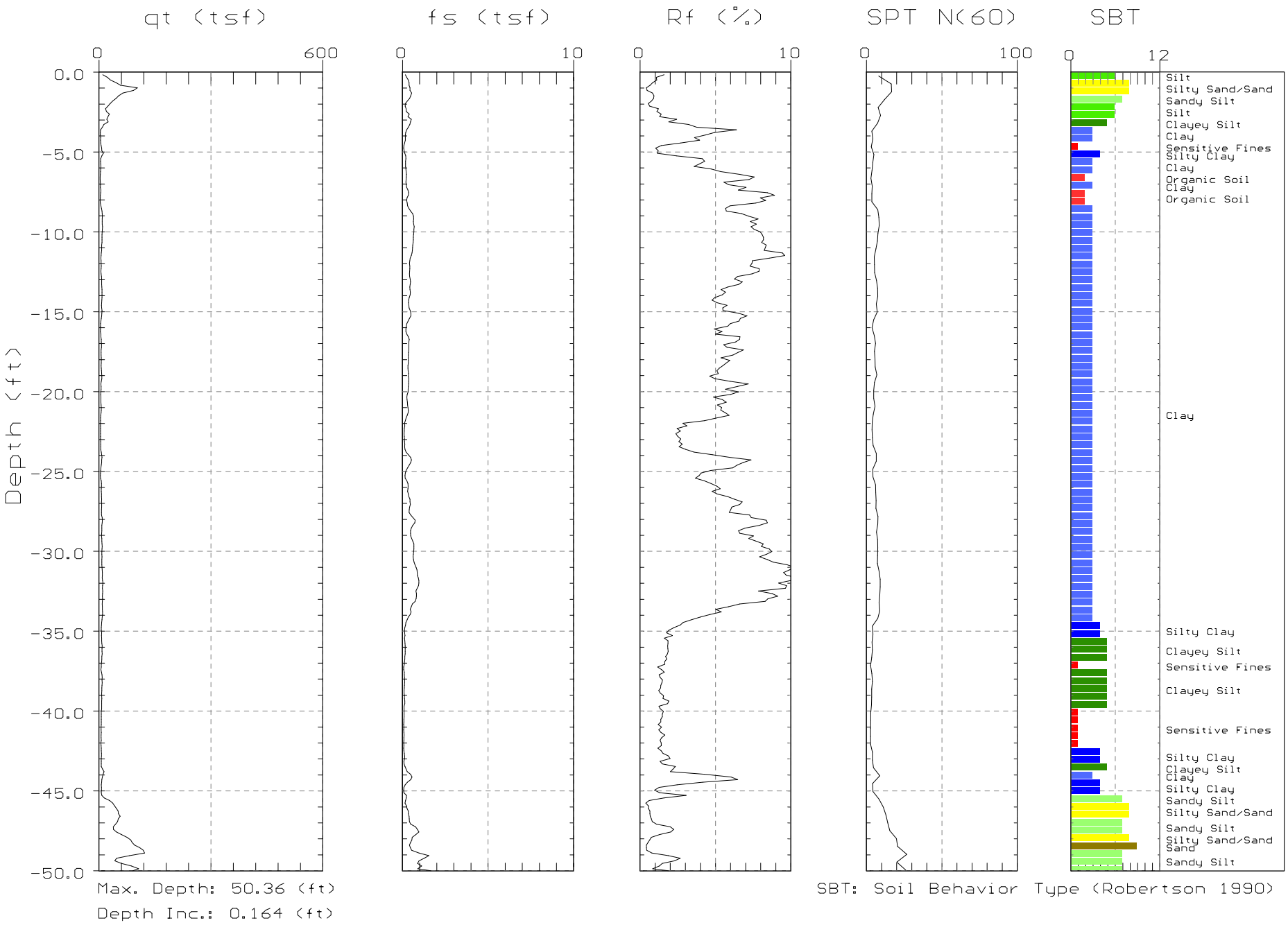
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-36

Engineer: H.RODGERS
Date: 12:20:05 04:49



Max. Depth: 50.36 (ft)
Depth Inc.: 0.164 (ft)

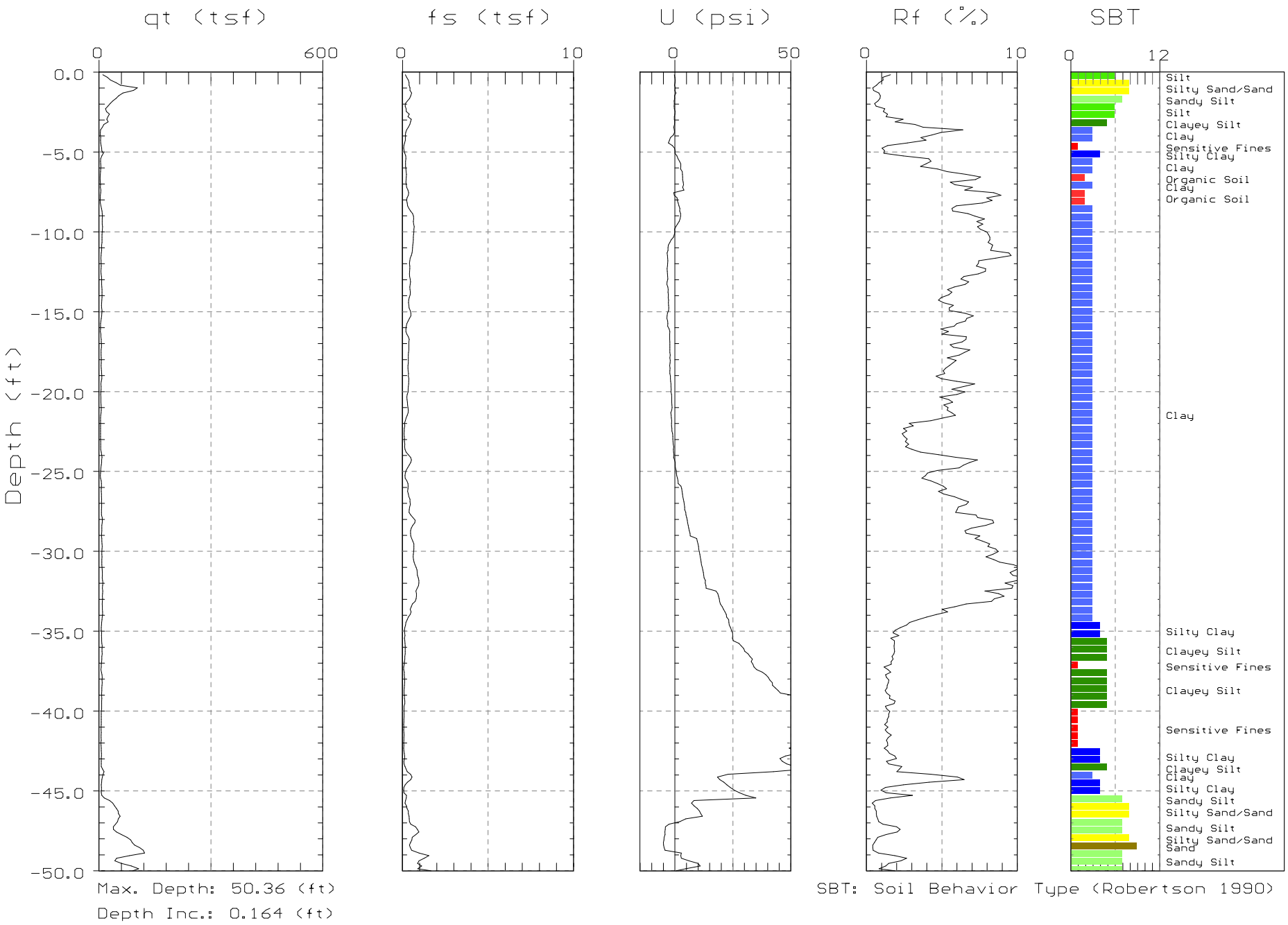
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-36

Engineer: H.RODGERS
Date: 12:20:05 04:49



Max. Depth: 50.36 (ft)
Depth Inc.: 0.164 (ft)

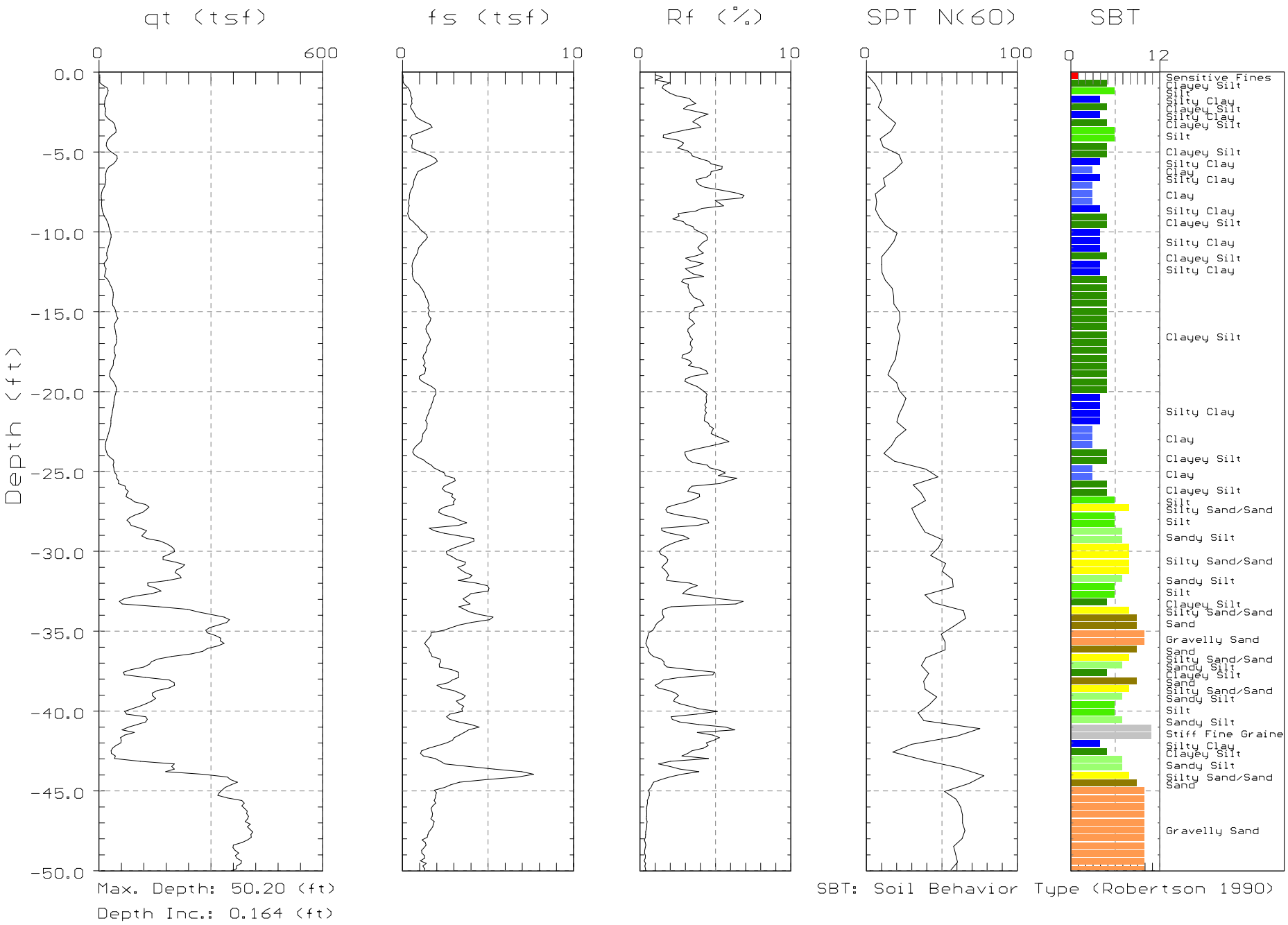
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-37

Engineer: H.RODGERS
Date: 12:20:05 05:59



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

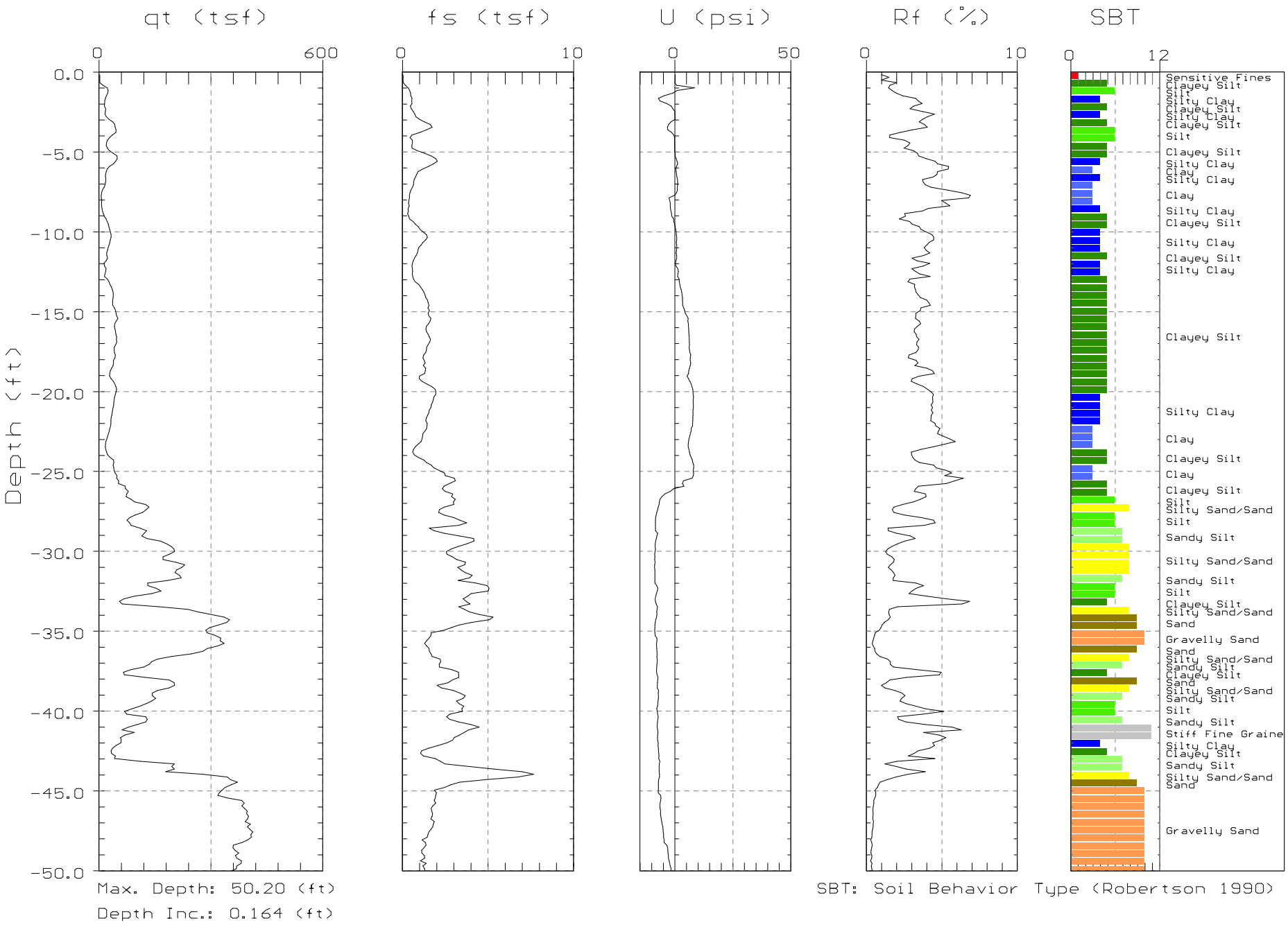
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-37

Engineer: H.RODGERS
Date: 12:20:05 05:59



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

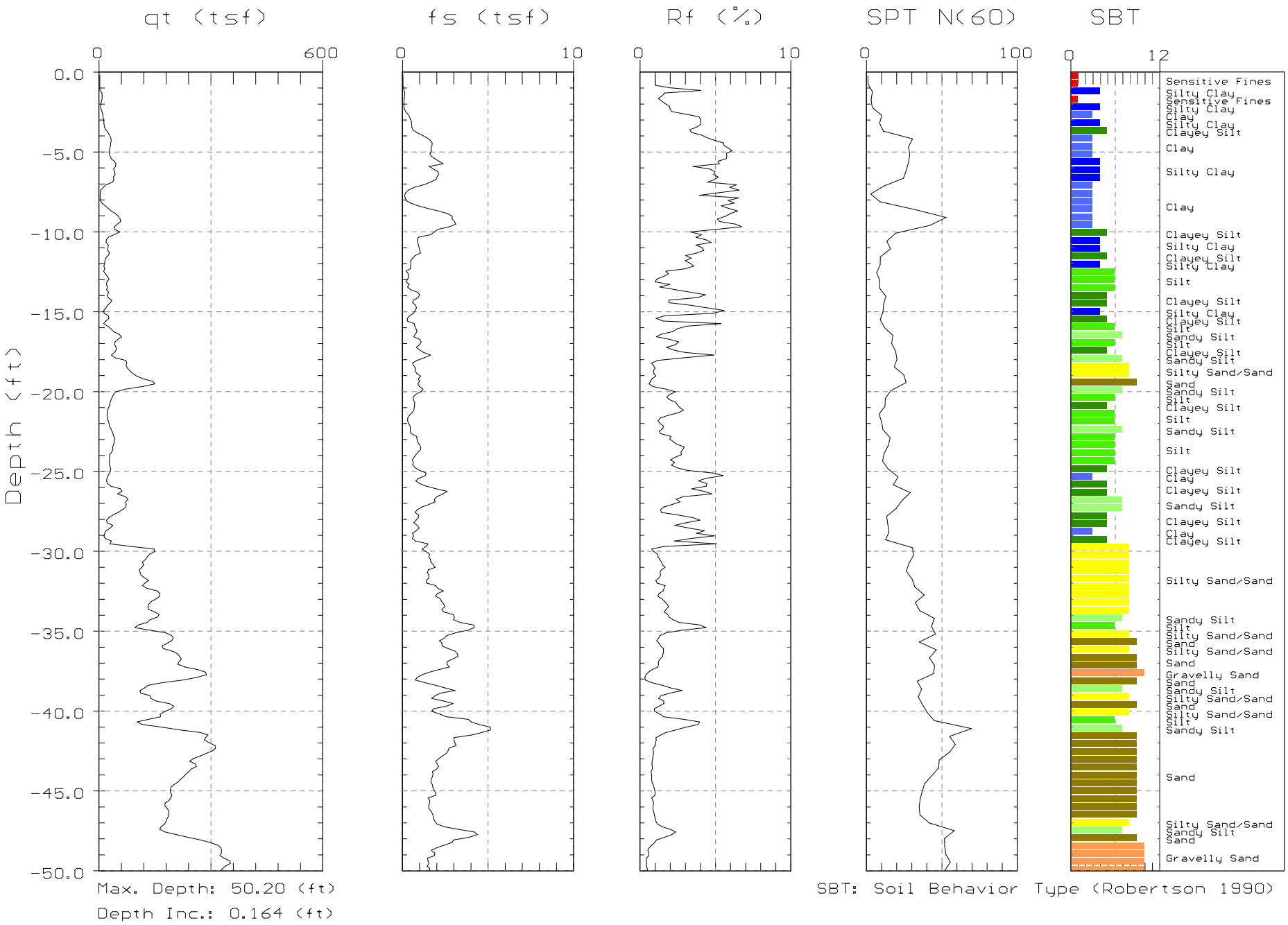
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-38

Engineer: H.RODGERS
Date: 12:20:05 06:57



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

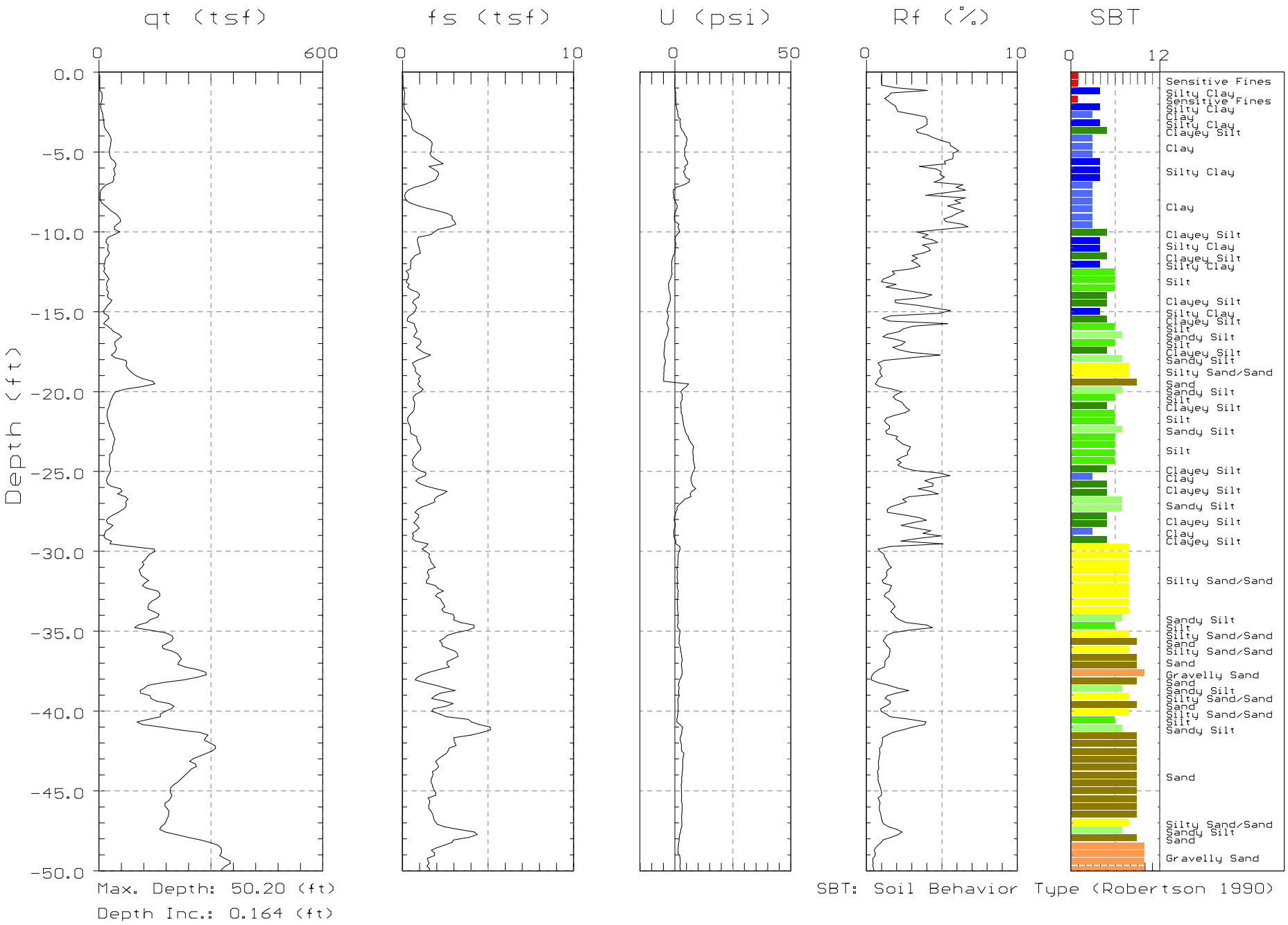
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-38

Engineer: H.RODGERS
Date: 12:20:05 06:57



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

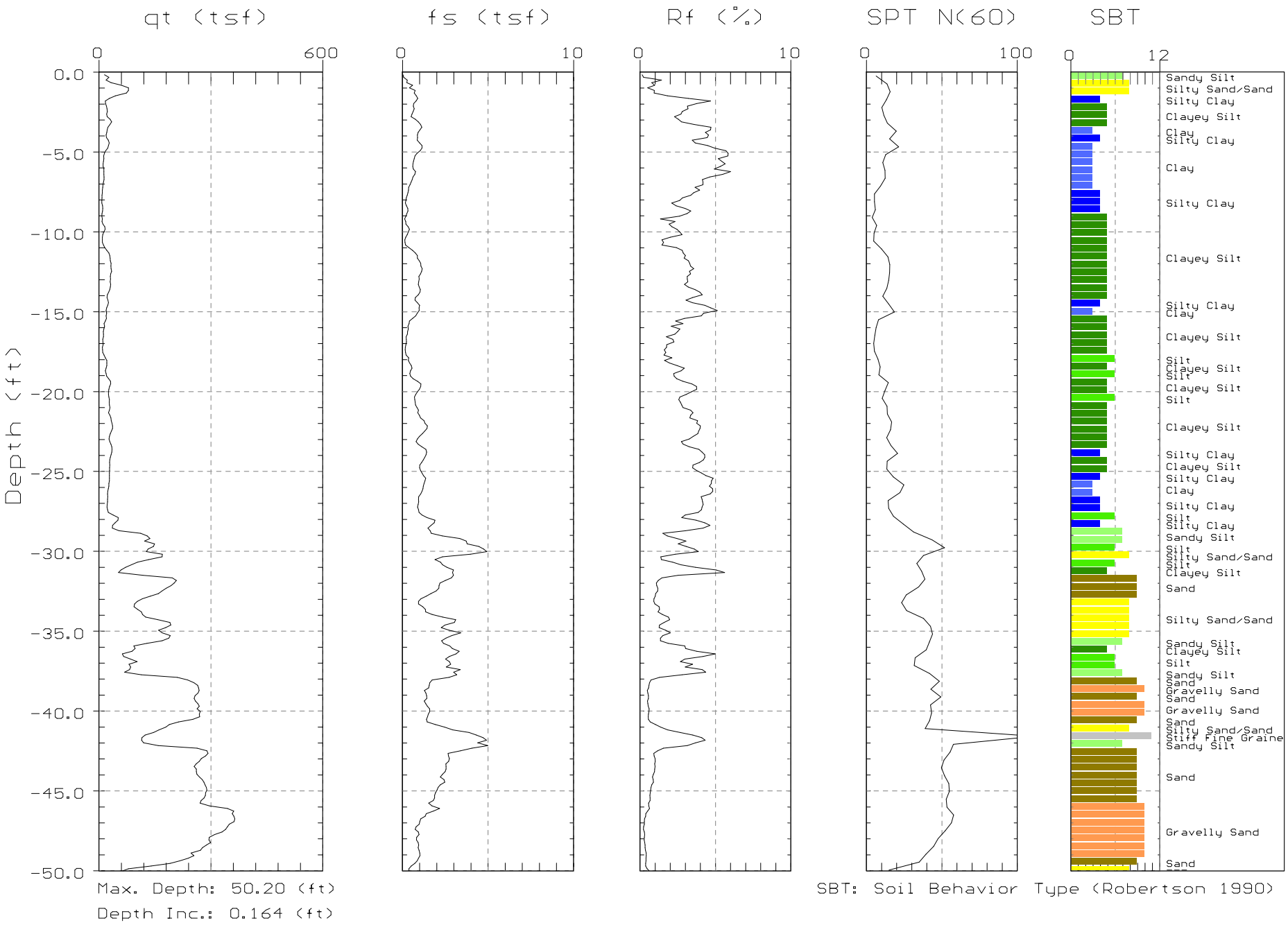
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-39

Engineer: H.RODGERS
Date: 12:20:05 10:10



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

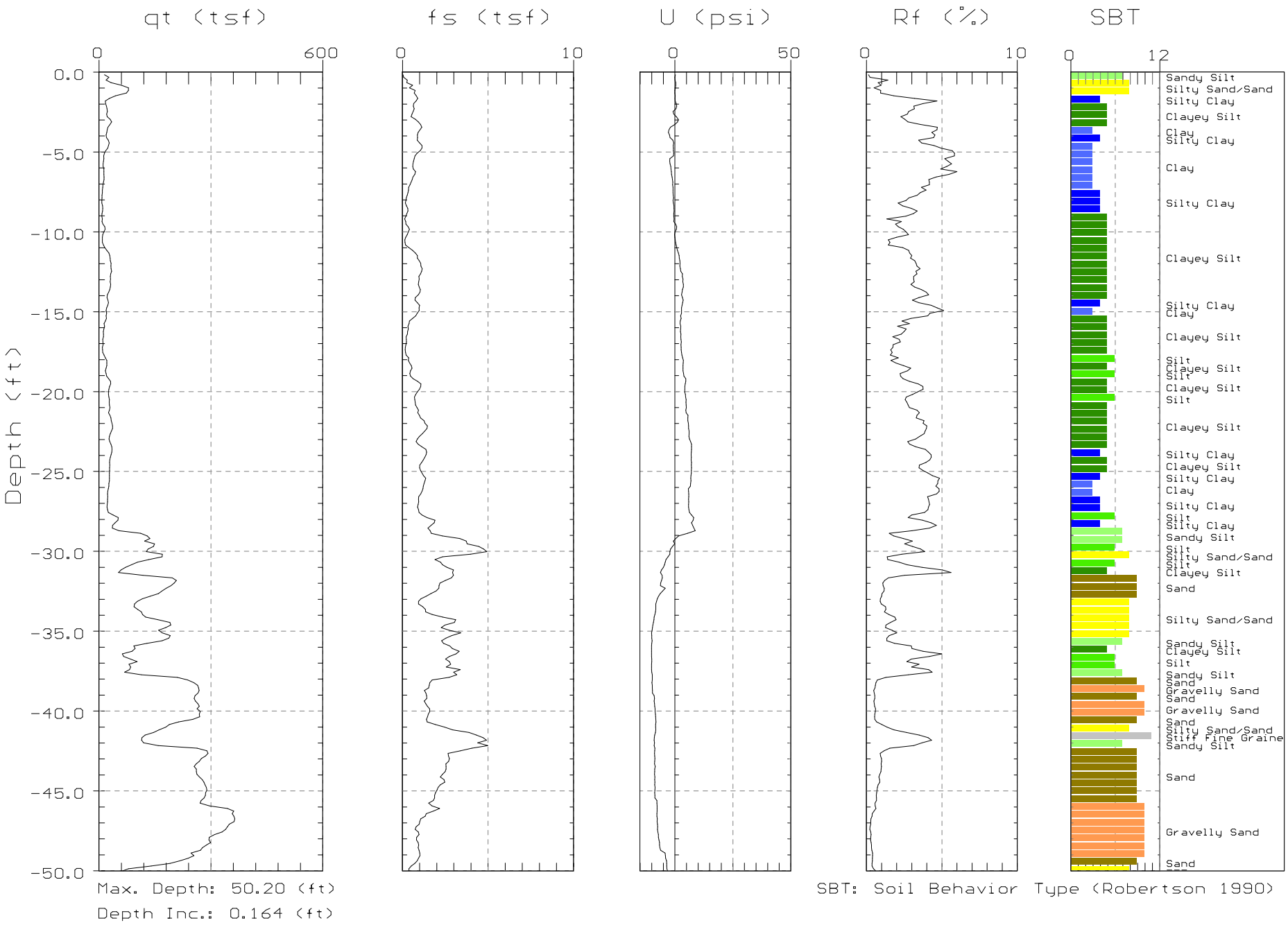
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-39

Engineer: H.RODGERS
Date: 12:20:05 10:10



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

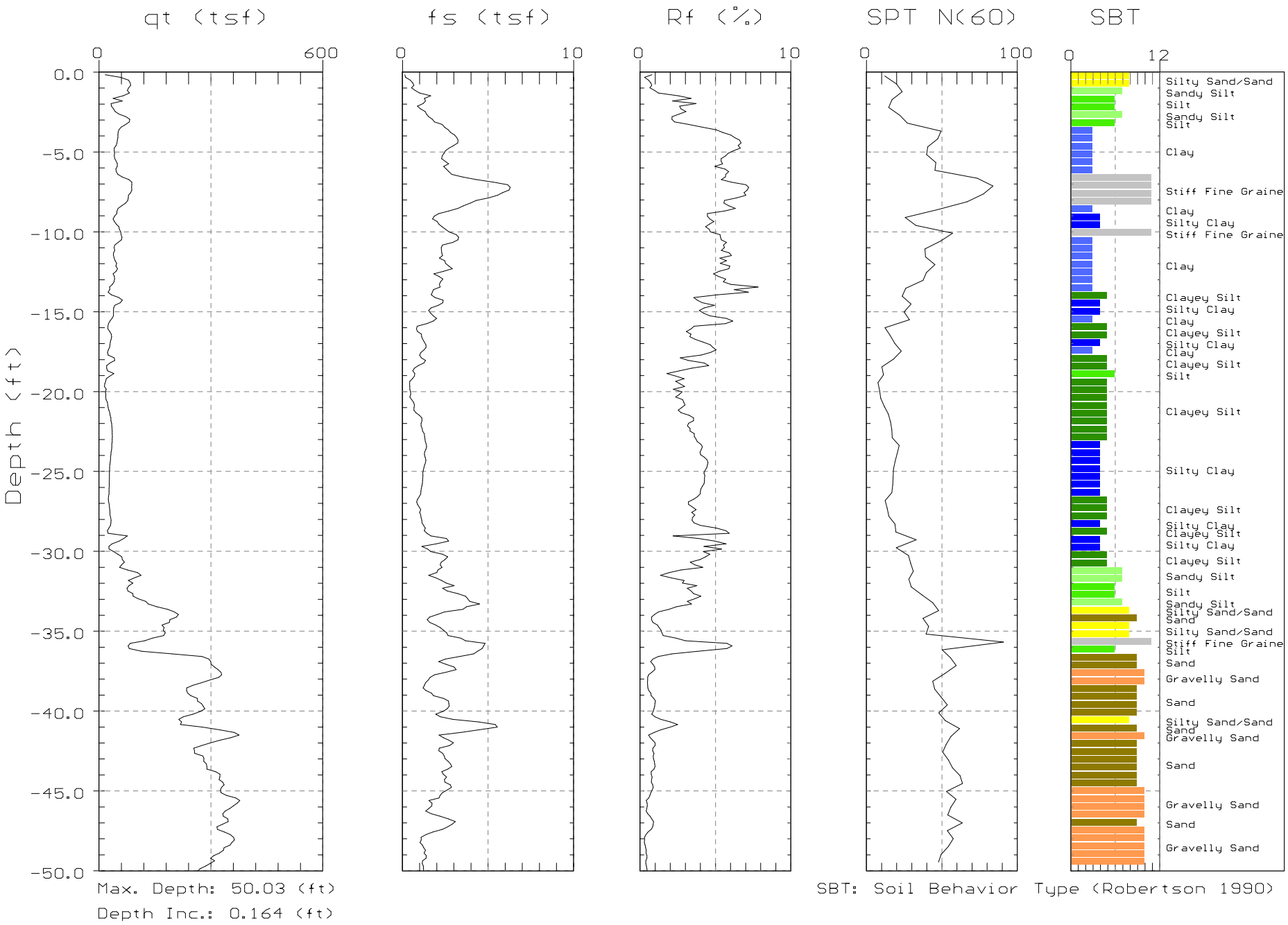
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-40

Engineer: H.RODGERS
Date: 12:20:05 10:46



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

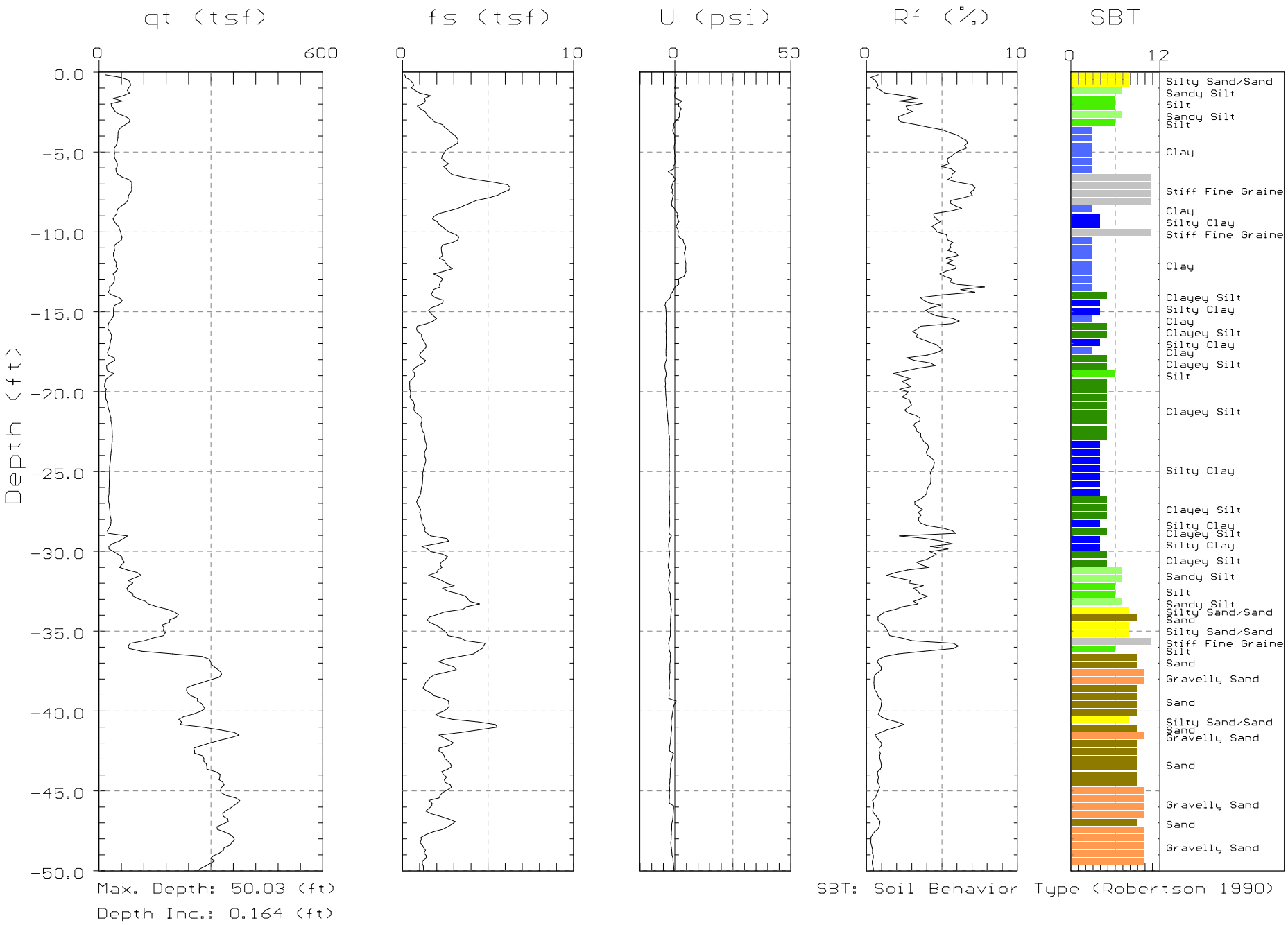
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-40

Engineer: H.RODGERS
Date: 12:20:05 10:46



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

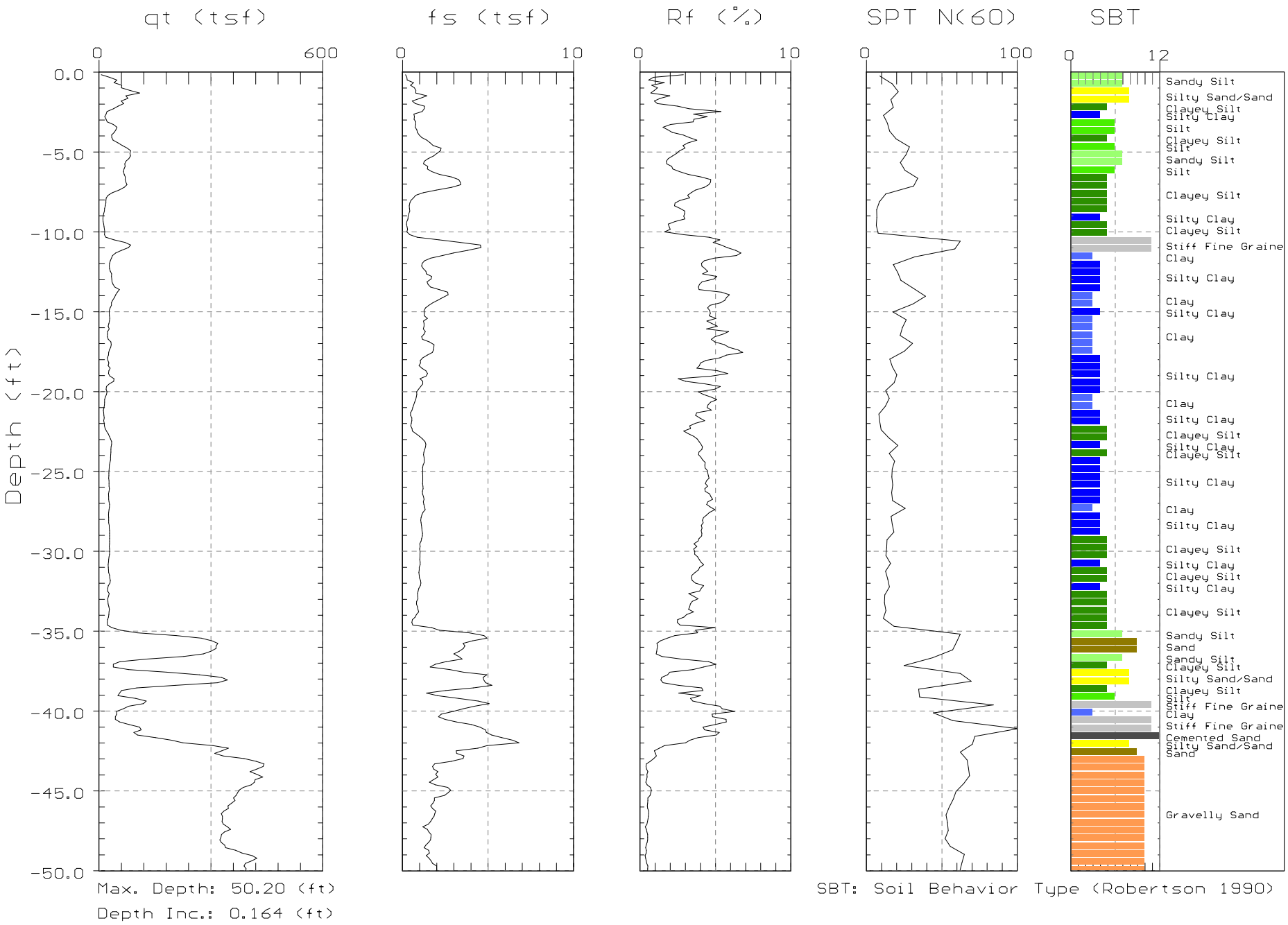
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-41

Engineer: H.RODGERS
Date: 12:20:05 11:24



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

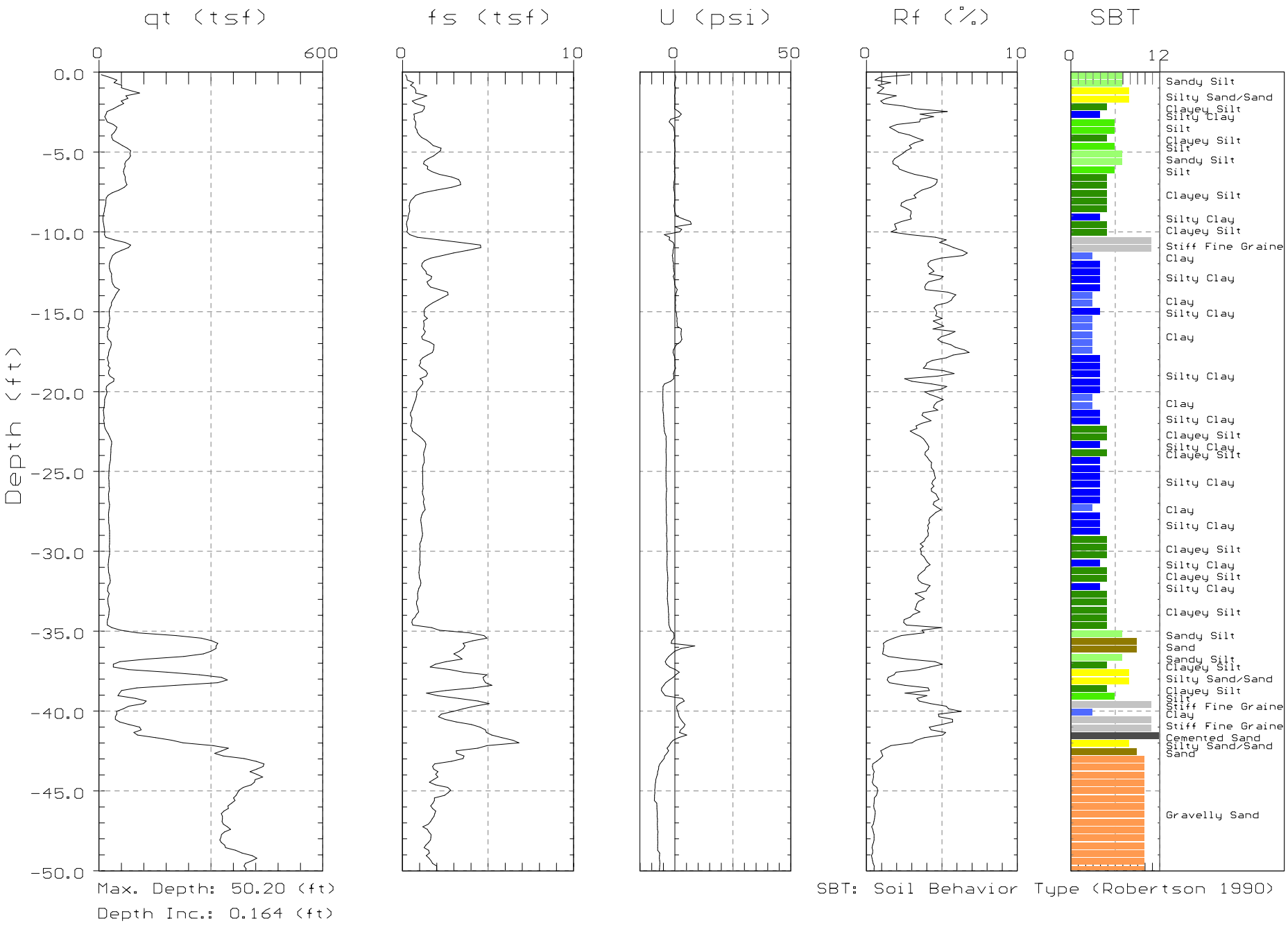
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-41

Engineer: H.RODGERS
Date: 12:20:05 11:24



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

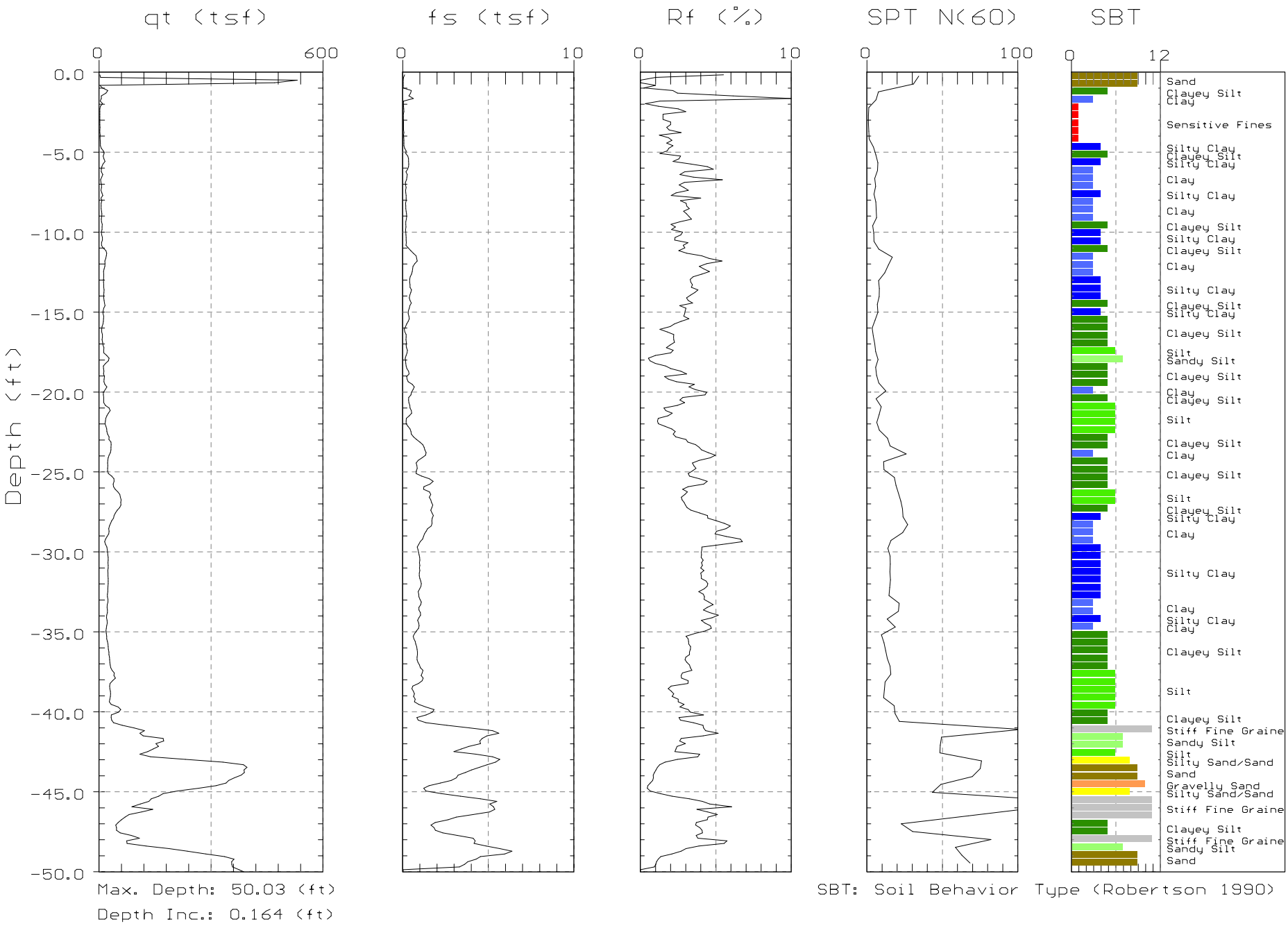
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-42

Engineer: H.RODGERS
Date: 12:21:05 05:39



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

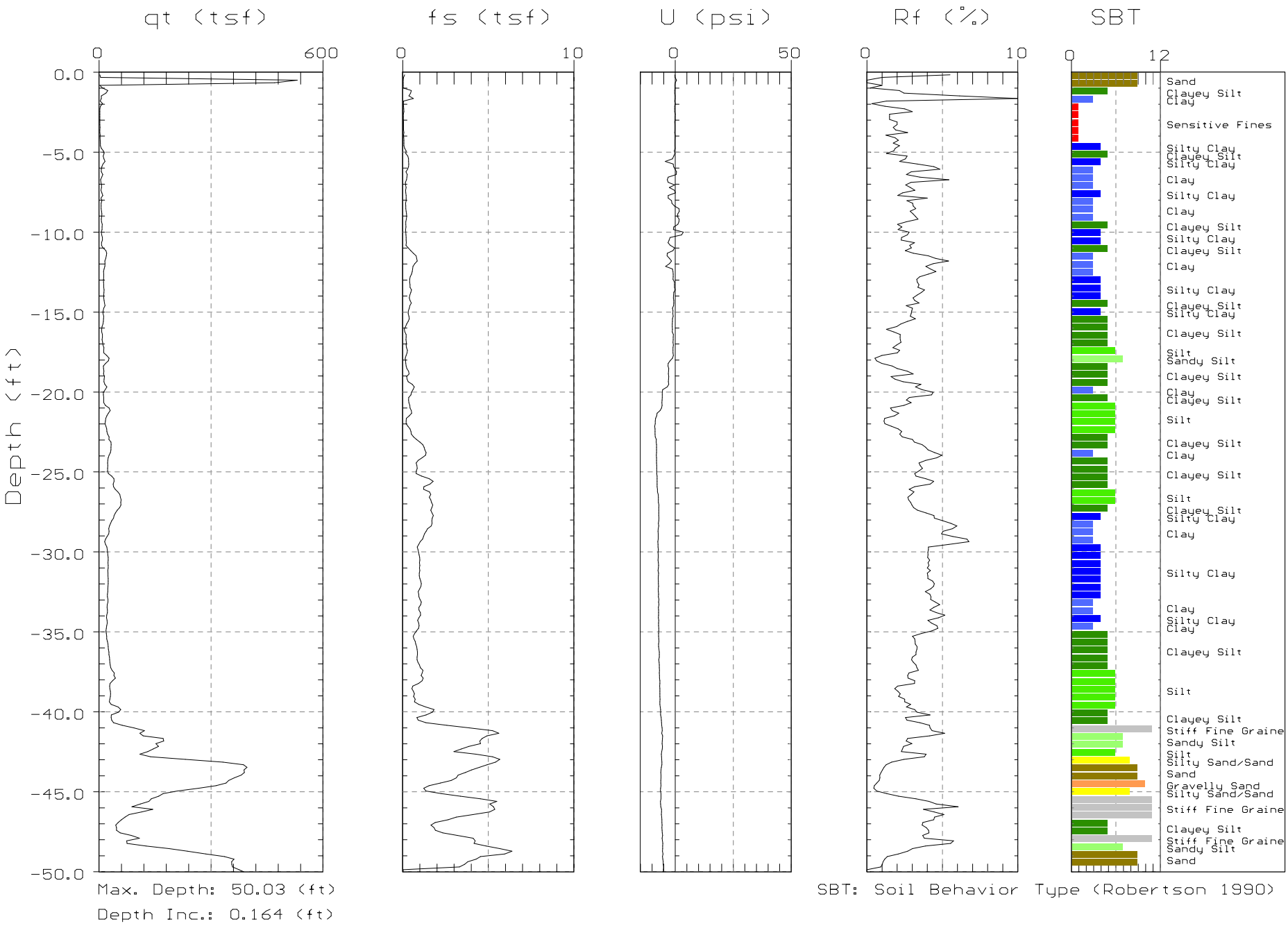
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-42

Engineer: H.RODGERS
Date: 12:21:05 05:39



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

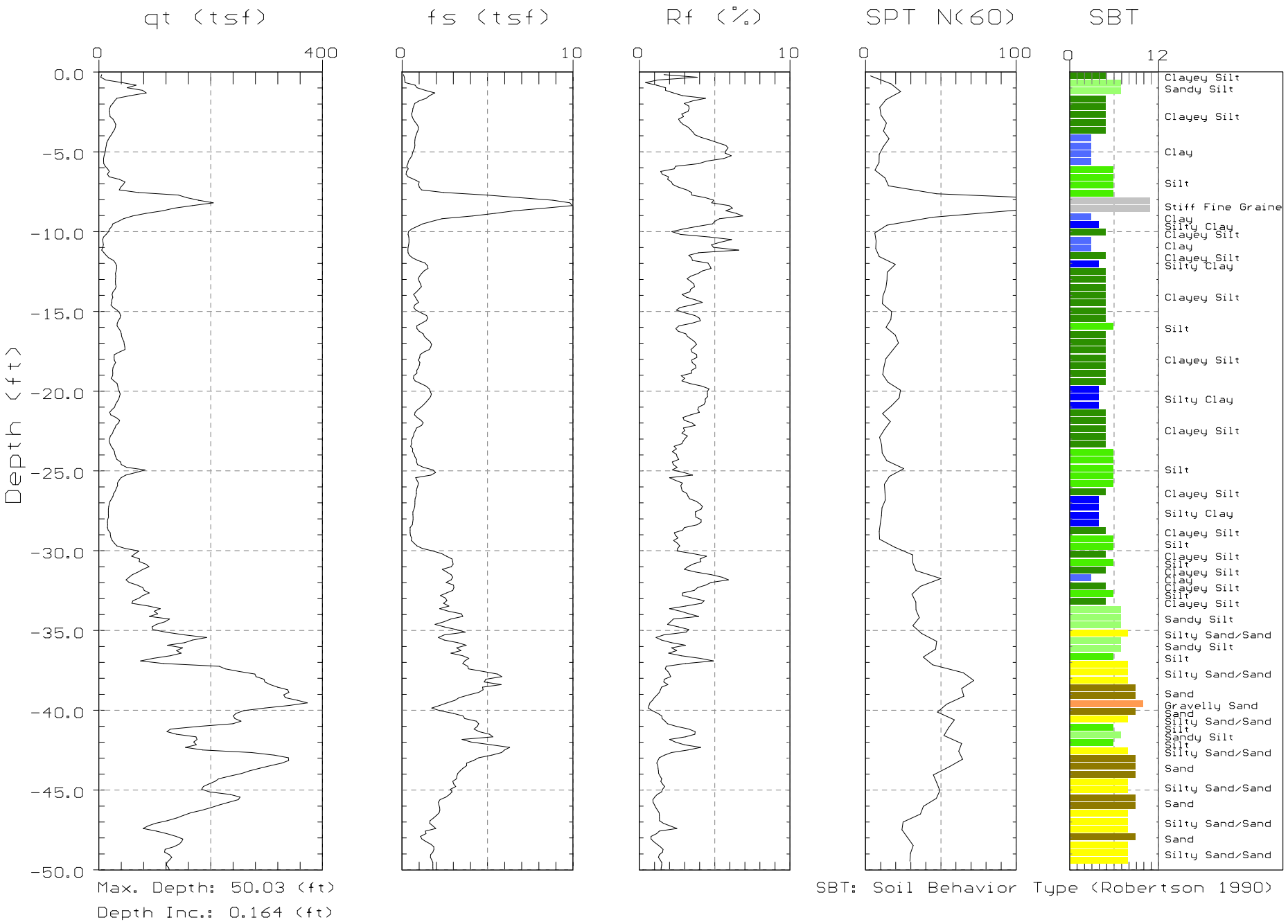
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-43

Engineer: H.RODGERS
Date: 02:02:06 12:28



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

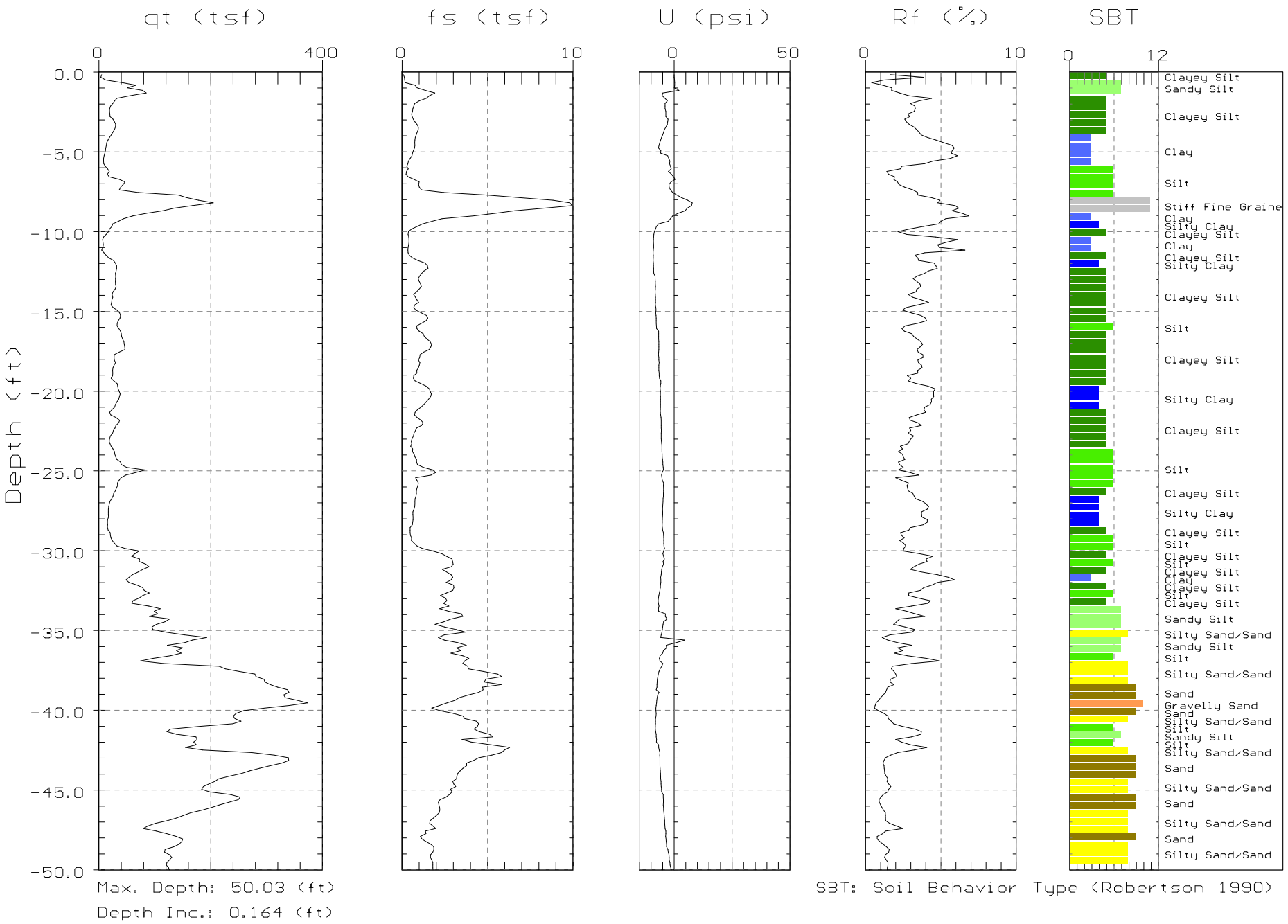
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-43

Engineer: H.RODGERS
Date: 02:02:06 12:28



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

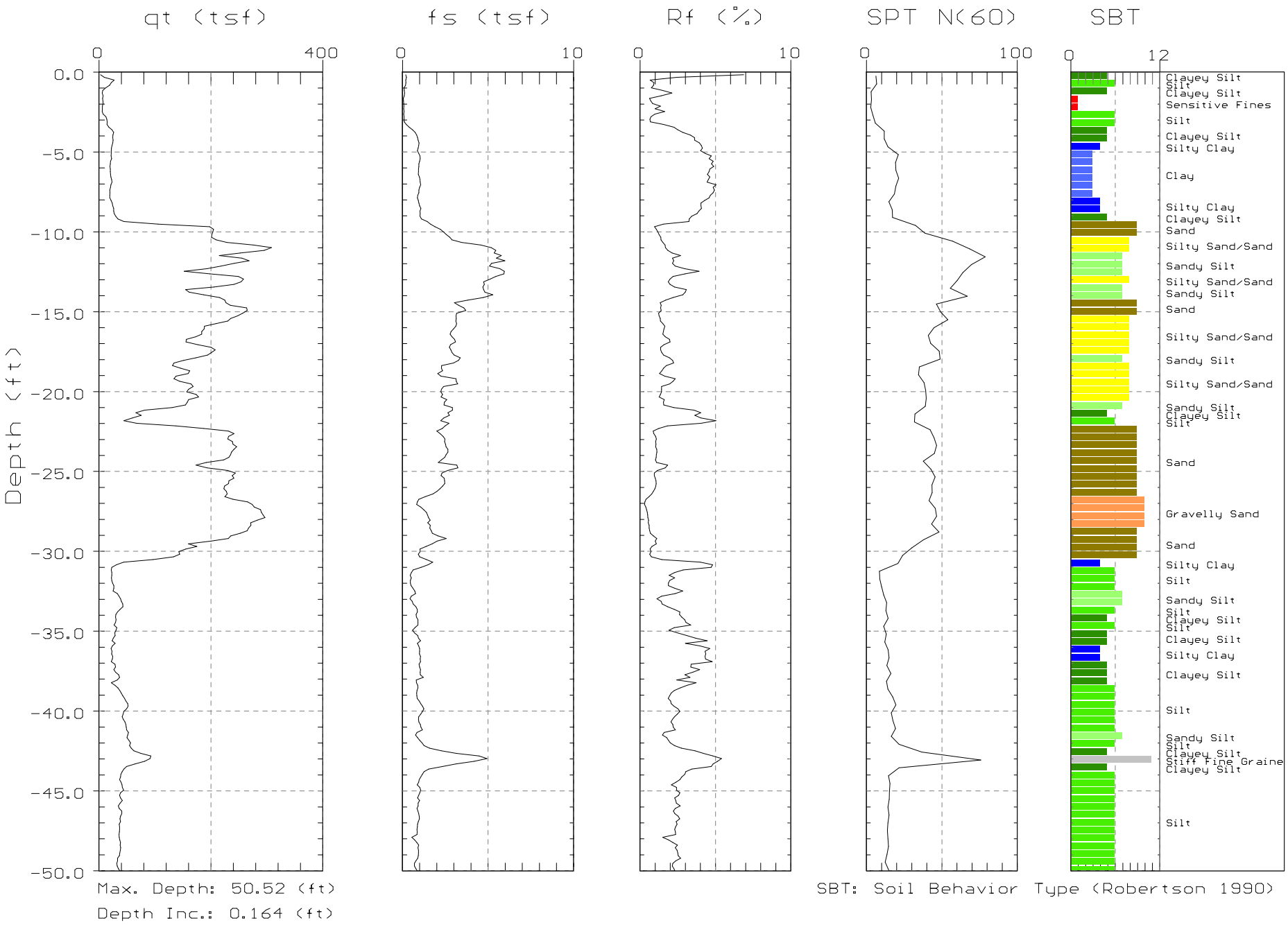
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-44

Engineer: H.RODGERS
Date: 02:02:06 14:15



Max. Depth: 50.52 (ft)
Depth Inc.: 0.164 (ft)

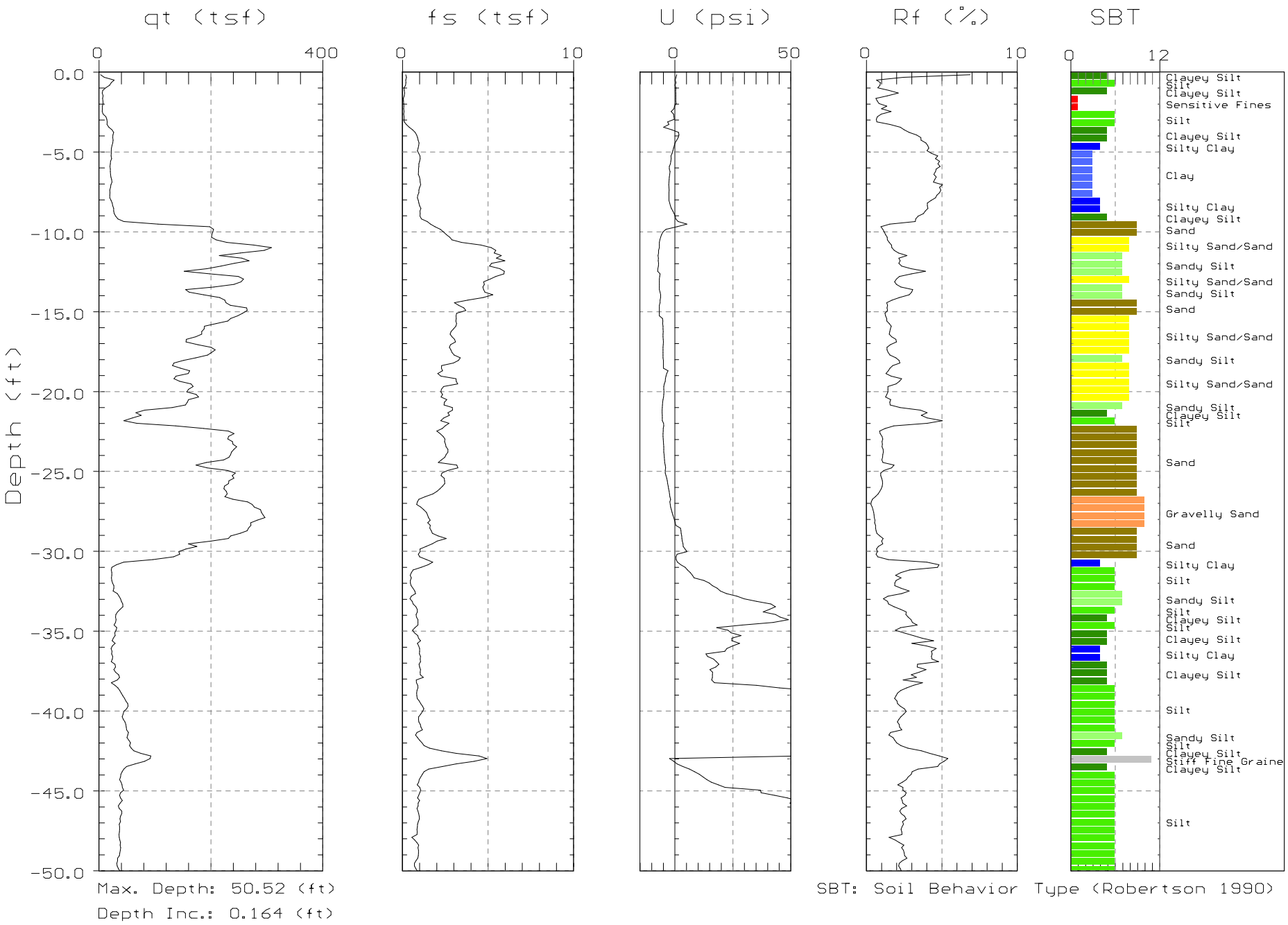
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-44

Engineer: H.RODGERS
Date: 02:02:06 14:15



Max. Depth: 50.52 (ft)
Depth Inc.: 0.164 (ft)

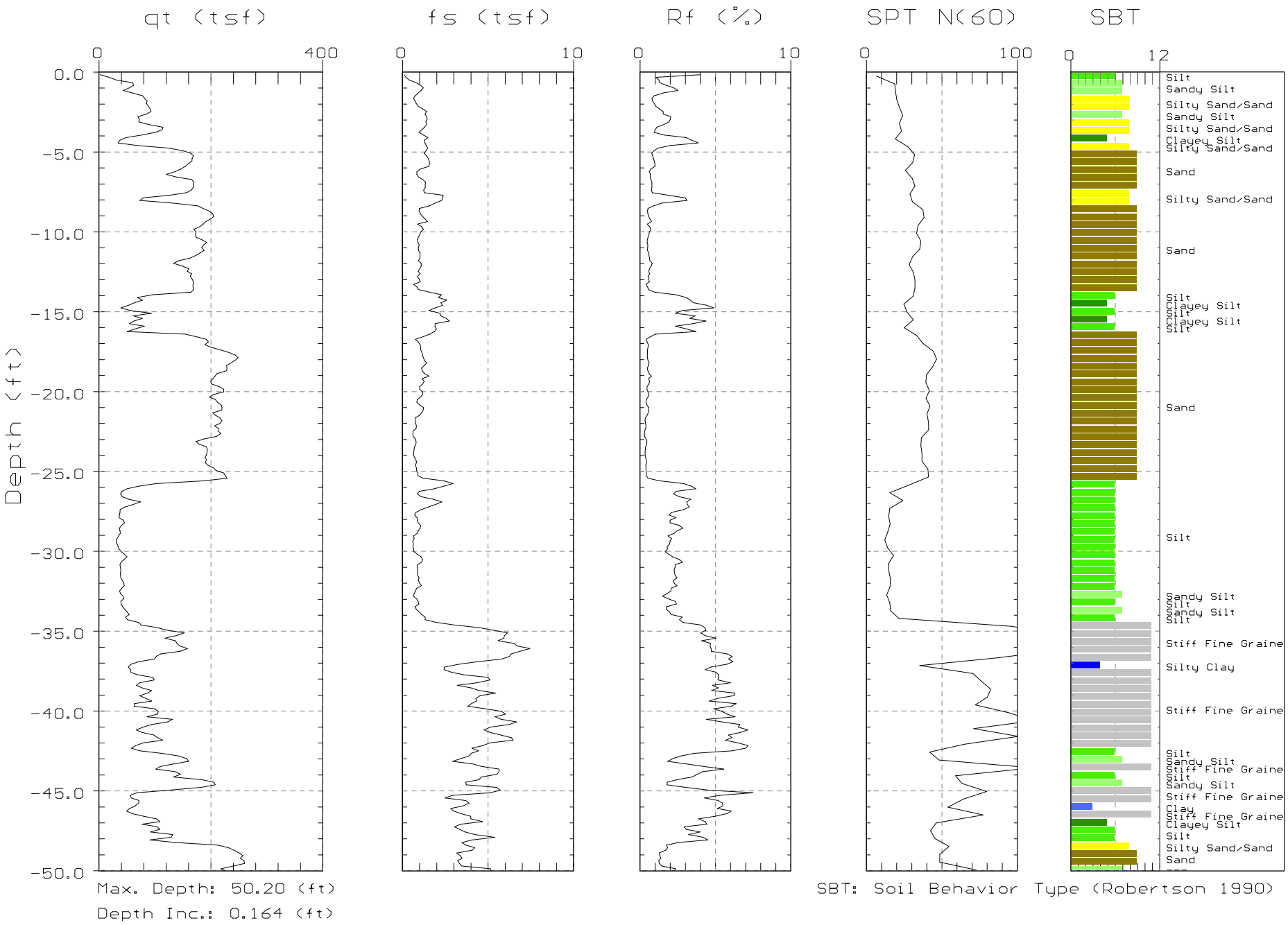
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-45

Engineer: H.RODGERS
Date: 02:02:06 14:59

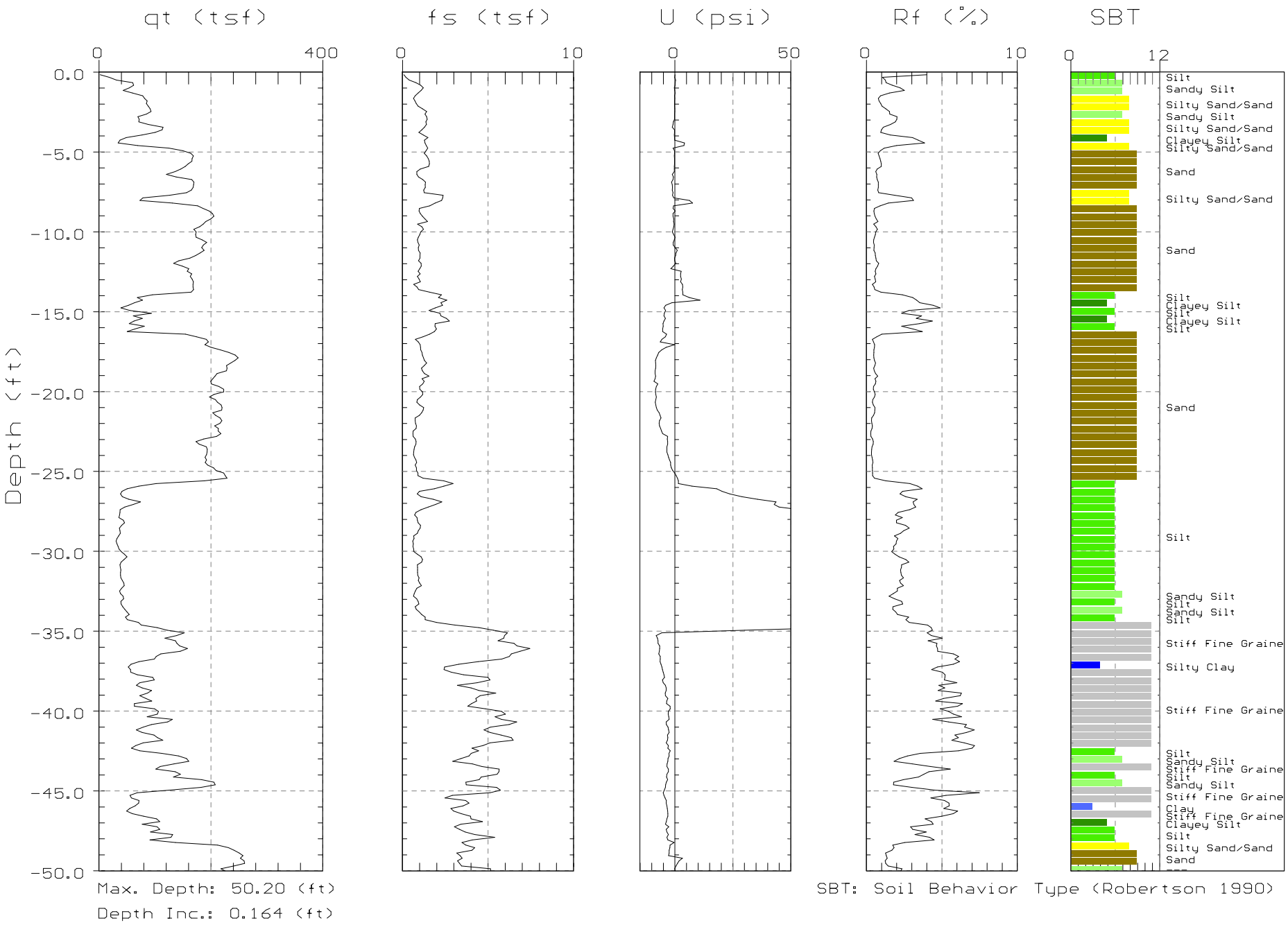


GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-45

Engineer: H.RODGERS
Date: 02:02:06 14:59

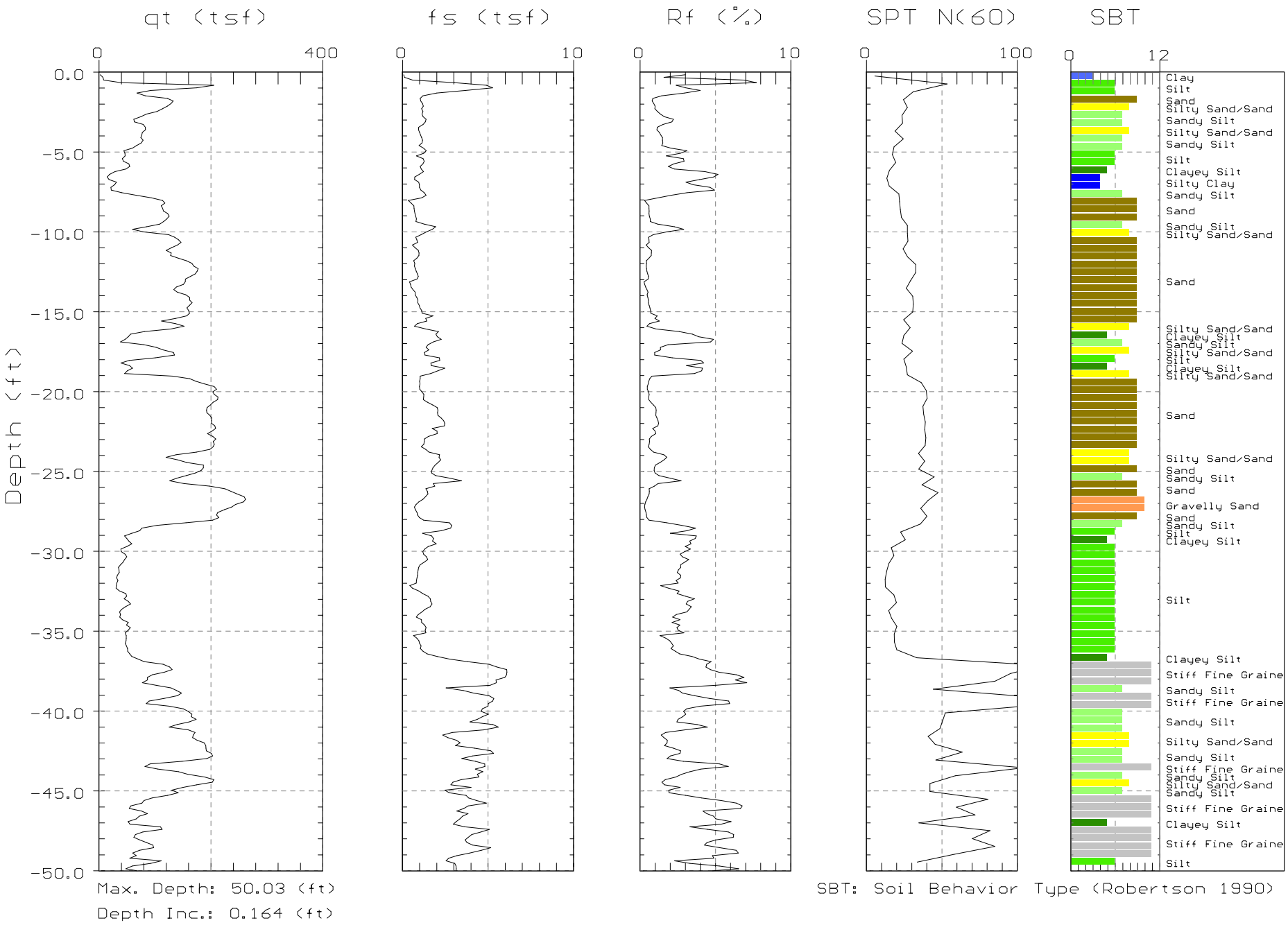


GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-46

Engineer: H.RODGERS
Date: 02:02:06 16:33

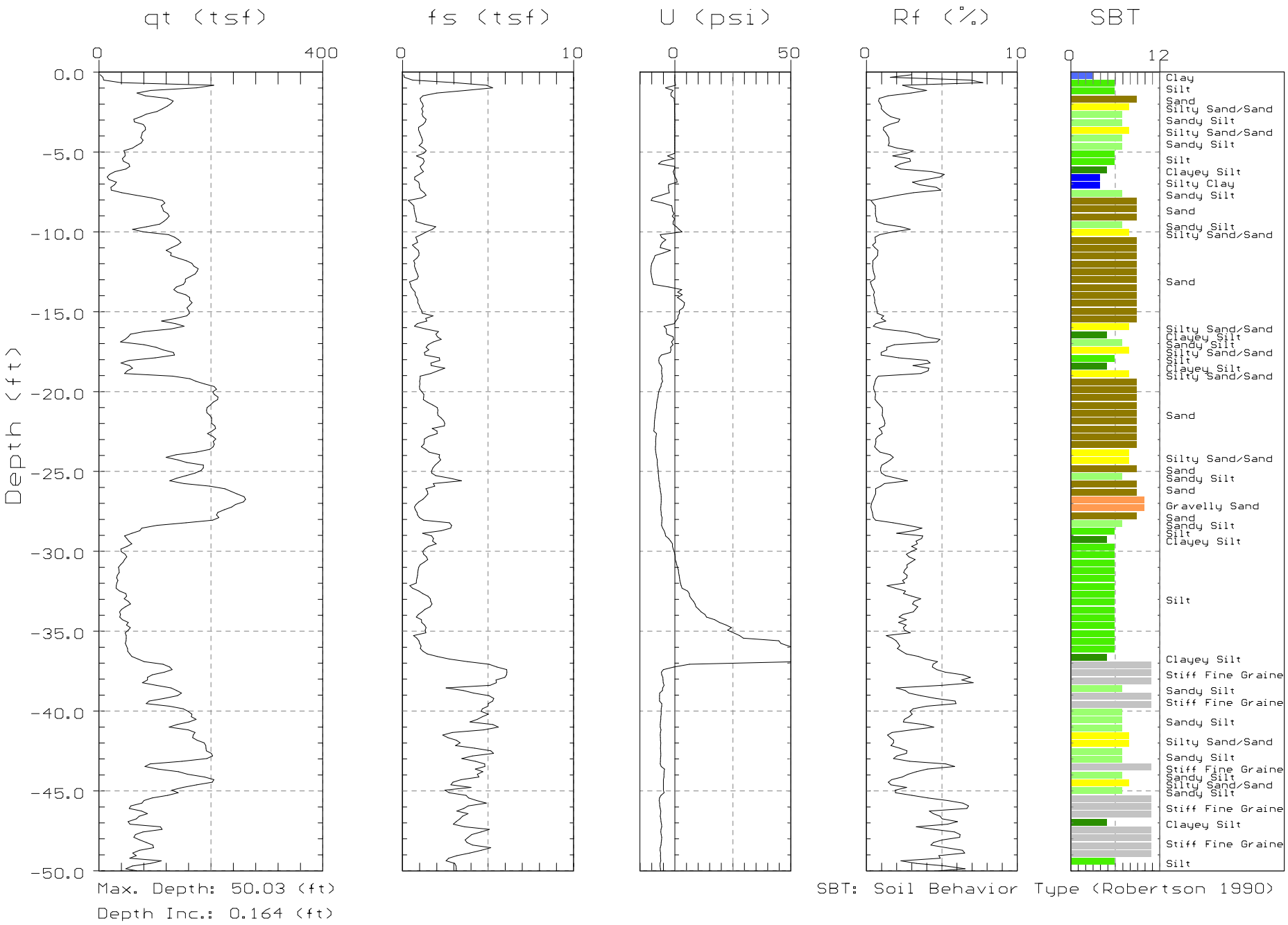


GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-46

Engineer: H.RODGERS
Date: 02:02:06 16:33



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

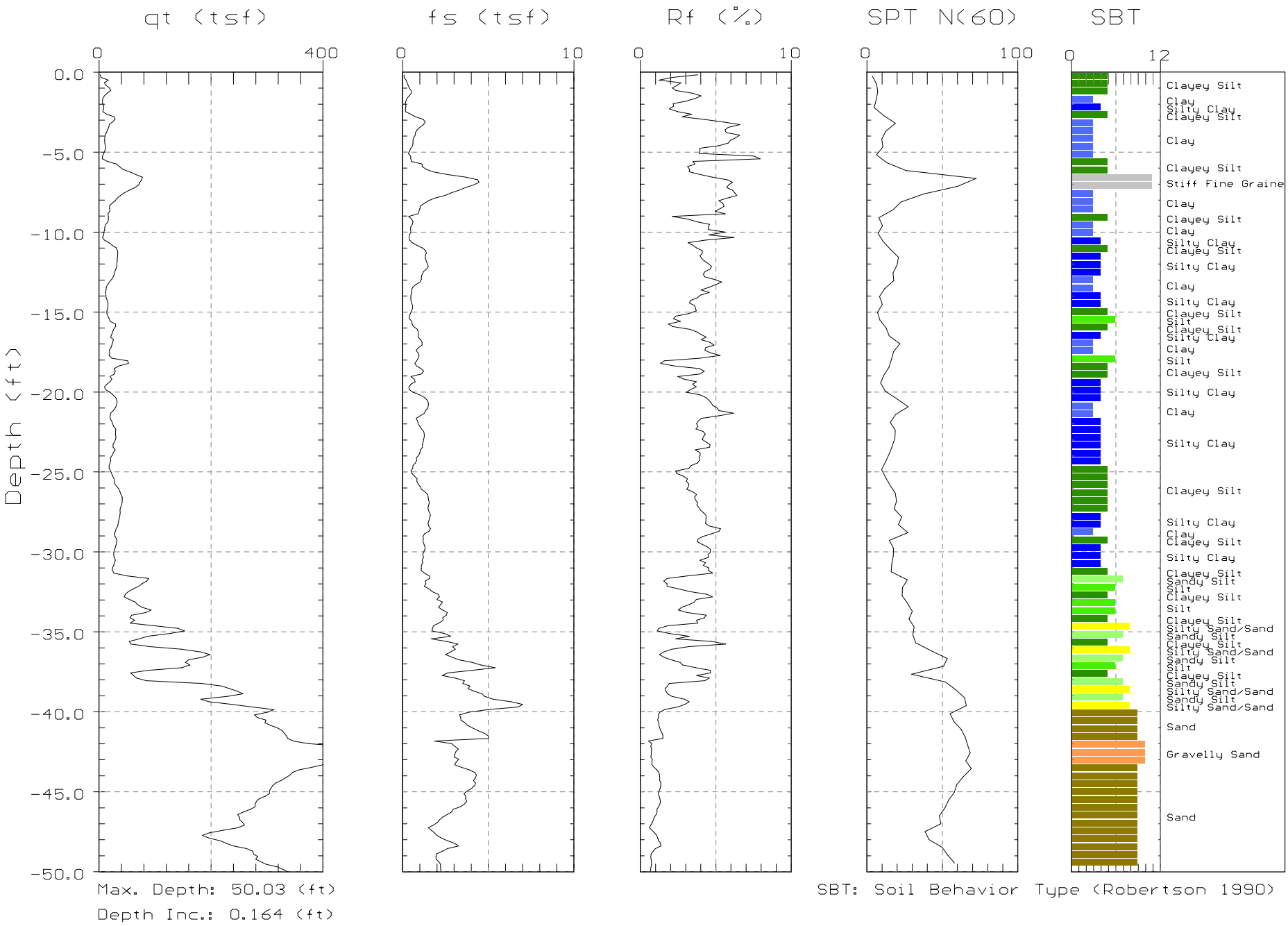
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-47

Engineer: H.RODGERS
Date: 02:02:06 17:29



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

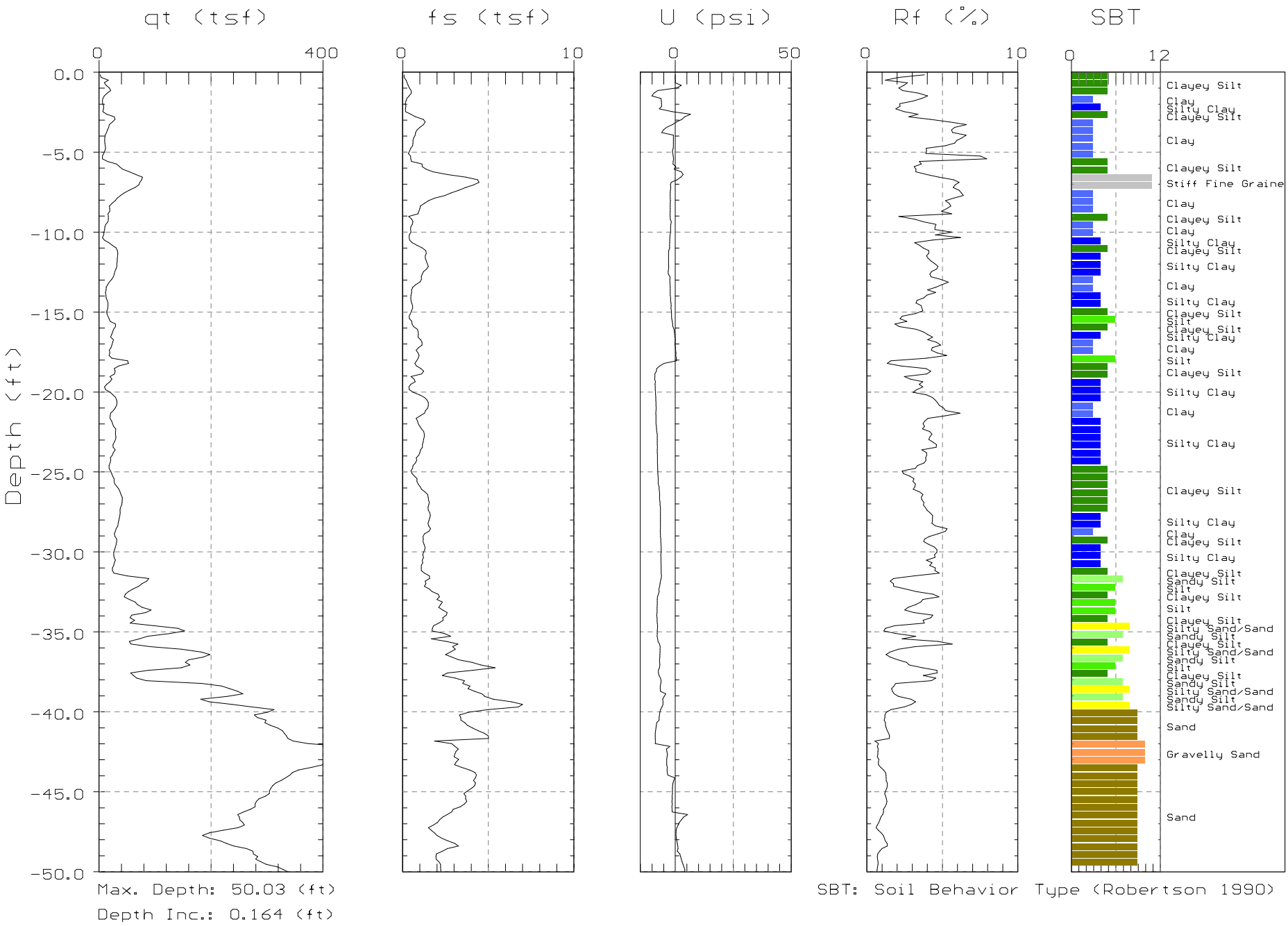
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-47

Engineer: H.RODGERS
Date: 02:02:06 17:29



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

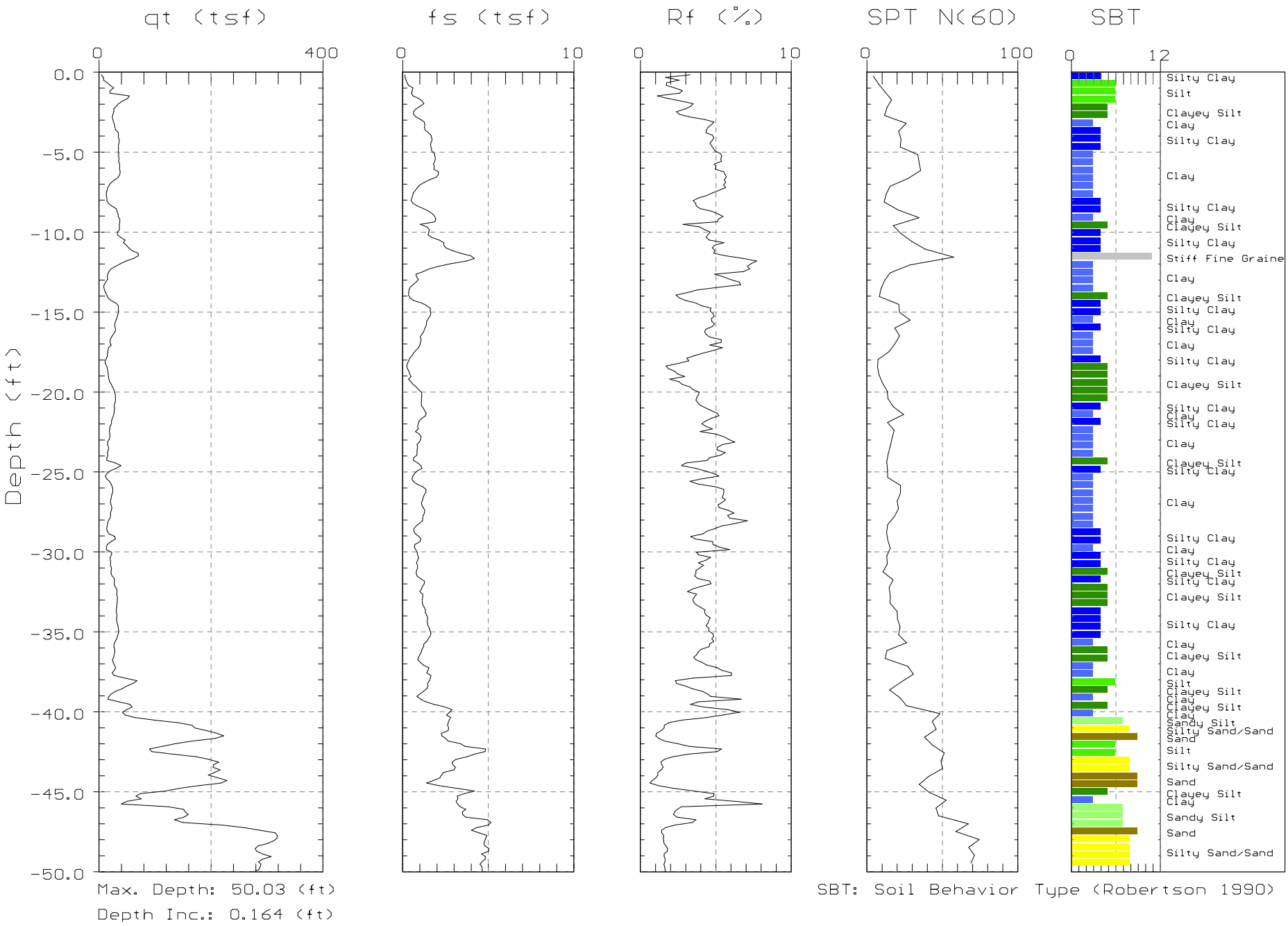
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-48

Engineer: H.RODGERS
Date: 02:02:06 18:26



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

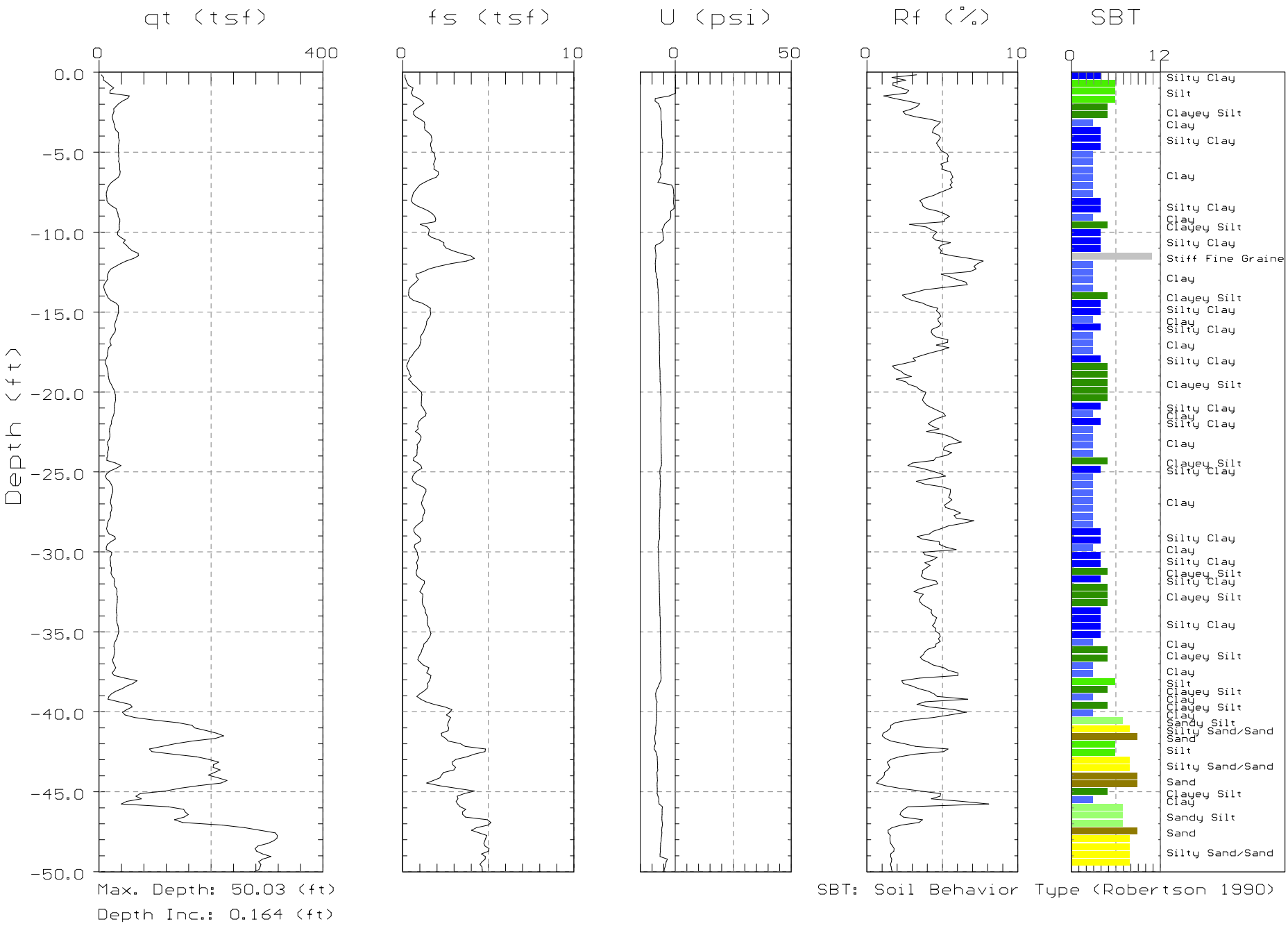
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-48

Engineer: H.RODGERS
Date: 02:02:06 18:26



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

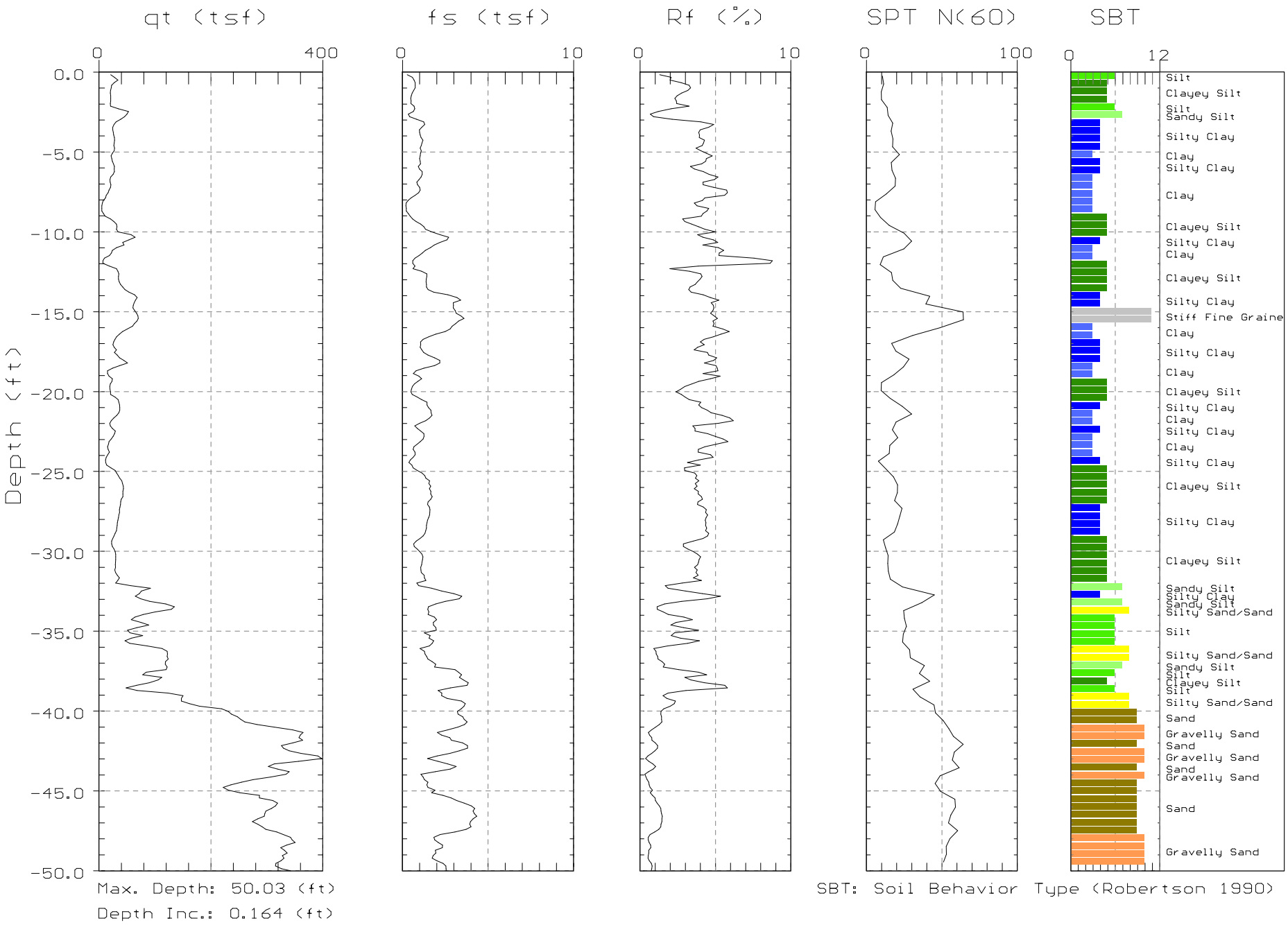
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-49

Engineer: H.RODGERS
Date: 02:02:06 19:17



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

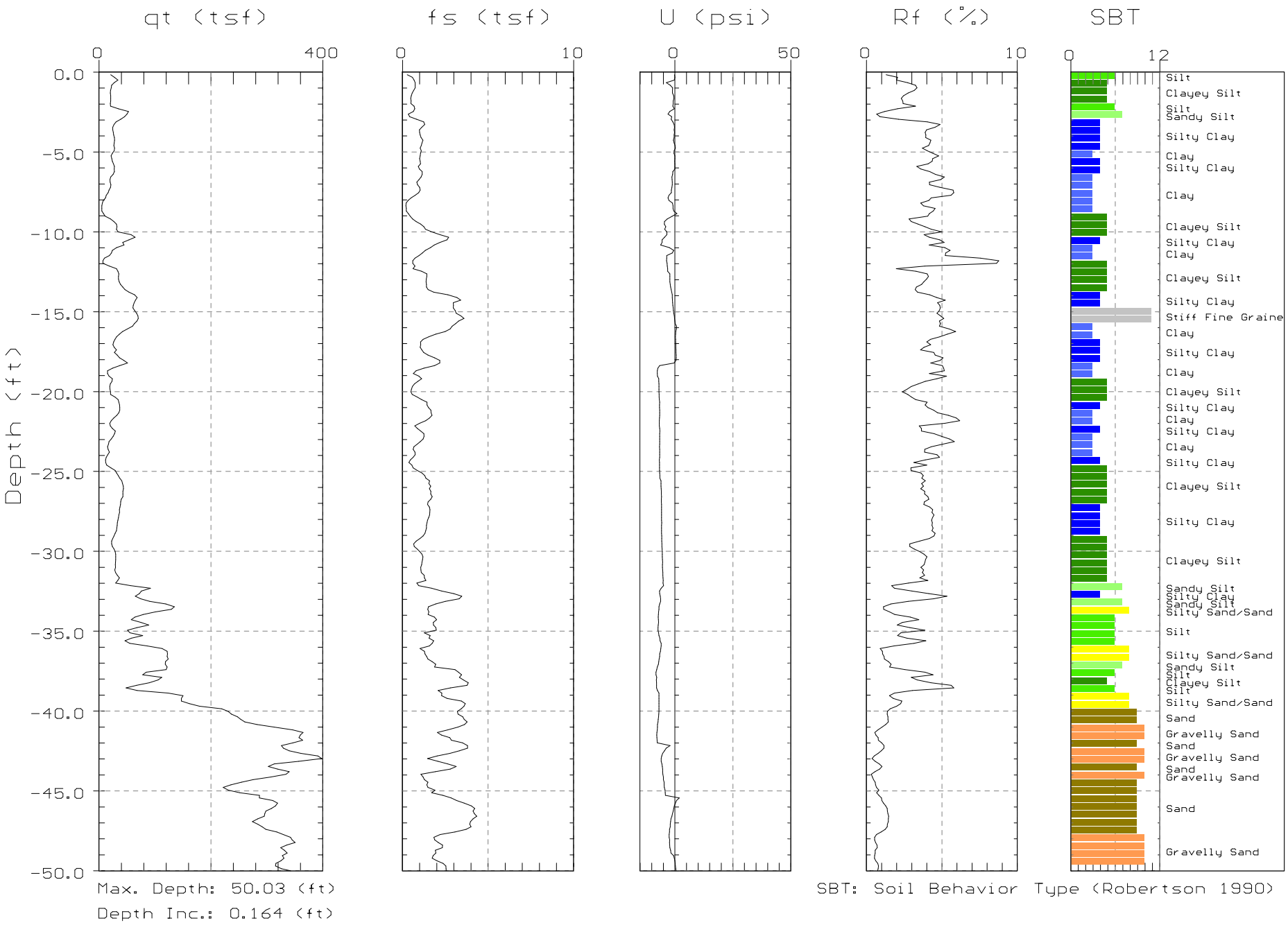
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-49

Engineer: H.RODGERS
Date: 02:02:06 19:17



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

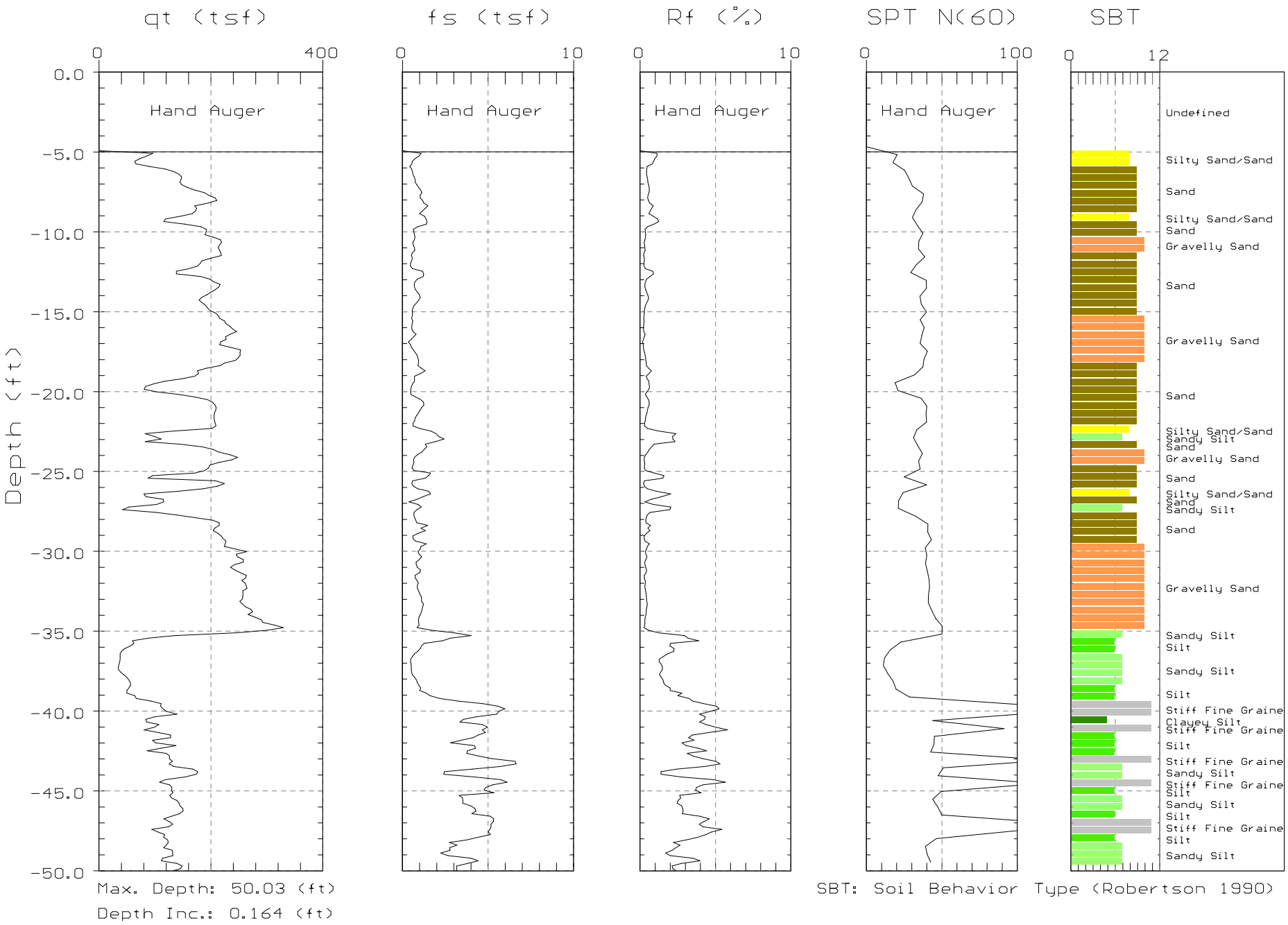
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-50

Engineer: H.RODGERS
Date: 02:10:06 08:25



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

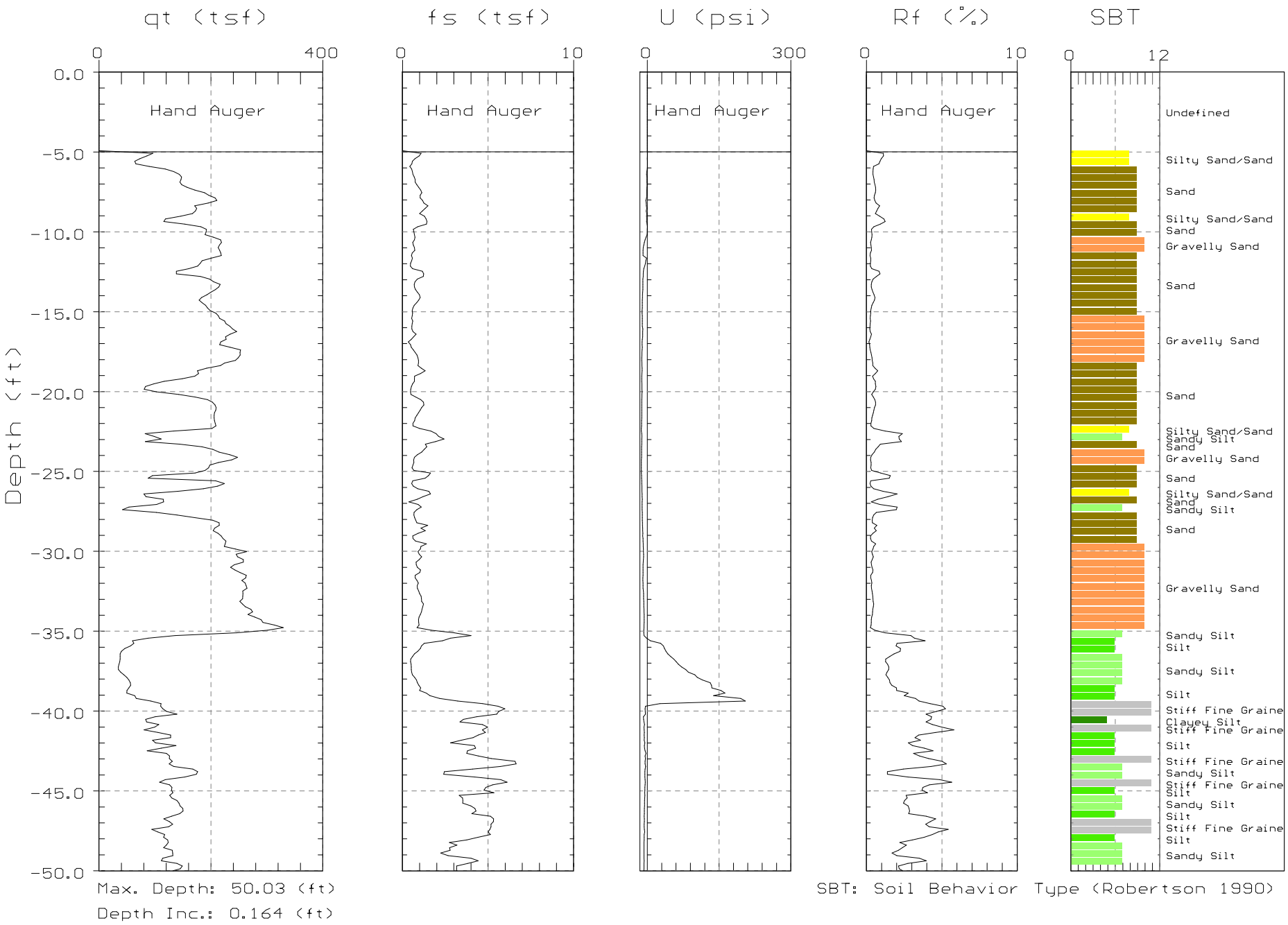
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-50

Engineer: H.RODGERS
Date: 02:10:06 08:25



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

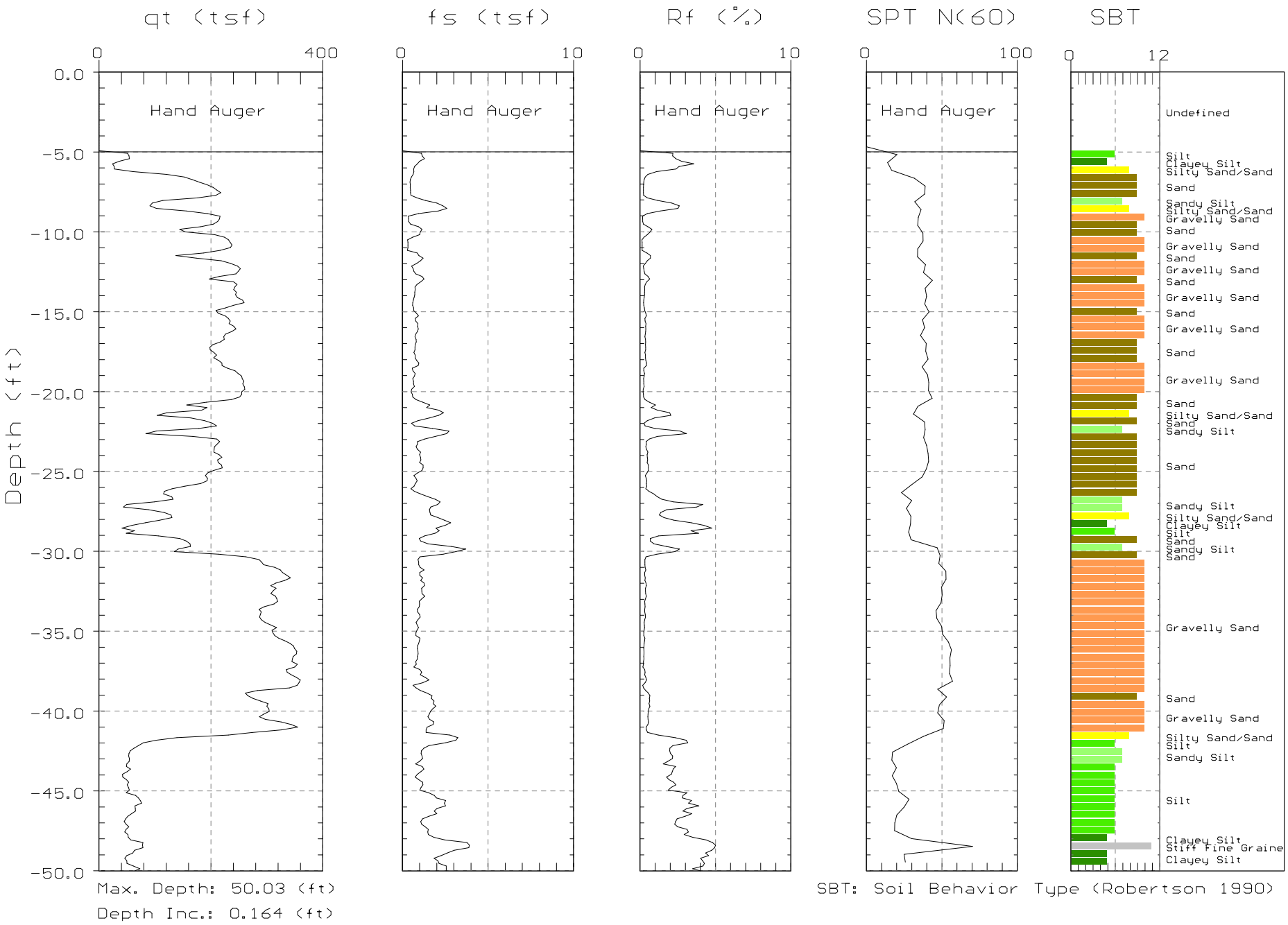
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-51

Engineer: H.RODGERS
Date: 02:10:06 09:40

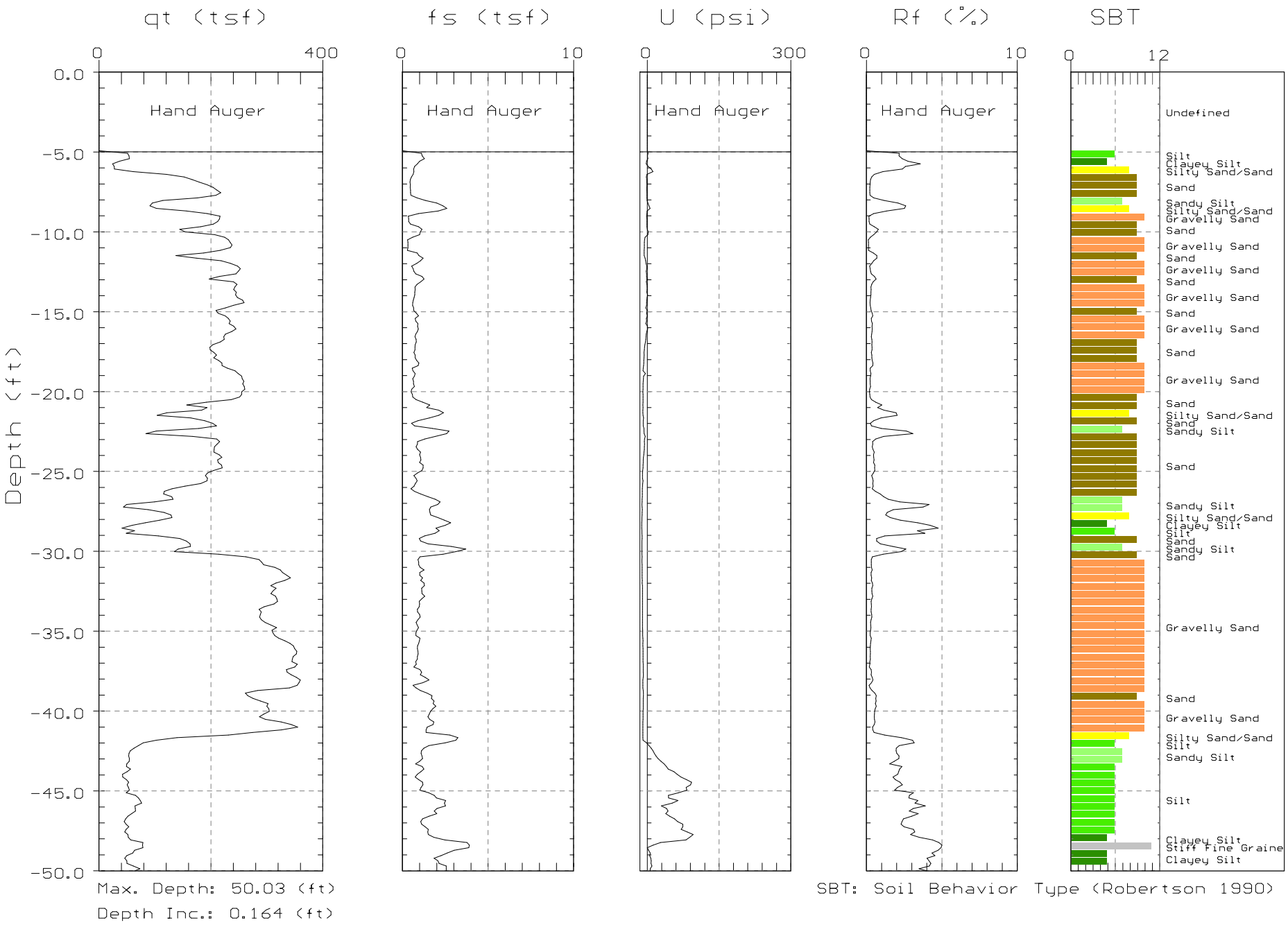


GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-51

Engineer: H.RODGERS
Date: 02:10:06 09:40



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

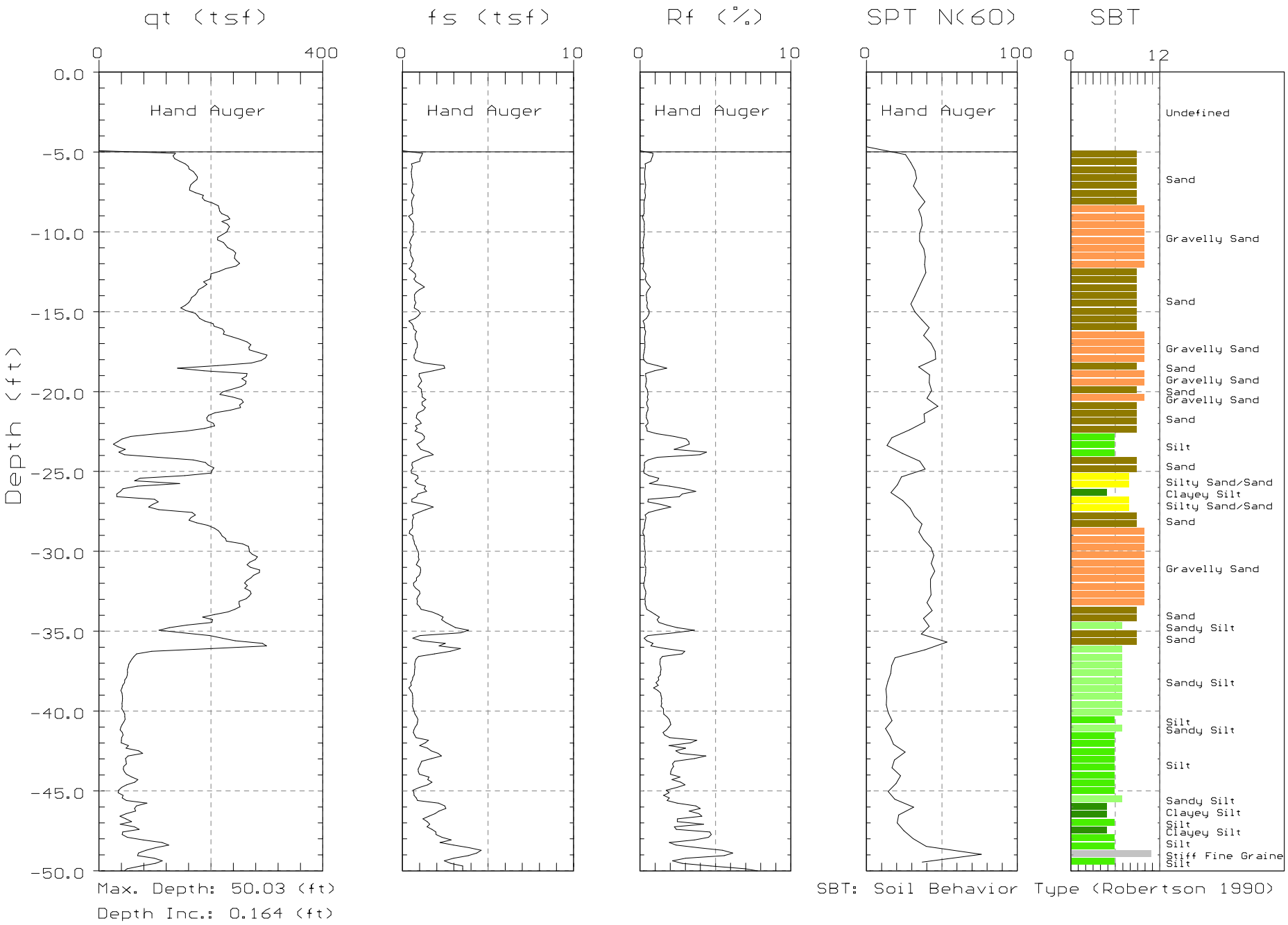
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-52

Engineer: H.RODGERS
Date: 02:10:06 10:37



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

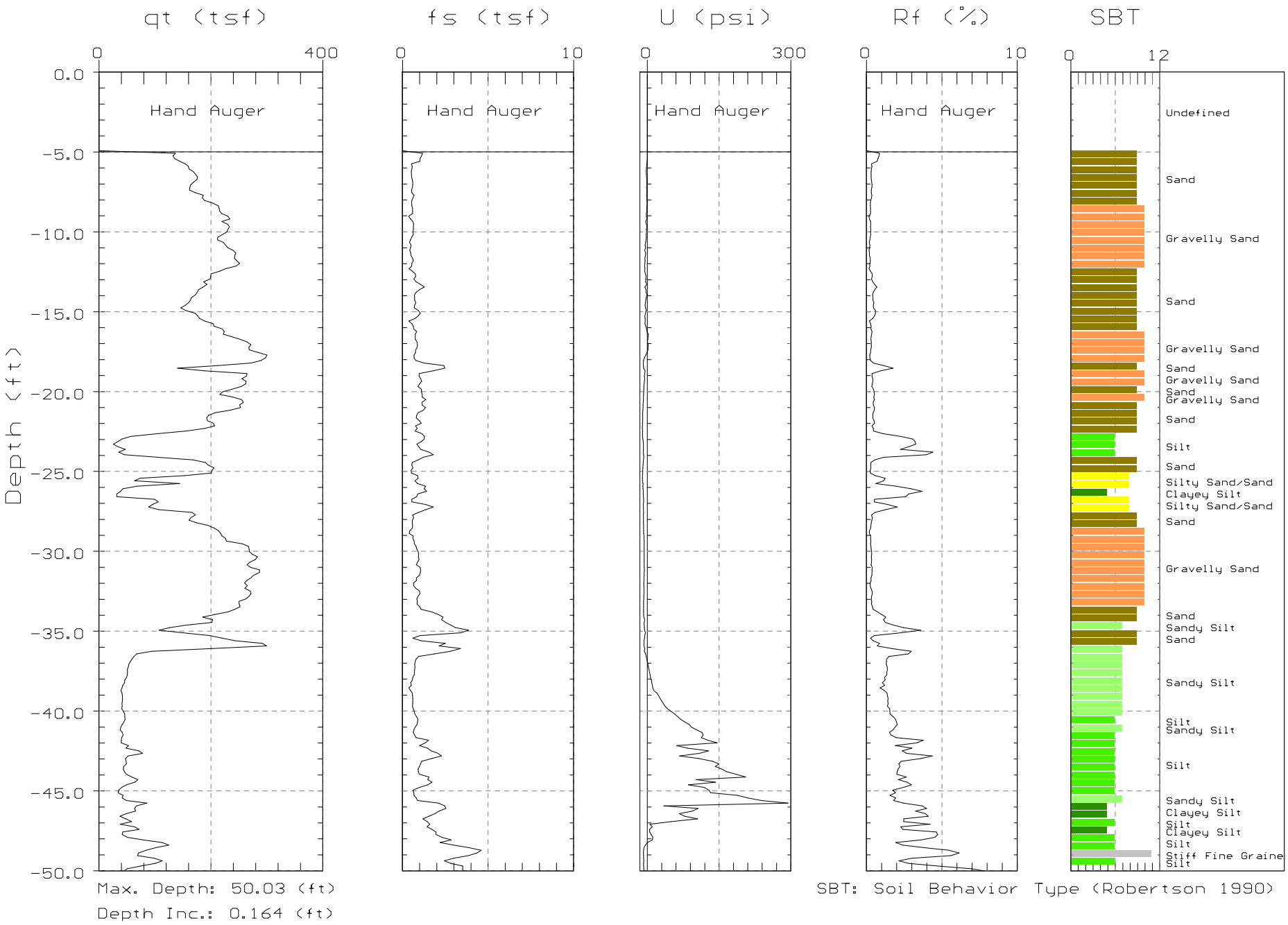
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-52

Engineer: H.RODGERS
Date: 02:10:06 10:37



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

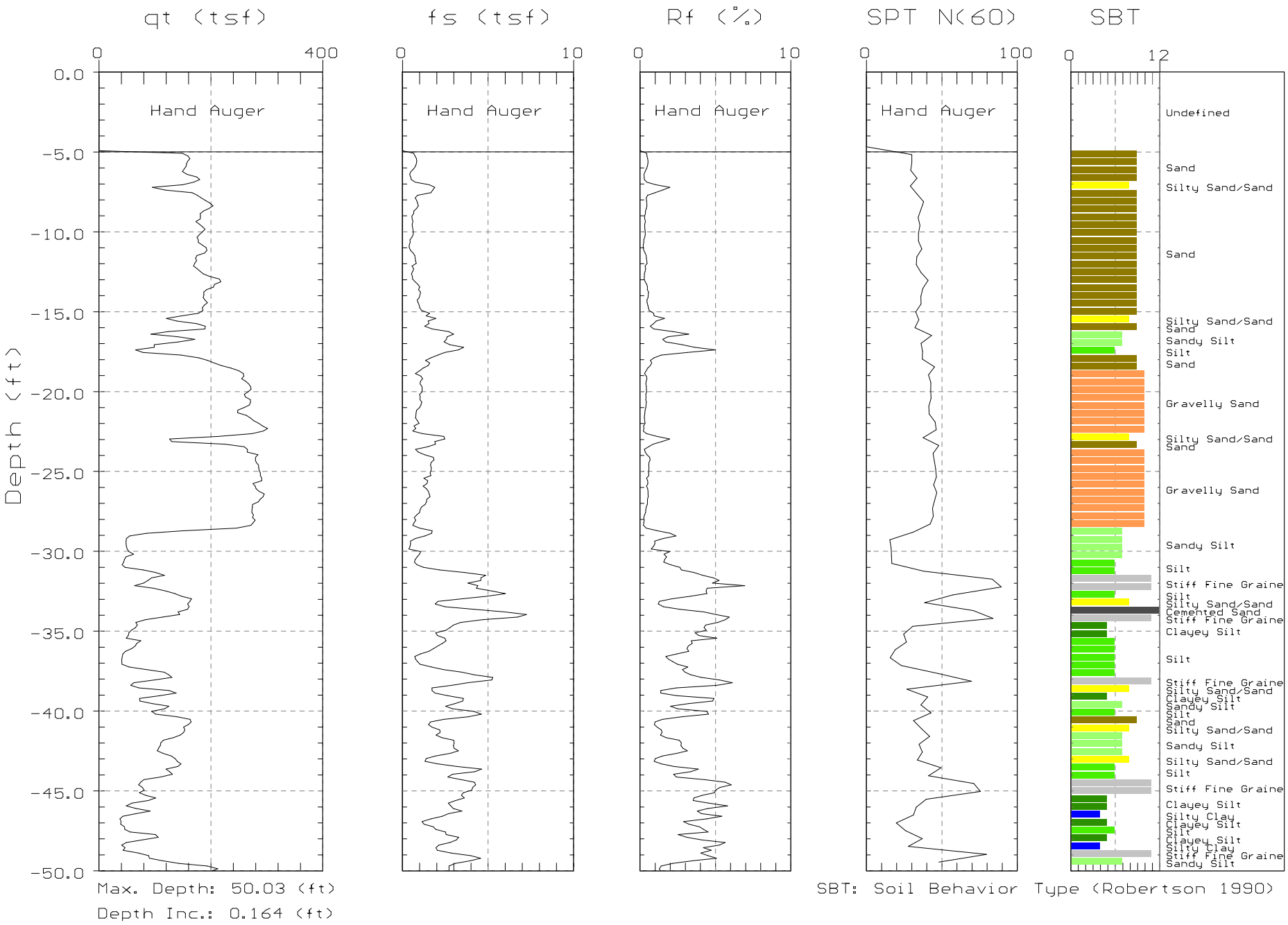
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-53

Engineer: H.RODGERS
Date: 02:10:06 11:28

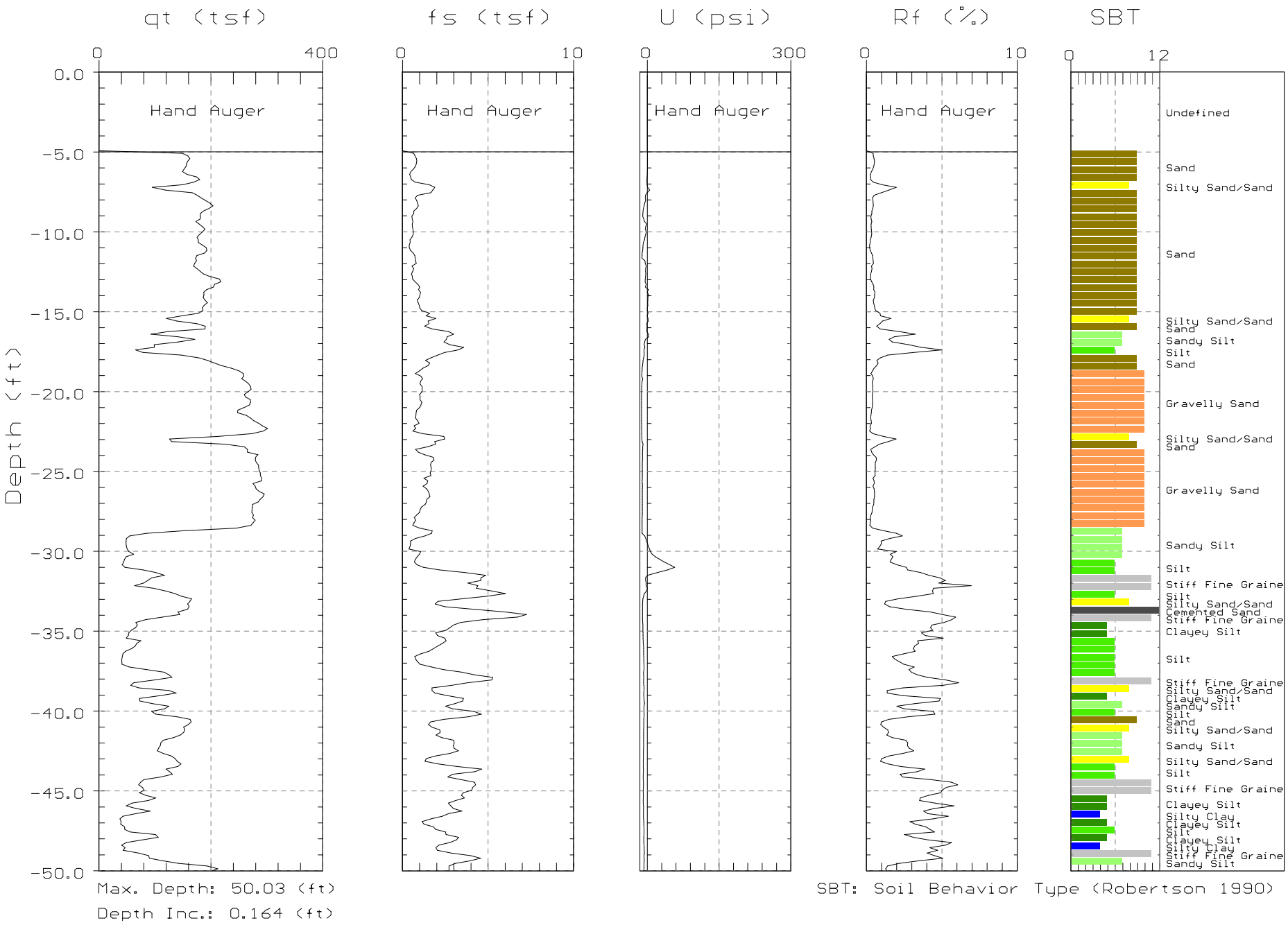


GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-53

Engineer: H.RODGERS
Date: 02:10:06 11:28



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

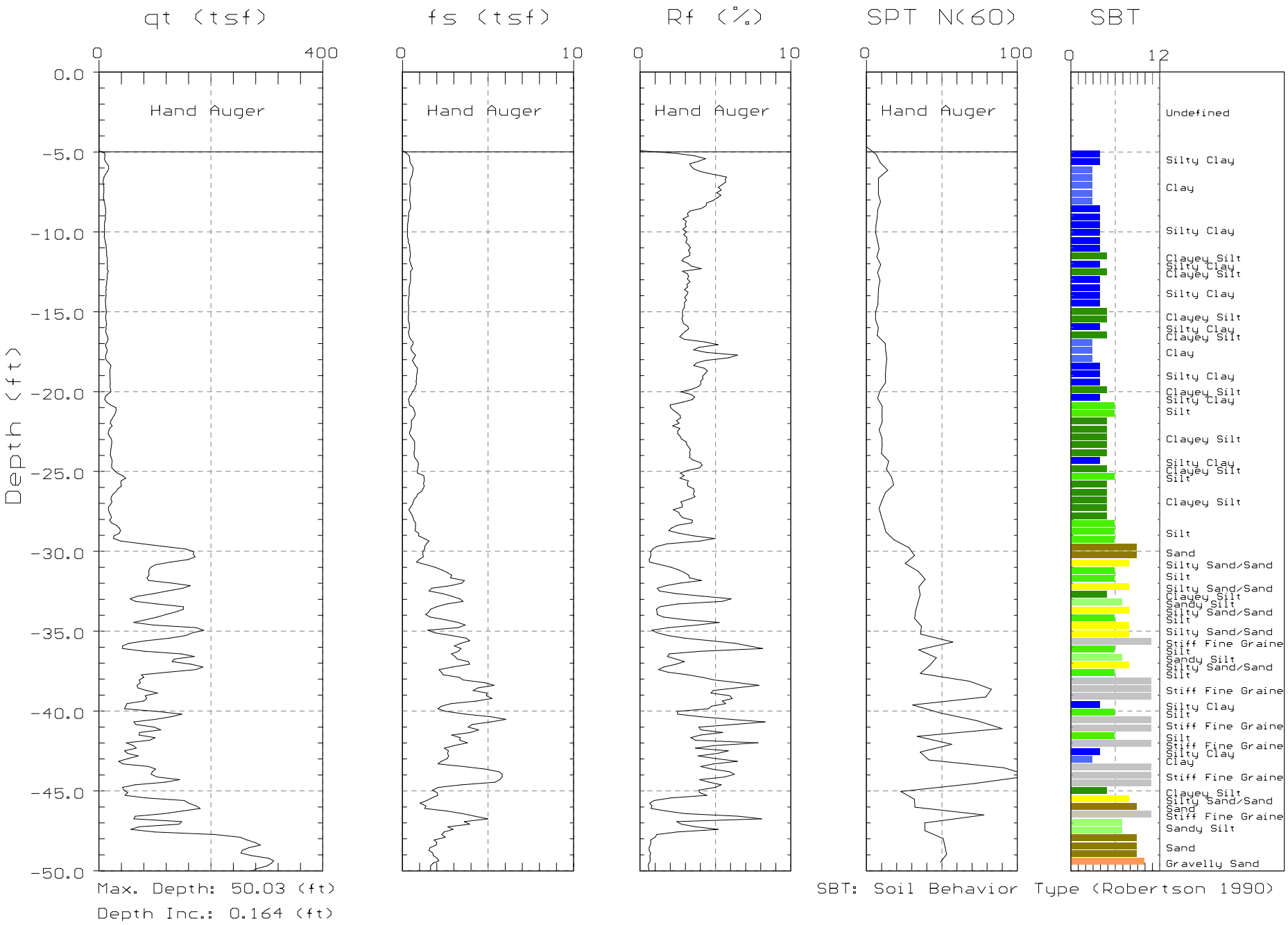
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-54

Engineer: H.RODGERS
Date: 02:10:06 13:26



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

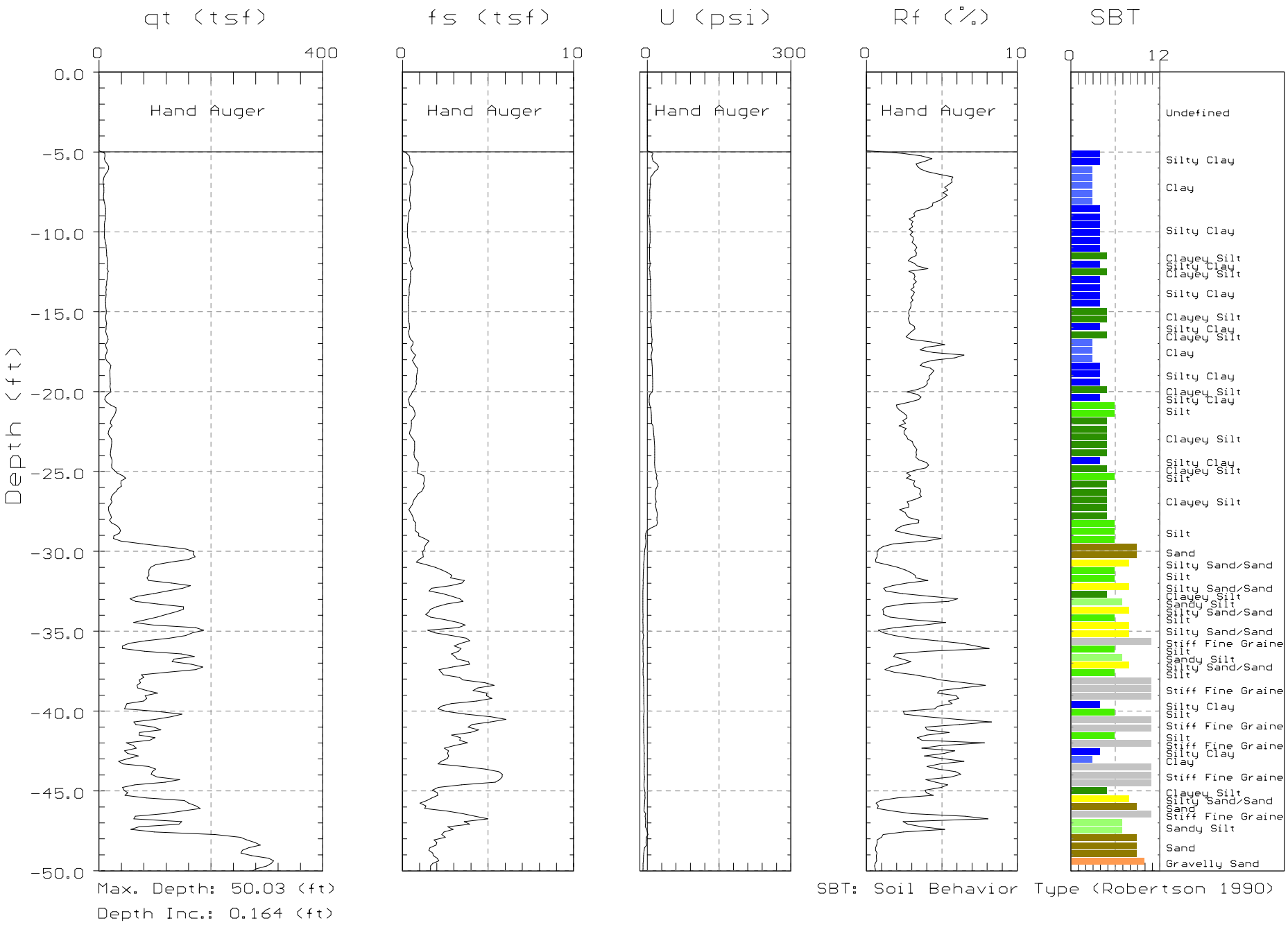
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-54

Engineer: H.RODGERS
Date: 02:10:06 13:26



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

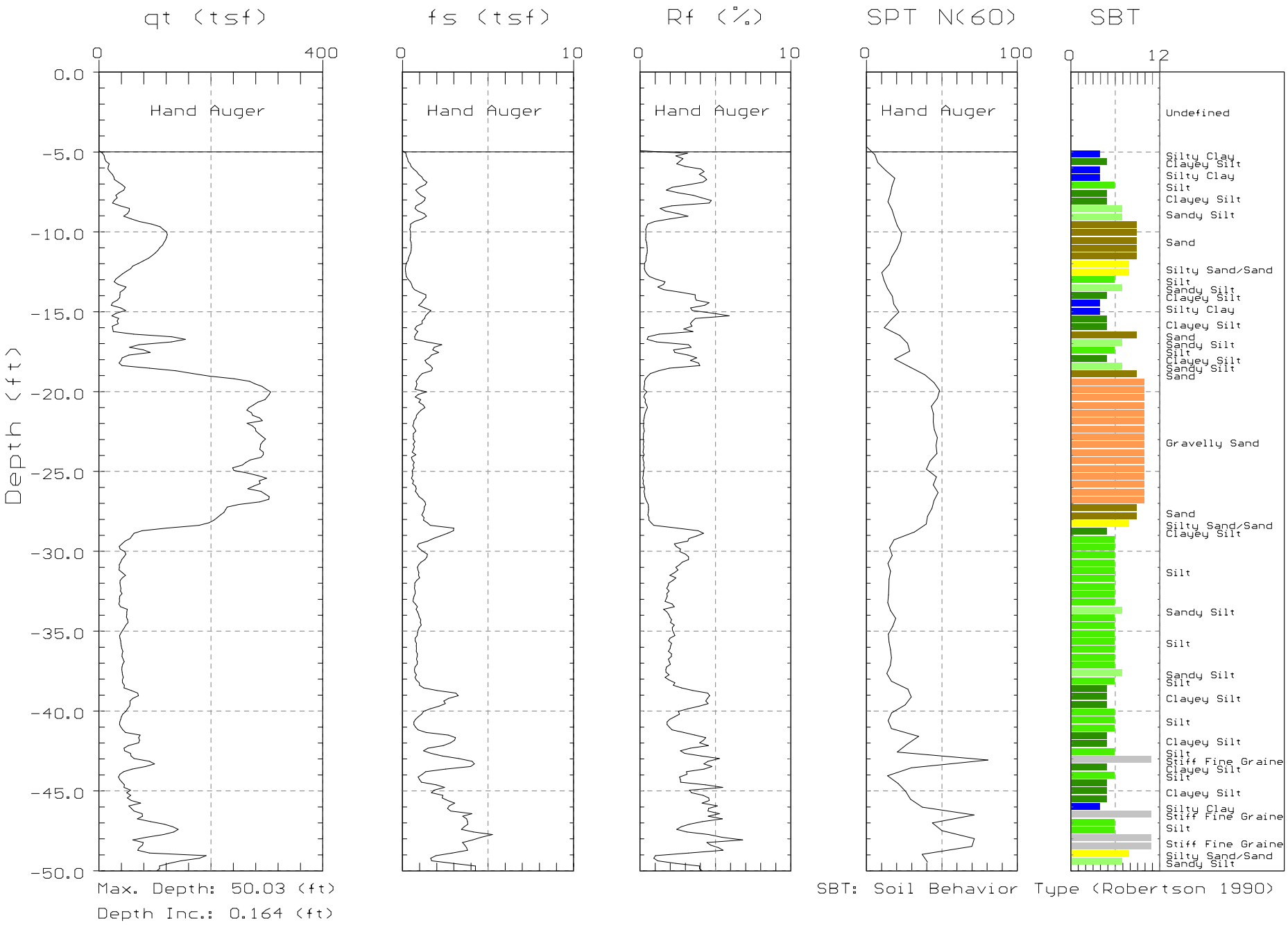
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-55

Engineer: H.RODGERS
Date: 02:10:06 14:23



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

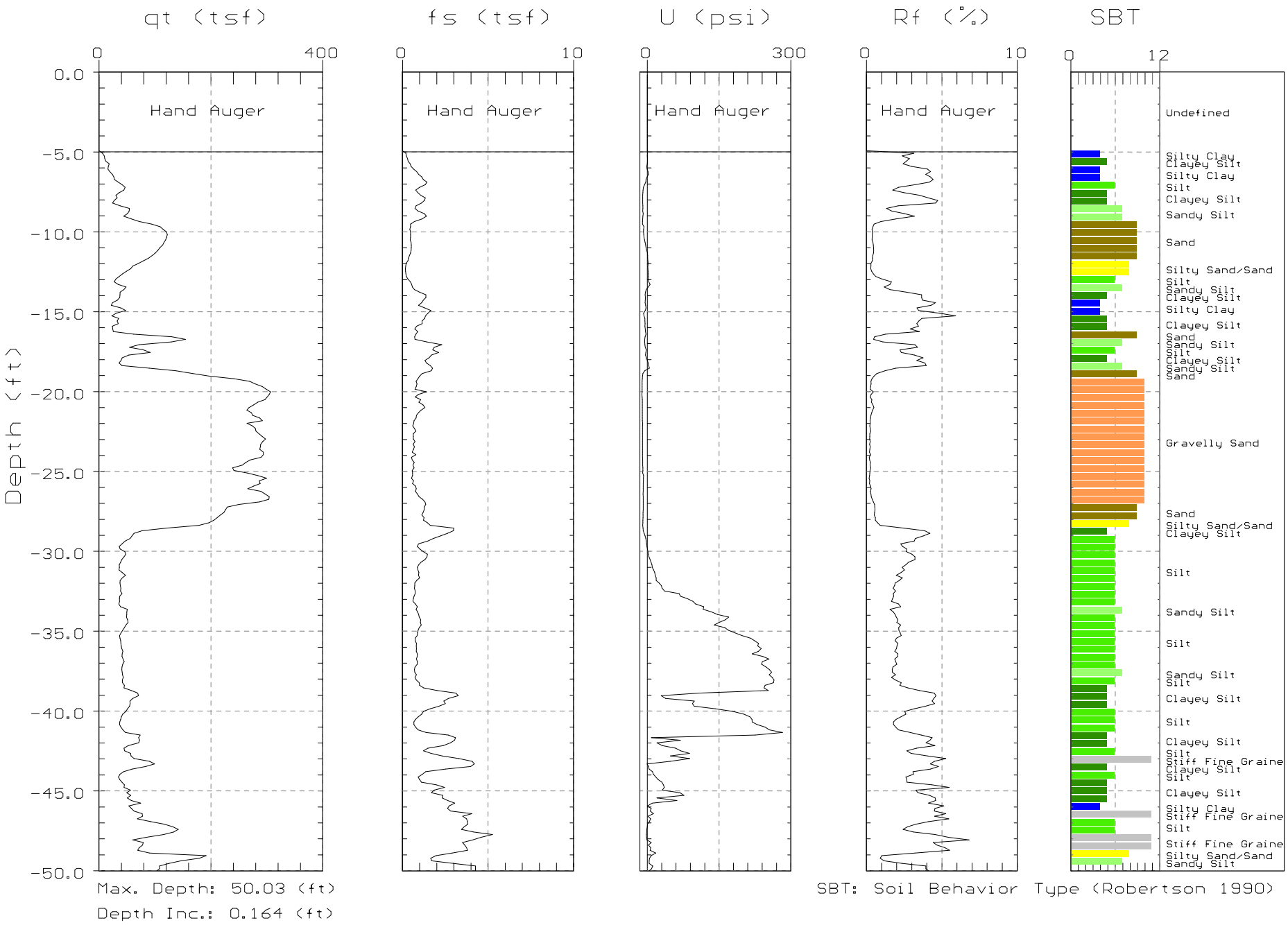
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-55

Engineer: H.RODGERS
Date: 02:10:06 14:23



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

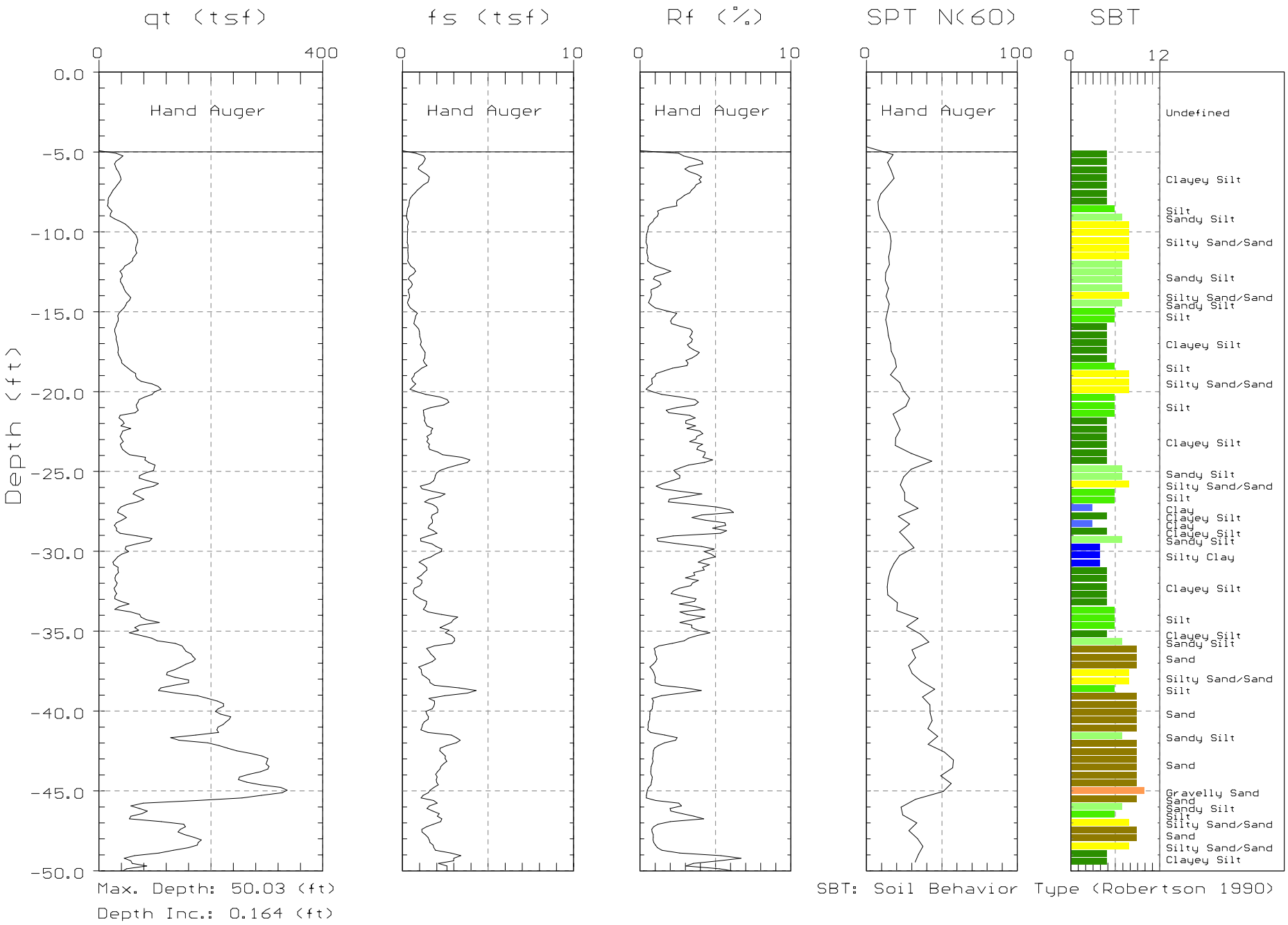
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-56

Engineer: H.RODGERS
Date: 02:10:06 15:13

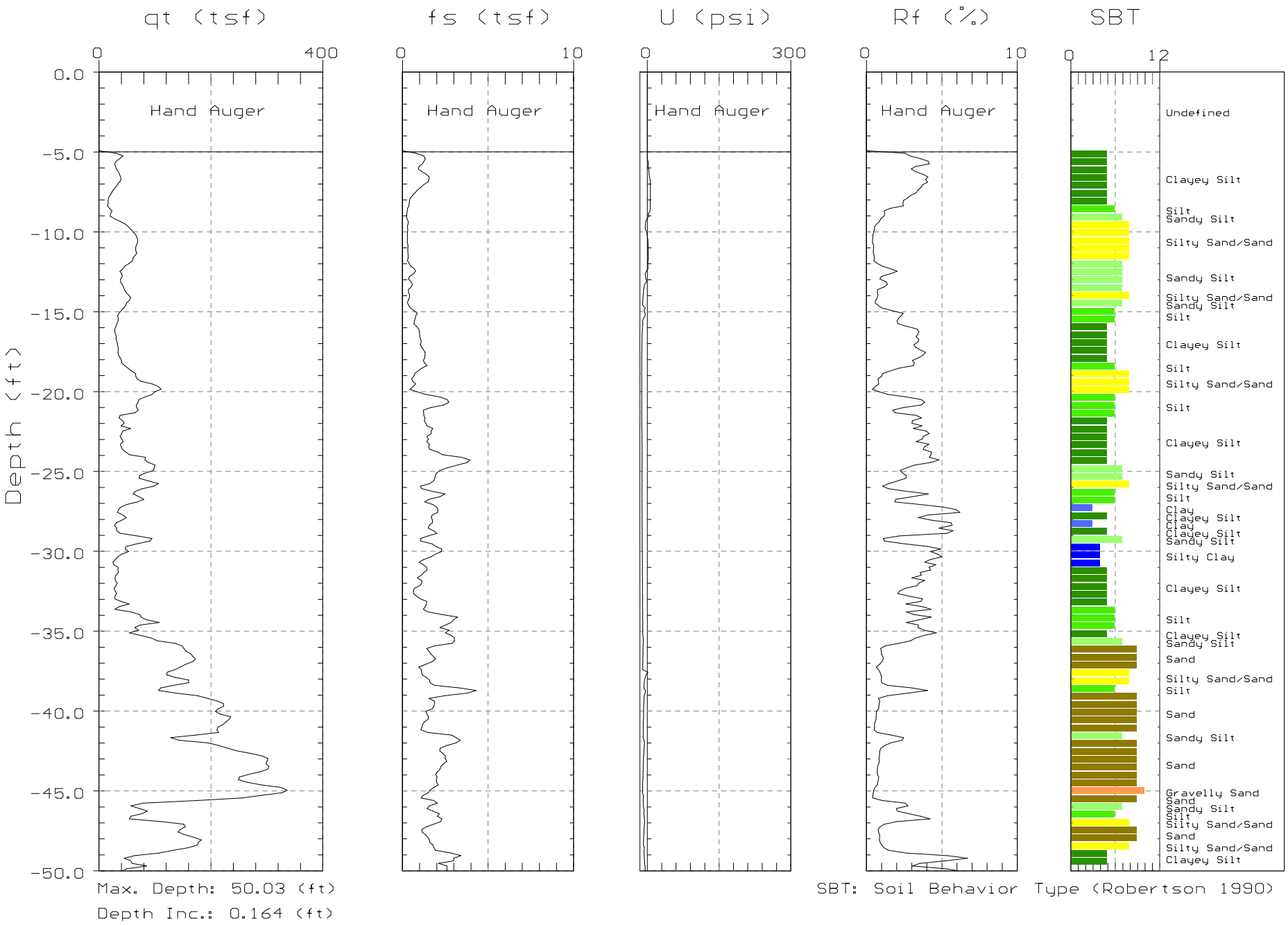


GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-56

Engineer: H.RODGERS
Date: 02:10:06 15:13



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

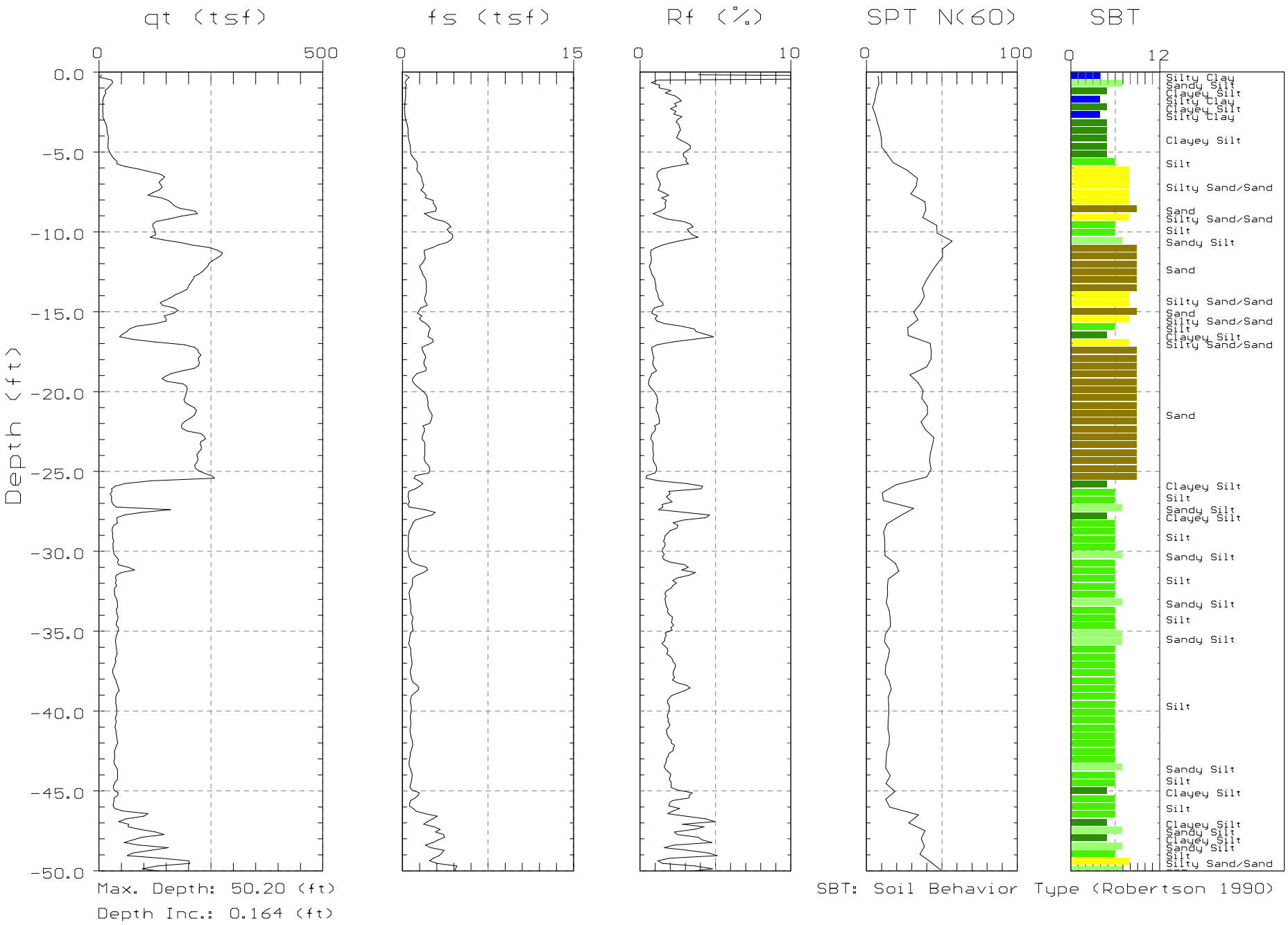
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-57

Engineer: H.RODGERS
Date: 02:24:06 09:12



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

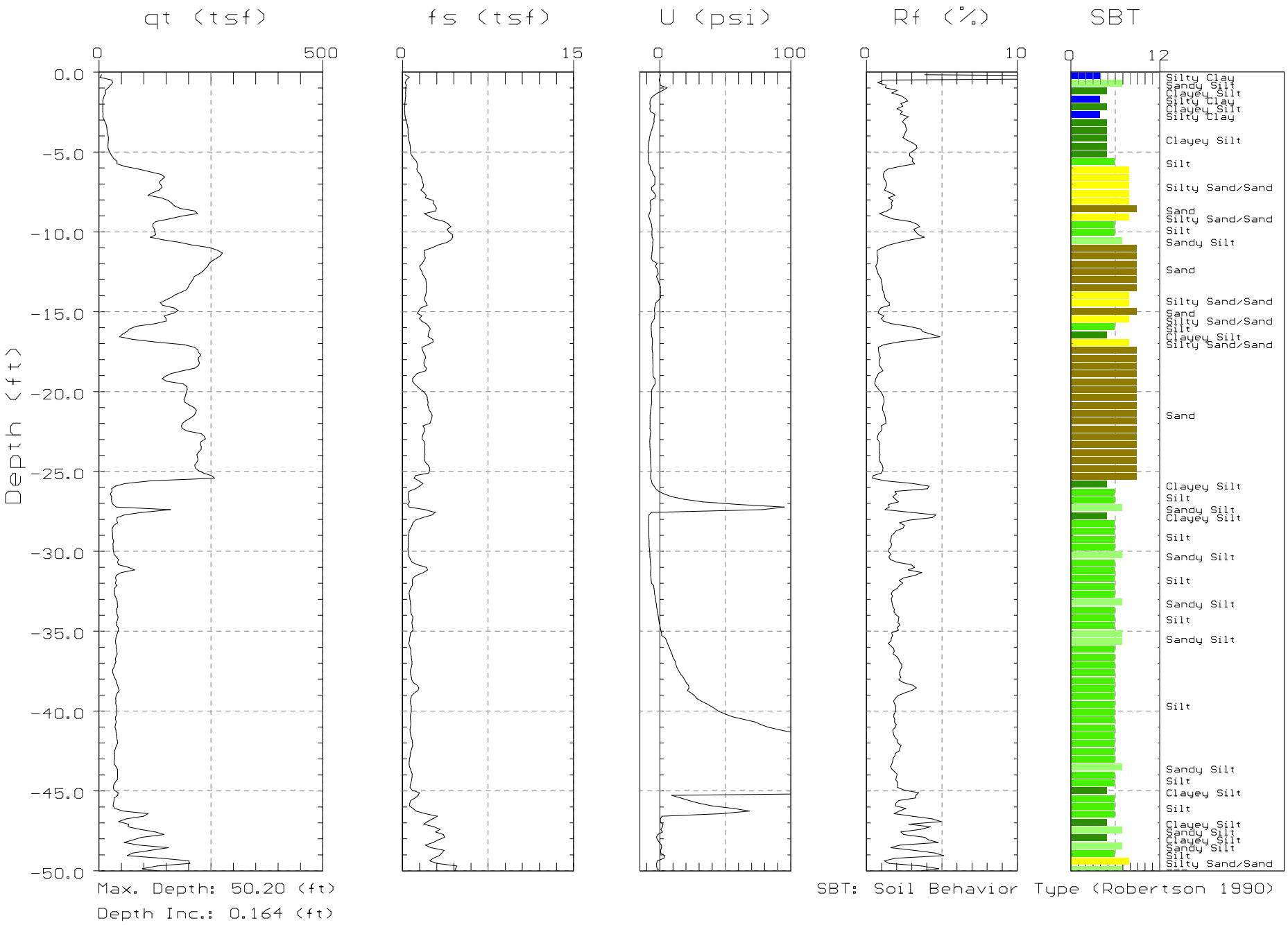
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-57

Engineer: H.RODGERS
Date: 02:24:06 09:12



Max. Depth: 50.20 (ft)
Depth Inc.: 0.164 (ft)

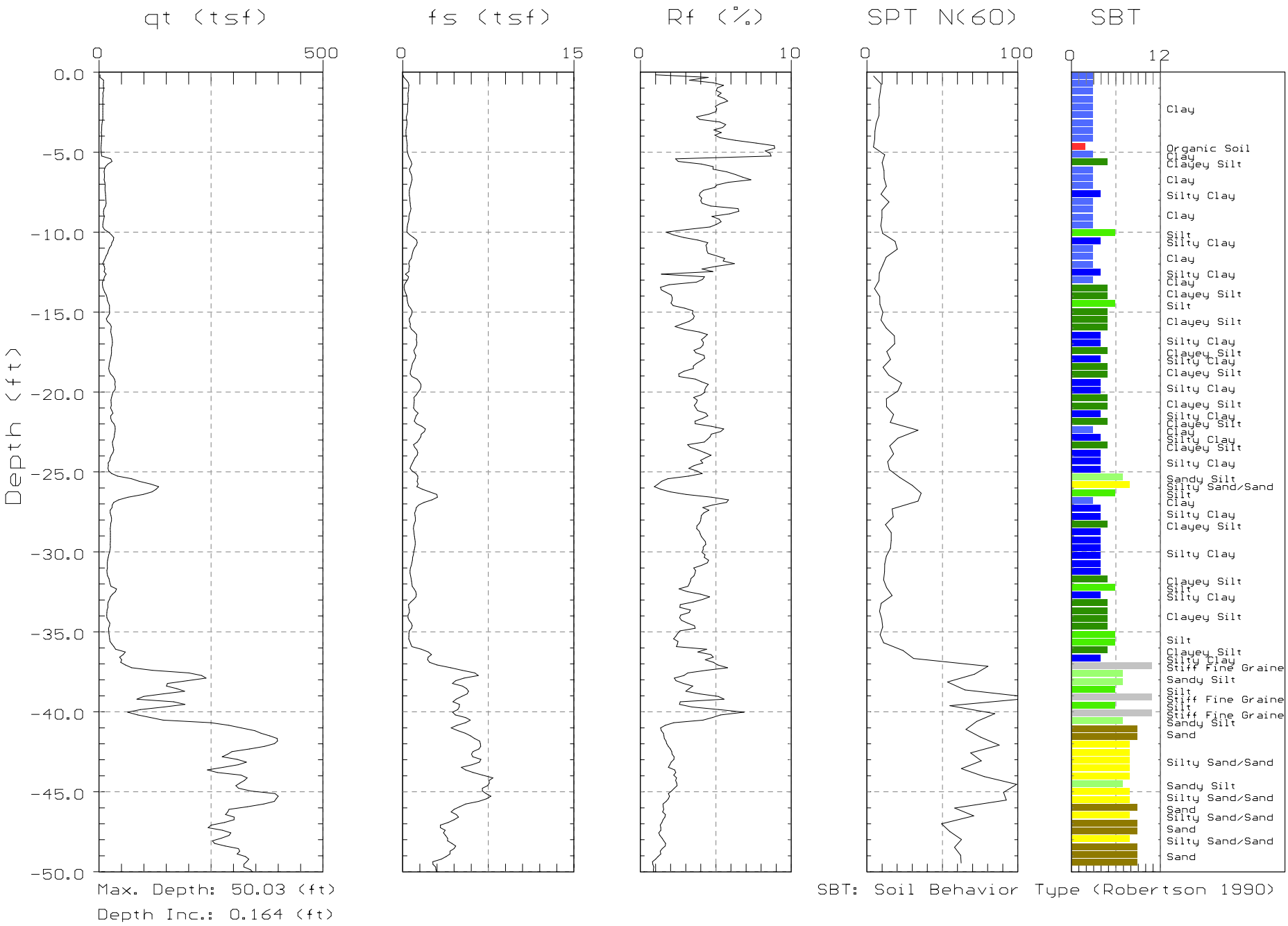
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-58

Engineer: H.RODGERS
Date: 02:24:06 10:07



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

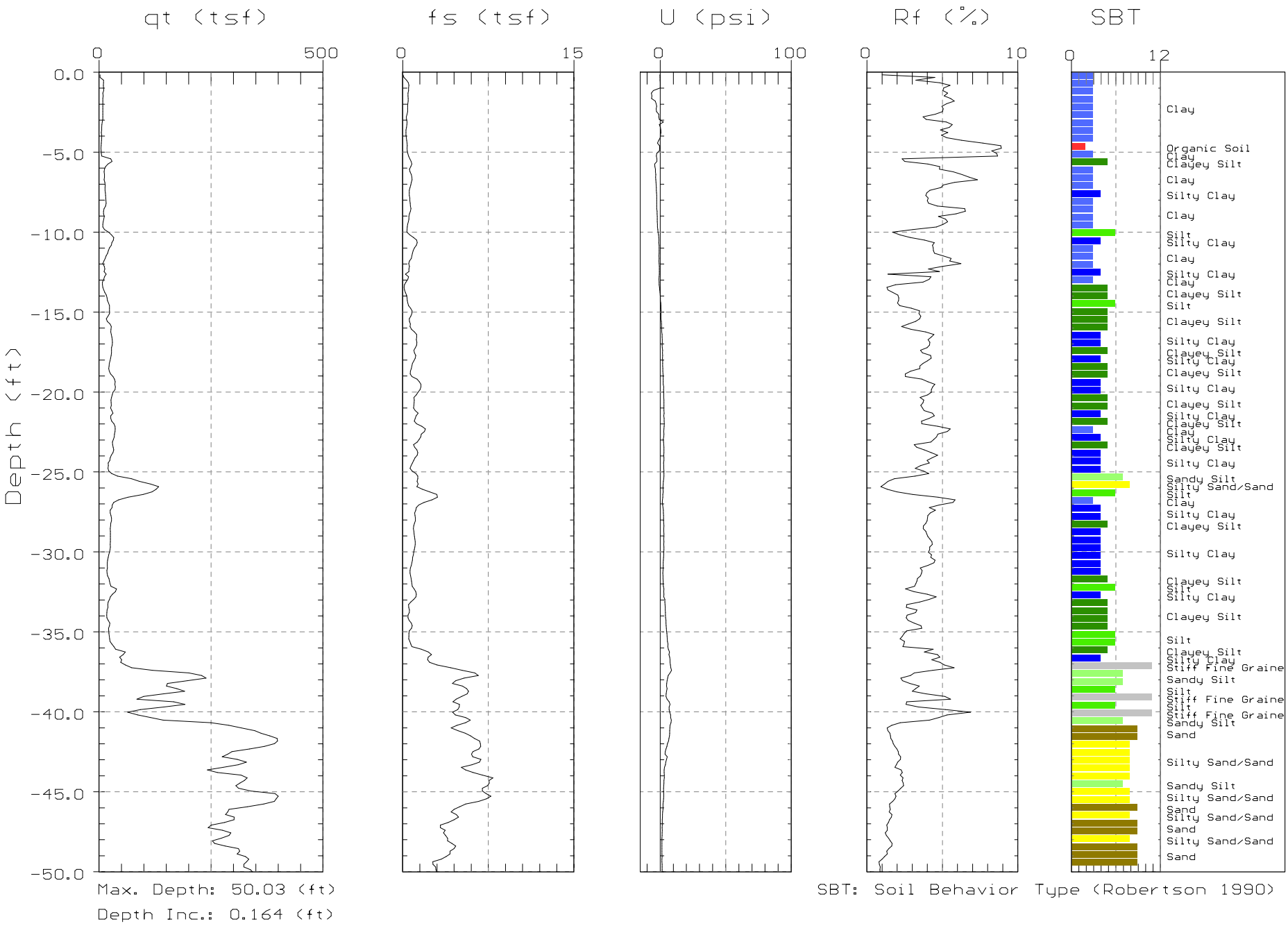
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-58

Engineer: H.RODGERS
Date: 02:24:06 10:07



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

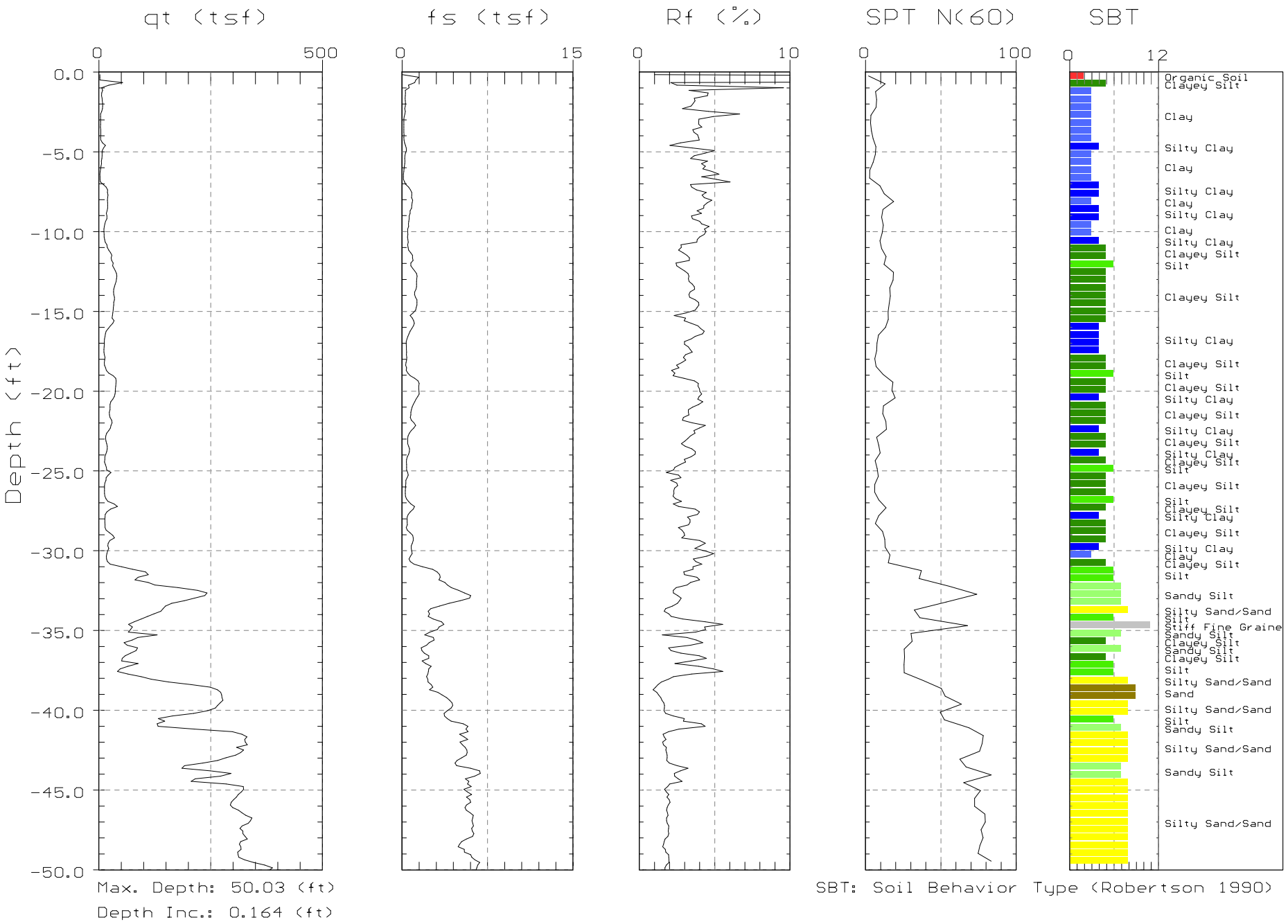
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-59

Engineer: H.RODGERS
Date: 02:24:06 10:58



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

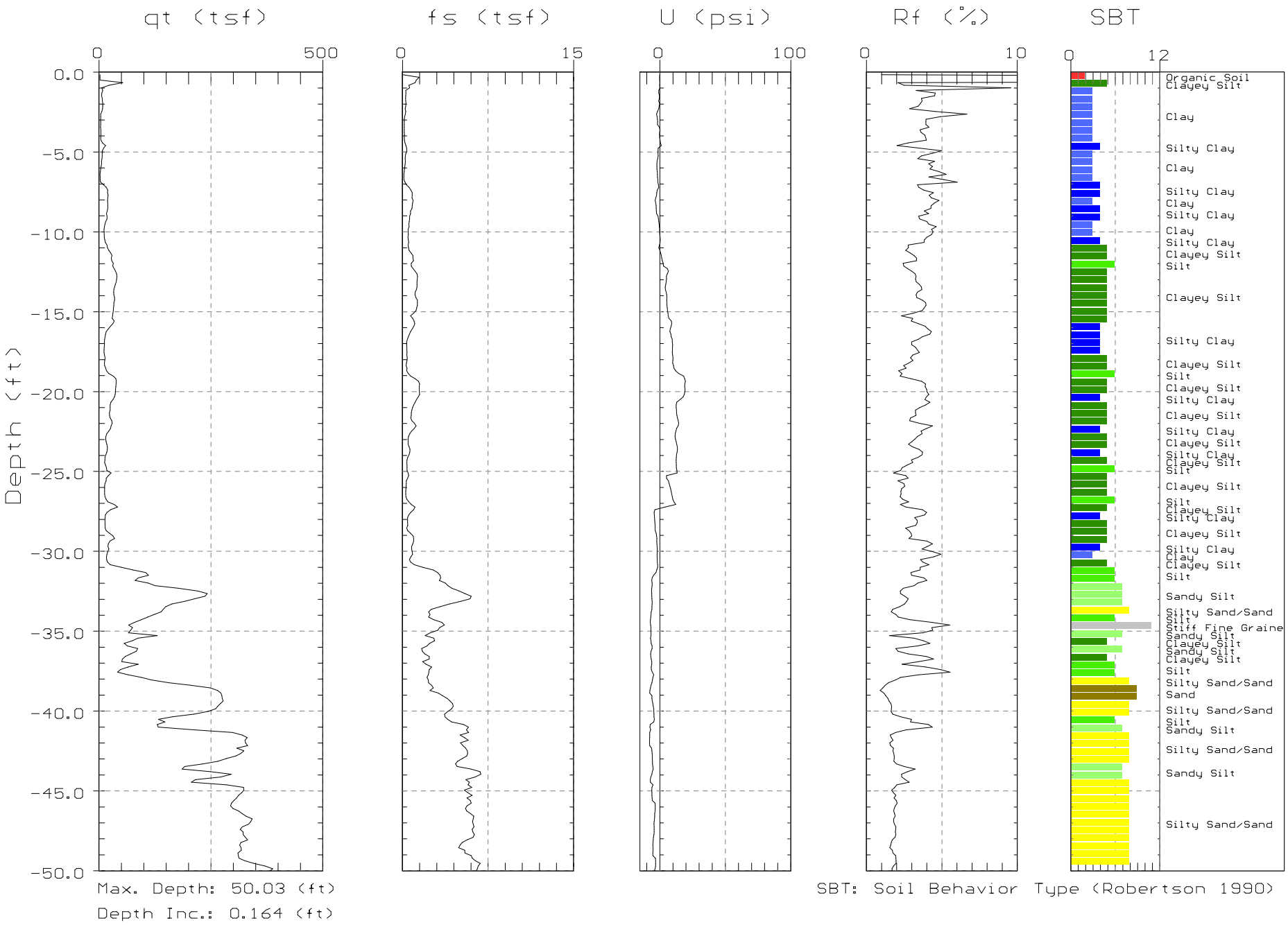
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-59

Engineer: H.RODGERS
Date: 02:24:06 10:58



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

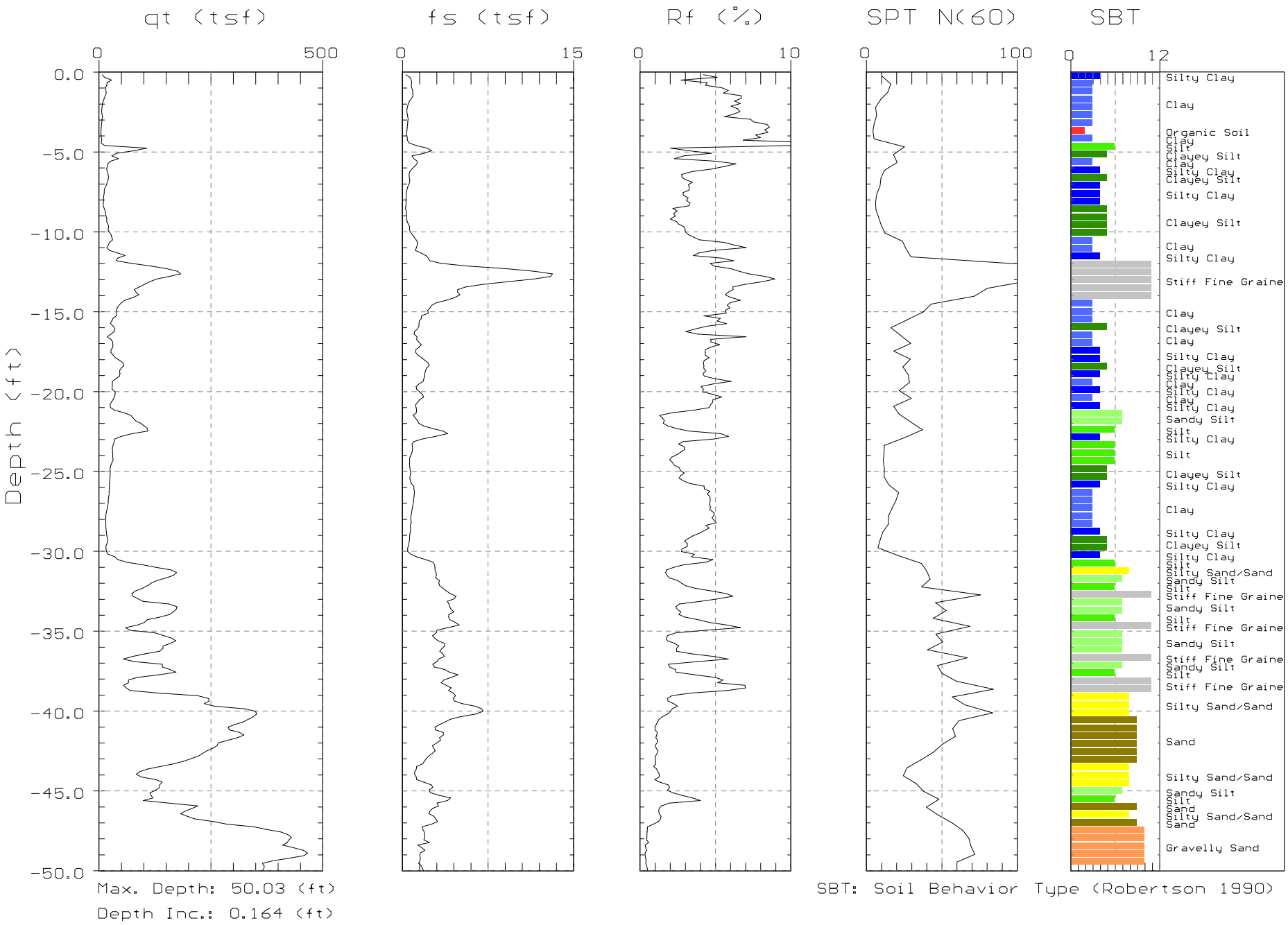
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-60

Engineer: H.RODGERS
Date: 02:24:06 11:51



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

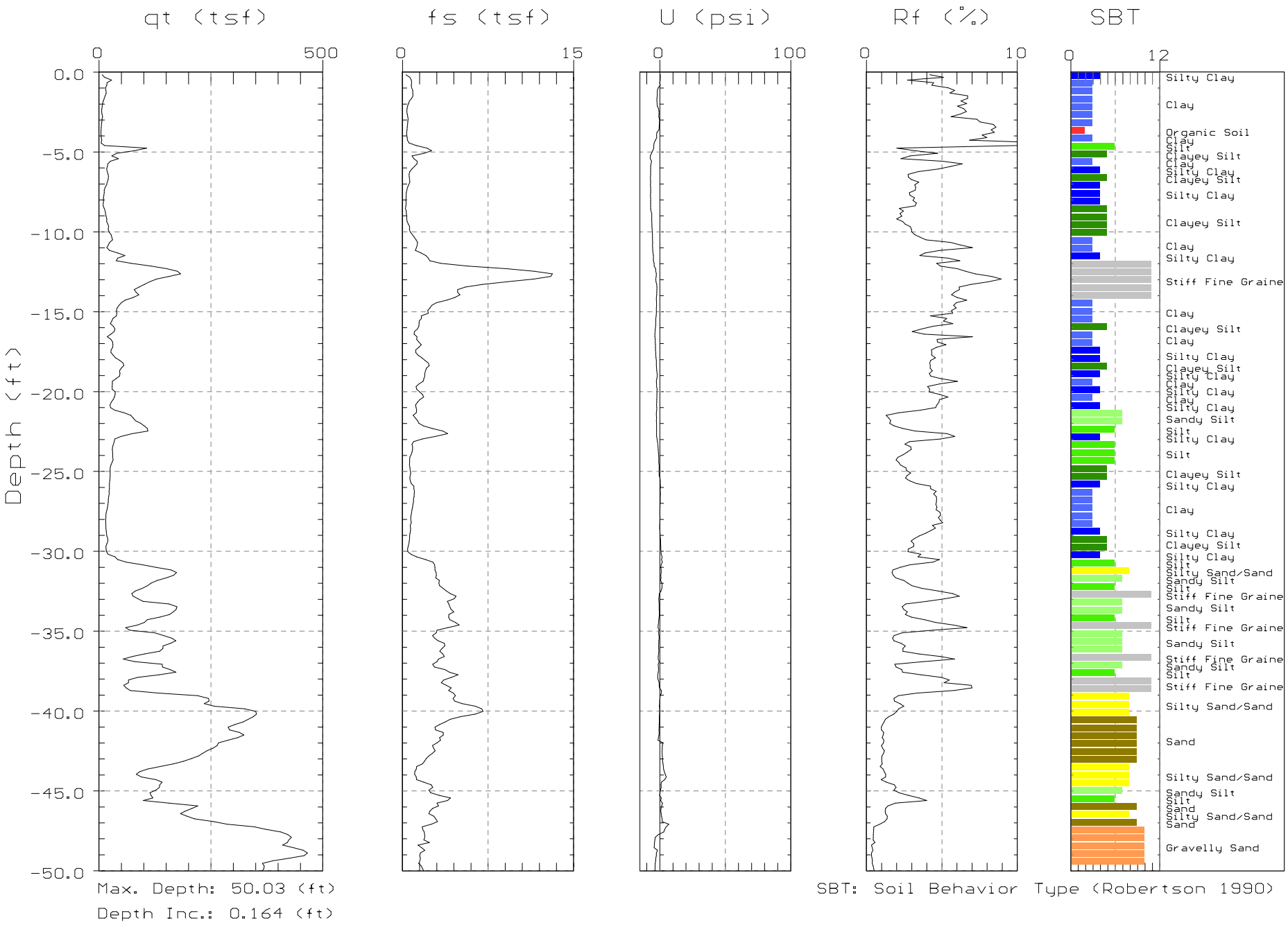
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-60

Engineer: H.RODGERS
Date: 02:24:06 11:51



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

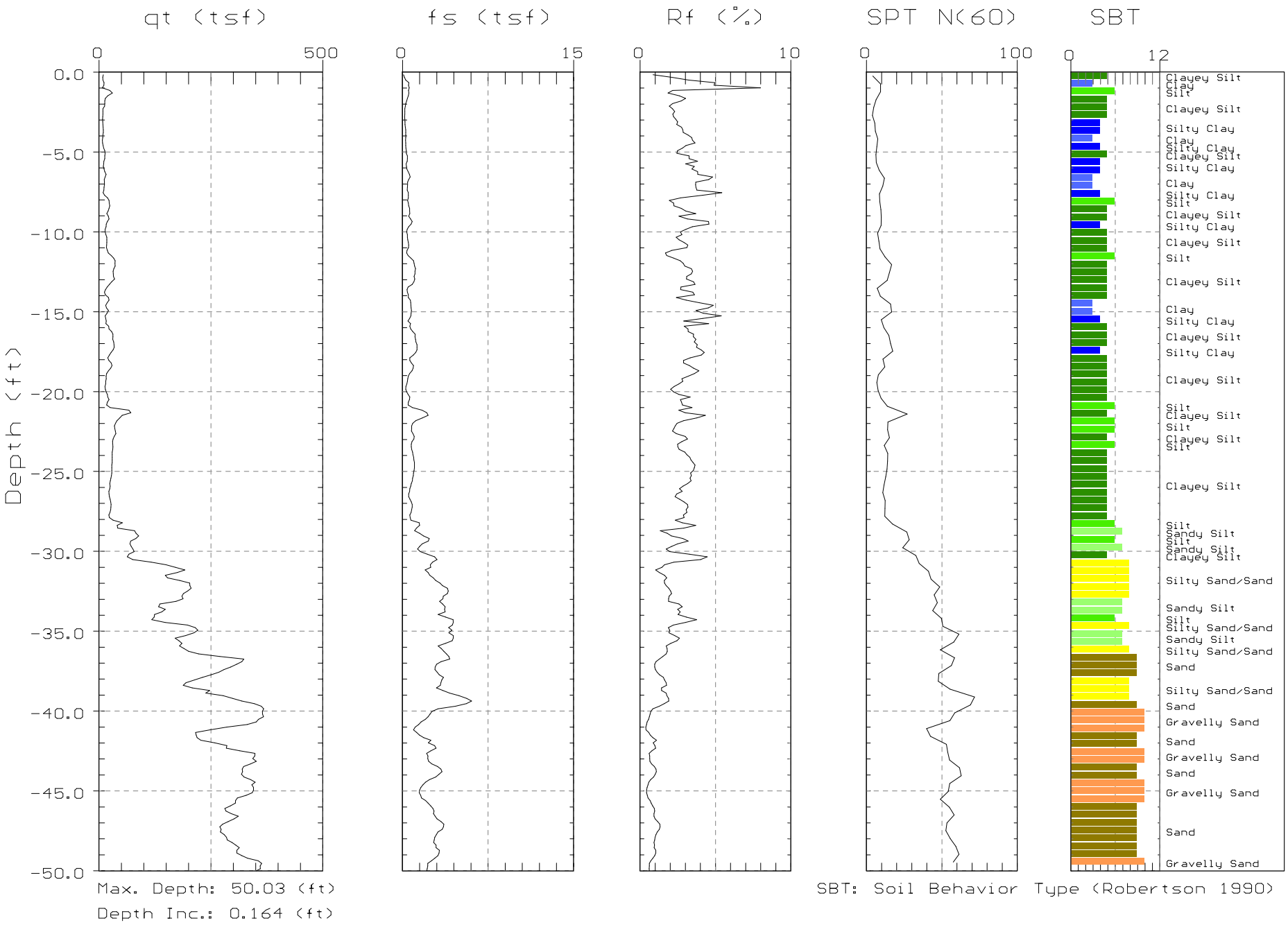
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-61

Engineer: H.RODGERS
Date: 02:24:06 12:37



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

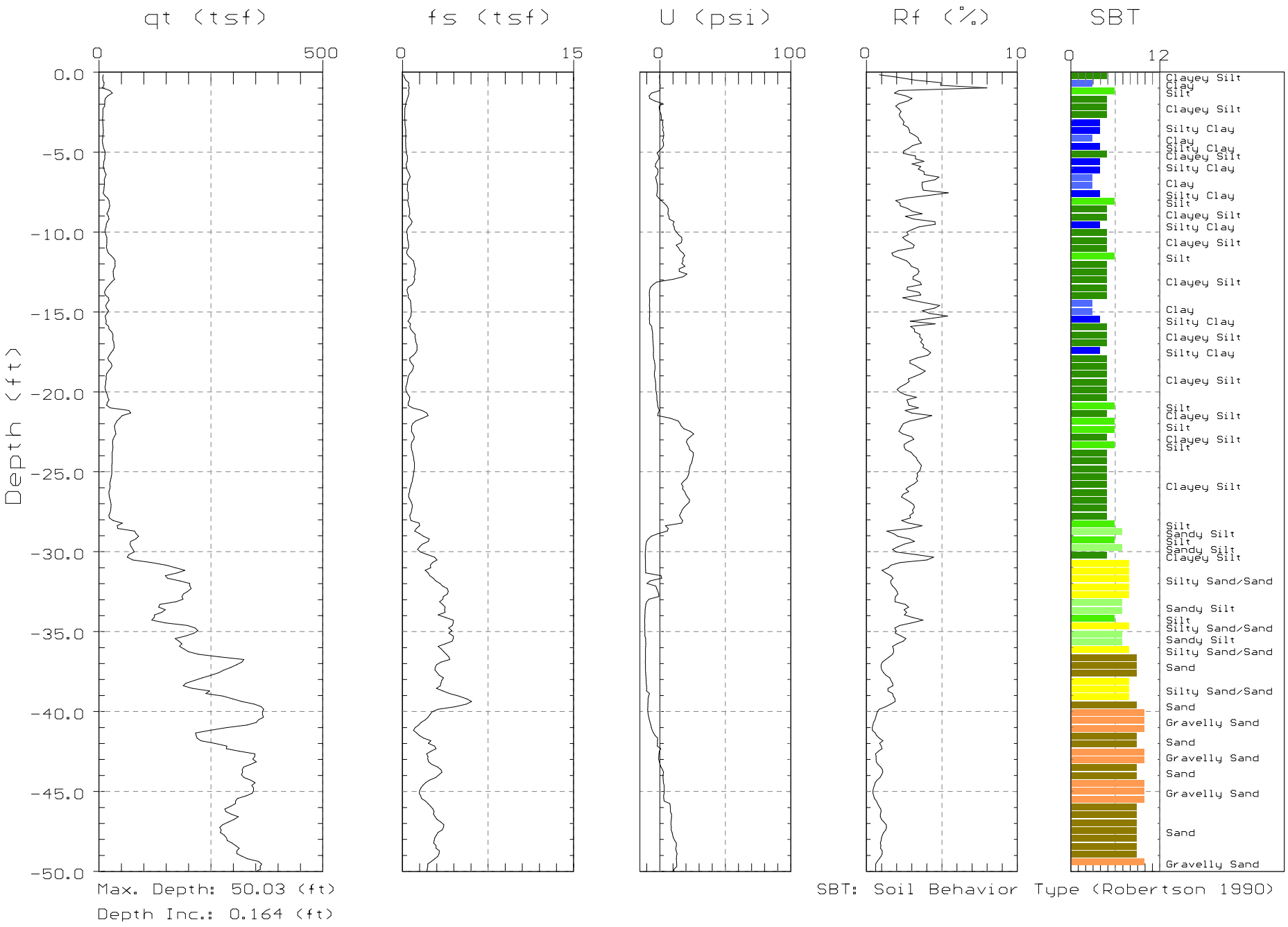
SBT: Soil Behavior Type (Robertson 1990)

GREGG

TREADWELL & ROLLO

Site: HARBOR PARK
Location: CPT-61

Engineer: H.RODGERS
Date: 02:24:06 12:37

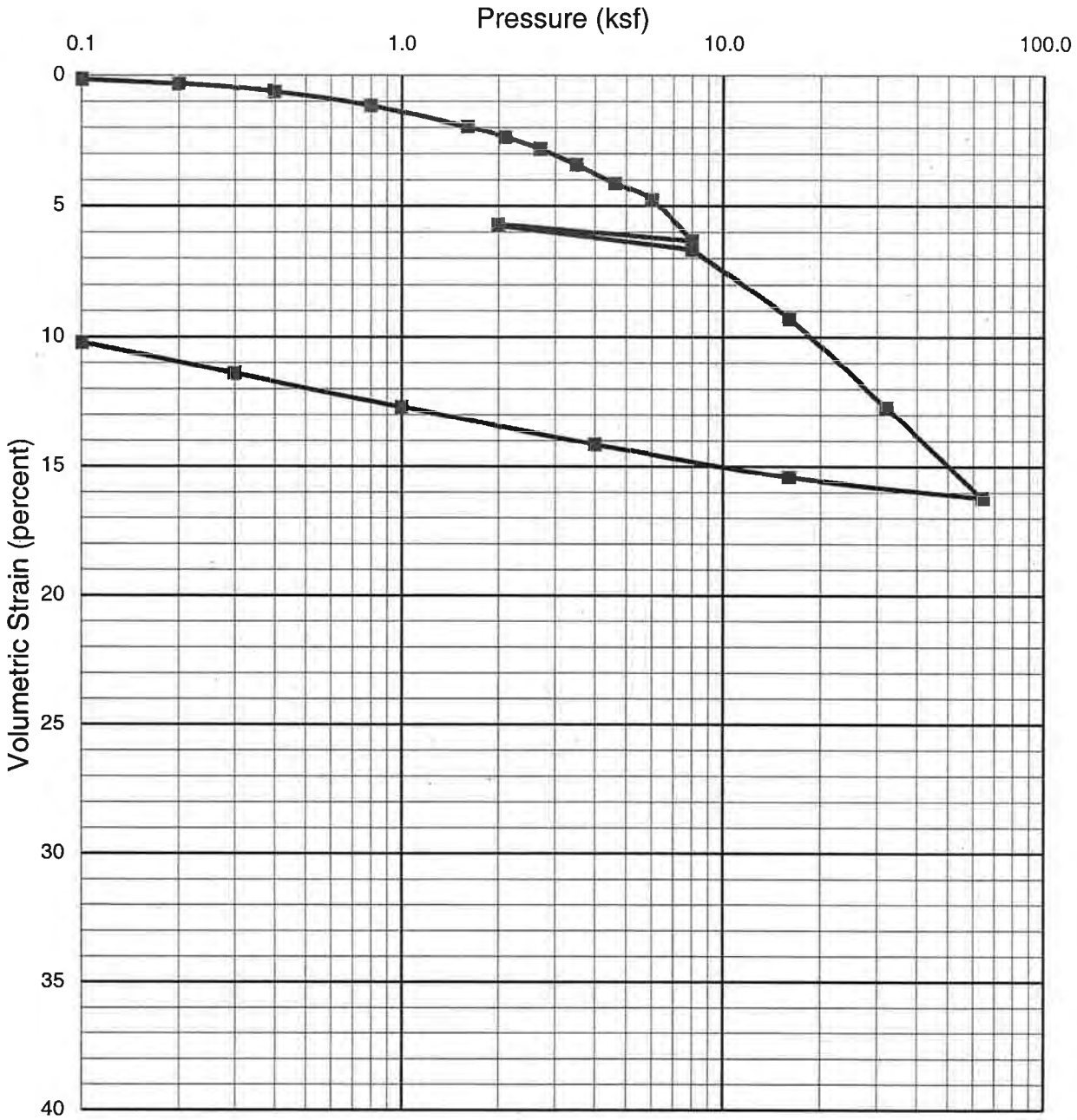


Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Treadwell&Rollo

APPENDIX C
Geotechnical Laboratory Test Results



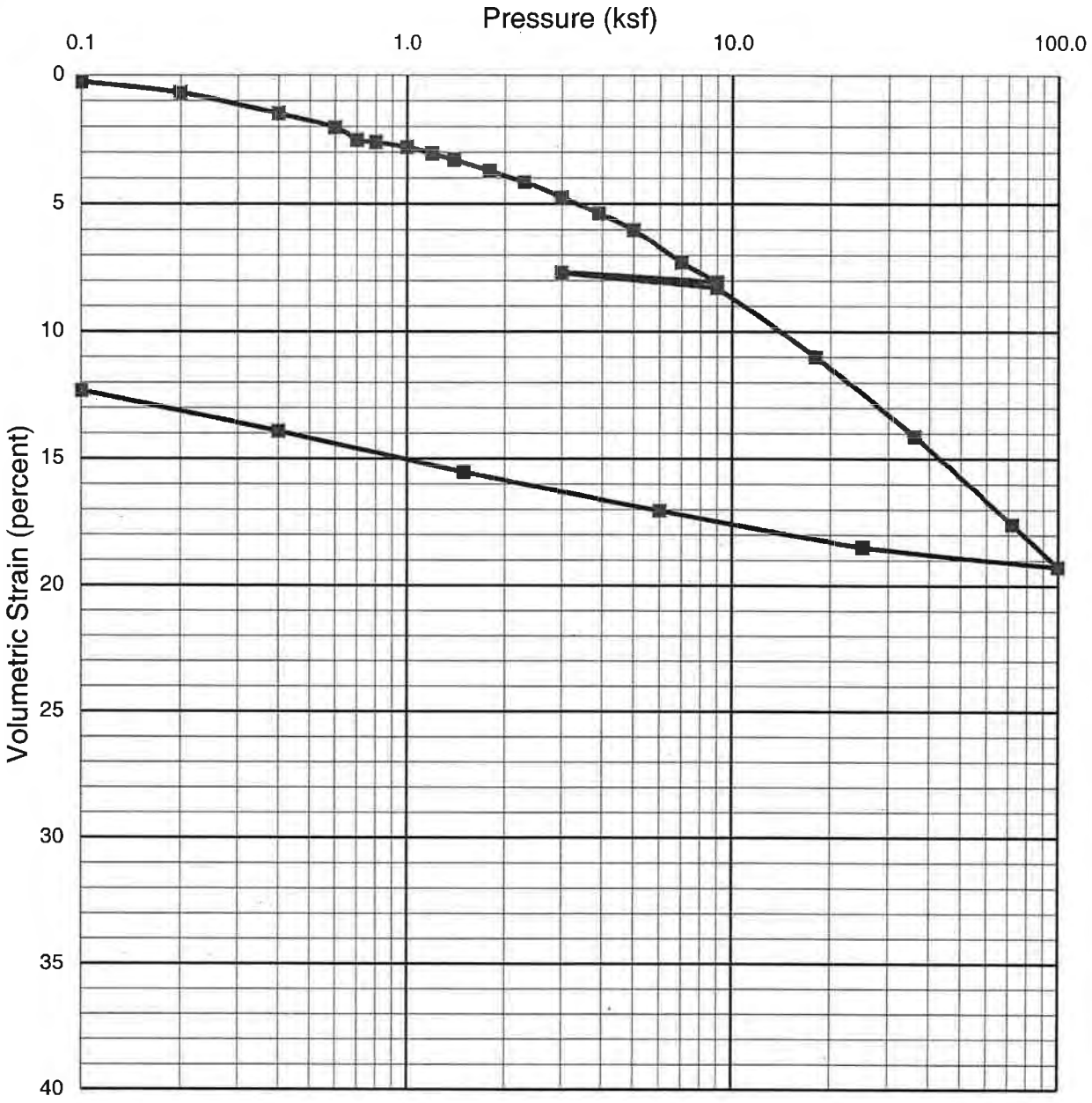
Sampler Type: Sprague & Henwood				Condition	Before Test			After Test	
Diameter (in)	2.42	Height (in)	1.00	Water Content	w_o	23.6	%	w_f	17.8 %
Overburden Pressure, p_o	700	psf		Void Ratio	e_o	0.64		e_f	0.48
Preconsol. Pressure, p_c	7,500	psf		Saturation	S_o	99	%	S_f	100 %
Compression Ratio, $C_{\varepsilon c}$	0.12			Dry Density	γ_d	103	pcf	γ_d	114 pcf
LL ND	PL ND			PI ND				G_s	2.70 (assumed)
Classification CLAY (CL), brown				Source B-1 @ 5.5 feet					

HARBOR PARK
Pittsburg, California

CONSOLIDATION TEST REPORT

Treadwell&Rollo

Date 06/12/06 | Project No. 4245.02 | Figure C-1



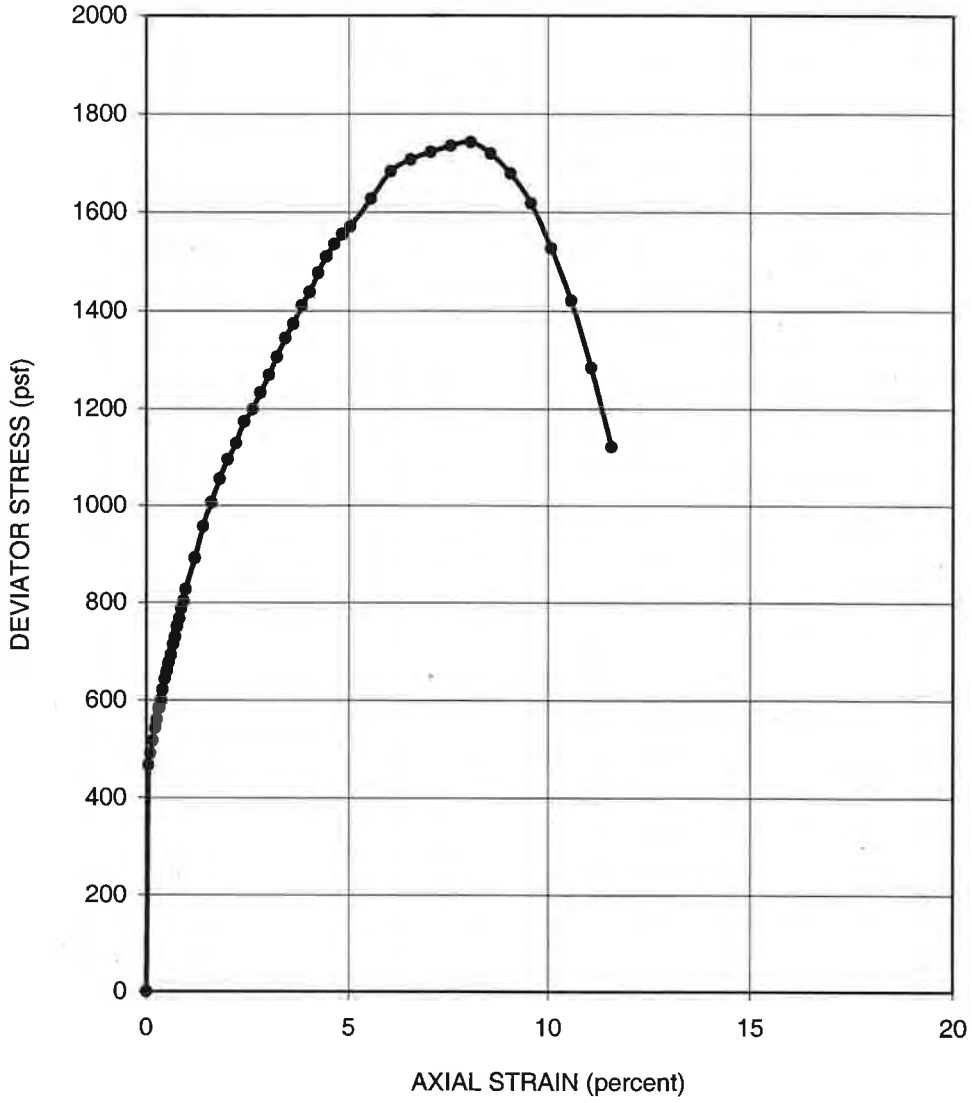
Sampler Type: Sprague & Henwood			Condition	Before Test			After Test	
Diameter (in)	2.42	Height (in) 1.00	Water Content	w_o	23.5 %		w_f	19.1 %
Overburden Pressure, p_o	1,540 psf		Void Ratio	e_o	0.71		e_f	0.50
Preconsol. Pressure, p_c	8,000 psf		Saturation	S_o	89 %		S_f	100 %
Compression Ratio, C_{ec}	0.11		Dry Density	γ_d	99 pcf		γ_d	113 pcf
LL ND	PL ND		PI ND			G_s 2.70 (assumed)		
Classification CLAY with SAND (CL), yellow-brown			Source B-1 @ 15.5 feet					

HARBOR PARK
Pittsburg, California

CONSOLIDATION TEST REPORT

Treadwell&Rollo

Date 06/12/06 | Project No. 4245.02 | Figure C-2



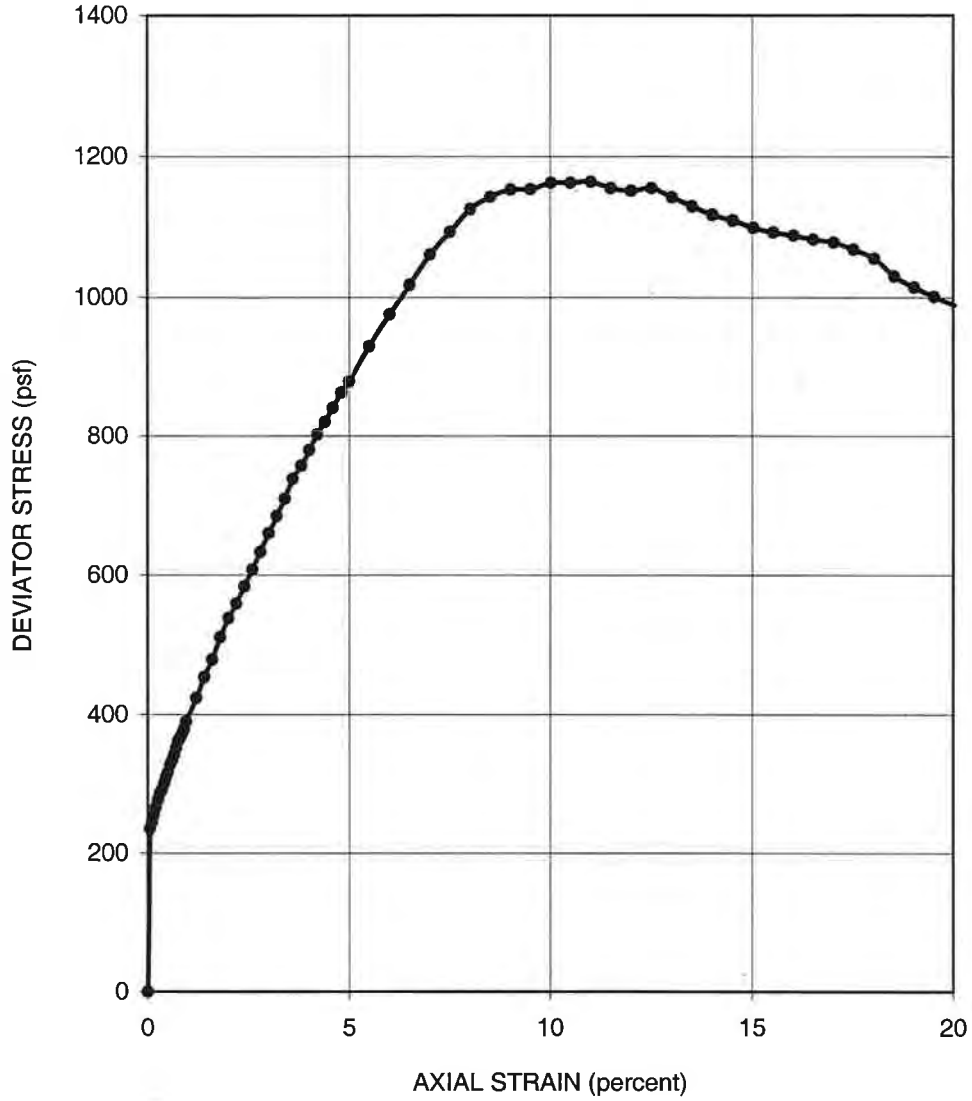
SAMPLER TYPE	Sprague & Henwood			SHEAR STRENGTH	870 psf
DIAMETER (in.)	2.42	HEIGHT (in.)	5.66	STRAIN AT FAILURE	8.1 %
MOISTURE CONTENT	22.6 %			CONFINING PRESSURE	1,100 psf
DRY DENSITY	103 pcf			STRAIN RATE	1.00 % / min
DESCRIPTION	CLAY (CL), brown			SOURCE	B-1 @ 11 feet

HARBOR PARK
Pittsburg, California

UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST

Treadwell&Rollo

Date	06/12/06	Project No.	4245.02	Figure	C-3



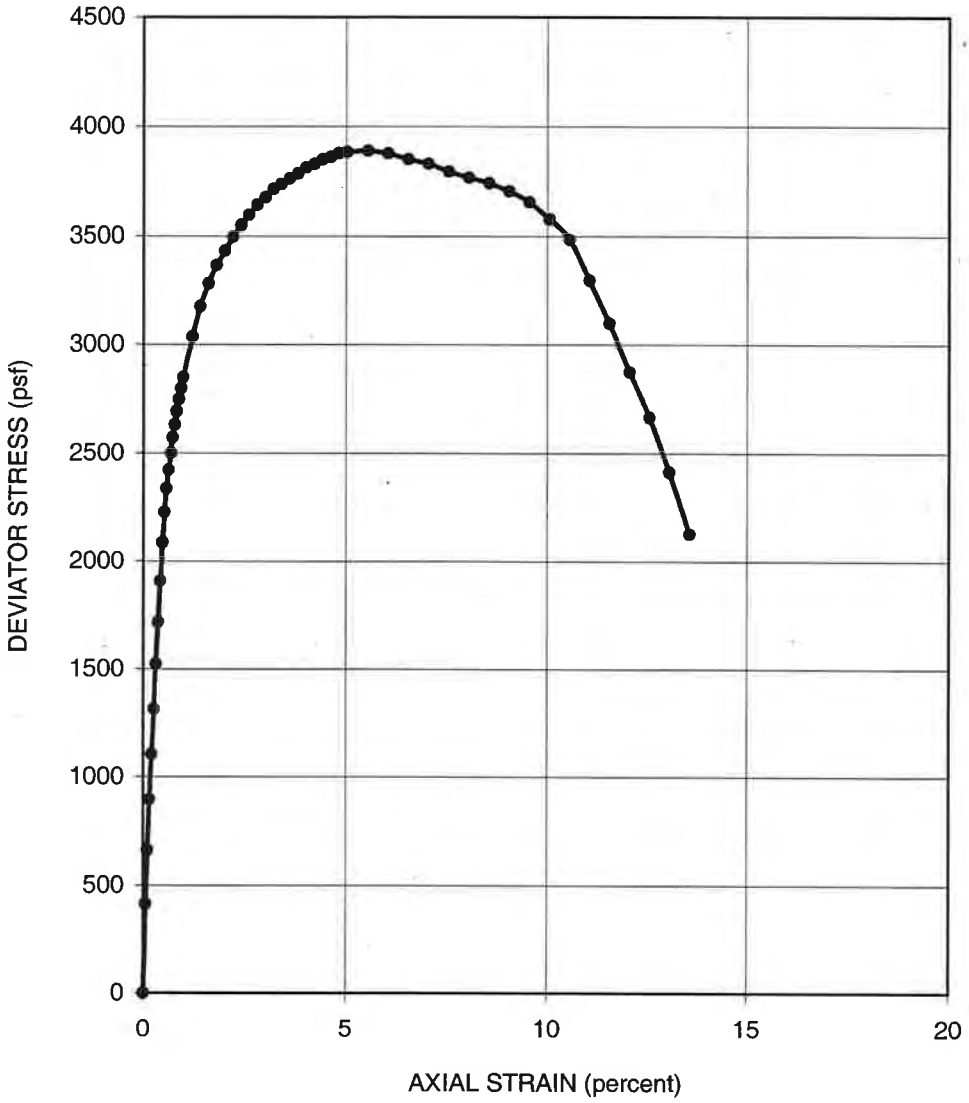
SAMPLER TYPE	Sprague & Henwood			SHEAR STRENGTH	580 psf
DIAMETER (in.)	2.42	HEIGHT (in.)	5.35	STRAIN AT FAILURE	11.0 %
MOISTURE CONTENT	26.2 %			CONFINING PRESSURE	1,600 psf
DRY DENSITY	98 pcf			STRAIN RATE	0.75 % / min
DESCRIPTION	CLAY (CL), yellow-brown			SOURCE	B-1 @ 16 feet

HARBOR PARK
Pittsburg, California

UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST

Treadwell&Rollo

Date	06/12/06	Project No.	4245.02	Figure	C-4



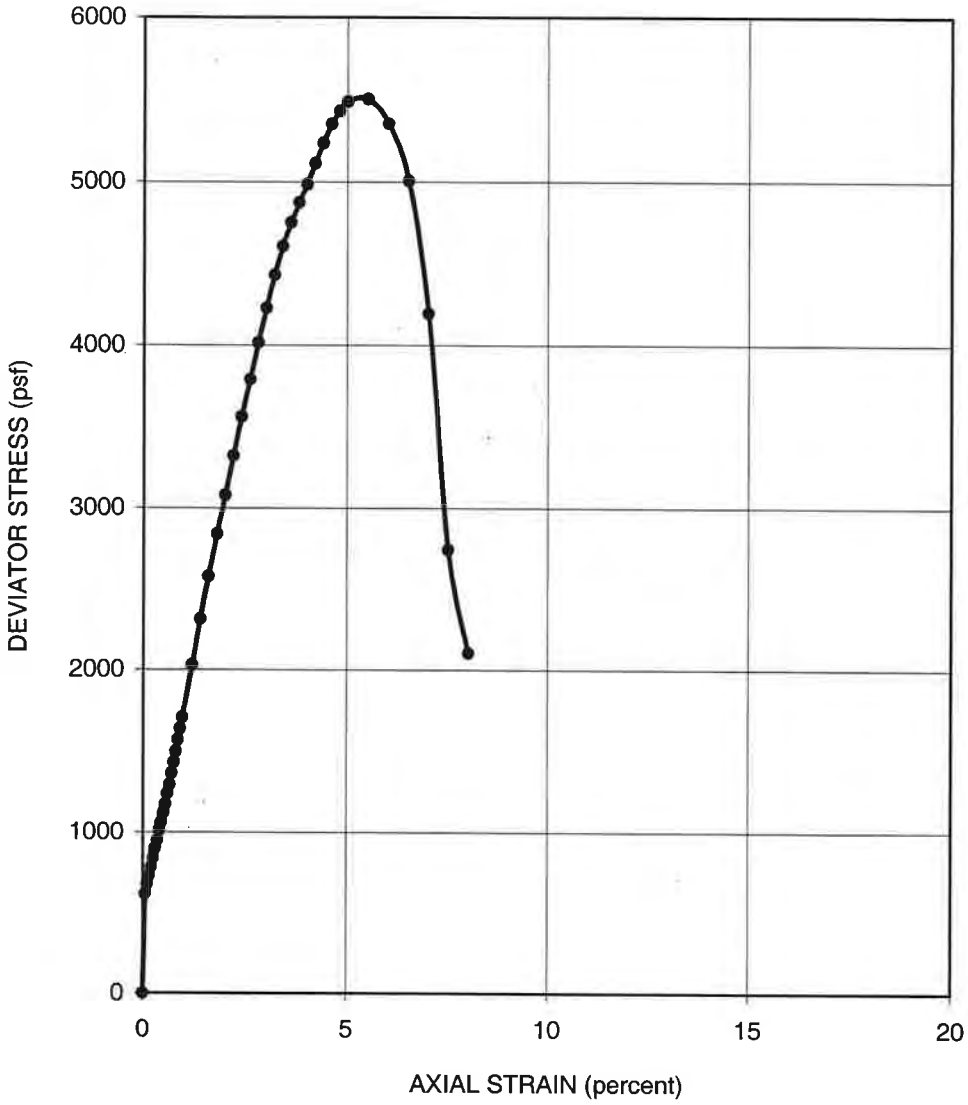
SAMPLER TYPE	Sprague & Henwood		SHEAR STRENGTH	1,940	psf
DIAMETER (in.)	2.42	HEIGHT (in.) 5.65	STRAIN AT FAILURE	5.5	%
MOISTURE CONTENT	24.6	%	CONFINING PRESSURE	550	psf
DRY DENSITY	100	pcf	STRAIN RATE	1.00	% / min
DESCRIPTION	CLAY (CL), dark brown		SOURCE	B-2 @ 5.5 feet	

HARBOR PARK
Pittsburg, California

UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST

Treadwell&Rollo

Date	06/12/06	Project No.	4245.02	Figure	C-5



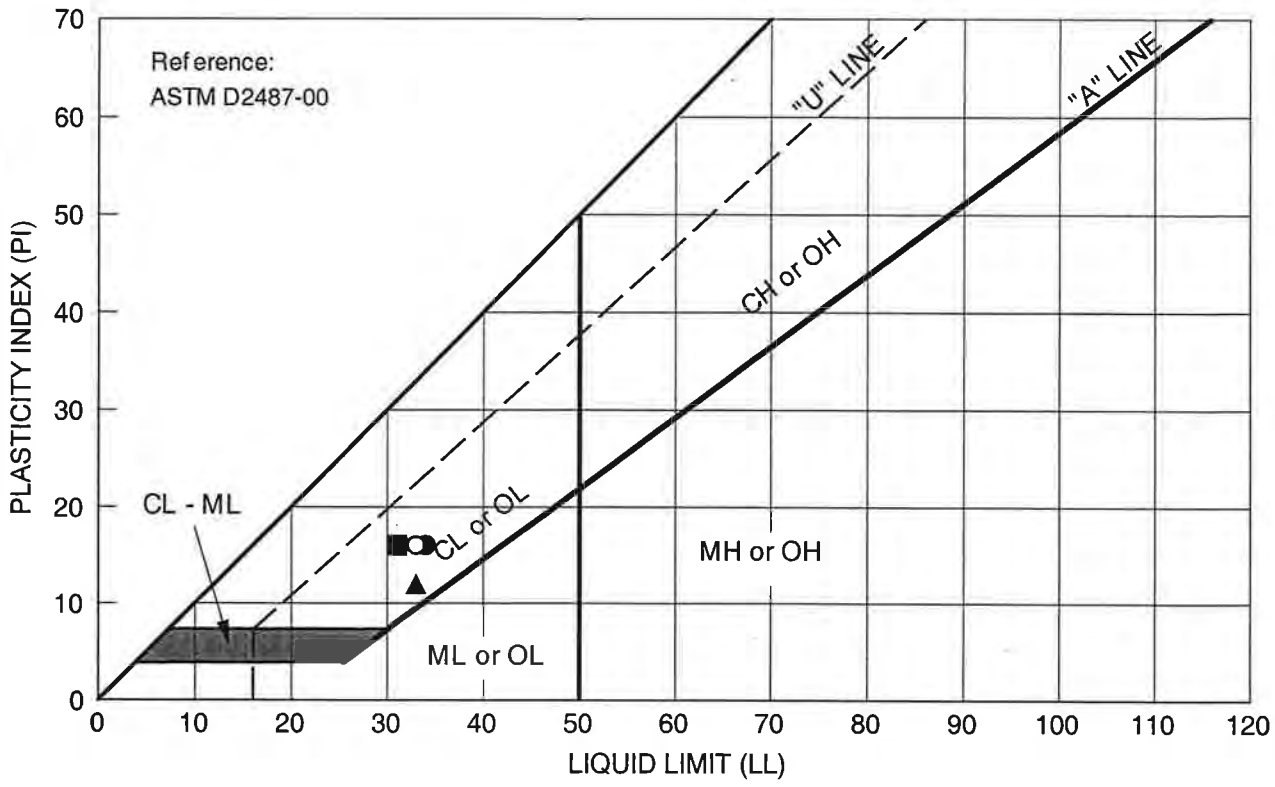
SAMPLER TYPE	Sprague & Henwood			SHEAR STRENGTH	2,750 psf
DIAMETER (in.)	2.42	HEIGHT (in.)	5.63	STRAIN AT FAILURE	5.5 %
MOISTURE CONTENT	17.3 %			CONFINING PRESSURE	600 psf
DRY DENSITY	113 pcf			STRAIN RATE	0.75 % / min
DESCRIPTION	SILT with CLAY (ML), yellow-brown			SOURCE	B-3 @ 6 feet

HARBOR PARK
Pittsburg, California

UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST

Treadwell&Rollo

Date	06/12/06	Project No.	4245.02	Figure	C-6



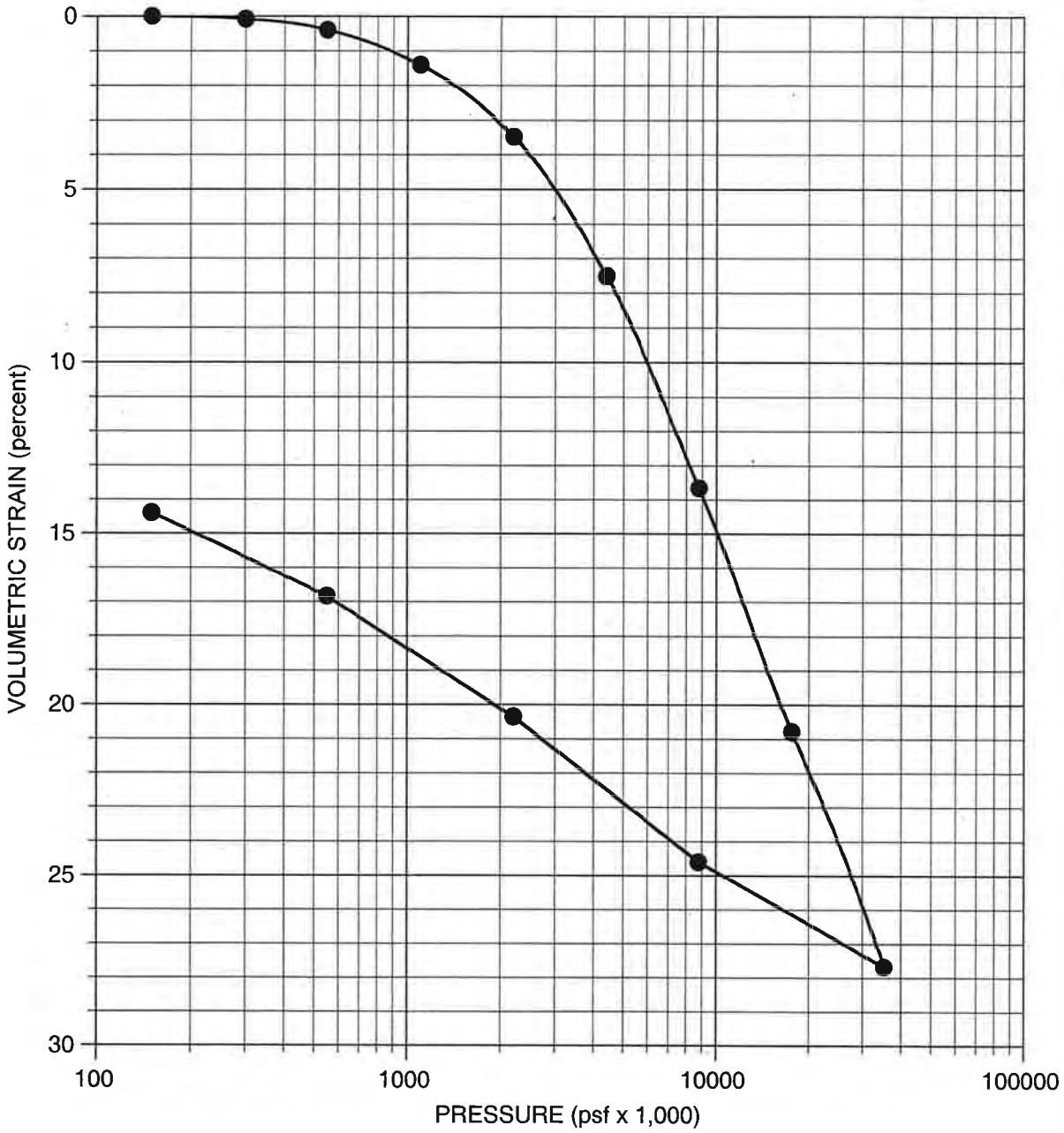
Symbol	Source	Description and Classification	Natural M.C. (%)	Liquid Limit (%)	Plasticity Index (%)	% Passing #200 Sieve
●	B-1 at 3 feet	CLAY with SILT (CL), gray-brown	19.4	34	16	---
▲	B-2 at 3 feet	SANDY CLAY (CL), gray-brown	---	33	12	---
■	B-3 at 2.5 feet	CLAY (CL), olive-brown	---	31	16	88.0
○	B-4 at 1.5 feet	CLAY with SAND and SILT (CL), olive-brown	20.8	33	16	---

HARBOR PARK
Pittsburg, California

PLASTICITY CHART

Treadwell&Rollo

Date 10/14/05 | Project No. 4245.02 | Figure C-7



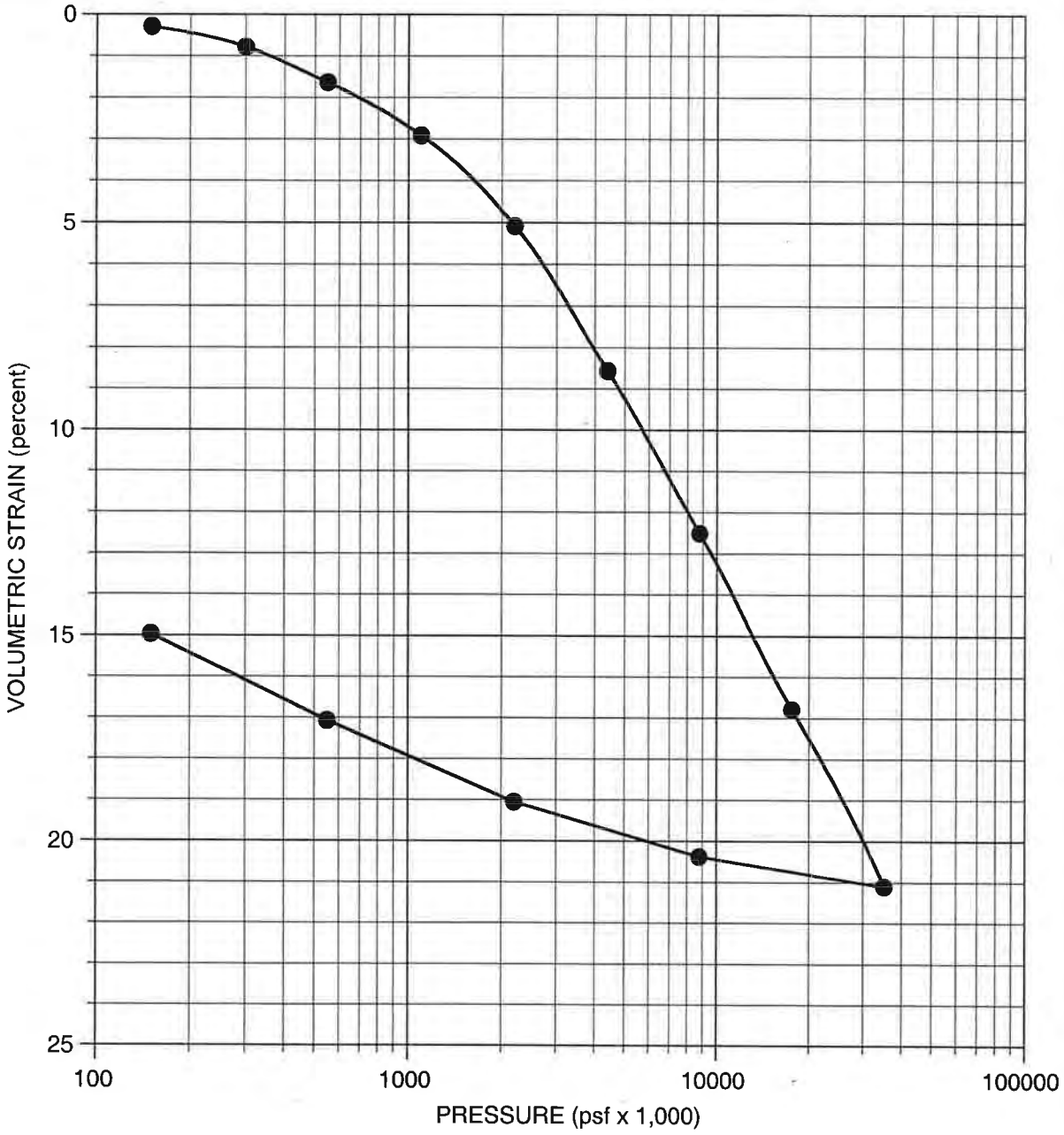
Diameter (in) 2.41	Height (in) 1.00	Condition		Before test		After test	
Overburden Pressure, P_o	1,280 psf	Water Content	w_o	58.1 %	w_f	46.3 %	
Preconsol. Pressure, P_c	3,000 psf	Void Ratio	e_o	1.568	e_f	1.249	
Compression Ratio, C_{ec}	0.23	Saturation	S_o	100 %	S_f	100 %	
Recompression Ratio, C_{er}	---	Dry Density	γ_d	66 pcf	γ_d	75 pcf	
LL ---	PL ---	PI 65.6		G_s 2.65 (assumed)			
Classification CLAY with SILT (CL), gray		Source B-7 at 15.5 feet					

HARBOR PARK
Pittsburg, California

CONSOLIDATION TEST REPORT

Treadwell&Rollo

Date 05/02/06 | Project No. 4245.02 | Figure C-8



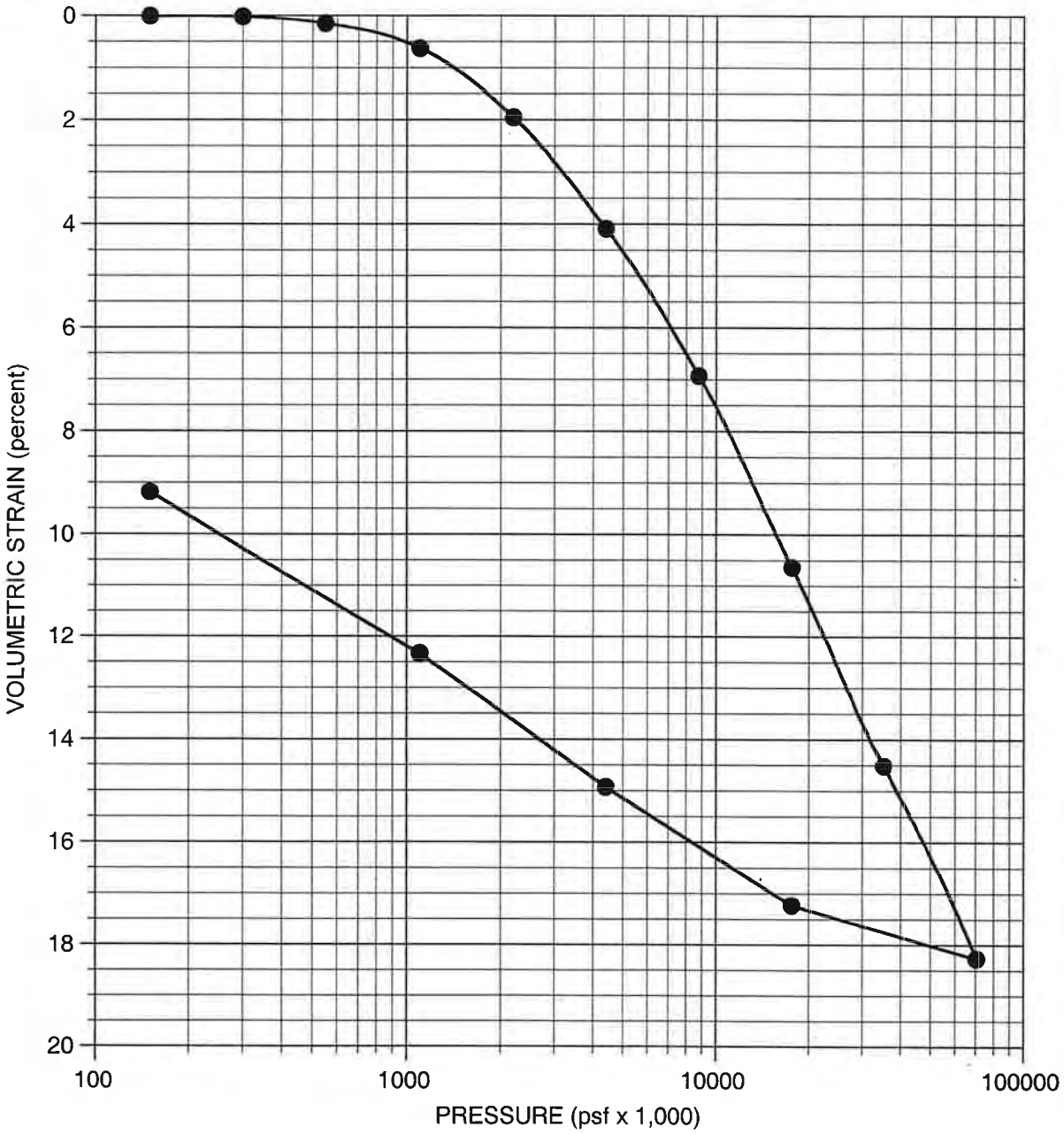
Diameter (in) 2.41	Height (in) 1.00	Condition		Before test		After test	
Overburden Pressure, P_o	1,890 psf	Water Content	w_o	35.7 %	w_f	25.7 %	
Preconsol. Pressure, P_c	2,000 psf	Void Ratio	e_o	0.971	e_f	0.679	
Compression Ratio, C_{ec}	0.14	Saturation	S_o	97.5 %	S_f	100 %	
Recompression Ratio, C_{er}	---	Dry Density	γ_d	84 pcf	γ_d	99 pcf	
LL 38	PL 20	PI 18		G_s 2.7 (assumed)			
Classification SANDY CLAY (CL), gray				Source B-7 at 25.25 feet			

HARBOR PARK
Pittsburg, California

CONSOLIDATION TEST REPORT

Treadwell&Rollo

Date 05/02/06 | Project No. 4245.02 | Figure C-9



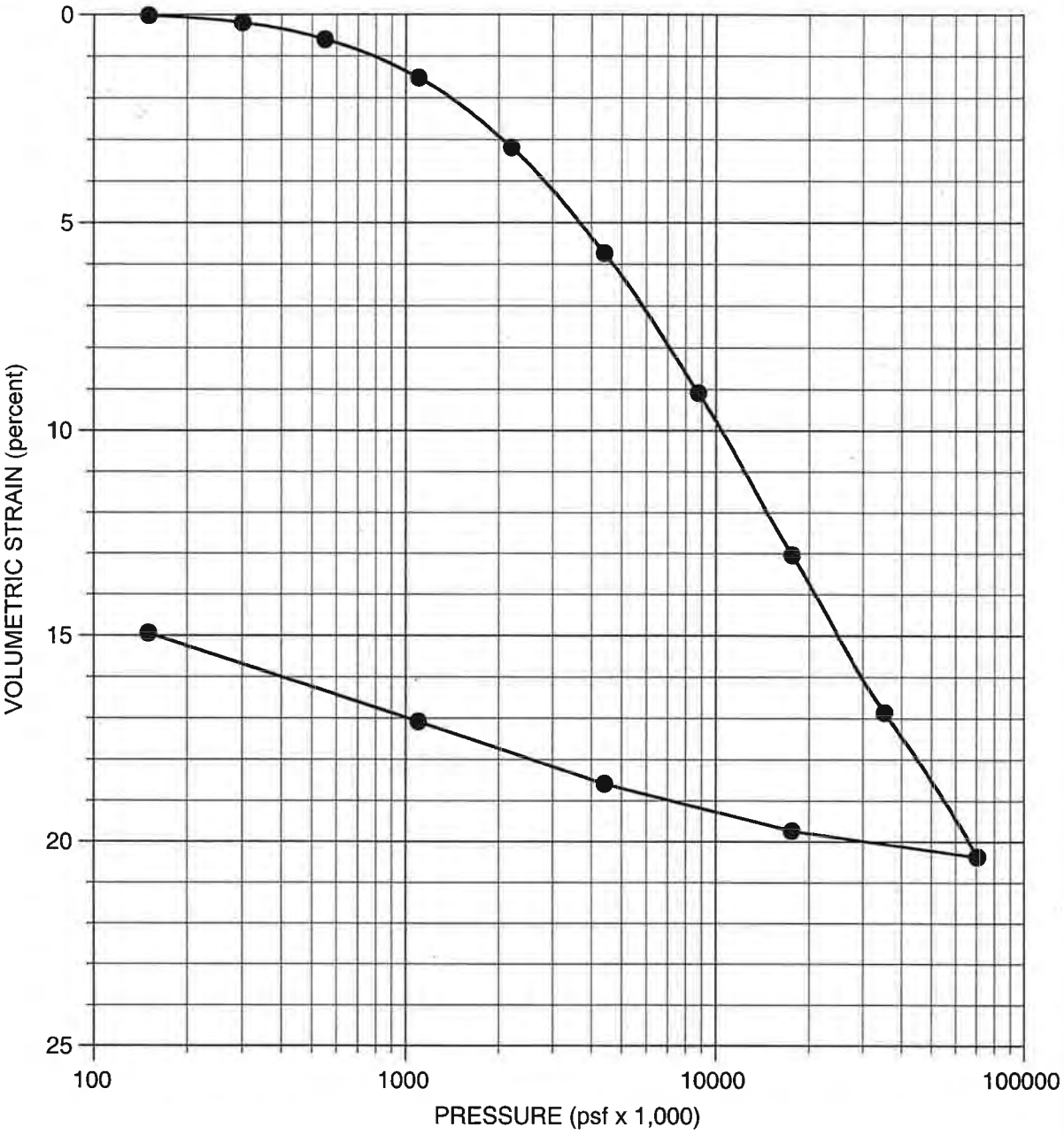
Diameter (in) 2.41	Height (in) 1.00	Condition		Before test		After test	
Overburden Pressure, P_o	1,500 psf	Water Content	w_o	24.1 %	w_f	20.3 %	
Preconsol. Pressure, P_c	3,160 psf	Void Ratio	e_o	0.654	e_f	0.546	
Compression Ratio, C_{ec}	0.13	Saturation	S_o	99.6 %	S_f	100 %	
Recompression Ratio, C_{er}	---	Dry Density	g_d	102 pcf	g_d	109 pcf	
LL ---	PL ---	PI ---		G_s 2.7 (assumed)			
Classification SANDY CLAY (CL), gray				Source B-8 at 15 feet			

HARBOR PARK
Pittsburg, California

CONSOLIDATION TEST REPORT

Treadwell&Rollo

Date 05/02/06 | Project No. 4245.02 | Figure C-10



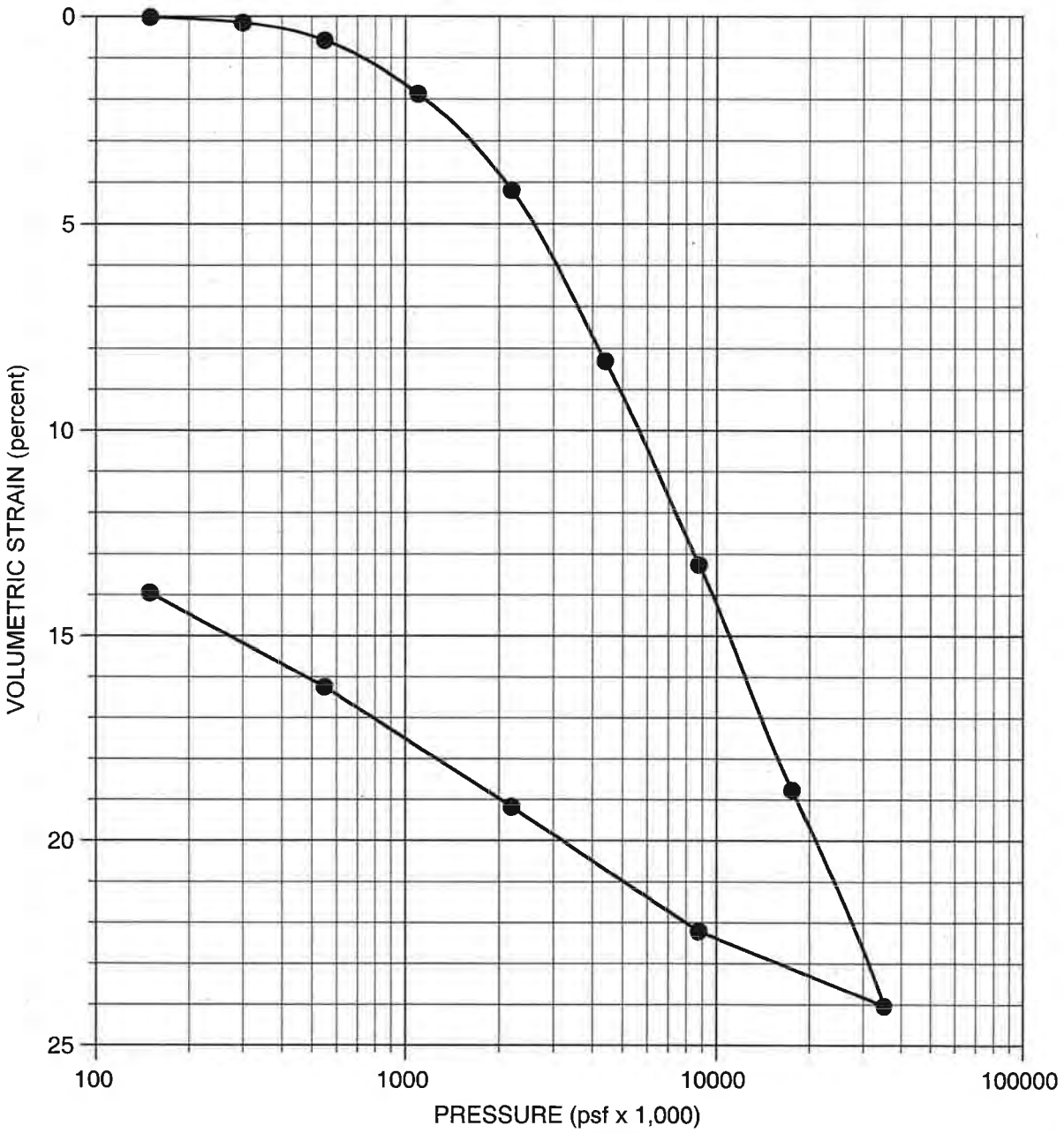
Diameter (in) 2.41	Height (in) 1.00	Condition		Before test		After test	
Overburden Pressure, P_o	1,800 psf	Water Content	w_o	26.4 %	w_f	17.7 %	
Preconsol. Pressure, P_c	2,670 psf	Void Ratio	e_o	0.737	e_f	0.478	
Compression Ratio, C_{ec}	0.13	Saturation	S_o	96.6 %	S_f	100 %	
Recompression Ratio, C_{er}	---	Dry Density	g_d	97 pcf	g_d	114 pcf	
LL ---	PL ---	PI ---		G_s 2.7 (assumed)			
Classification SANDY CLAY (CL), olive-brown				Source B-8 at 20 feet			

HARBOR PARK
Pittsburg, California

CONSOLIDATION TEST REPORT

Treadwell&Rollo

Date 05/02/06 | Project No. 4245.02 | Figure C-11



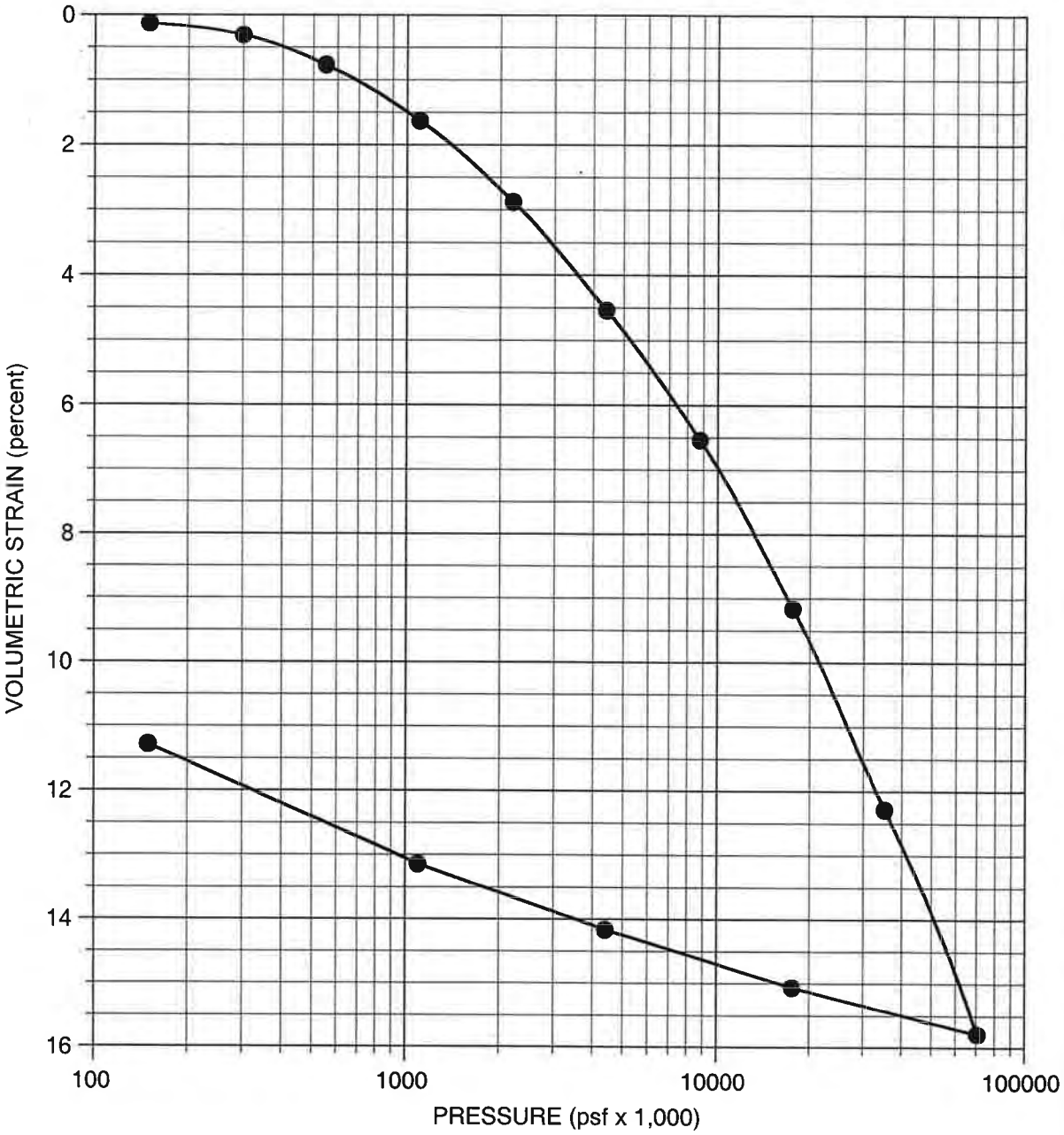
Diameter (in) 2.41	Height (in) 1.00	Condition		Before test		After test	
Overburden Pressure, P_o	1,330 psf	Water Content	w_o	38.4 %	w_f	30.8 %	
Preconsol. Pressure, P_c	2,100 psf	Void Ratio	e_o	1.100	e_f	0.846	
Compression Ratio, C_{ec}	0.18	Saturation	S_o	96.0 %	S_f	100 %	
Recompression Ratio, C_{er}	—	Dry Density	γ_d	82 pcf	γ_d	93 pcf	
LL 61	PL 17	PI 44		G_s 2.75 (assumed)			
Classification CLAY (CH), gray				Source B-11 at 15 feet			

HARBOR PARK
Pittsburg, California

CONSOLIDATION TEST REPORT

Treadwell&Rollo

Date 05/02/06 | Project No. 4245.02 | Figure C-12



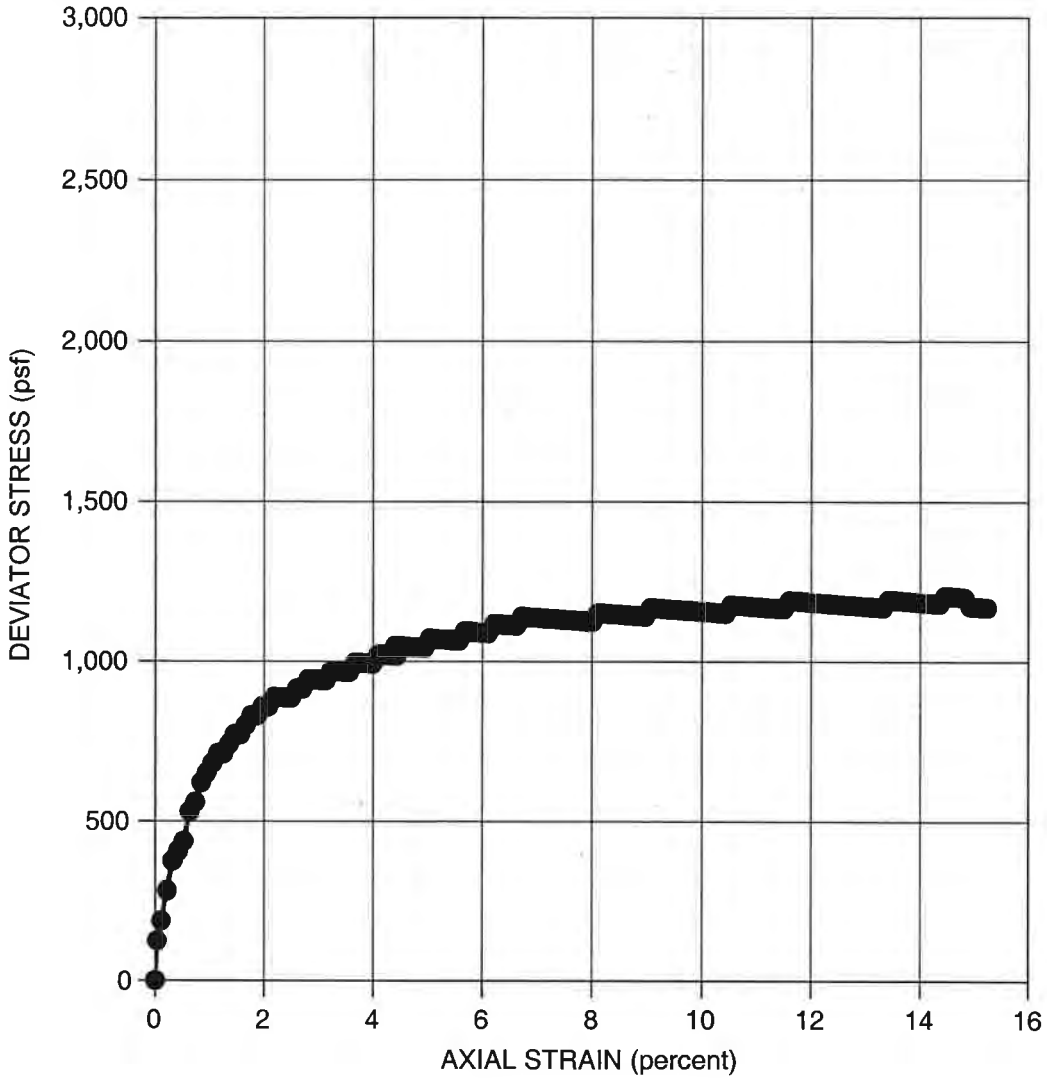
Diameter (in) 2.41	Height (in) 1.00	Condition		Before test		After test	
Overburden Pressure, P_o	1,100 psf	Water Content	w_o	23.6 %	w_f	18.6 %	
Preconsol. Pressure, P_c	4,400 psf	Void Ratio	e_o	0.659	e_f	0.501	
Compression Ratio, C_{ec}	0.11	Saturation	S_o	96.9 %	S_f	100 %	
Recompression Ratio, C_{er}	---	Dry Density	g_d	102 pcf	g_d	112 pcf	
LL ---	PL ---	PI ---		G_s 2.7 (assumed)			
Classification SANDY CLAY (CL), yellow-brown				Source B-12 at 10 feet			

HARBOR PARK
Pittsburg, California

CONSOLIDATION TEST REPORT

Treadwell&Rollo

Date 05/02/06 | Project No. 4245.02 | Figure C-13



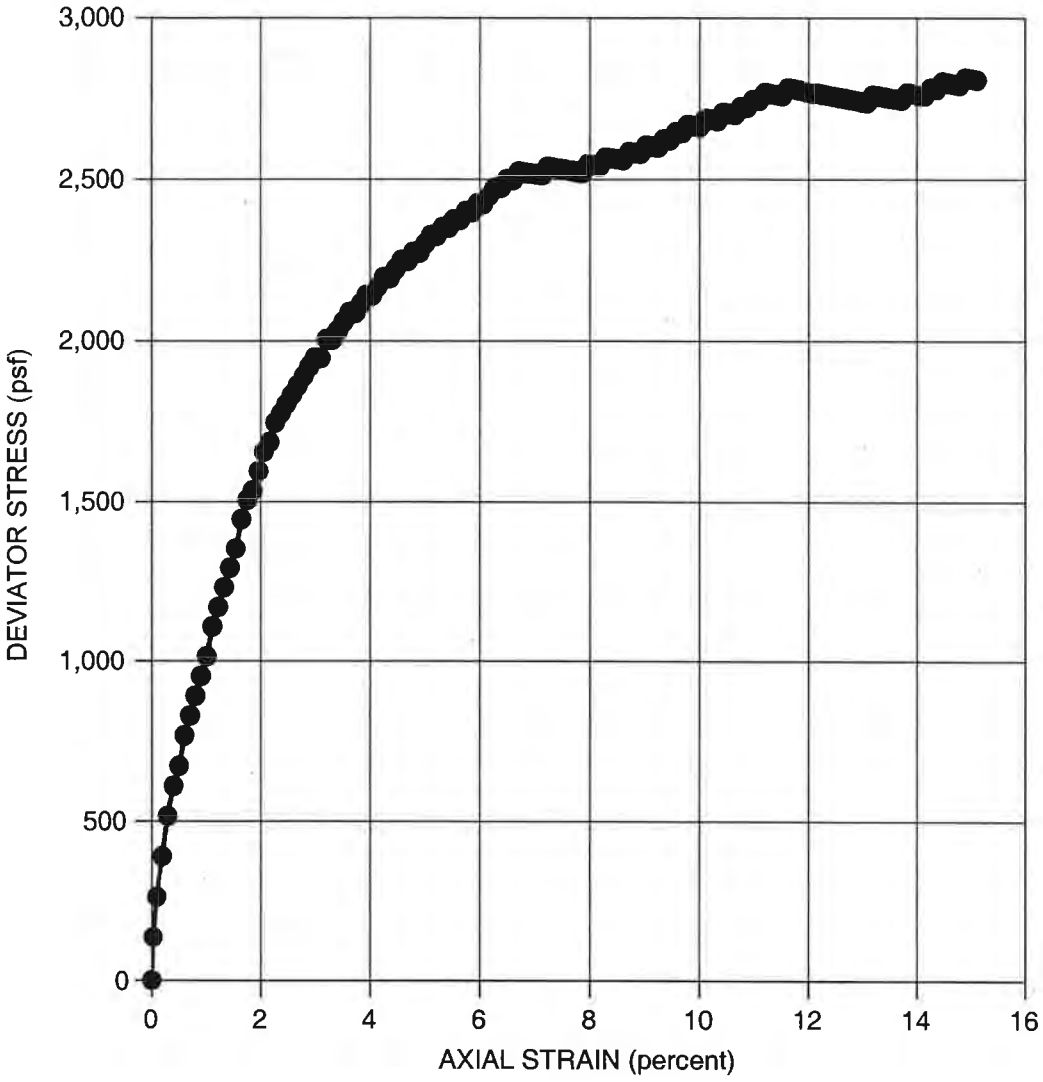
SAMPLER TYPE Sprague & Henwood		SHEAR STRENGTH	600 psf
DIAMETER (in) 2.42	HEIGHT (in) 4.97	STRAIN AT FAILURE	14.5 %
MOISTURE CONTENT	43.9 %	CONFINING PRESSURE	1,000 psf
DRY DENSITY	77 pcf	STRAIN RATE	1.01 % /min
DESCRIPTION CLAY (CL), olive-gray		SOURCE B-7 at 10.5 feet	

HARBOR PARK
Pittsburg, California

UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST

Treadwell&Rollo

Date 05/02/06 | Project No. 4245.02 | Figure C-14



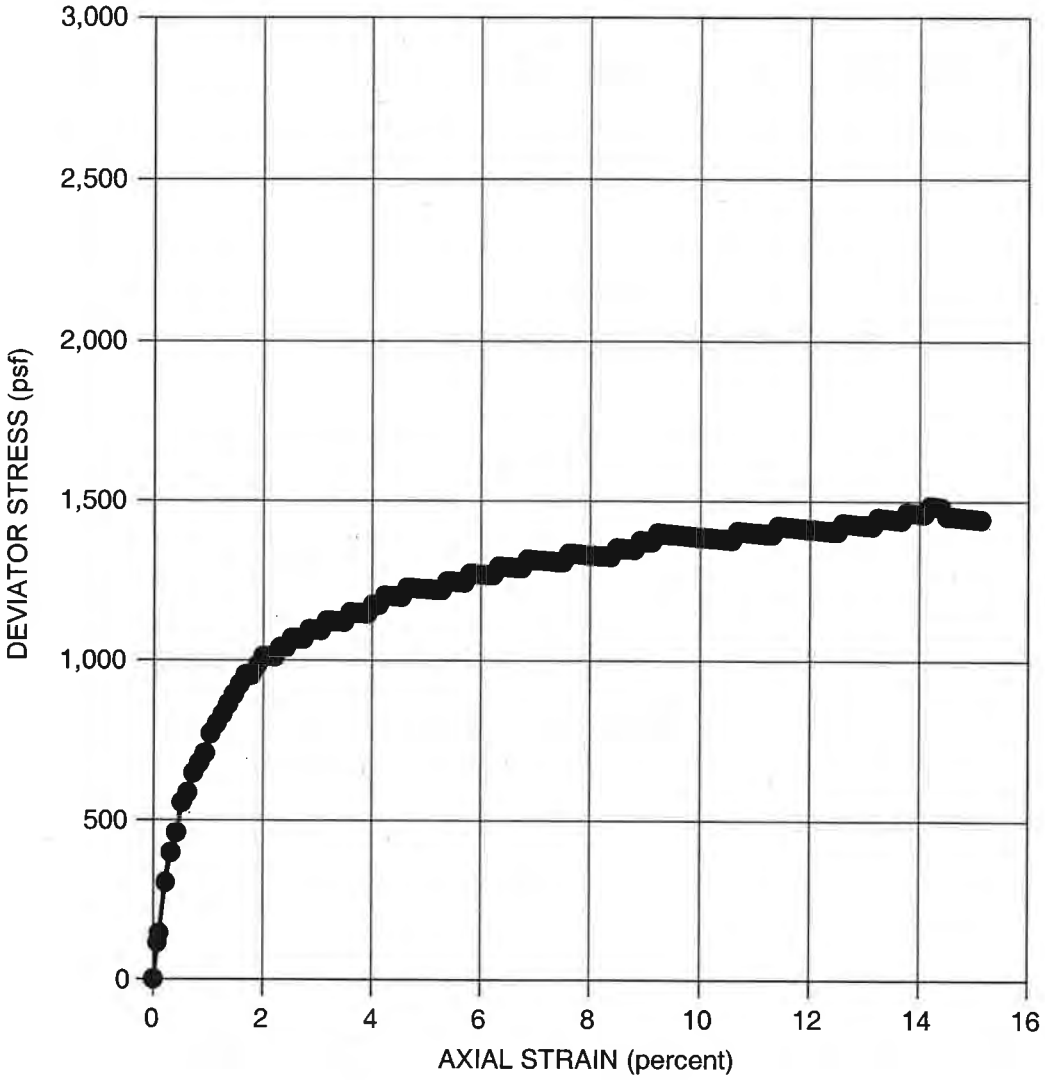
SAMPLER TYPE	Dames & Moore	SHEAR STRENGTH	1,400 psf
DIAMETER (in) 2.41	HEIGHT (in) 5.01	STRAIN AT FAILURE	14.9 %
MOISTURE CONTENT	22.8 %	CONFINING PRESSURE	1,500 psf
DRY DENSITY	104 pcf	STRAIN RATE	1.00 % /min
DESCRIPTION	CLAY (CL), gray mottled with yellow-brown	SOURCE	B-8 at 15 feet

HARBOR PARK
Pittsburg, California

UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST

Treadwell&Rollo

Date 4/27/06	Project No. 4245.02	Figure C-15



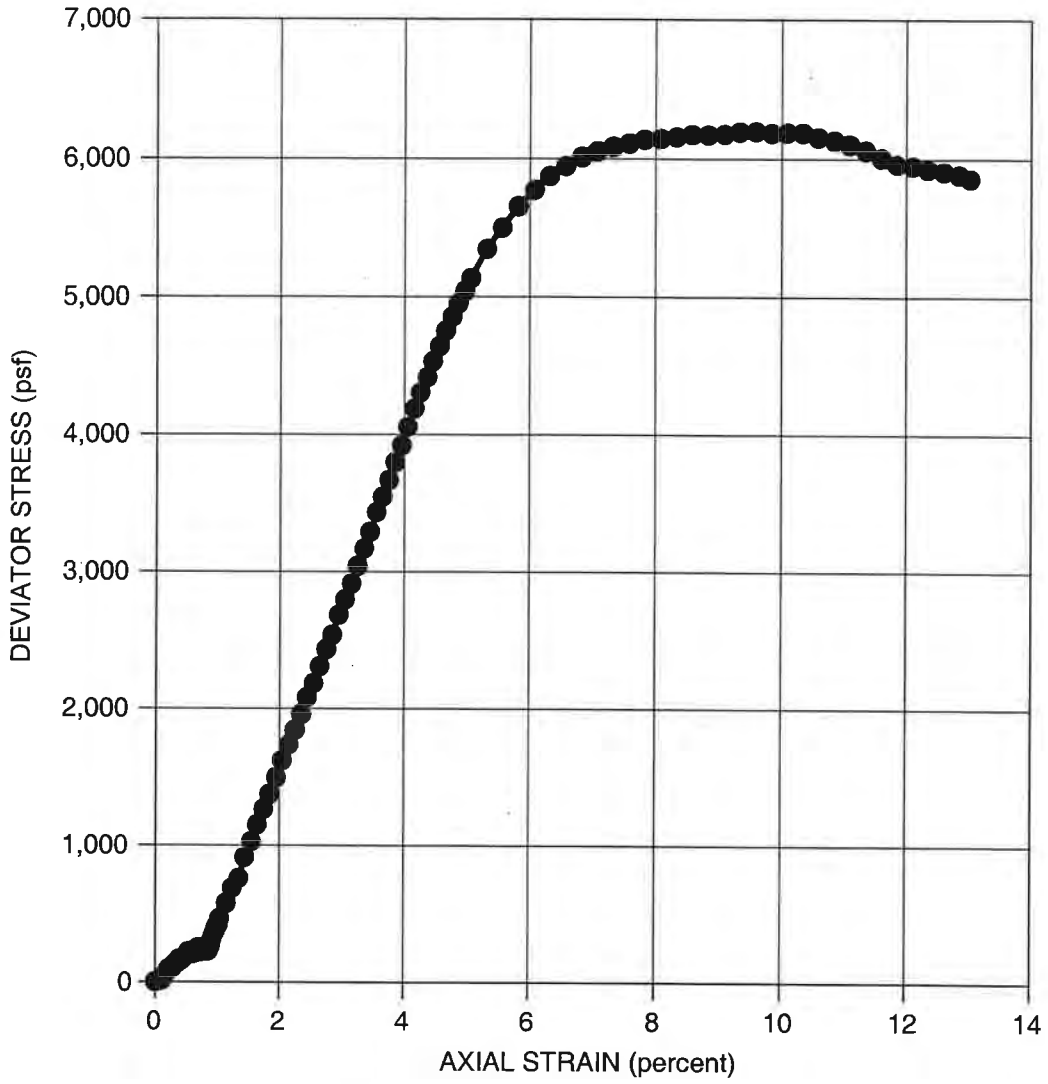
SAMPLER TYPE Dames & Moore		SHEAR STRENGTH	740 psf
DIAMETER (in) 2.91	HEIGHT (in) 5.01	STRAIN AT FAILURE	14.2 %
MOISTURE CONTENT	26.6 %	CONFINING PRESSURE	2,000 psf
DRY DENSITY	99 pcf	STRAIN RATE	1.00 % /min
DESCRIPTION SANDY CLAY (CL), olive-brown		SOURCE B-8 at 20 feet	

HARBOR PARK
Pittsburg, California

UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST

Treadwell&Rollo

Date 05/02/06 | Project No. 4245.02 | Figure C-16



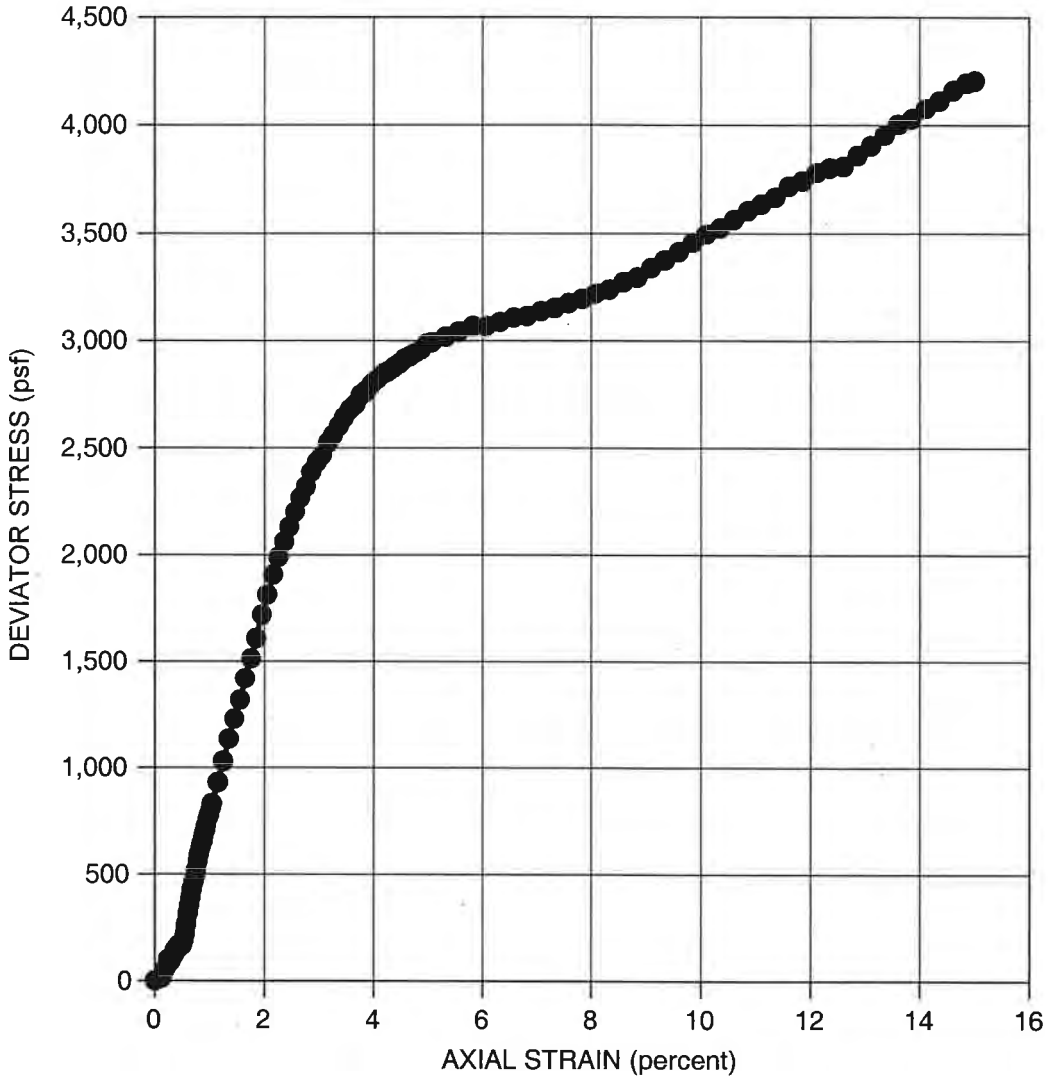
SAMPLER TYPE Sprague & Henwood		SHEAR STRENGTH	3,100 psf
DIAMETER (in) 2.43	HEIGHT (in) 5.12	STRAIN AT FAILURE	9.3 %
MOISTURE CONTENT	17.7 %	CONFINING PRESSURE	1,600 psf
DRY DENSITY	93 pcf	STRAIN RATE	0.98 %/min
DESCRIPTION SILT (ML), olive		SOURCE B-9 at 16.0 feet	

HARBOR PARK
Pittsburg, California

UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST

Treadwell&Rollo

Date 05/02/06 | Project No. 4245.02 | Figure C-17



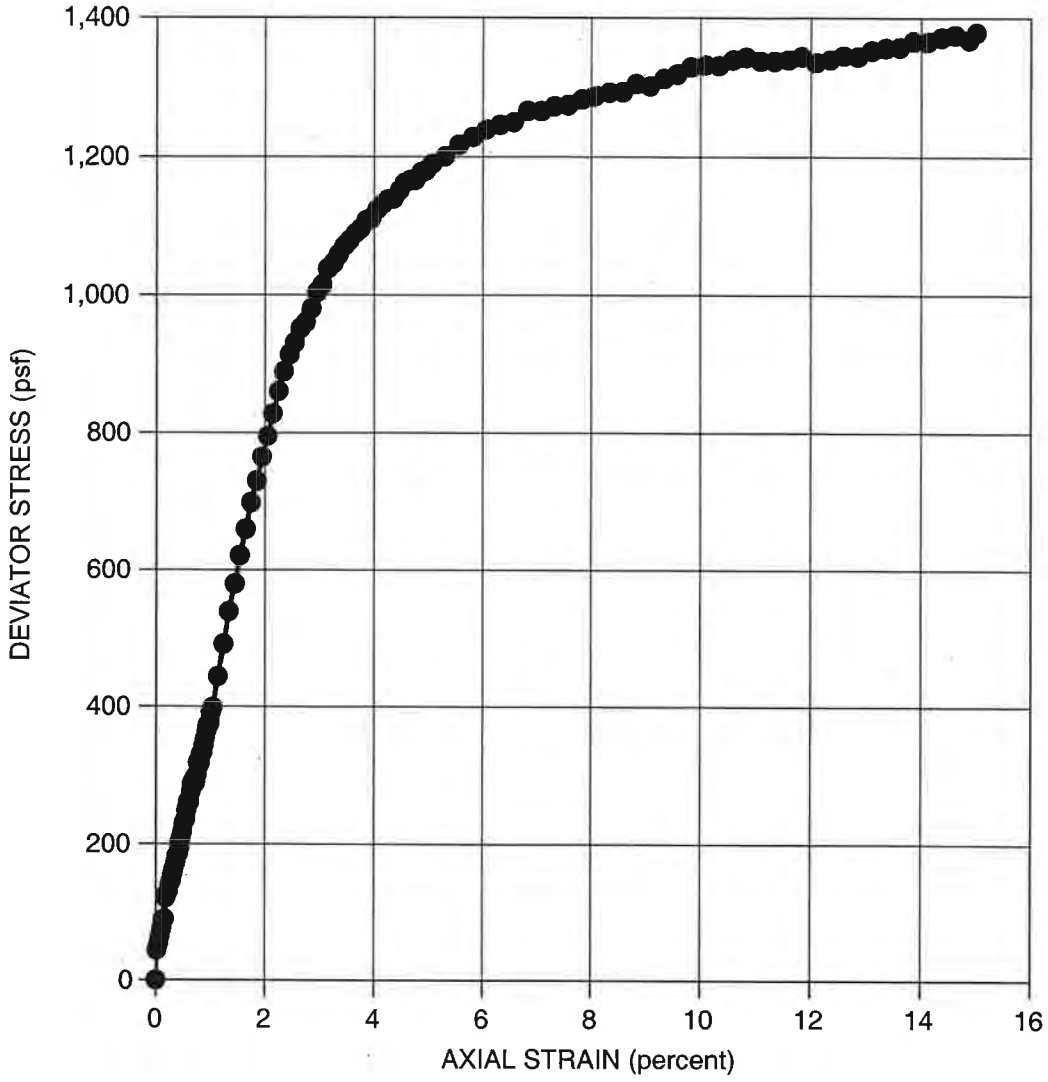
SAMPLER TYPE Sprague & Henwood		SHEAR STRENGTH	2,100 psf
DIAMETER (in) 2.42	HEIGHT (in) 5.00	STRAIN AT FAILURE	15.0 %
MOISTURE CONTENT	22.1 %	CONFINING PRESSURE	2,600 psf
DRY DENSITY	102 pcf	STRAIN RATE	1.00 %/min
DESCRIPTION SILTY SAND (SM), red-brown		SOURCE B-9 at 26.5 feet	

HARBOR PARK
Pittsburg, California

UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST

Treadwell&Rollo

Date 05,02,06 | Project No. 4245.02 | Figure C-18



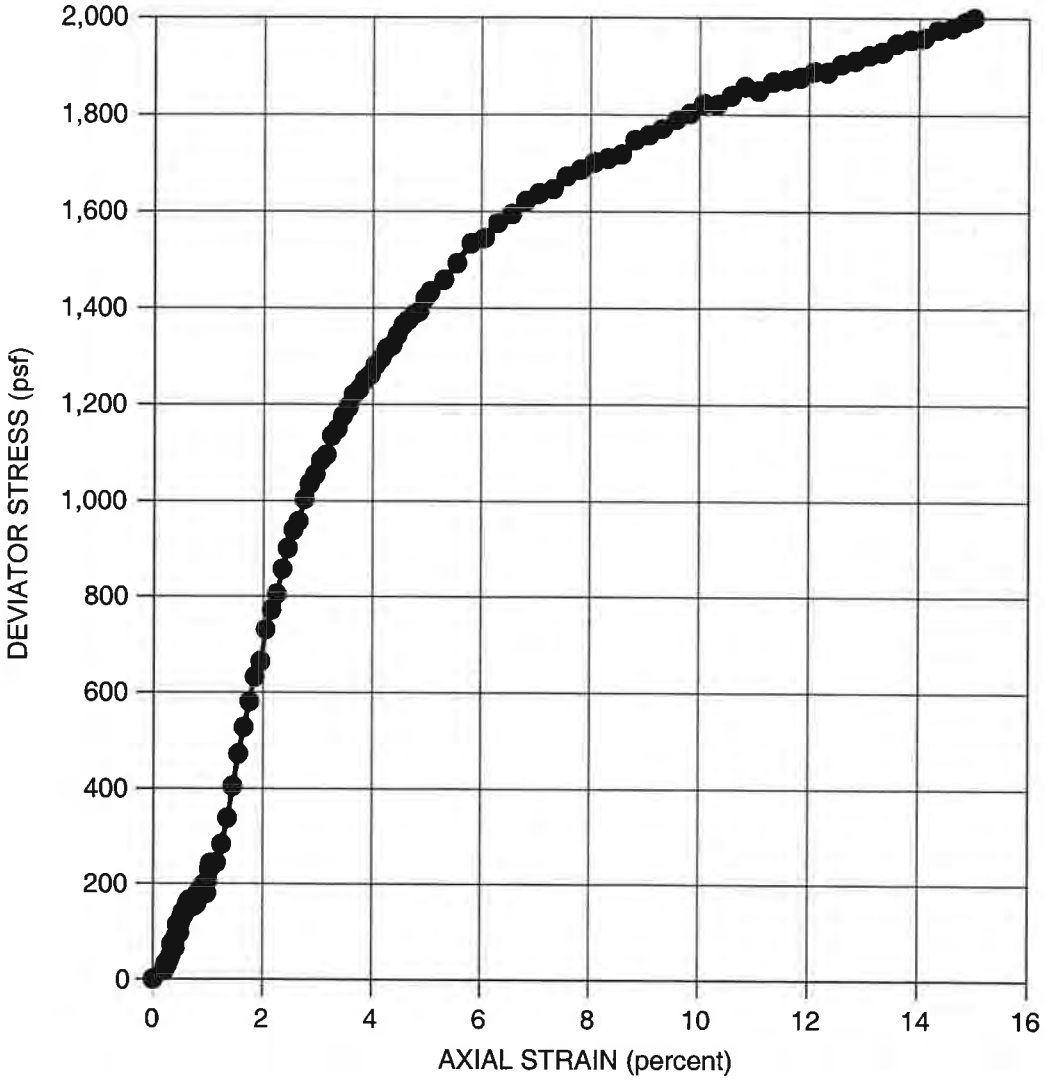
SAMPLER TYPE Dames & Moore		SHEAR STRENGTH	690 psf
DIAMETER (in) 2.40	HEIGHT (in) 4.94	STRAIN AT FAILURE	15.0 %
MOISTURE CONTENT	35.9 %	CONFINING PRESSURE	1,400 psf
DRY DENSITY	86 pcf	STRAIN RATE	1.01 %/min
DESCRIPTION CLAY (CH), gray		SOURCE B-11 at 14.0 feet	

HARBOR PARK
Pittsburg, California

UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST

Treadwell&Rollo

Date 05/02/06	Project No. 4245.02	Figure C-19



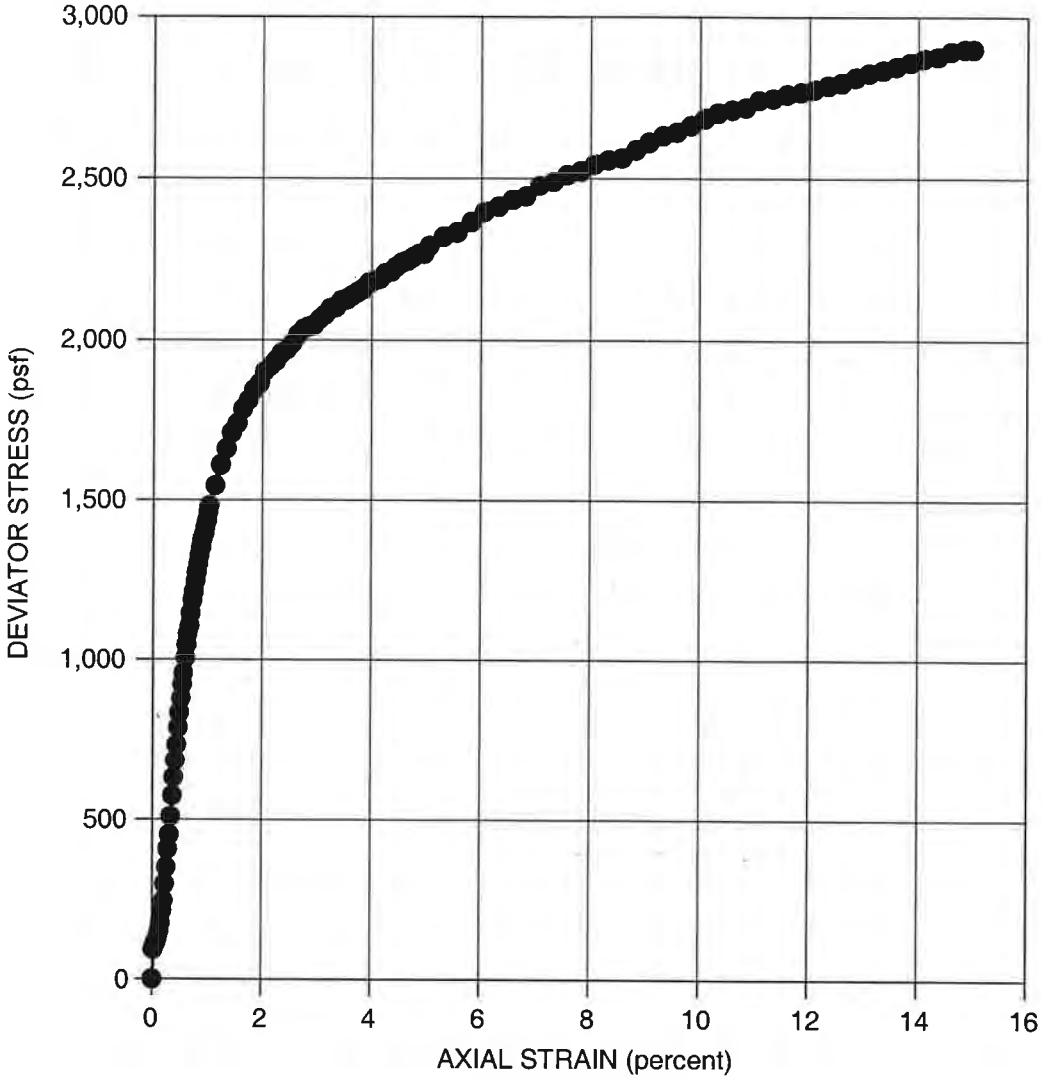
SAMPLER TYPE Sprague & Henwood		SHEAR STRENGTH	1,000 psf
DIAMETER (in) 2.41	HEIGHT (in) 4.98	STRAIN AT FAILURE	15.0 %
MOISTURE CONTENT	28.2 %	CONFINING PRESSURE	2,150 psf
DRY DENSITY	97 pcf	STRAIN RATE	1.00 % /min
DESCRIPTION CLAY (CL), blue-gray		SOURCE B-11 at 21.5 feet	

HARBOR PARK
Pittsburg, California

UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST

Treadwell&Rollo

Date 05/02/06 | Project No. 4245.02 | Figure C-20



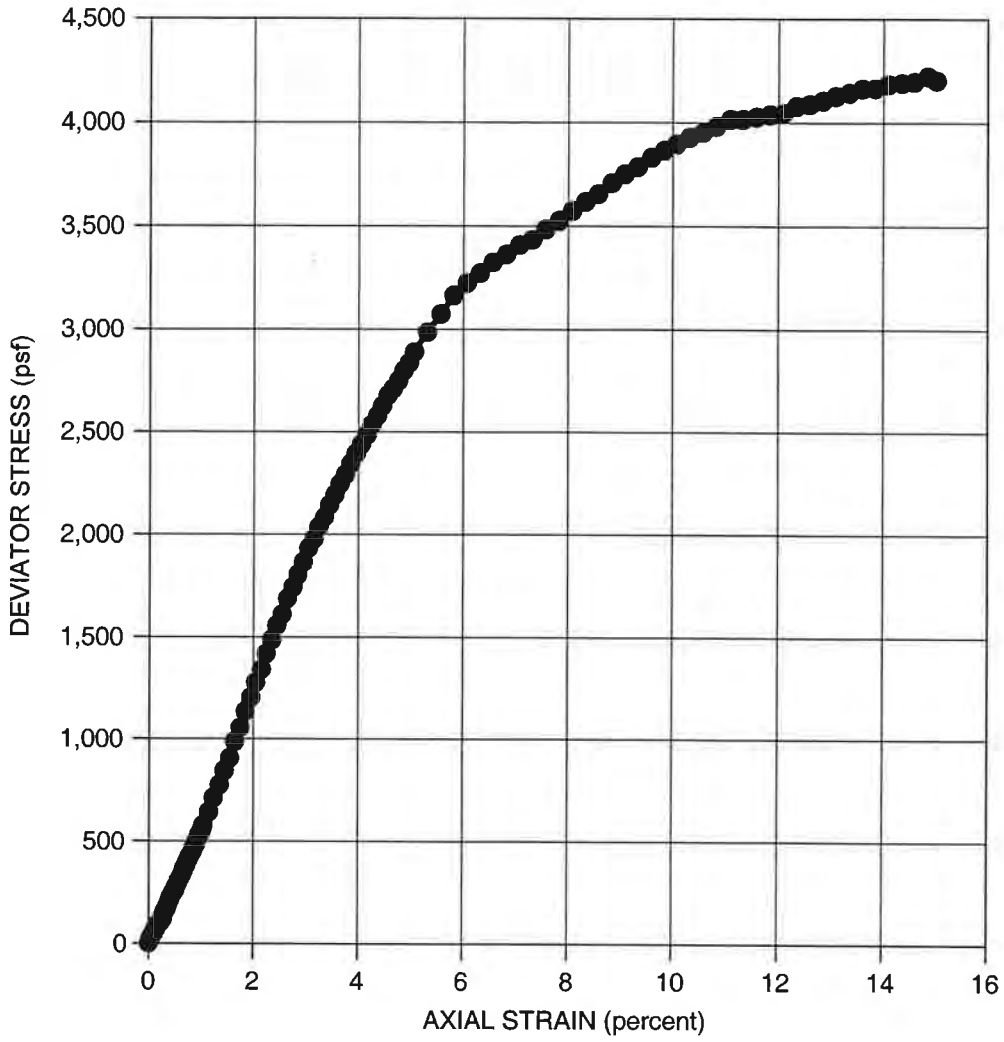
SAMPLER TYPE Sprague & Henwood		SHEAR STRENGTH	1,450 psf
DIAMETER (in) 2.42	HEIGHT (in) 4.97	STRAIN AT FAILURE	14.8 %
MOISTURE CONTENT	23.0 %	CONFINING PRESSURE	500 psf
DRY DENSITY	102 pcf	STRAIN RATE	1.01 %/min
DESCRIPTION CLAY with SAND (CL), yellow-brown		SOURCE B-12 at 5 feet	

HARBOR PARK
Pittsburg, California

UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST

Treadwell&Rollo

Date 4/27/06	Project No. 4245.02	Figure C-21



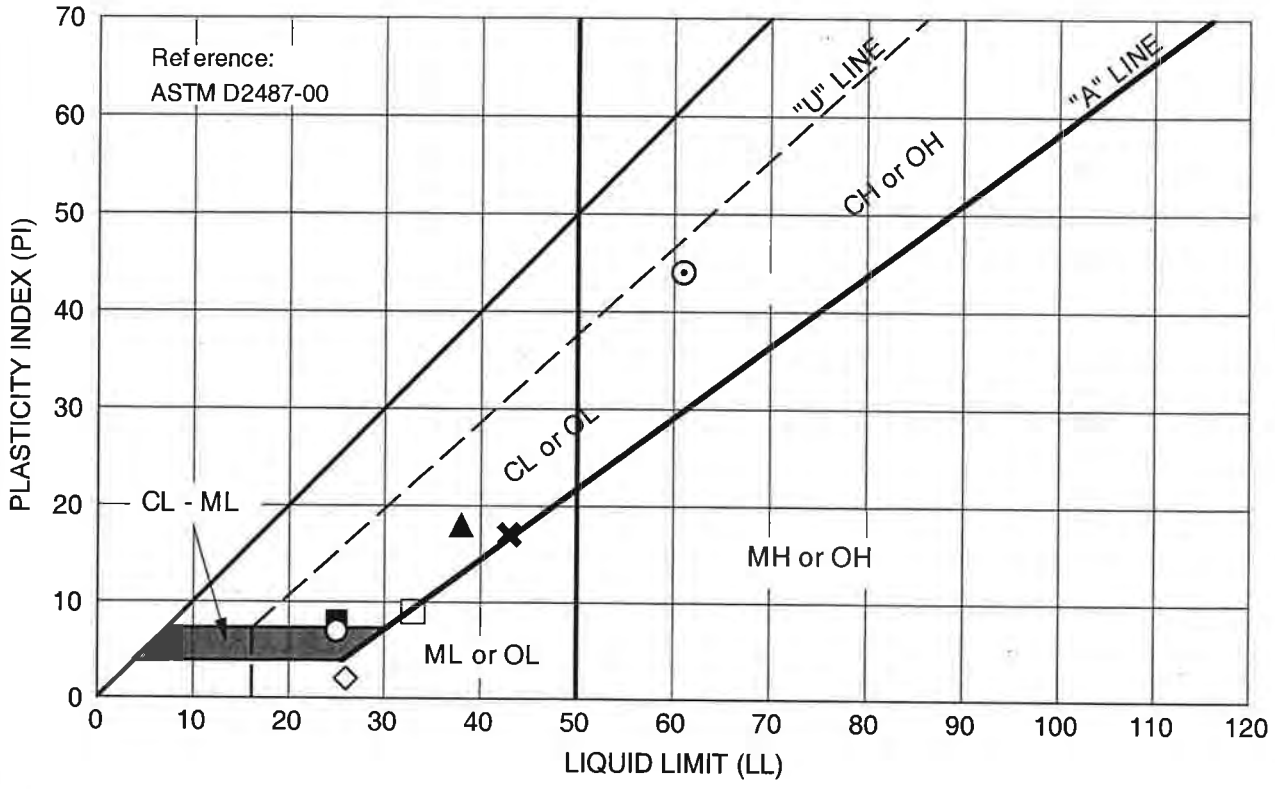
SAMPLER TYPE Sprague & Henwood		SHEAR STRENGTH	2,110 psf
DIAMETER (in) 2.43	HEIGHT (in) 4.98	STRAIN AT FAILURE	14.8 %
MOISTURE CONTENT	31.8 %	CONFINING PRESSURE	1,540 psf
DRY DENSITY	92 pcf	STRAIN RATE	1.00 %/min
DESCRIPTION SANDY SILT (ML), brown		SOURCE B-13 at 15.5 feet	

HARBOR PARK
Pittsburg, California

UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST

Treadwell&Rollo

Date 05/02/06 | Project No. 4245.02 | Figure C-22



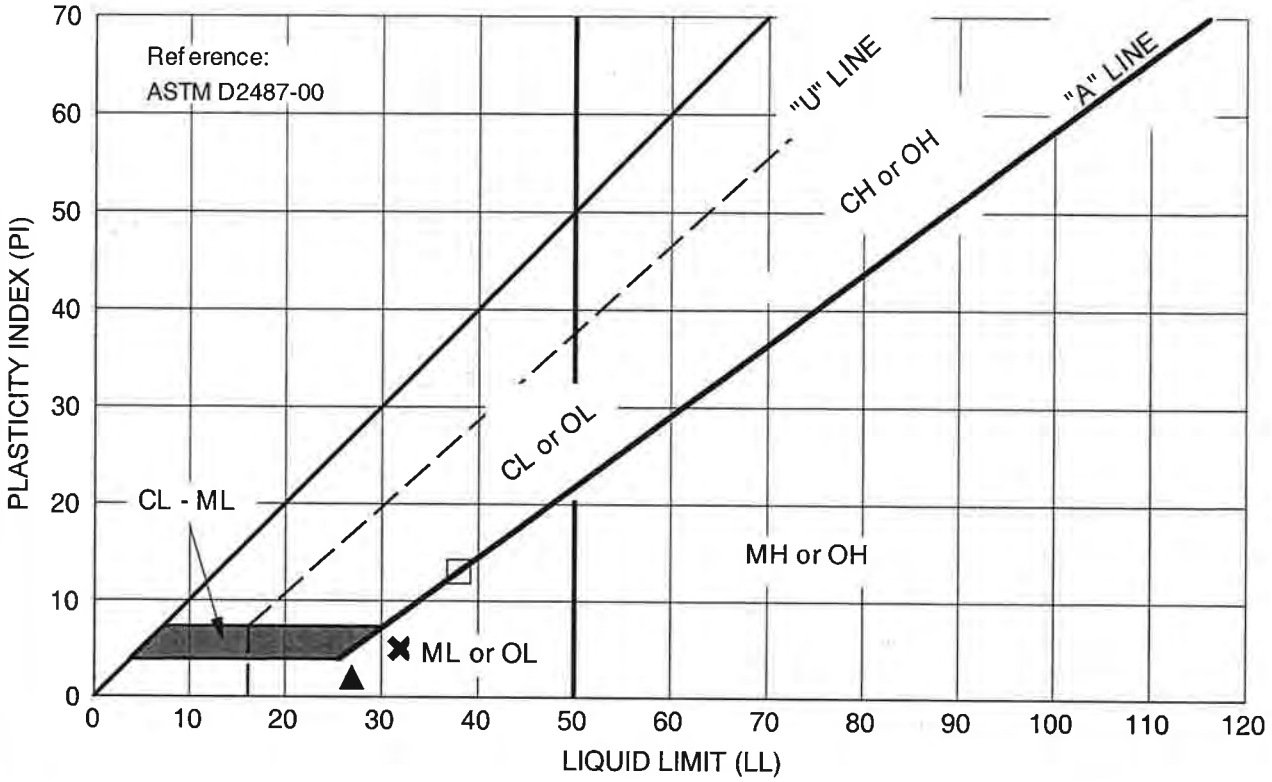
Symbol	Source	Description and Classification	Natural M.C. (%)	Liquid Limit (%)	Plasticity Index (%)	% Passing #200 Sieve
	B-6 at 31 feet	SANDY SILT (ML), brown	26.9	--	NP	69.2
▲	B-7 at 25 feet	SANDY CLAY (CL), gray to black	35.7	38	18	--
■	B-7 at 31 foot	CLAYEY SAND (SC), gray	23.3	25	8	7.5
○	B-8 at 26 feet	CLAYEY SAND (SC), brown	--	25	7	42.5
	B-10B at 5 feet	SILTY SAND (SM), red-brown	15.7	--	NP	18.6
□	B-10B at 30.0 ft	SANDY SILT (ML), yellow-brown	--	33	9	--
✖	B-10B at 35.5 ft	CLAY (CL), olive-brown	31.6	43	17	--
◇	B-10B at 46 ft	SILTY SAND (SM), olive-brown	29.2	26	2	43.3
⊙	B-11 at 14 feet	CLAY (CH), gray	35.9	61	44	--

HARBOR PARK
Pittsburg, California

PLASTICITY CHART

Treadwell&Rollo

Date 05/01/06 | Project No. 4245.02 | Figure C-23



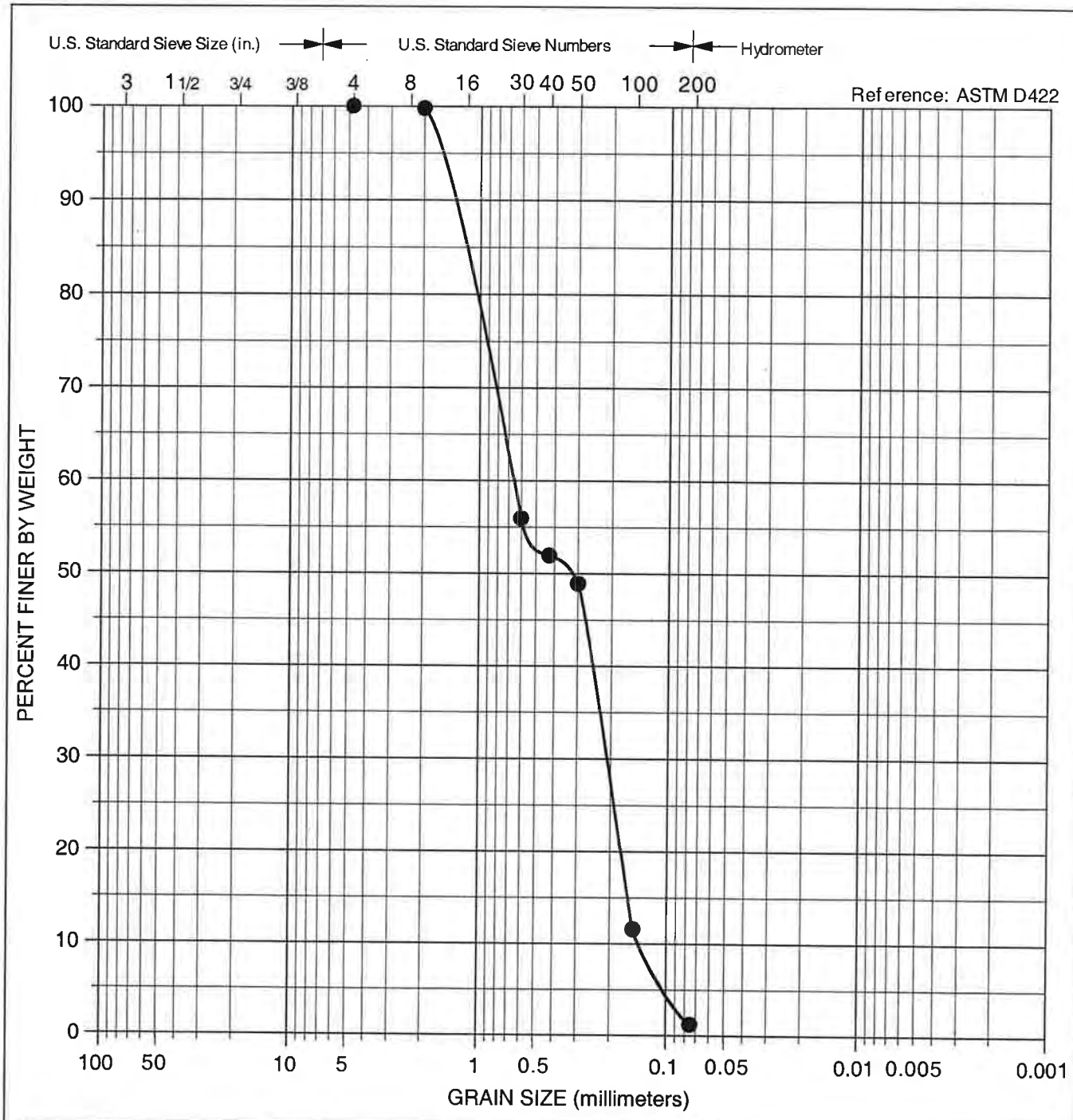
Symbol	Source	Description and Classification	Natural M.C. (%)	Liquid Limit (%)	Plasticity Index (%)	% Passing #200 Sieve
	B-11 at 30 feet	SAND (SP), gray	--	--	NP	4.1
▲	B-12 at 29 feet	SILTY SAND (SM), olive-brown	28.4	27	2	--
	B-12 at 35 foot	SILTY SAND (SM), gray	--	--	NP	46.4
	B-13 at 6 feet	SILTY SAND (SM), red-brown	--	--	NP	--
	B-13 at 10 feet	SAND with SILT (SP), olive-brown	--	--	NP	6.3
□	B-13 at 15.5 ft	SANDY SILT (ML), brown	31.8	38	13	82.4
✖	B-13 at 31 feet	SILT (ML), olive-gray	--	32	5	--
	CPT-24 at 0-1 ft	SAND (SP), gray	--	--	NP	1.2

HARBOR PARK
Pittsburg, California

PLASTICITY CHART

Treadwell&Rollo

Date 05/01/06 | Project No. 4245.02 | Figure C-24



Cobbles	Gravel: Coarse	Gravel: Fine	Sand: Coarse	Sand: Medium	Sand: Fine	Silt or Clay

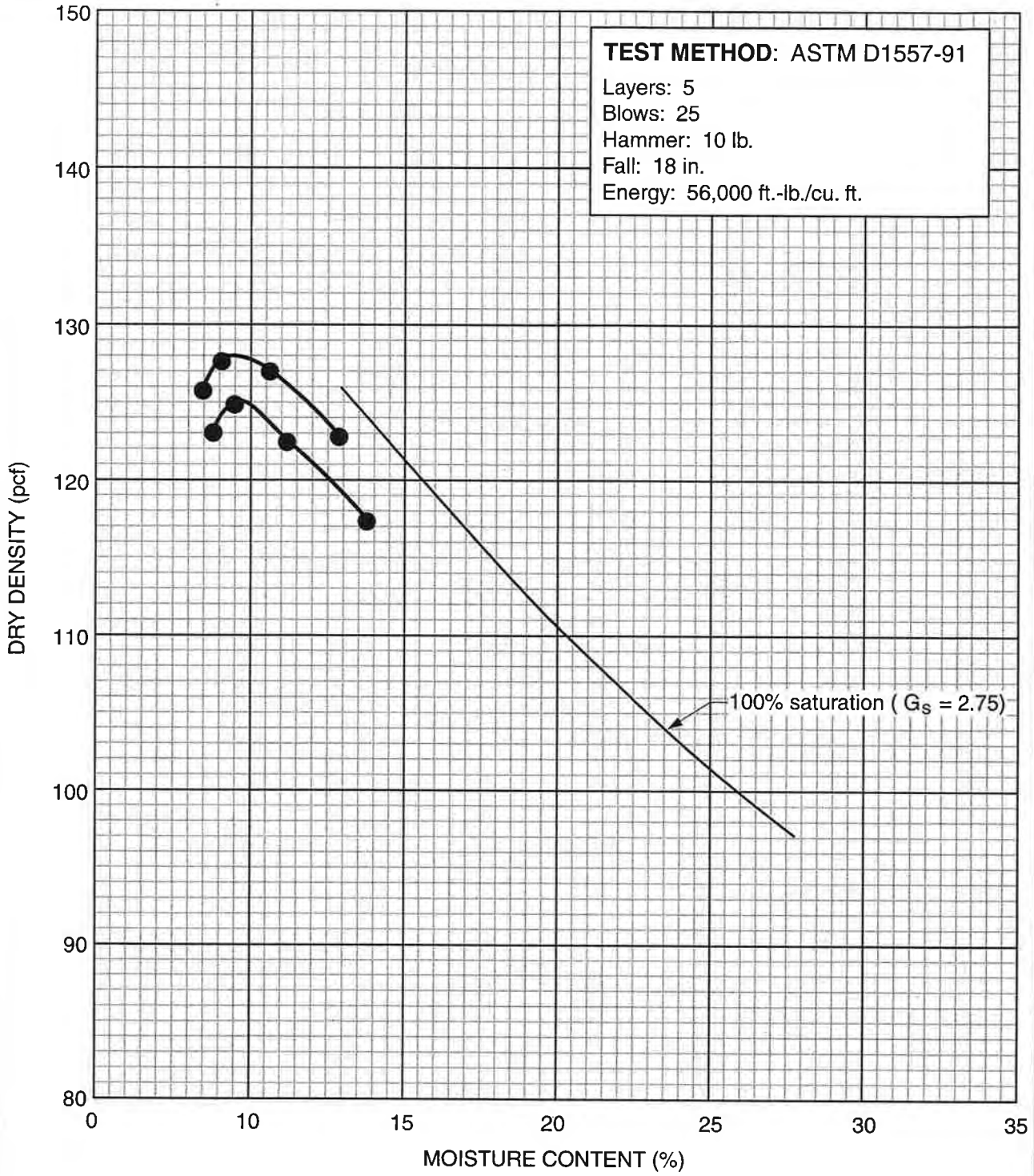
Symbol	Sample Source	Classification
●	CPT-24 at 0 to 1 feet	SAND (SP), gray

HARBOR PARK
Pittsburg, California

PARTICLE SIZE ANALYSIS

Treadwell&Rollo

Date 05/02/06	Project No. 4245.02	Figure C-25



Symbol	Sample Source	Description of Sample	Optimum Water Content (%)	Maximum Dry Density (pcf)
●	B-7 at 0.1 feet	CLAY (CL), brown	8.9	128.7

HARBOR PARK
Pittsburg, California

COMPACTION TEST DATA

Treadwell&Rollo

Project No. 4245.02 | Figure C-26

Treadwell&Rollo

APPENDIX D
Analytical Test Results
(on CD ROM)

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

ANALYTICAL REPORT

Prepared for:

Treadwell & Rollo
777 Campus Commons Rd.
Suite 200
Sacramento, CA 95825

Date: 07-MAR-06
Lab Job Number: 185059
Project ID: STANDARD
Location: Harbor Bay, Pittsburg

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Reviewed by: _____
Project Manager

Reviewed by: _____
Operations Manager

This package may be reproduced only in its entirety.

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	185059
Client:	Treadwell & Rollo
Location:	Harbor Bay, Pittsburg
Request Date:	02/21/06
Samples Received:	02/21/06

This hardcopy data package contains sample and QC results for two three-point soil composites and one two-point soil composite, requested for the above referenced project on 02/21/06. The samples were received cold and intact.

TPH-Purgeables and/or BTXE by GC (EPA 8015B):
Low recoveries were observed for gasoline C7-C12 in the MS/MSD for batch 110641; the parent sample was not a project sample, the LCS was within limits, and the associated RPD was within limits. 185059-009, 185059-010, and 185059-011 were received outside of hold time; affected data were qualified with "b". No other analytical problems were encountered.

TPH-Extractables by GC (EPA 8015B):
Low recoveries were observed for diesel C10-C24 in the MS/MSD for batch 110713; the parent sample was not a project sample, the LCS was within limits, and the associated RPD was within limits. 185059-009, 185059-010, and 185059-011 were received outside of hold time; affected data was qualified with "b". No other analytical problems were encountered.

Metals (EPA 6010B):
High recovery was observed for chromium in the MSD for batch 110682; the parent sample was not a project sample, and the BS/BSD were within limits. High RPD was also observed for chromium in the MS/MSD for batch 110682; the RPD was acceptable in the BS/BSD. No other analytical problems were encountered.

185059

Treadwell&Rollo
Environmental and Geotechnical Consultant

CHAIN OF CUSTODY RECORD

☐ 555 Montgomery Street, Suite 1300, San Francisco, CA 94111 Ph: 415-955-9040 / Fax: 415-955-9041
☐ 2 Theatre Square, Suite 216, Orinda CA 94563 Ph: 925-253-4980 / Fax: 925-253-4985
☒ 501 14th Street, 3rd Floor, Oakland, CA 94612 Ph: 510-874-4500 / Fax: 510-874-4507

Site Name: Harbor Bay, Pittsburg
Job Number: 4245.01
Project Manager\Contact: Haze Rodgers
Samplers: 2"x6" Stainless steel
Recorder (Signature Required):

Turnaround Time: Standard

Field Sample Identification No.	Date	Time	Lab Sample No.	Matrix: Soil	Matrix: Water	Matrix: Other	No. Containers & Preservative: HCl	H_2SO_4	HNO_3	Ice	Other	Analysis Requested: TPH-G,D,MO	LUFT 5 Metals	Silica gel clean-up	Hold	Remarks
B-5 Drum	12/20/05	12:00 pm	5,6,8 Comp.	X	X					1						Composite B-5, B-6, B-8
B-6 Drum	12/20/05	4:00 pm	5,6,8 Comp.	X	X					1						Composite B-5, B-6, B-8
B-7 Drum	12/21/05	12:00pm	7,11,12 Comp.	X	X					1						Composite B-7, B-11, B-12
B-8 Drum	12/21/05	2:00 pm	5,6,8 Comp.	X	X					1						Composite B-5, B-6, B-8
B-11 Drum	2/6/06	4:00pm	7,11,12 Comp.	X	X					1						Composite B-7, B-11, B-12
B-12 Drum	2/6/06	4:00pm	7,11,12 Comp.	X	X					1						Composite B-7, B-11, B-12
B-10 Drum	2/7/06	4:00pm	10,13 Comp.	X	X					1						Composite B-10, B-13
B-13 Drum	2/7/06	4:00pm	10,13 Comp.	X	X					1						Composite B-10, B-13
												X	X			Composite B-5, B-6, B-8
												X	X			Composite B-7, B-11, B-12
												X	X			Composite B-10, B-13

Relinquished by: (Signature)	Date 12/22/05	Time 1:00pm	Received by: (Signature)	Date 12/22/05	Time 1:00pm
Relinquished by: (Signature)	Date 2/21/06	Time 12:00	Received by: (Signature)	Date 2/21/06	Time 12:00
Relinquished by: (Signature)	Date	Time	Received by Lab: (Signature)	Date	Time

Sent to Laboratory (Name): Curtis & Tompkins
Laboratory Comments/Notes:

Method of Shipment: ☐ Lab courier ☐ Fed Ex ☐ Airborne ☐ UPS ☐ Hand Carried ☐ Private Courier (Co. Name)

White Copy - Original Yellow Copy - Laboratory Pink Copy - Field

COC Number: 002525

intact cold RG

Curtis & Tompkins, Ltd.

COOLER RECEIPT CHECKLIST

Login#: 165159 Date Received: 2-21-06 Number of Coolers: 1
Client: Treadwell & Rollo Project: 4245.01

A. Preliminary Examination Phase
Date Opened: 2-21-06 By (print): Troy Windsor (sign) Troy Windsor

1. Did cooler come with a shipping slip (airbill, etc.)? ..... YES (NO)
If YES, enter carrier name and airbill number: _____
2. Were custody seals on outside of cooler? ..... YES (NO)
How many and where? _____ Seal date: _____ Seal name: _____
3. Were custody seals unbroken and intact at the date and time of arrival? ..... YES NO N/A
4. Were custody papers dry and intact when received? ..... (YES) NO
5. Were custody papers filled out properly (ink, signed, etc.)? ..... (YES) NO
6. Did you sign the custody papers in the appropriate place? ..... (YES) NO
7. Was project identifiable from custody papers? ..... (YES) NO
If YES, enter project name at the top of this form.
8. If required, was sufficient ice used? Samples should be 2-6 degrees C. ..... (YES) NO
Type of ice: Wet Temperature: Cold - no temp blank

B. Login Phase
Date Logged In: 2-21-06 By (print): Troy Windsor (sign) Troy Windsor

1. Describe type of packing in cooler: In ziploc type bags
2. Did all bottles arrive unbroken? ..... (YES) NO
3. Were labels in good condition and complete (ID, date, time, signature, etc.)? ..... (YES) NO
4. Did bottle labels agree with custody papers? ..... (YES) NO
5. Were appropriate containers used for the tests indicated? ..... (YES) NO
6. Were correct preservatives added to samples? ..... YES NO N/A
7. Was sufficient amount of sample sent for tests indicated? ..... (YES) NO
8. Were bubbles absent in VOA samples? If NO, list sample Ids below ..... YES NO N/A
9. Was the client contacted concerning this sample delivery? ..... YES NO
If YES, give details below.
Who was called? _____ By whom? _____ Date: _____

Additional Comments:

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	185059	Location:	Harbor Bay, Pittsburg
Client:	Treadwell & Rollo	Prep:	EPA 5030B
Project#:	4245	Analysis:	EPA 8015B
Matrix:	Soil	Batch#:	110641
Units:	mg/Kg	Received:	02/21/06
Basis:	as received	Analyzed:	02/22/06
Diln Fac:	1.000		

Field ID: COMP B-5,6,8 — Lab ID: 185059-009
Type: SAMPLE — Sampled: 12/21/05

Analyte	Result	RL
Gasoline C7-C12	ND b	0.95

Surrogate	%REC	Limits
Trifluorotoluene (FID)	96 b	59-140
Bromofluorobenzene (FID)	99 b	62-149

Field ID: COMP B-7,11,12 — Lab ID: 185059-010
Type: SAMPLE — Sampled: 02/21/05

Analyte	Result	RL
Gasoline C7-C12	ND b	1.1

Surrogate	%REC	Limits
Trifluorotoluene (FID)	101 b	59-140
Bromofluorobenzene (FID)	109 b	62-149

Field ID: COMP B-10,13 — Lab ID: 185059-011
Type: SAMPLE — Sampled: 02/07/05

Analyte	Result	RL
Gasoline C7-C12	ND b	1.0

Surrogate	%REC	Limits
Trifluorotoluene (FID)	100 b	59-140
Bromofluorobenzene (FID)	104 b	62-149

Type: BLANK — Lab ID: QC328780

Analyte	Result	RL
Gasoline C7-C12	ND	0.20

Surrogate	%REC	Limits
Trifluorotoluene (FID)	90	59-140
Bromofluorobenzene (FID)	95	62-149

b= See narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	185059	Location:	Harbor Bay, Pittsburg
Client:	Treadwell & Rollo	Prep:	EPA 5030B
Project#:	4245	Analysis:	EPA 8015B
Type:	LCS	Basis:	as received
Lab ID:	QC328782	Diln Fac:	1.000
Matrix:	Soil	Batch#:	110641
Units:	mg/Kg	Analyzed:	02/22/06

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	10.00	9.494	95	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	108	59-140
Bromofluorobenzene (FID)	104	62-149

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	185059	Location:	Harbor Bay, Pittsburg
Client:	Treadwell & Rollo	Prep:	EPA 5030B
Project#:	4245	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
MSS Lab ID:	185049-001	Batch#:	110641
Matrix:	Soil	Sampled:	02/21/06
Units:	mg/Kg	Received:	02/21/06
Basis:	as received	Analyzed:	02/23/06

Type: MS Lab ID: QC328917

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	<0.1240	10.10	3.488	35 *	44-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	97	59-140
Bromofluorobenzene (FID)	97	62-149

Type: MSD Lab ID: QC328918

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	9.259	3.548	38 *	44-120	10	23

Surrogate	%REC	Limits
Trifluorotoluene (FID)	97	59-140
Bromofluorobenzene (FID)	97	62-149

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	185059	Location:	Harbor Bay, Pittsburg
Client:	Treadwell & Rollo	Prep:	SHAKER TABLE
Project#:	STANDARD	Analysis:	EPA 8015B
Matrix:	Soil	Diln Fac:	1.000
Units:	mg/Kg	Received:	02/21/06
Basis:	as received		

Field ID:	COMP B-5,6,8	Sampled:	12/21/05
Type:	SAMPLE	Prepared:	02/23/06
Lab ID:	185059-009	Analyzed:	02/27/06
Batch#:	110713		

Analyte	Result	RL
Diesel C10-C24	23 H Y b	0.99
Motor Oil C24-C36	50 b	5.0

Surrogate	%REC	Limits
Hexacosane	77 b	48-132

Field ID:	COMP B-7,11,12	Sampled:	02/21/05
Type:	SAMPLE	Prepared:	02/24/06
Lab ID:	185059-010	Analyzed:	02/24/06
Batch#:	110742		

Analyte	Result	RL
Diesel C10-C24	3.0 H L Y b	0.99
Motor Oil C24-C36	8.2 b	5.0

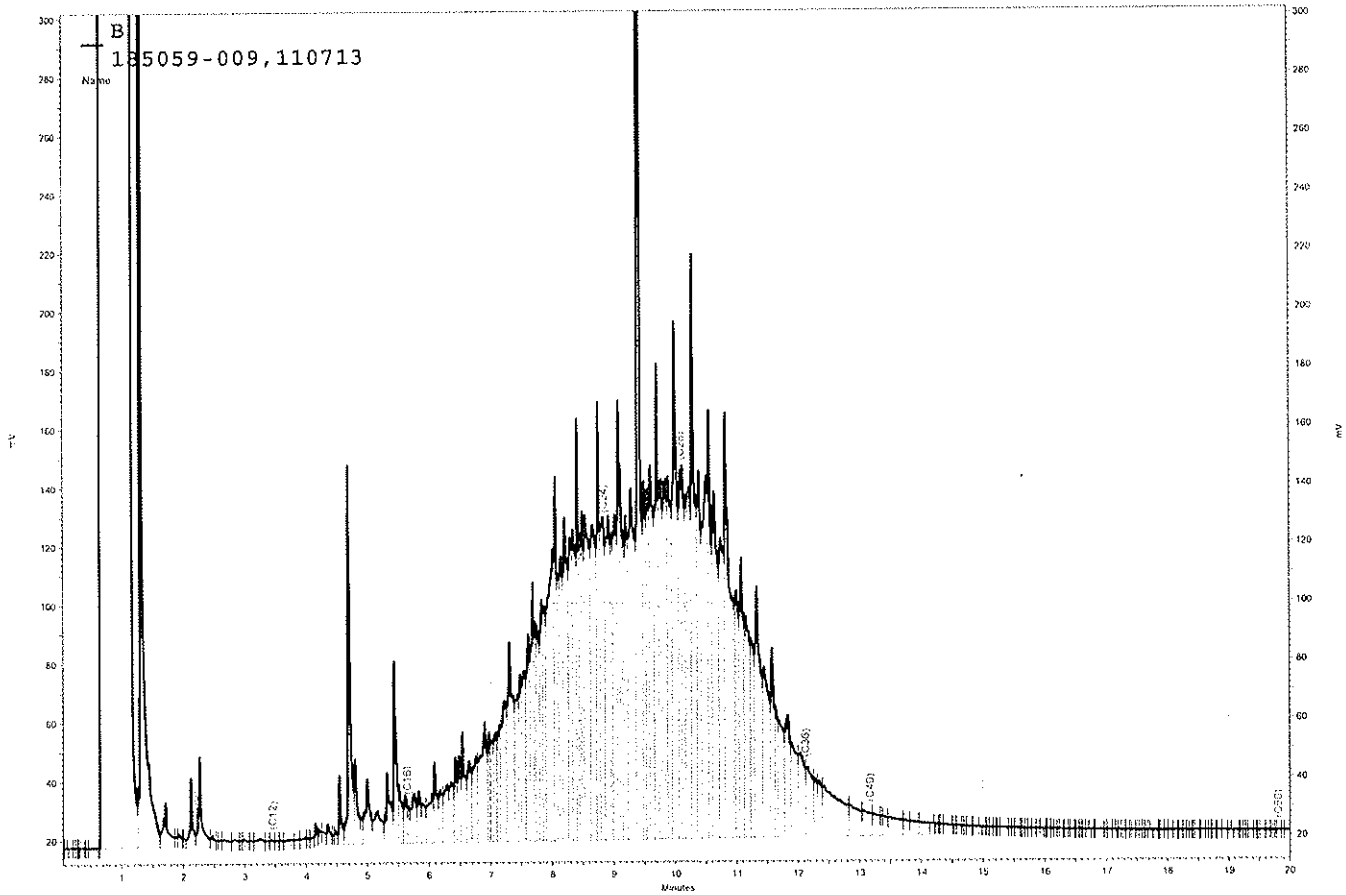
Surrogate	%REC	Limits
Hexacosane	79 b	48-132

Field ID:	COMP B-10,13	Sampled:	02/07/05
Type:	SAMPLE	Prepared:	02/24/06
Lab ID:	185059-011	Analyzed:	02/24/06
Batch#:	110742		

Analyte	Result	RL
Diesel C10-C24	2.8 H L Y b	1.0
Motor Oil C24-C36	9.5 b	5.0

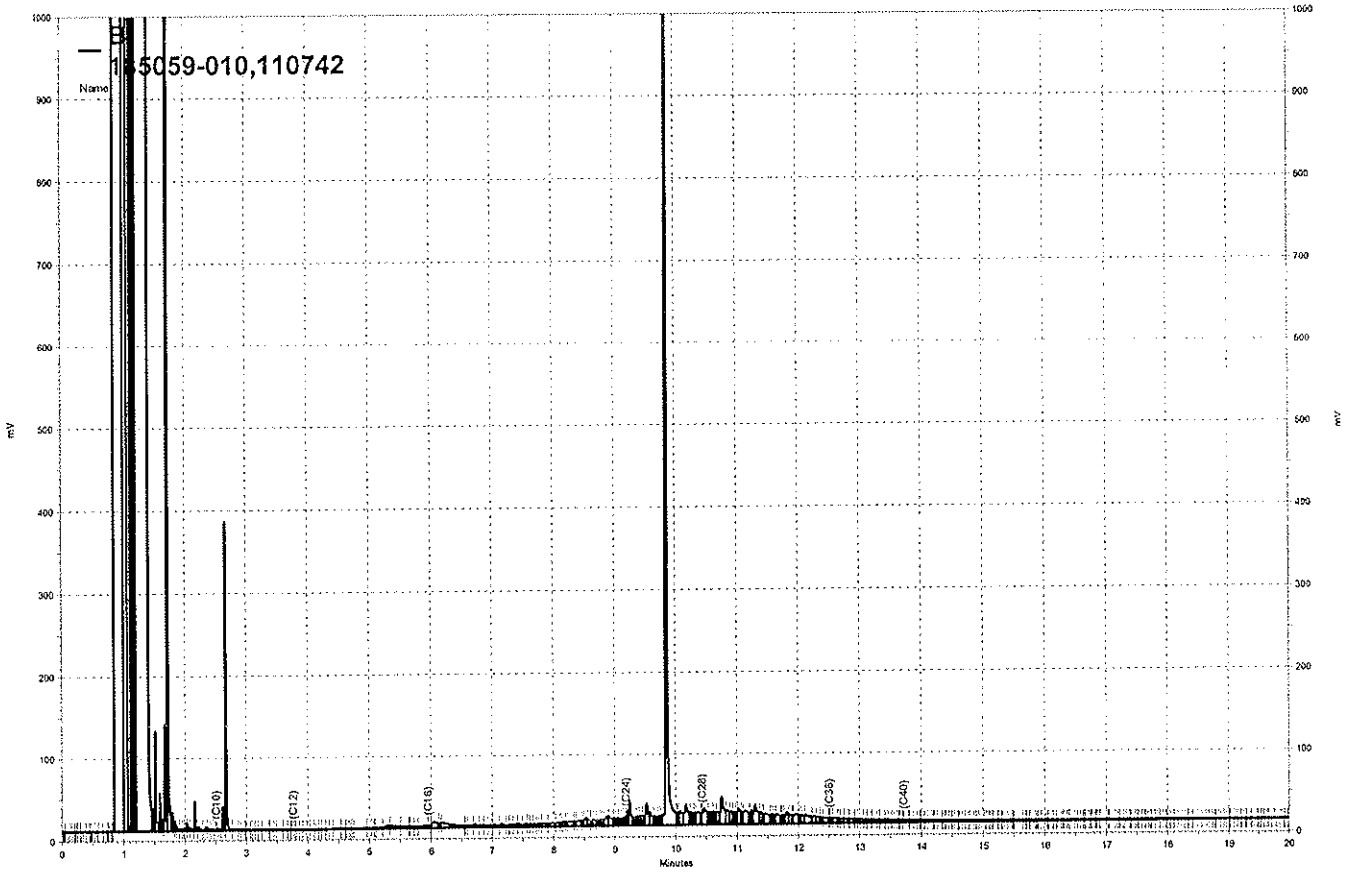
Surrogate	%REC	Limits
Hexacosane	77 b	48-132

H= Heavier hydrocarbons contributed to the quantitation
L= Lighter hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
b= See narrative
ND= Not Detected
RL= Reporting Limit



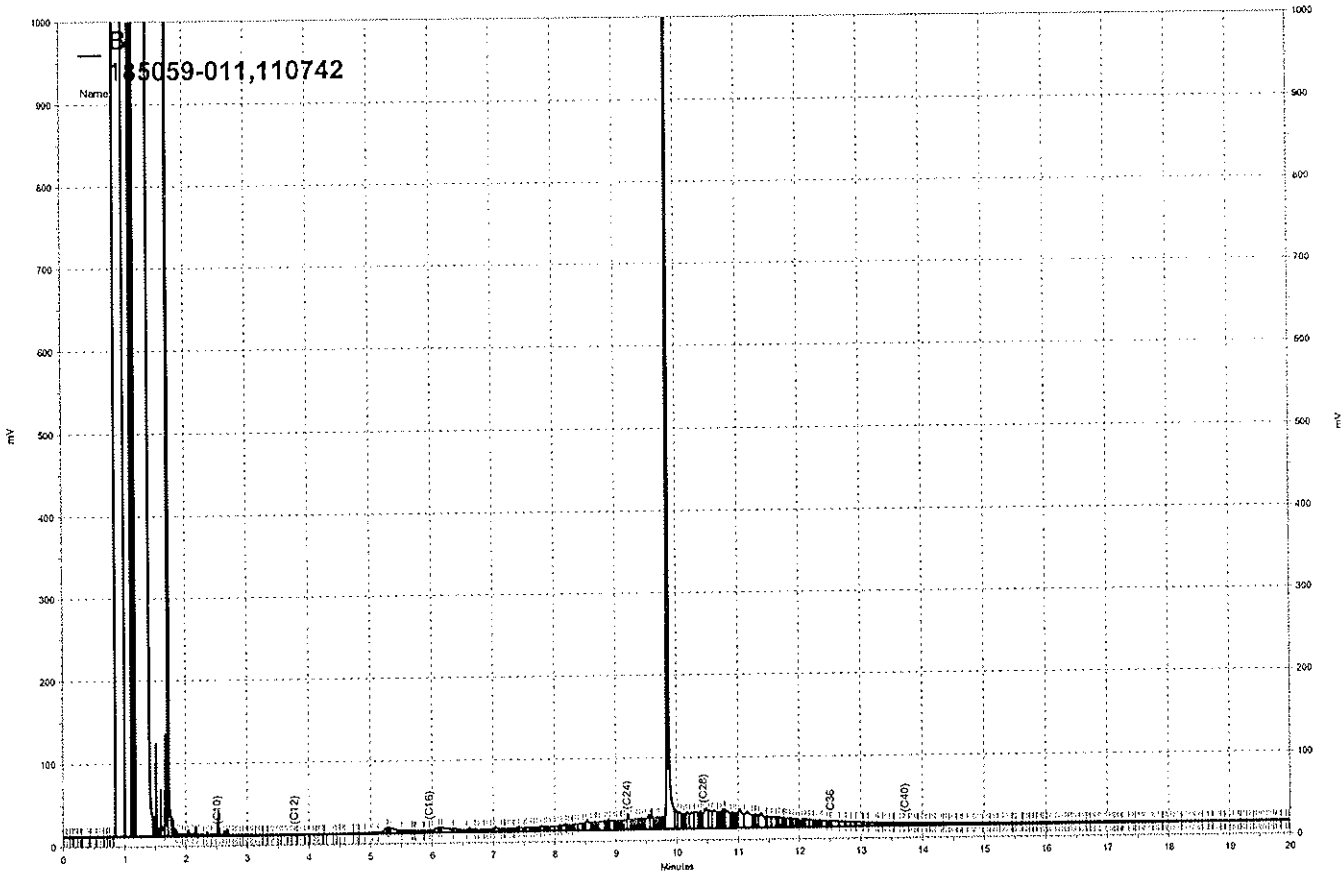
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COMP. B-5, 6, 8



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COMP B-7, 11, 12



\\Lims\gdrive\ezchrom\Projects\GC15B\Data\055b020, B

COMP B-10, 13

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	185059	Location:	Harbor Bay, Pittsburg
Client:	Treadwell & Rollo	Prep:	SHAKER TABLE
Project#:	STANDARD	Analysis:	EPA 8015B
Matrix:	Soil	Diln Fac:	1.000
Units:	mg/Kg	Received:	02/21/06
Basis:	as received		

Type:	BLANK	Prepared:	02/23/06
Lab ID:	QC329080	Analyzed:	02/27/06
Batch#:	110713	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Diesel C10-C24	ND	1.0
Motor Oil C24-C36	ND	5.0

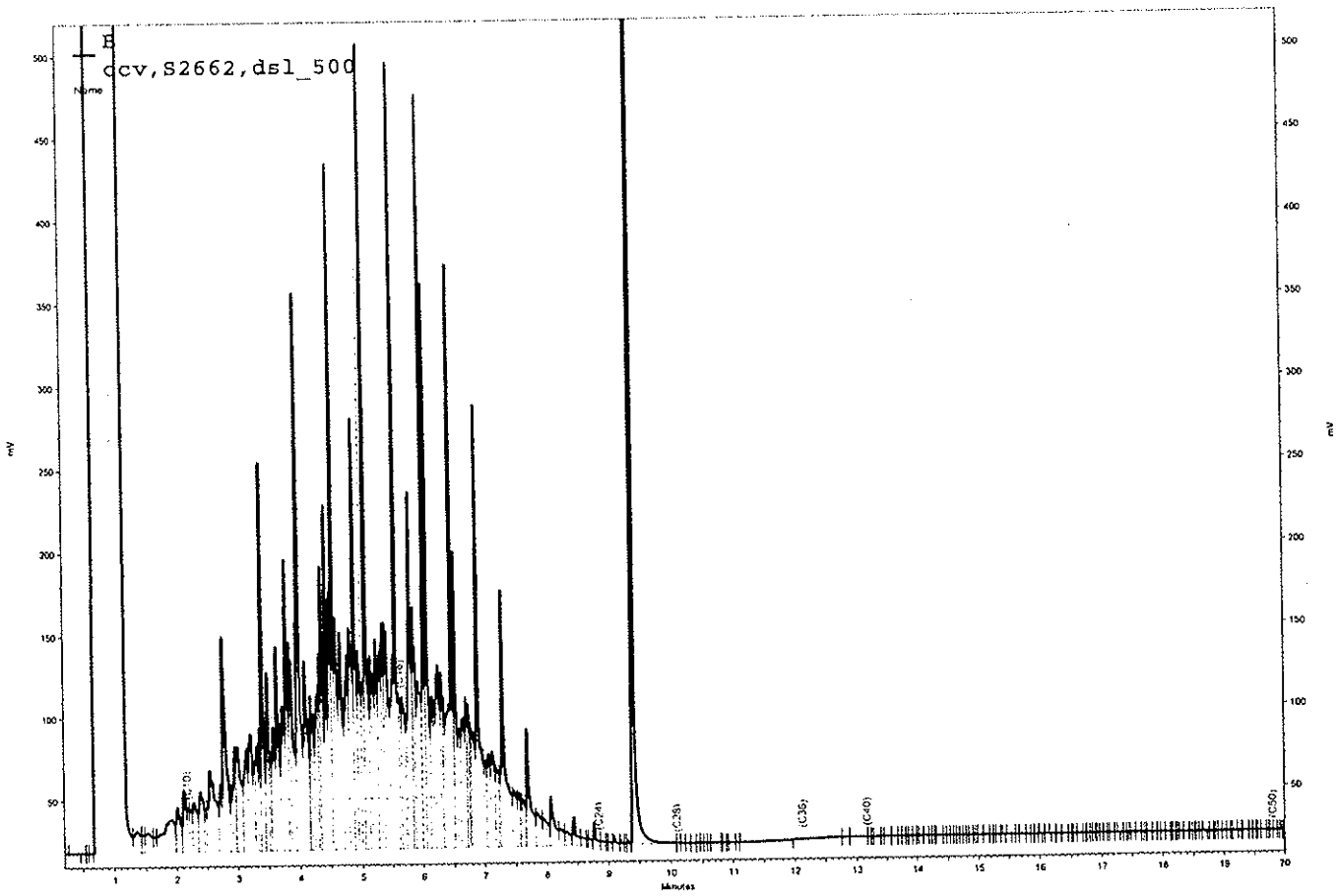
Surrogate	%REC	Limits
Hexacosane	97	48-132

Type:	BLANK	Prepared:	02/24/06
Lab ID:	QC329190	Analyzed:	02/24/06
Batch#:	110742	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Diesel C10-C24	ND	1.0
Motor Oil C24-C36	ND	5.0

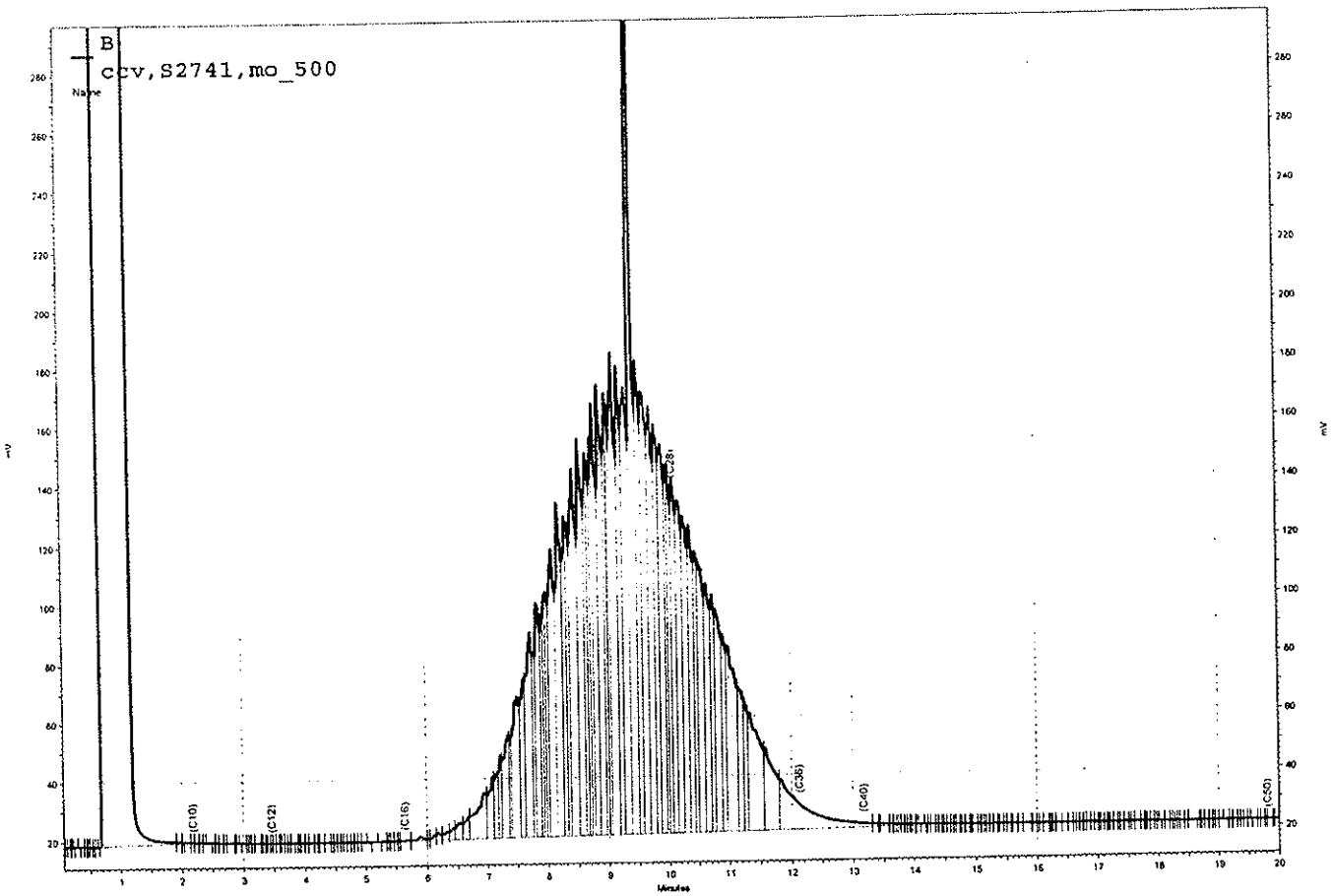
Surrogate	%REC	Limits
Hexacosane	78	48-132

H= Heavier hydrocarbons contributed to the quantitation
L= Lighter hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
b= See narrative
ND= Not Detected
RL= Reporting Limit



——— \\Lims\gdrive\ezchrom\Projects\GC13B\Data\058b003, B

Diesel



\\Lims\gdrive\ezchrom\Projects\GC13B\Data\058b004, B

Motor Oil

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	185059	Location:	Harbor Bay, Pittsburg
Client:	Treadwell & Rollo	Prep:	SHAKER TABLE
Project#:	STANDARD	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC329081	Batch#:	110713
Matrix:	Soil	Prepared:	02/23/06
Units:	mg/Kg	Analyzed:	02/27/06
Basis:	as received		

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.80	57.26	115	54-137

Surrogate	%REC	Limits
Hexacosane	113	48-132

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	185059	Location:	Harbor Bay, Pittsburg
Client:	Treadwell & Rollo	Prep:	SHAKER TABLE
Project#:	STANDARD	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC329191	Batch#:	110742
Matrix:	Soil	Prepared:	02/24/06
Units:	mg/Kg	Analyzed:	02/24/06
Basis:	as received		

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.78	46.85	94	54-137

Surrogate	%REC	Limits
Hexacosane	93	48-132

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	185059	Location:	Harbor Bay, Pittsburg
Client:	Treadwell & Rollo	Prep:	SHAKER TABLE
Project#:	STANDARD	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	110713
MSS Lab ID:	184945-012	Sampled:	02/10/06
Matrix:	Soil	Received:	02/15/06
Units:	mg/Kg	Prepared:	02/23/06
Basis:	as received	Analyzed:	02/27/06
Diln Fac:	5.000		

Type: MS
Lab ID: QC329082

Cleanup Method: EPA 3630C

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	72.62	50.30	71.32	-3 *	28-163

Surrogate	%REC	Limits
Hexacosane	90	48-132

Type: MSD
Lab ID: QC329083

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	50.32	75.61	6 *	28-163	6	46

Surrogate	%REC	Limits
Hexacosane	94	48-132

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	185059	Location:	Harbor Bay, Pittsburg
Client:	Treadwell & Rollo	Prep:	SHAKER TABLE
Project#:	STANDARD	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	110742
MSS Lab ID:	184968-005	Sampled:	02/15/06
Matrix:	Soil	Received:	02/16/06
Units:	mg/Kg	Prepared:	02/24/06
Basis:	as received	Analyzed:	02/25/06
Diln Fac:	1.000		

Type: MS Lab ID: QC329192

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	74.42	49.77	126.0	104	28-163

Surrogate	%REC	Limits
Hexacosane	90	48-132

Type: MSD Lab ID: QC329193

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	49.64	119.9	92	28-163	5	46

Surrogate	%REC	Limits
Hexacosane	96	48-132

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

California LUFT Metals

Lab #:	185059	Location:	Harbor Bay, Pittsburg
Client:	Treadwell & Rollo	Prep:	EPA 3050B
Project#:	STANDARD	Analysis:	EPA 6010B
Matrix:	Soil	Batch#:	110682
Units:	mg/Kg	Received:	02/21/06
Basis:	as received	Prepared:	02/23/06
Diln Fac:	1.000	Analyzed:	02/23/06

Field ID: COMP B-5,6,8 Lab ID: 185059-009
Type: SAMPLE Sampled: 12/21/05

Analyte	Result	RL
Cadmium	ND	0.16
Chromium	29	0.32
Lead	3.9	0.096
Nickel	32	0.64
Zinc	31	0.64

Field ID: COMP B-7,11,12 Lab ID: 185059-010
Type: SAMPLE Sampled: 02/21/05

Analyte	Result	RL
Cadmium	ND	0.22
Chromium	21	0.43
Lead	5.7	0.13
Nickel	20	0.86
Zinc	40	0.86

Field ID: COMP B-10,13 Lab ID: 185059-011
Type: SAMPLE Sampled: 02/07/05

Analyte	Result	RL
Cadmium	ND	0.27
Chromium	37	0.55
Lead	2.1	0.16
Nickel	52	1.1
Zinc	25	1.1

Type: BLANK Lab ID: QC328961

Analyte	Result	RL
Cadmium	ND	0.25
Chromium	ND	0.50
Lead	ND	0.15
Nickel	ND	1.0
Zinc	ND	1.0

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

California LUFT Metals

Lab #:	185059	Location:	Harbor Bay, Pittsburg
Client:	Treadwell & Rollo	Prep:	EPA 3050B
Project#:	STANDARD	Analysis:	EPA 6010B
Matrix:	Soil	Batch#:	110682
Units:	mg/Kg	Prepared:	02/23/06
Basis:	as received	Analyzed:	02/23/06
Diln Fac:	1.000		

Type: BS Lab ID: QC328962

Analyte	Spiked	Result	%REC	Limits
Cadmium	10.00	10.72	107	80-120
Chromium	100.0	104.6	105	80-120
Lead	100.0	102.6	103	80-120
Nickel	25.00	26.01	104	80-120
Zinc	25.00	26.43	106	80-120

Type: BSD Lab ID: QC328963

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Cadmium	10.00	10.40	104	80-120	3	20
Chromium	100.0	102.1	102	80-120	2	20
Lead	100.0	99.71	100	80-120	3	20
Nickel	25.00	25.25	101	80-120	3	20
Zinc	25.00	25.64	103	80-120	3	20

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

California LUFT Metals

Lab #:	185059	Location:	Harbor Bay, Pittsburg
Client:	Treadwell & Rollo	Prep:	EPA 3050B
Project#:	STANDARD	Analysis:	EPA 6010B
Field ID:	ZZZZZZZZZZ	Batch#:	110682
MSS Lab ID:	184945-002	Sampled:	02/14/06
Matrix:	Soil	Received:	02/15/06
Units:	mg/Kg	Prepared:	02/23/06
Basis:	as received	Analyzed:	02/23/06

Type: MS Lab ID: QC328964

Analyte	MSS Result	Spiked	Result	%REC	Limits	Diln Fac
Cadmium	0.7207	7.299	7.506	93	72-120	1.000
Chromium	21.80	72.99	101.1	109	65-120	10.00
Lead	31.88	72.99	94.48	86	57-125	1.000
Nickel	487.9	18.25	700.9 >LR	1168 NM	47-135	1.000
Zinc	139.0	18.25	115.3	-130 NM	43-141	1.000

Type: MSD Lab ID: QC328965

Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Diln Fac
Cadmium	9.434	9.728	95	72-120	2	20	1.000
Chromium	94.34	533.2	542 *	65-120	125 *	20	10.00
Lead	94.34	113.4	86	57-125	0	20	1.000
Nickel	23.58	804.9 >LR	1344 NM	47-135	NC	20	1.000
Zinc	23.58	115.2	-101 NM	43-141	3	20	1.000

*= Value outside of QC limits; see narrative
NC= Not Calculated
NM= Not Meaningful: Sample concentration > 4X spike concentration
>LR= Response exceeds instrument's linear range
RPD= Relative Percent Difference

Treadwell&Rollo

DISTRIBUTION

4 copies: Mr. Chris Nelson
c/o Pittsburg River Park
55 Hawthorne Street, Suite 555
San Francisco, California 94105

QUALITY CONTROL REVIEWER:

For Richard D. Rodgers
Geotechnical Engineer

Treadwell&Rollo

17 July 2008
Project 4245.02

Pittsburg River Park LLC
c/o Mr. Michael Singer
36 Washington Street, Suite 390
Wellesley, Massachusetts 02481

Subject: Final Report
Geotechnical Services during Remedial Mass Grading
The Proposed Harbor Park Development
Pittsburg, California

Dear Mr. Singer:

This letter summarizes the geotechnical services provided by Treadwell & Rollo, Inc. (T&R) during remedial mass grading of The Proposed Harbor Park Development project located in Pittsburg, California. Environmental services were performed by ERM West (ERM) until December 2006. By February 2007 environmental services were performed by LFR. Our scope of work was performed in accordance with our proposal dated 13 August 2007, and our budget and scope revisions dated 3 January 2008. We previously performed a geotechnical investigation for the project and presented the results in a report dated 13 June 2006. Supplemental geotechnical recommendations were presented in the following documents:

- *Supplemental Geotechnical Consultation, Settlement of the Proposed Earthen Embankment, Proposed Harbor Park Development, Pittsburg, California*, dated 13 June 2006
- *Embankment Repair, Harbor Park Development, Pittsburg, California,* dated 5 December 2006
- *Supplemental Geotechnical Consultation, Proposed Wick Drain Design for the Acceleration of Settlement Due the Proposed Earthen Embankment, Proposed Harbor Park Development, Pittsburg, California*, dated 9 January 2007
- *Supplemental Geotechnical Consultation, Proposed Wick Drain Design for the Acceleration of Settlement Due the Proposed Earthen Embankment, Proposed Harbor Park Development, Pittsburg, California*, dated 16 July 2007
- *Additional Geotechnical Consultation for Remedial Mass Grading and Revised Earthen*
- *Embankment Construction, Harbor Park Development, Pittsburg, California*, dated 16 July 2007
- *Geotechnical Consultation, Selected Approach for Remedial Mass Grading and Revised Earthen Embankment Construction, Harbor Park Development, Pittsburg, California*, dated 31 July 2007

- *Supplemental Geotechnical Consultation, Estimated Settlement due to the Revised Earthen Embankment Configuration, Proposed Harbor Park Development, Pittsburg, California*, dated 3 August 2007

- *Former Evaporation Pond Drainage,* dated 30 October 2007.

Our observations of the construction of the wick drain system were presented in a separate letter dated 24 June 2008. We previously observed and performed field density testing of the backfill of the excavations for the removal of buried utilities in the DMDR development area between 26 June and 20 October 2006. The summary of our geotechnical observations and testing were published in a letter dated 20 November 2006.

The development site is located southwest of the intersection of East 3rd Street and Harbor Street in Pittsburg, California as shown on Figure 1. The proposed development includes the following:

- Downtown Medium Density Residential (DMDR); this portion of the development will consist of 2- and 3-story, single-family, detached and attached homes, constructed at a density of 12 to 18 units per acre

- Downtown High Density Residential (DHDR); this portion of the development will consist of 3-story, multi-family structures and live/work lofts, constructed at a density of 18 to 30 units per acre

- Open Space (OS) area; this portion of the development will include a relatively large earthen embankment along the eastern edge of the site along Harbor Street.

As discussed in Section 10.4 and shown on Figures 4 and 8 of our report dated 13 June 2006, we recommended the proposed building sites that are underlain by compressible, soft to medium stiff, clay deposits and subject to new fill and building loads, be supported on deep foundations that gain support in competent soil below the compressible clay deposits. At all other locations, we recommend the proposed 2- to 3-story buildings be supported on stiffened shallow foundations that rest on at least a 3-foot-thick layer of compacted fill. A stiffened shallow foundation system may consist of either interconnected, continuous spread-type footings, a reinforced concrete mat, or a P-T slab.

The site improvements for the remedial mass grading phase included backfilling the former evaporation pond, widening the existing earth embankment, installing wick drains, and evaluating the ground surface settlement data of the wick drain treated area. Based on discussions with the design team during a conference call on 3 December 2007, we expanded our observation services to include backfilling of two excavations located northwest of the former evaporation pond. The excavations were approximately 30 to 50 feet in diameter and approximately 9 to 12 feet deeper than the surrounding ground surface. However, in accordance with e-mail correspondence with Pittsburg River Park, LLC dated 11 December 2007, testing and observation services were limited to areas of the site where previous environmental work had resulted in large excavations (the former evaporation pond and two excavations) that required the placement and compaction of new fill.

During remedial mass grading, we performed:

- full-time observation and testing services during the placement and compaction of fill at the former evaporation pond and two smaller excavations resulting from site remediation activities.
- part-time observation of the widening of the existing embankment
- consultation with the project team regarding geotechnical issues that arose during construction.

The basis for our work included the mass grading plan, prepared by Winzler & Kelly, the project civil engineer, dated 18 October 2007, the site survey plan, prepared by Winzler & Kelly and e-mailed to Treadwell & Rollo, Inc. on 4 December 2007, and our geotechnical report and other correspondence previously listed.

Between 6 November and 8 February 2008, we intermittently visited the site and provided geotechnical services when requested by Pittsburg River Park LLC. ENTACT was the grading contractor. The items we observed and tested are summarized in the remainder of this letter.

EMBANKMENT CONSTRUCTION

Construction of an earthen embankment had begun prior to T&R's involvement with performing geotechnical observation services at the site. The earthen embankment was designed to contain environmentally impacted soil. The impacted soil was placed beneath and within the embankment under the observation of the environmental consultant, ERM. The below-grade portion was placed to a depth of about 10 feet below finish grade. The impacted soil within the embankment had a trapezoidal configuration with approximately 2:1 (horizontal to vertical) side slopes. In general, the embankment was approximately 10 to 14 feet high and approximately 25 to 30 feet wide at the top. In mid-November 2006, a portion of the embankment failed due to oversteepened cuts near the western toe of the embankment. T&R was requested to assist in the evaluation and repair of the embankment. Our findings and recommendations were presented in a letter titled "Embankment Repair Harbor Park Development, Pittsburg, California" dated 5 December 2006. The configuration of the earthen embankment as of 18 October 2007 is presented on the site survey prepared by Winzler and Kelly as shown on Figure 2. In December 2006, Pittsburg River Park, LLC performed interim grading to temporarily stabilize the failed portion of the embankment, and subsequently stopped construction in order to re-evaluate the capacity of the existing embankment to accommodate the remainder of the environmentally impacted soil. LFR was retained by Pittsburg River Park, LLC to provide environmental consultation during the repair and redesign of the embankment.

The revised embankment configuration is shown on drawing titled "Details - 1" sheet C-501, prepared by Winzler and Kelly, dated 18 October 2007. The revised embankment has:

- an above-grade portion that is approximately 10 to 14 feet high and 85 feet wide at the base (between the toe of the side slopes) with 4-foot-wide drainage swales along the eastern and western edges of the embankment
- a below-grade portion that is approximately 10 feet deep and 85 feet wide
- side slopes at inclinations no steeper than 2:1 (horizontal to vertical).

The existing embankment was repaired by following the recommendations presented in our letter dated 5 December 2006, and the existing embankment was modified by excavating an approximately 10-foot deep and 15- to 20-foot-wide trench on the western side of the berm and placing environmentally impacted soil in the trench. Subsequently environmentally impacted soil was placed above the ground surface to the configuration shown in the Winzler and Kelly drawing dated 18 October 2007. Between the dates of 28 November 2007 and 8 February 2008, we performed part-time observation during the repair and widening of the existing embankment. The fill material was highly variable, consisted of environmentally impacted soil, and the embankment is in an "open space" area; therefore, as discussed with Pittsburg River Park, LLC, T&R personal would observe the compaction activities on an intermittent basis, but we would not enter the excavation nor perform compaction tests on the environmentally impacted soil.

We recommended that the embankment backfill be placed in 8-inch-thick lifts and be compacted. Initially, up to 10 feet of environmental impacted soil was loosely dumped into the trench. Based on a teleconference discussion dated 3 December 2007, the upper six feet of material was removed and the bottom was compacted until the fill was firm and unyielding. The remaining trench material was placed in thin lifts and compacted.

As discussed in our 16 July 2007 letter, we recommended that the contact between the environmental impacted fill and the "clean" soil cover be stair-stepped, or a cellular anchorage system be used to help reduce the potential for slumping of the cap material. We explained that if the contact is not stair-stepped or an anchorage system is not used, there could be potential for downhill movement of the cap material, especially after the cover soil has become saturated. Subsequently, Pittsburg River Park, LLC decided not to stair-step or bench the "clean" cover soil onto the existing embankment slope but instead would repair the embankment side-slopes, if necessary. Also, as discussed in our letter dated 31 July 2007, Pittsburg River Park, LLC decided to use tensile geogrid as a separation material between the "clean" soil cap and the underlying environmentally impacted soil in the embankment, because of its superior engineering properties in comparison to the originally proposed felt separation fabric. During construction, we confirmed that a geogrid was placed on the embankment slope between the soil and soil cover material.

REMEDIAL MASS GRADING

During remedial mass grading we performed full-time observation and testing during placement and compaction of fill within the former evaporation pond and smaller excavations for remedial activities as shown on Figure 2. A shallow excavation (approximately 5 feet deeper than the surrounding ground surface) was created and backfilled. The excavation was located on the south side of the central former excavation. The approximate location is shown on Figure 2. Between 6 November to 17 December 2007, we performed a total of 557 field density tests to check the relative compaction of pond and excavation backfill. Based on a telephone conversation with Pittsburg River Park, LLC on 3 December 2007, observation and testing services were performed to within 2-feet of finished grade. Originally, finish grades were estimated based on the mass grading plan, prepared by Winzler & Kelly dated 18 October 2007. However, during the course of the remedial grading operations, our field engineer was informed by Pittsburg River Park, LLC that the finish grades would be decreased by about two feet because of the lack of available fill. Elevations were checked in the field by a representative of ENTACT using a laser level and the elevations of the field density tests are shown on the attached Table 1. The T&R representative provided testing services when requested by Pittsburg River Park, LLC.

The field density tests were performed using a nuclear moisture/density gauge in accordance with ASTM test methods D2922 and D3017 for density and moisture, respectively. The results of all of our field density tests are presented in Table 1. The first 118 density tests were summarized in the letter dated 20 November 2006.

Laboratory compaction tests were performed on the on-site material and aggregate base to determine the maximum dry density and optimum moisture content of each material. The compaction tests were performed in accordance with ASTM Test Method D1557-07. The results of these tests and the laboratory compaction tests performed on samples of fill are summarized in Table 2.

Before placing fill within the excavation at the former evaporation pond, a temporary dewatering system was installed to lower the water level. We understand the water was collected and treated on-site before disposal. To facilitate the placement and compaction of fill over wet subgrade at the bottom of the excavation, a combination of geotextile tensile fabric and crushed concrete was used to create a stable base. However, at localized areas, an additional layer of tensile fabric and crushed concrete was needed to stabilize the wet subgrade.

During compaction of the hydrocarbon impacted soil in the large evaporation pond, on-site soil with high moisture content was encountered. T&R recommended the use of a lime-admixture to aid in changing the soil properties and to improve the potential of compacting wet clayey fill during the rainy season. Lime was spread on the surface of clayey fill and mixed into the fill using of an excavator's bucket. Lime was also mixed into the soil stockpiles. Lime was added to the soil at a concentration of about 3 to 5 percent by dry weight of soil and blended until the soil had sufficiently dried to achieve adequate compaction.

We noted oversized rubble was placed along the eastern side of the large evaporation pond and the western side of the embankment and, based on conversations with Pittsburg River Park, LLC, we understand that oversized material was placed beneath the future widened embankment. In addition, a sump was constructed in the eastern portion of the large evaporation pond to aid in dewatering during fill placement. In our memorandum dated 30 October 2007, we recommended that the temporary drainage system should be tremie grouted after fill was placed above the groundwater level. ENTACT attempted to tremie grout the PVC pipeline, but grout did not appear to flow through the pipeline and it returned through the injection point. We were informed that the sump would remain in place. T&R recommended that the sump be filled with grout or drain rock. We understand from Pittsburg River Park, LLC that the sump was filled with drain rock in accordance with our recommendations.

Based on the results of our observations and testing, we conclude the fill within former pond and excavations was placed and compacted in accordance with our geotechnical recommendations and the project plans and specifications.

CONCLUSIONS

On the basis of our observations and the results of our tests, we conclude the remedial site grading earth embankment was performed in general conformance with the intent of our recommendations and with the project plans and specifications, with minor exceptions as noted in the previous sections of this letter.

This letter concludes our services for the project. If you have any questions, please contact us.

Sincerely yours,
TREADWELL & ROLLO, INC.

Lisa M. Splitter
Civil Engineer

REGISTERED PROFESSIONAL ENGINEER
LISA M. SPLITTER
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42450220.OAK

Attachments: Table 1 – Summary of Density Test Data
Table 2 – Summary of Laboratory Compaction Curves
Figure 1 – Site Location Map
Figure 2 – Density Test Location Map

TABLES

TABLE 1
SUMMARY OF DENSITY TEST DATA
Harbor Park
Pittsburg, CA 94565

Treadwell&Rollo

[1] *Approximate locations of field density tests are shown on Figure 1 attached.*
[2] *Elevations are based on Pittsburg City datumn and were provided in the field by ENTACT, the grading contractor*
[3] *As determined by ASTM D1557-07 laboratory compaction procedure*
[4] *The ratio of the in-place dry density to the maximum dry density of the same material*
[5] *Minimum 90% relative compaction.*

Sequential Field Density Test No.	Test Location[1]	Date	Elevation (feet) [2]	Dry Density (pcf)	Moisture Content (percent)	Maximum Dry Density (pcf) [3]	Relative Compaction (percent) [4]	Required Compaction (percent) [5]	Comments
119	See Figure 2.	11/7/2007	-4.5	86	26.6	114	76	90	Fail; soil removed and replaced with crushed concrete
120	See Figure 2.	11/7/2007	-4.0	94	24.1	114	83	90	Fail; soil removed and replaced with crushed concrete
121	See Figure 2.	11/7/2007	-4.5	86	28.0	114	75	90	Fail; soil removed and replaced with crushed concrete
122	See Figure 2.	11/7/2007	-4.0	95	25.8	114	83	90	Fail; soil removed and replaced with crushed concrete
123	See Figure 2.	11/7/2007	-4.5	87	25.3	114	76	90	Fail; soil removed and replaced with crushed concrete
124	See Figure 2.	11/10/2007	-4.5	92	27.0	114	81	90	Fail; soil removed and replaced with crushed concrete
125	See Figure 2.	11/10/2007	-4.5	89	25.4	114	78	90	Fail; soil removed and replaced with crushed concrete
126	See Figure 2.	11/10/2007	-4.0	90	27.9	114	79	90	Fail; soil removed and replaced with crushed concrete
127	See Figure 2.	11/10/2007	-4.5	81	25.1	114	71	90	Fail; soil removed and replaced with crushed concrete
128	See Figure 2.	11/10/2007	-4.0	87	25.8	114	76	90	Fail; soil removed and replaced with crushed concrete
129	See Figure 2.	11/10/2007	-4.0	87	25.1	114	77	90	Fail; soil removed and replaced with crushed concrete
130	See Figure 2.	11/10/2007	-4.0	91	26.4	114	80	90	Fail; soil removed and replaced with crushed concrete
131	See Figure 2.	11/10/2007	-4.5	93	25.0	114	81	90	Fail; soil removed and replaced with crushed concrete
132	See Figure 2.	11/10/2007	-4.0	96	23.0	114	84	90	Fail; soil removed and replaced with crushed concrete
133	See Figure 2.	11/10/2007	-4.0	86	27.3	114	76	90	Fail; soil removed and replaced with crushed concrete
134	See Figure 2.	11/10/2007	-4.5	93	24.0	114	81	90	Fail; soil removed and replaced with crushed concrete
135	See Figure 2.	11/10/2007	-4.0	88	27.7	114	77	90	Fail; soil removed and replaced with crushed concrete
136	See Figure 2.	11/14/2007	-4.0	80	28.7	114	70	90	Fail; soil removed and replaced with crushed concrete
137	See Figure 2.	11/14/2007	-4.5	83	28.3	114	72	90	Fail; soil removed and replaced with crushed concrete
138	See Figure 2.	11/14/2007	-4.5	82	28.1	114	72	90	Fail; soil removed and replaced with crushed concrete
139	See Figure 2.	11/14/2007	-4.0	83	28.3	114	73	90	Fail; soil removed and replaced with crushed concrete
140	See Figure 2.	11/14/2007	-4.5	89	24.9	103	87	90	Fail; see retest #147
141	See Figure 2.	11/14/2007	-4.0	92	23.9	103	90	90	PASS
142	See Figure 2.	11/15/2007	-4.0	95	23.9	103	92	90	PASS
143	See Figure 2.	11/15/2007	-4.5	88	23.4	103	86	90	Fail; see retest #147
144	See Figure 2.	11/15/2007	-4.5	90	21.7	103	88	90	Fail; soil removed and replaced with crushed concrete

TABLE 1
SUMMARY OF DENSITY TEST DATA
Harbor Park
Pittsburg, CA 94565

Treadwell&Rollo

[1] *Approximate locations of field density tests are shown on Figure 1 attached.*
[2] *Elevations are based on Pittsburg City datumn and were provided in the field by ENTACT, the grading contractor*
[3] *As determined by ASTM D1557-07 laboratory compaction procedure*
[4] *The ratio of the in-place dry density to the maximum dry density of the same material*
[5] *Minimum 90% relative compaction.*

Sequential Field Density Test No.	Test Location[1]	Date	Elevation (feet) [2]	Dry Density (pcf)	Moisture Content (percent)	Maximum Dry Density (pcf) [3]	Relative Compaction (percent) [4]	Required Compaction (percent) [5]	Comments
145	See Figure 2.	11/15/2007	-4.0	92	24.4	103	89	90	Fail; soil removed and replaced with crushed concrete
146	See Figure 2.	11/15/2007	-4.0	94	21.9	103	92	90	PASS
147	See Figure 2.	11/16/2007	-4.5	99	19.2	103	97	90	PASS; retest for #'s 140 and 143
148	See Figure 2.	11/16/2007	-4.0	96	21.2	103	94	90	PASS
149	See Figure 2.	11/16/2007	-4.0	93	23.6	103	91	90	PASS
150	See Figure 2.	11/16/2007	-3.5	96	22.5	103	94	90	PASS
151	See Figure 2.	11/16/2007	-3.5	99	10.7	119	83	90	Fail; see retest #153
152	See Figure 2.	11/16/2007	-3.0	102	14.0	119	86	90	Fail; see retest #154
153	See Figure 2.	11/16/2007	-3.5	108	12.1	119	90	90	PASS; retest for #151
154	See Figure 2.	11/16/2007	-3.0	111	14.9	119	93	90	PASS; retest for #152
155	See Figure 2.	11/16/2007	-3.0	107	15.1	119	89	90	PASS by observation, rerolled
156	See Figure 2.	11/16/2007	-3.0	87	24.8	103	85	90	Fail; see retest #160
157	See Figure 2.	11/16/2007	-2.5	89	24.2	103	86	90	Fail; see retest #162
158	See Figure 2.	11/16/2007	-3.0	86	25.4	103	84	90	Fail; see retest #160
159	See Figure 2.	11/16/2007	-2.0	88	24.7	103	86	90	Fail, see retest #165
160	See Figure 2.	11/17/2007	-3.0	94	23.2	103	92	90	PASS, retest for #156, 158
161	See Figure 2.	11/17/2007	-2.5	88	23.7	103	85	90	Fail, see retest #166
162	See Figure 2.	11/17/2007	-2.0	90	24.1	103	88	90	PASS by observation, rerolled, retest for #157
163	See Figure 2.	11/17/2007	-2.5	89	25.5	103	87	90	Fail, see retest #166
164	See Figure 2.	11/17/2007	-2.0	84	23.7	103	82	90	Fail, see retest at #167
165	See Figure 2.	11/17/2007	-1.5	91	23.5	103	89	90	PASS by observation, rerolled, retest for #159, 160
166	See Figure 2.	11/17/2007	-2.5	92	23.6	103	90	90	PASS, retest for #161, 163
167	See Figure 2.	11/17/2007	-2.0	96	22.5	103	93	90	PASS, retest for #164
168	See Figure 2.	11/17/2007	-1.5	92	22.3	103	89	90	PASS by observation, rerolled
169	See Figure 2.	11/17/2007	-2.0	94	23.9	103	92	90	PASS
170	See Figure 2.	11/17/2007	-1.5	93	23.9	103	91	90	PASS
171	See Figure 2.	11/17/2007	-1.0	93	22.8	103	91	90	PASS
172	See Figure 2.	11/18/2007	0.0	84	19.7	103	82	90	Fail, see retest #196
173	See Figure 2.	11/18/2007	0.0	83	21.8	103	81	90	Fail; see retest #183
174	See Figure 2.	11/18/2007	0.0	83	25.3	103	81	90	Fail; see retest #191
175	See Figure 2.	11/18/2007	0.0	89	22.7	103	87	90	Fail; see retest #237
176	See Figure 2.	11/18/2007	0.0	86	21.8	103	84	90	Fail; see retest #185

TABLE 1
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[3] *As determined by ASTM D1557-07 laboratory compaction procedure*
[4] *The ratio of the in-place dry density to the maximum dry density of the same material*
[5] *Minimum 90% relative compaction.*

Sequential Field Density Test No.	Test Location[1]	Date	Elevation (feet) [2]	Dry Density (pcf)	Moisture Content (percent)	Maximum Dry Density (pcf) [3]	Relative Compaction (percent) [4]	Required Compaction (percent) [5]	Comments
177	See Figure 2.	11/18/2007	-1.0	89	24.5	103	87	90	Fail; see retest #180
178	See Figure 2.	11/18/2007	-0.5	88	25.0	103	86	90	Fail; see retest #195
179	See Figure 2.	11/18/2007	-1.0	92	21.5	103	90	90	PASS
180	See Figure 2.	11/18/2007	-1.0	90	23.5	103	88	90	PASS by observation, rerolled, retest for #177
181	See Figure 2.	11/18/2007	-0.5	95	23.8	103	92	90	PASS
182	See Figure 2.	11/18/2007	0.0	90	23.2	103	87	90	Fail, see retest #237
183	See Figure 2.	11/18/2007	0.0	92	22.1	103	89	90	PASS by observation, rerolled, retest for #173
184	See Figure 2.	11/18/2007	0.0	88	25.1	103	86	90	Fail, see retest #203
185	See Figure 2.	11/18/2007	0.0	91	23.1	103	89	90	PASS by observation, rerolled, retest for #176
186	See Figure 2.	11/18/2007	-1.0	92	23.2	103	90	90	PASS
187	See Figure 2.	11/18/2007	-0.5	92	23.1	103	90	90	PASS
188	See Figure 2.	11/18/2007	0.0	93	23.0	103	91	90	PASS
189	See Figure 2.	11/18/2007	0.5	89	25.1	103	87	90	Fail, see retest #195
190	See Figure 2.	11/18/2007	0.5	89	24.4	103	87	90	Fail, see retest #196
191	See Figure 2.	11/19/2007	0.5	91	23.1	103	89	90	PASS by observation, rerolled, retest for #174
192	See Figure 2.	11/19/2007	0.0	94	22.1	103	92	90	PASS
193	See Figure 2.	11/19/2007	0.0	96	23.0	103	93	90	PASS
194	See Figure 2.	11/19/2007	0.0	93	23.5	103	91	90	PASS
195	See Figure 2.	11/19/2007	0.0	96	23.2	103	93	90	PASS, retest for #178, 189
196	See Figure 2.	11/19/2007	0.0	94	23.5	103	92	90	PASS, retest for #172, 190
197	See Figure 2.	11/19/2007	1.0	89	22.9	103	87	90	Fail; see retest at #200
198	See Figure 2.	11/19/2007	1.0	90	24.8	103	88	90	Fail; see retest at #201
199	See Figure 2.	11/19/2007	1.0	87	25.7	103	85	90	Fail; see retest at #202
200	See Figure 2.	11/19/2007	1.0	90	25.3	103	88	90	PASS by observation, rerolled, retest for #197
201	See Figure 2.	11/19/2007	1.0	89	24.8	103	87	90	PASS by observation, rerolled, retest for #198
202	See Figure 2.	11/19/2007	1.0	93	23.1	103	91	90	PASS, retest for #199
203	See Figure 2.	11/19/2007	1.0	91	24.5	103	89	90	PASS by observation, rerolled, retest for #184
204	See Figure 2.	11/19/2007	1.0	93	23.1	103	91	90	PASS
205	See Figure 2.	11/19/2007	1.0	95	24.8	103	93	90	PASS
206	See Figure 2.	11/19/2007	1.0	94	23.1	103	92	90	PASS
207	See Figure 2.	11/19/2007	1.5	98	23.7	103	96	90	PASS
208	See Figure 2.	11/19/2007	1.5	94	23.1	103	92	90	PASS
209	See Figure 2.	11/19/2007	1.5	92	23.7	103	90	90	PASS
210	See Figure 2.	11/19/2007	1.5	91	24.1	103	88	90	PASS by observation, rerolled

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[4] *The ratio of the in-place dry density to the maximum dry density of the same material*
[5] *Minimum 90% relative compaction.*

Sequential Field Density Test No.	Test Location[1]	Date	Elevation (feet) [2]	Dry Density (pcf)	Moisture Content (percent)	Maximum Dry Density (pcf) [3]	Relative Compaction (percent) [4]	Required Compaction (percent) [5]	Comments
211	See Figure 2.	11/20/2007	2.5	93	21.5	103	90	90	PASS
212	See Figure 2.	11/20/2007	2.5	96	21.1	103	94	90	PASS
213	See Figure 2.	11/20/2007	2.0	91	22.7	103	89	90	PASS
214	See Figure 2.	11/20/2007	3.0	101	19.2	103	98	90	PASS
215	See Figure 2.	11/20/2007	3.0	110	20.9	114	96	90	PASS
216	See Figure 2.	11/20/2007	2.5	98	21.4	103	96	90	PASS
217	See Figure 2.	11/20/2007	3.5	104	18.3	103	101	90	PASS
218	See Figure 2.	11/20/2007	3.0	109	21.1	114	95	90	PASS
219	See Figure 2.	11/20/2007	3.0	99	19.6	103	97	90	PASS
220	See Figure 2.	11/20/2007	3.0	103	20.0	103	101	90	PASS
221	See Figure 2.	11/20/2007	2.5	99	18.8	103	97	90	PASS
222	See Figure 2.	11/20/2007	2.5	99	18.2	103	96	90	PASS
223	See Figure 2.	11/20/2007	3.0	104	17.3	103	102	90	PASS
224	See Figure 2.	11/26/2007	4.1	105	13.3	119	88	90	Fail; see retest at #227
225	See Figure 2.	11/26/2007	4.1	103	10.4	119	87	90	Fail; see retest at #228
226	See Figure 2.	11/26/2007	3.8	96	8.9	119	81	90	Fail; see retest at #229
227	See Figure 2.	11/26/2007	4.1	115	13.5	119	97	90	PASS; retest of #224
228	See Figure 2.	11/26/2007	4.1	109	12.3	119	92	90	PASS; retest of #225
229	See Figure 2.	11/26/2007	3.8	107	13.9	119	90	90	PASS; retest of #226
230	See Figure 2.	11/26/2007	3.0	112	13.7	119	94	90	PASS
231	See Figure 2.	11/26/2007	0.0	101	13.4	119	85	90	Fail; see retest at #236
232	See Figure 2.	11/26/2007	0.0	104	11.3	119	87	90	Fail; see retest at #237
233	See Figure 2.	11/26/2007	0.0	103	20.1	119	87	90	Fail; see retest at #236
234	See Figure 2.	11/26/2007	0.0	104	16.8	119	88	90	Fail; see retest at #237
235	See Figure 2.	11/26/2007	-1.0	113	13.8	119	95	90	PASS
236	See Figure 2.	11/29/2007	0.0	108	15.9	119	91	90	PASS; retest of #'s: 233 and 231
237	See Figure 2.	11/29/2007	0.0	107	18.0	119	90	90	PASS; retest of #'s: 175, 182, 232, and 234
238	See Figure 2.	11/29/2007	1.0	105	15.2	119	88	90	Fail; see retest at #243
239	See Figure 2.	11/29/2007	1.0	106	14.2	119	89	90	Fail; see retest at #242
240	See Figure 2.	11/29/2007	1.0	102	12.8	119	85	90	Fail; see retest at #241
241	See Figure 2.	11/29/2007	1.0	106	11.0	119	89	90	PASS; rerolled, retest of #240
242	See Figure 2.	11/29/2007	1.0	108	15.2	119	91	90	PASS; retest of #239
243	See Figure 2.	11/29/2007	1.0	108	16.8	119	91	90	PASS; retest of #238
244	See Figure 2.	11/29/2007	0.0	107	12.0	119	90	90	PASS

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[5] *Minimum 90% relative compaction.*

Sequential Field Density Test No.	Test Location[1]	Date	Elevation (feet) [2]	Dry Density (pcf)	Moisture Content (percent)	Maximum Dry Density (pcf) [3]	Relative Compaction (percent) [4]	Required Compaction (percent) [5]	Comments
245	See Figure 2.	11/29/2007	3.5	103	15.0	116	89	90	PASS by observation, rerolled
246	See Figure 2.	11/29/2007	3.5	105	12.6	116	90	90	PASS
247	See Figure 2.	11/29/2007	3.5	107	12.4	116	92	90	PASS
248	See Figure 2.	11/29/2007	3.5	106	19.2	116	92	90	PASS
249	See Figure 2.	11/29/2007	4.0	106	16.6	116	91	90	PASS
250	See Figure 2.	11/29/2007	4.0	99	14.0	116	85	90	Fail; see retest at #252
251	See Figure 2.	11/30/2007	4.0	103	16.1	116	89	90	Fail; see retest at #253
252	See Figure 2.	11/30/2007	4.0	105	13.8	116	91	90	PASS; retest of #250
253	See Figure 2.	11/30/2007	4.0	107	12.5	116	92	90	PASS; retest of #251
254	See Figure 2.	11/30/2007	4.0	117	14.0	119	98	90	PASS
255	See Figure 2.	11/30/2007	3.5	109	13.0	119	91	90	PASS
256	See Figure 2.	11/30/2007	0.5	100	12.0	119	84	90	Fail; see retest at #258
257	See Figure 2.	11/30/2007	1.0	105	12.0	119	88	90	Fail; see retest at #259
258	See Figure 2.	11/30/2007	0.5	109	12.0	119	92	90	PASS; retest of #256
259	See Figure 2.	11/30/2007	1.0	109	12.0	119	92	90	PASS; retest of #257
260	See Figure 2.	11/30/2007	1.0	113	12.1	119	95	90	PASS
261	See Figure 2.	11/30/2007	1.0	102	12.7	116	88	90	Fail; see retest at #262
262	See Figure 2.	11/30/2007	1.5	107	12.2	116	92	90	PASS; retest of #261
263	See Figure 2.	11/30/2007	1.5	107	19.5	116	92	90	PASS
264	See Figure 2.	11/30/2007	1.5	110	18.1	116	95	90	PASS
265	See Figure 2.	11/30/2007	1.5	105	19.6	116	91	90	PASS
266	See Figure 2.	11/30/2007	2.0	107	18.8	116	92	90	PASS
267	See Figure 2.	11/30/2007	2.0	106	19.4	116	91	90	PASS
268	See Figure 2.	11/30/2007	2.0	106	16.4	116	91	90	PASS
269	See Figure 2.	11/30/2007	2.5	107	19.4	116	93	90	PASS
270	See Figure 2.	11/30/2007	2.5	112	18.0	116	96	90	PASS
271	See Figure 2.	11/30/2007	2.5	104	19.0	116	90	90	PASS
272	See Figure 2.	11/30/2007	3.0	106	17.0	116	91	90	PASS
273	See Figure 2.	11/30/2007	3.0	107	20.0	116	92	90	PASS
274	See Figure 2.	11/30/2007	3.0	106	21.0	116	91	90	PASS
275	See Figure 2.	11/30/2007	3.5	104	19.0	116	90	90	PASS
276	See Figure 2.	11/30/2007	3.5	104	16.0	116	90	90	PASS
277	See Figure 2.	11/30/2007	3.5	105	19.0	116	91	90	PASS
278	See Figure 2.	11/30/2007	4.0	107	16.0	116	92	90	PASS

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Sequential Field Density Test No.	Test Location[1]	Date	Elevation (feet) [2]	Dry Density (pcf)	Moisture Content (percent)	Maximum Dry Density (pcf) [3]	Relative Compaction (percent) [4]	Required Compaction (percent) [5]	Comments
279	See Figure 2.	11/30/2007	4.0	104	20.0	116	90	90	PASS
280	See Figure 2.	12/1/2007	4.0	106	17.0	116	91	90	PASS
281	See Figure 2.	12/1/2007	4.0	106	17.0	116	91	90	PASS
282	See Figure 2.	12/1/2007	4.0	102	17.0	116	88	90	Fail; see retest at #287
283	See Figure 2.	12/1/2007	4.0	108	14.0	116	93	90	PASS
284	See Figure 2.	12/1/2007	4.0	103	14.0	116	89	90	PASS by observation, rerolled
285	See Figure 2.	12/1/2007	4.0	105	15.0	116	91	90	PASS
286	See Figure 2.	12/1/2007	4.0	107	11.0	116	92	90	PASS
287	See Figure 2.	12/1/2007	4.0	107	13.0	116	92	90	PASS; retest of #282
288	See Figure 2.	12/1/2007	4.0	110	15.0	119	92	90	PASS
289	See Figure 2.	12/1/2007	4.0	107	19.0	119	90	90	PASS
290	See Figure 2.	12/1/2007	4.0	110	19.0	119	92	90	PASS
291	See Figure 2.	12/1/2007	4.0	108	18.0	119	91	90	PASS
292	See Figure 2.	12/1/2007	4.5	106	20.0	116	91	90	PASS
293	See Figure 2.	12/1/2007	4.5	103	16.0	116	89	90	PASS
294	See Figure 2.	12/1/2007	4.5	107	19.0	116	92	90	PASS
295	See Figure 2.	12/1/2007	4.5	108	15.0	116	93	90	PASS
296	See Figure 2.	12/1/2007	4.5	105	20.0	116	91	90	PASS
297	See Figure 2.	12/1/2007	4.5	108	18.0	119	91	90	PASS
298	See Figure 2.	12/1/2007	4.5	110	17.0	119	92	90	PASS
299	See Figure 2.	12/1/2007	4.5	108	16.0	119	91	90	PASS
300	See Figure 2.	12/1/2007	4.5	114	16.0	119	96	90	PASS
301	See Figure 2.	12/1/2007	4.5	109	18.0	119	92	90	PASS
302	See Figure 2.	12/1/2007	4.5	106	19.0	119	89	90	PASS by observation, rerolled
303	See Figure 2.	12/1/2007	4.5	113	16.0	119	95	90	PASS
304	See Figure 2.	12/1/2007	4.5	115	16.0	119	97	90	PASS
305	See Figure 2.	12/1/2007	4.5	103	16.0	116	89	90	PASS by observation, rerolled
306	See Figure 2.	12/1/2007	4.5	105	12.0	116	91	90	PASS
307	See Figure 2.	12/1/2007	4.5	107	16.0	116	92	90	PASS
308	See Figure 2.	12/1/2007	4.5	106	19.0	116	91	90	PASS
309	See Figure 2.	12/1/2007	4.5	109	14.0	119	92	90	PASS
310	See Figure 2.	12/1/2007	4.5	114	16.0	119	96	90	PASS
311	See Figure 2.	12/1/2007	4.5	109	17.0	119	92	90	PASS
312	See Figure 2.	12/1/2007	4.5	113	16.0	119	95	90	PASS

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[5] *Minimum 90% relative compaction.*

Sequential Field Density Test No.	Test Location[1]	Date	Elevation (feet) [2]	Dry Density (pcf)	Moisture Content (percent)	Maximum Dry Density (pcf) [3]	Relative Compaction (percent) [4]	Required Compaction (percent) [5]	Comments
313	See Figure 2.	12/1/2007	4.5	109	16.0	119	92	90	PASS
314	See Figure 2.	12/1/2007	4.5	112	16.0	119	94	90	PASS
315	See Figure 2.	12/1/2007	4.5	107	16.0	119	90	90	PASS
316	See Figure 2.	12/1/2007	4.5	108	18.0	119	91	90	PASS
317	See Figure 2.	12/1/2007	4.5	104	14.0	119	87	90	Fail, see retest #318
318	See Figure 2.	12/1/2007	4.5	115	14.0	119	97	90	PASS, retest for #317
319	See Figure 2.	12/1/2007	4.5	111	13.0	119	93	90	PASS
320	See Figure 2.	12/1/2007	4.5	105	16.0	119	88	90	Fail; see retest at #321
321	See Figure 2.	12/1/2007	4.5	107	15.0	119	90	90	PASS; retest of #320
322	See Figure 2.	12/2/2007	5.0	113	15.0	119	95	90	PASS
323	See Figure 2.	12/2/2007	5.0	108	16.0	119	91	90	PASS
324	See Figure 2.	12/2/2007	5.0	108	19.0	119	91	90	PASS
325	See Figure 2.	12/2/2007	5.0	110	14.0	119	92	90	PASS
326	See Figure 2.	12/2/2007	1.0	99	13.0	119	83	90	Fail; see retest at #344
327	See Figure 2.	12/2/2007	1.0	104	12.0	119	87	90	Fail; see retest at #344
328	See Figure 2.	12/2/2007	5.0	109	12.0	119	92	90	PASS
329	See Figure 2.	12/2/2007	5.0	106	16.0	119	89	90	PASS by observation, rerolled
330	See Figure 2.	12/2/2007	5.0	114	16.0	119	96	90	PASS
331	See Figure 2.	12/2/2007	5.0	114	18.0	119	96	90	PASS
332	See Figure 2.	12/2/2007	5.0	105	14.0	119	88	90	PASS by observation, rerolled
333	See Figure 2.	12/2/2007	5.0	111	15.0	119	93	90	PASS
334	See Figure 2.	12/2/2007	5.0	114	16.0	119	96	90	PASS
335	See Figure 2.	12/2/2007	5.0	108	19.0	119	91	90	PASS
336	See Figure 2.	12/2/2007	5.0	107	18.0	119	90	90	PASS
337	See Figure 2.	12/2/2007	5.0	107	17.0	119	90	90	PASS
338	See Figure 2.	12/2/2007	5.0	113	17.0	119	95	90	PASS
339	See Figure 2.	12/2/2007	5.5	112	18.0	119	94	90	PASS
340	See Figure 2.	12/2/2007	5.5	113	18.0	119	95	90	PASS
341	See Figure 2.	12/2/2007	5.5	105	16.0	119	88	90	PASS by observation, rerolled
342	See Figure 2.	12/2/2007	5.5	108	14.0	119	91	90	PASS
343	See Figure 2.	12/2/2007	5.5	105	11.0	119	88	90	PASS by observation, rerolled
344	See Figure 2.	12/2/2007	1.0	107	13.0	119	90	90	PASS; restest of #'s: 327 and 326
345	See Figure 2.	12/2/2007	5.5	114	15.0	119	96	90	PASS
346	See Figure 2.	12/2/2007	5.5	113	17.0	119	95	90	PASS

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Sequential Field Density Test No.	Test Location[1]	Date	Elevation (feet) [2]	Dry Density (pcf)	Moisture Content (percent)	Maximum Dry Density (pcf) [3]	Relative Compaction (percent) [4]	Required Compaction (percent) [5]	Comments
347	See Figure 2.	12/2/2007	5.5	109	17.0	119	92	90	PASS
348	See Figure 2.	12/2/2007	5.5	112	13.0	119	94	90	PASS
349	See Figure 2.	12/2/2007	5.5	107	17.0	119	90	90	PASS
350	See Figure 2.	12/2/2007	5.5	109	14.0	119	92	90	PASS
351	See Figure 2.	12/2/2007	5.5	110	18.0	119	92	90	PASS
352	See Figure 2.	12/2/2007	5.5	107	15.0	119	90	90	PASS
353	See Figure 2.	12/3/2007	5.5	108	19.0	119	91	90	PASS
354	See Figure 2.	12/3/2007	5.5	106	19.0	119	89	90	PASS
355	See Figure 2.	12/3/2007	5.5	112	15.0	119	94	90	PASS
356	See Figure 2.	12/3/2007	5.5	109	11.0	119	92	90	PASS
357	See Figure 2.	12/3/2007	5.5	108	14.0	119	91	90	PASS
358	See Figure 2.	12/3/2007	5.5	107	17.0	119	90	90	PASS
359	See Figure 2.	12/3/2007	5.5	99	13.0	119	83	90	Fail, see retest at #370
360	See Figure 2.	12/3/2007	5.5	104	13.0	119	87	90	Fail, see retest at #370
361	See Figure 2.	12/3/2007	5.5	112	19.0	119	94	90	PASS
362	See Figure 2.	12/3/2007	5.5	108	15.0	119	91	90	PASS
363	See Figure 2.	12/3/2007	5.5	109	17.0	119	92	90	PASS
364	See Figure 2.	12/3/2007	5.5	107	17.0	119	90	90	PASS
365	See Figure 2.	12/3/2007	5.5	107	14.0	119	90	90	PASS
366	See Figure 2.	12/3/2007	5.5	113	17.0	119	95	90	PASS
367	See Figure 2.	12/3/2007	5.5	112	17.0	119	94	90	PASS
368	See Figure 2.	12/3/2007	5.5	113	14.0	119	95	90	PASS
369	See Figure 2.	12/3/2007	5.5	111	15.0	119	93	90	PASS
370	See Figure 2.	12/3/2007	5.5	111	15.0	119	93	90	PASS, retest for #359, 360
371	See Figure 2.	12/3/2007	6.0	108	14.0	119	91	90	PASS
372	See Figure 2.	12/3/2007	6.0	113	17.0	119	95	90	PASS
373	See Figure 2.	12/3/2007	2.5	104	15.0	119	87	90	Fail; see retest at #378
374	See Figure 2.	12/3/2007	6.0	107	18.0	119	90	90	PASS
375	See Figure 2.	12/3/2007	7.2	112	18.0	119	94	90	PASS
376	See Figure 2.	12/3/2007	7.2	110	15.0	119	92	90	PASS
377	See Figure 2.	12/3/2007	7.2	111	13.0	119	93	90	PASS
378	See Figure 2.	12/3/2007	2.5	111	15.0	119	93	90	PASS; restest of # 373
379	See Figure 2.	12/3/2007	6.0	111	16.0	119	93	90	PASS
380	See Figure 2.	12/3/2007	6.0	108	17.0	119	91	90	PASS

TABLE 1
SUMMARY OF DENSITY TEST DATA
Harbor Park
Pittsburg, CA 94565

Treadwell&Rollo

[1] *Approximate locations of field density tests are shown on Figure 1 attached.*
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[3] *As determined by ASTM D1557-07 laboratory compaction procedure*
[4] *The ratio of the in-place dry density to the maximum dry density of the same material*
[5] *Minimum 90% relative compaction.*

Sequential Field Density Test No.	Test Location[1]	Date	Elevation (feet) [2]	Dry Density (pcf)	Moisture Content (percent)	Maximum Dry Density (pcf) [3]	Relative Compaction (percent) [4]	Required Compaction (percent) [5]	Comments
381	See Figure 2.	12/3/2007	6.0	109	18.0	119	92	90	PASS
382	See Figure 2.	12/3/2007	2.5	105	14.0	119	88	90	PASS
383	See Figure 2.	12/3/2007	6.0	113	16.0	119	95	90	PASS
384	See Figure 2.	12/3/2007	2.5	111	15.0	119	93	90	PASS
385	See Figure 2.	12/3/2007	2.5	107	14.0	119	90	90	PASS
386	See Figure 2.	12/3/2007	7.0	111	15.0	119	93	90	PASS
387	See Figure 2.	12/3/2007	7.0	112	14.0	119	94	90	PASS
389	See Figure 2.	12/3/2007	7.0	111	16.0	119	93	90	PASS
390	See Figure 2.	12/3/2007	7.0	115	14.0	119	97	90	PASS
391	See Figure 2.	12/3/2007	7.0	108	18.0	119	91	90	PASS
392	See Figure 2.	12/3/2007	7.0	108	14.0	119	91	90	PASS
393	See Figure 2.	12/3/2007	7.0	107	14.0	119	90	90	PASS
394	See Figure 2.	12/3/2007	7.0	111	15.0	119	93	90	PASS
395	See Figure 2.	12/3/2007	3.0	107	14.0	119	90	90	PASS
396	See Figure 2.	12/3/2007	4.0	113	16.0	119	95	90	PASS
397	See Figure 2.	12/4/2007	5.0	115	17.0	119	97	90	PASS
398	See Figure 2.	12/4/2007	6.5	114	16.0	119	96	90	PASS
399	See Figure 2.	12/4/2007	6.5	112	17.0	119	94	90	PASS
400	See Figure 2.	12/4/2007	6.5	110	18.0	119	92	90	PASS
401	See Figure 2.	12/4/2007	5.5	113	18.0	119	95	90	PASS
402	See Figure 2.	12/4/2007	6.0	116	17.0	119	97	90	PASS
403	See Figure 2.	12/4/2007	6.0	110	17.0	119	92	90	PASS
404	See Figure 2.	12/4/2007	6.0	113	17.0	119	95	90	PASS
405	See Figure 2.	12/4/2007	6.0	116	14.0	119	97	90	PASS
406	See Figure 2.	12/4/2007	6.0	108	18.0	119	91	90	PASS
407	See Figure 2.	12/4/2007	6.0	113	15.0	119	95	90	PASS
408	See Figure 2.	12/4/2007	6.0	116	17.0	119	97	90	PASS
409	See Figure 2.	12/4/2007	6.0	108	16.0	119	91	90	PASS
410	See Figure 2.	12/4/2007	5.5	115	16.0	119	97	90	PASS
411	See Figure 2.	12/4/2007	5.5	110	17.0	119	92	90	PASS
412	See Figure 2.	12/4/2007	5.5	111	16.0	119	93	90	PASS
413	See Figure 2.	12/4/2007	5.5	109	18.0	119	92	90	PASS
414	See Figure 2.	12/4/2007	5.5	112	18.0	119	94	90	PASS
415	See Figure 2.	12/4/2007	3.5	105	15.0	119	88	90	Fail, soil removed and recompacted

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[4] *The ratio of the in-place dry density to the maximum dry density of the same material*
[5] *Minimum 90% relative compaction.*

Sequential Field Density Test No.	Test Location[1]	Date	Elevation (feet) [2]	Dry Density (pcf)	Moisture Content (percent)	Maximum Dry Density (pcf) [3]	Relative Compaction (percent) [4]	Required Compaction (percent) [5]	Comments
416	See Figure 2.	12/4/2007	5.5	107	15.0	119	90	90	Pass, soil removed and recompacted
417	See Figure 2.	12/4/2007	7.5	105	16.0	119	88	90	Fail, soil removed and recompacted
418	See Figure 2.	12/4/2007	2.5	93	10.0	119	78	90	Fail, soil removed and recompacted
419	See Figure 2.	12/4/2007	5.5	102	11.0	119	86	90	Fail, soil removed and recompacted
420	See Figure 2.	12/4/2007	7.5	95	22.0	119	80	90	Fail, soil removed and recompacted
421	See Figure 2.	12/4/2007	6.5	116	17.0	119	97	90	PASS
422	See Figure 2.	12/4/2007	6.5	112	17.0	119	94	90	PASS
423	See Figure 2.	12/4/2007	6.5	107	18.0	119	90	90	PASS
424	See Figure 2.	12/4/2007	6.5	112	17.0	119	94	90	PASS
425	See Figure 2.	12/4/2007	6.5	111	16.0	119	93	90	PASS
426	See Figure 2.	12/4/2007	6	109	18.0	119	92	90	PASS
427	See Figure 2.	12/4/2007	6	111	18.0	119	93	90	PASS
428	See Figure 2.	12/4/2007	5.5	113	17.0	119	95	90	PASS
429	See Figure 2.	12/4/2007	7	112	19.0	119	94	90	PASS
430	See Figure 2.	12/4/2007	7	108	20.0	119	91	90	PASS
431	See Figure 2.	12/4/2007	6	108	20.0	119	91	90	PASS
432	See Figure 2.	12/4/2007	6.5	106	15.0	119	89	90	PASS
433	See Figure 2.	12/4/2007	6.5	112	17.0	119	94	90	PASS
434	See Figure 2.	12/4/2007	7	116	17.0	119	97	90	PASS
435	See Figure 2.	12/4/2007	7	114	14.0	119	96	90	PASS
436	See Figure 2.	12/5/2007	7	106	15.0	119	89	90	Fail; see retest at #443
437	See Figure 2.	12/5/2007	7	107	17.0	119	90	90	PASS
438	See Figure 2.	12/5/2007	7	112	15.0	119	94	90	PASS
439	See Figure 2.	12/5/2007	7	115	14.0	119	97	90	PASS
440	See Figure 2.	12/5/2007	7	112	14.0	119	94	90	PASS
441	See Figure 2.	12/5/2007	7	119	16.0	119	100	90	PASS
442	See Figure 2.	12/5/2007	7	104	14.0	119	87	90	Fail; see retest at #443
443	See Figure 2.	12/5/2007	7	119	13.0	119	100	90	PASS; retest for #'s: 442 and 436
444	See Figure 2.	12/5/2007	5	110	18.0	119	92	90	PASS
445	See Figure 2.	12/5/2007	5	110	20.0	119	92	90	PASS
446	See Figure 2.	12/5/2007	5	108	19.0	119	91	90	PASS
447	See Figure 2.	12/5/2007	6.5	112	16.0	119	94	90	PASS
448	See Figure 2.	12/5/2007	5	108	14.0	119	91	90	PASS
449	See Figure 2.	12/5/2007	5	117	15.0	119	98	90	PASS

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[4] *The ratio of the in-place dry density to the maximum dry density of the same material*
[5] *Minimum 90% relative compaction.*

Sequential Field Density Test No.	Test Location[1]	Date	Elevation (feet) [2]	Dry Density (pcf)	Moisture Content (percent)	Maximum Dry Density (pcf) [3]	Relative Compaction (percent) [4]	Required Compaction (percent) [5]	Comments
450	See Figure 2.	12/5/2007	7	111	16.0	119	93	90	PASS
451	See Figure 2.	12/5/2007	7	110	17.0	119	92	90	PASS
452	See Figure 2.	12/5/2007	7	113	19.0	119	95	90	PASS
453	See Figure 2.	12/5/2007	7	115	16.0	119	97	90	PASS
454	See Figure 2.	12/5/2007	5.5	113	18.0	119	95	90	PASS
455	See Figure 2.	12/5/2007	5.5	110	16.0	119	92	90	PASS
456	See Figure 2.	12/5/2007	5.5	112	19.0	119	94	90	PASS
457	See Figure 2.	12/5/2007	6	113	19.0	119	95	90	PASS
458	See Figure 2.	12/5/2007	6	114	17.0	119	96	90	PASS
459	See Figure 2.	12/5/2007	6	114	19.0	119	96	90	PASS
460	See Figure 2.	12/5/2007	6	114	18.0	119	96	90	PASS
461	See Figure 2.	12/5/2007	6	115	17.0	119	97	90	PASS
462	See Figure 2.	12/5/2007	3	102	17.0	119	86	90	Fail; see restat at #468
463	See Figure 2.	12/5/2007	4	111	18.0	119	93	90	PASS
464	See Figure 2.	12/5/2007	6	115	17.0	119	97	90	PASS
465	See Figure 2.	12/5/2007	6	115	18.0	119	97	90	PASS
467	See Figure 2.	12/5/2007	6	114	17.0	119	96	90	PASS
468	See Figure 2.	12/5/2007	3	117	17.0	119	98	90	PASS, retest for #462
469	See Figure 2.	12/5/2007	5	110	18.0	119	92	90	PASS
470	See Figure 2.	12/5/2007	5	110	15.0	119	92	90	PASS
471	See Figure 2.	12/5/2007	5.5	110	18.0	119	92	90	PASS
472	See Figure 2.	12/5/2007	5.5	110	16.0	119	92	90	PASS
473	See Figure 2.	12/5/2007	6	102	15.0	119	86	90	Fail; see retest at #475
474	See Figure 2.	12/5/2007	6	101	15.0	119	85	90	Fail; see retest at #476
475	See Figure 2.	12/5/2007	6	108	18.0	119	91	90	PASS; retest of #473
476	See Figure 2.	12/5/2007	6	113	17.0	119	95	90	PASS; retest of #474
477	See Figure 2.	12/5/2007	6.5	108	17.0	119	91	90	PASS
478	See Figure 2.	12/5/2007	6.5	109	15.0	119	92	90	PASS
479	See Figure 2.	12/5/2007	7	108	16.0	119	91	90	PASS
480	See Figure 2.	12/5/2007	7	109	17.0	119	92	90	PASS
481	See Figure 2.	12/5/2007	8	108	14.0	119	91	90	PASS
482	See Figure 2.	12/5/2007	8	111	15.0	119	93	90	PASS
483	See Figure 2.	12/6/2007	4	107	15.0	119	90	90	PASS
484	See Figure 2.	12/6/2007	9	100	16.0	119	84	90	Fail; see retest at #488

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[3] *As determined by ASTM D1557-07 laboratory compaction procedure*
[4] *The ratio of the in-place dry density to the maximum dry density of the same material*
[5] *Minimum 90% relative compaction.*

Sequential Field Density Test No.	Test Location[1]	Date	Elevation (feet) [2]	Dry Density (pcf)	Moisture Content (percent)	Maximum Dry Density (pcf) [3]	Relative Compaction (percent) [4]	Required Compaction (percent) [5]	Comments
485	See Figure 2.	12/6/2007	9	106	15.0	119	89	90	Fail; see retest at #489
486	See Figure 2.	12/6/2007	7	111	14.0	119	93	90	PASS
487	See Figure 2.	12/6/2007	7	118	18.0	119	99	90	PASS
488	See Figure 2.	12/6/2007	9	111	15.0	119	93	90	PASS; retest of #484
489	See Figure 2.	12/6/2007	9	112	17.0	119	94	90	PASS; retest of #485
490	See Figure 2.	12/6/2007	5	107	20.0	119	90	90	PASS
491	See Figure 2.	12/6/2007	6	108	19.0	119	91	90	PASS
492	See Figure 2.	12/6/2007	8.5	110	17.0	119	92	90	PASS
493	See Figure 2.	12/6/2007	8.5	108	16.0	119	91	90	PASS
494	See Figure 2.	12/6/2007	9	112	18.0	119	94	90	PASS
495	See Figure 2.	12/6/2007	9	113	18.0	119	95	90	PASS
496	See Figure 2.	12/6/2007	5.5	96	20.0	119	81	90	PASS
497	See Figure 2.	12/6/2007	9.5	115	18.0	119	97	90	PASS
498	See Figure 2.	12/6/2007	9.5	116	19.0	119	97	90	PASS
499	See Figure 2.	12/6/2007	5	112	17.0	119	94	90	PASS
500	See Figure 2.	12/10/2007	6.5	93	26.0	119	78	90	Fail, soil removed and recompacted
501	See Figure 2.	12/10/2007	10.5	105	17.0	119	88	90	Fail, soil removed and recompacted
502	See Figure 2.	12/10/2007	12.5	101	14.0	119	85	90	Fail, soil removed and recompacted
503	See Figure 2.	12/10/2007	7.5	101	16.0	119	85	90	Fail, soil removed and recompacted
504	See Figure 2.	12/10/2007	12.5	108	17.0	119	91	90	Pass, soil removed and recompacted
505	See Figure 2.	12/10/2007	8.5	100	13.0	119	84	90	Fail, soil removed and recompacted
506	See Figure 2.	12/10/2007	4	110	22.0	119	92	90	PASS
507	See Figure 2.	12/10/2007	4	101	20.0	119	85	90	Fail; see retest at #508
508	See Figure 2.	12/10/2007	4	109	20.0	119	92	90	PASS; retest of #507
509	See Figure 2.	12/10/2007	4	113	19.0	119	95	90	PASS
510	See Figure 2.	12/11/2007	4.5	112	18.0	119	94	90	PASS
511	See Figure 2.	12/11/2007	45	114	19.0	119	96	90	PASS
512	See Figure 2.	12/11/2007	4.5	114	16.0	119	96	90	PASS
513	See Figure 2.	12/11/2007	5	108	13.0	119	91	90	PASS
514	See Figure 2.	12/11/2007	5	114	18.0	119	96	90	PASS
515	See Figure 2.	12/11/2007	5	115	18.0	119	97	90	PASS
516	See Figure 2.	12/11/2007	5	116	19.0	119	97	90	PASS
517	See Figure 2.	12/11/2007	5.5	106	17.0	119	89	90	Fail; see retest at #521
518	See Figure 2.	12/11/2007	5.5	107	18.0	119	90	90	PASS

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[4] *The ratio of the in-place dry density to the maximum dry density of the same material*
[5] *Minimum 90% relative compaction.*

Sequential Field Density Test No.	Test Location[1]	Date	Elevation (feet) [2]	Dry Density (pcf)	Moisture Content (percent)	Maximum Dry Density (pcf) [3]	Relative Compaction (percent) [4]	Required Compaction (percent) [5]	Comments
519	See Figure 2.	12/11/2007	5.5	107	18.0	119	90	90	PASS
520	See Figure 2.	12/11/2007	5.5	97	18.0	119	82	90	Fail; see retest at #523
521	See Figure 2.	12/11/2007	5.5	117	18.0	119	98	90	PASS; retest of #517
522	See Figure 2.	12/11/2007	5.5	118	19.0	119	99	90	PASS
523	See Figure 2.	12/11/2007	5.5	119	15.0	119	100	90	PASS; retest of #520
524	See Figure 2.	12/11/2007	5.5	109	18.0	119	92	90	PASS
525	See Figure 2.	12/11/2007	5.5	115	19.0	119	97	90	PASS
526	See Figure 2.	12/11/2007	5.5	113	20.0	119	95	90	PASS
527	See Figure 2.	12/11/2007	5.5	114	18.0	119	96	90	PASS
528	See Figure 2.	12/11/2007	6	116	19.0	119	97	90	PASS
529	See Figure 2.	12/11/2007	6	112	19.0	119	94	90	PASS
530	See Figure 2.	12/11/2007	6	113	20.0	119	95	90	PASS
531	See Figure 2.	12/11/2007	6	101	19.0	119	85	90	Fail; see retest at #532
532	See Figure 2.	12/11/2007	6	108	20.0	119	91	90	PASS; retest of #531
533	See Figure 2.	12/11/2007	6	111	20.0	119	93	90	PASS
534	See Figure 2.	12/11/2007	6	114	19.0	119	96	90	PASS
535	See Figure 2.	12/11/2007	4.5	113	22.0	119	95	90	PASS
536	See Figure 2.	12/11/2007	4.5	111	19.0	119	93	90	PASS
537	See Figure 2.	12/11/2007	4.5	114	19.0	119	96	90	PASS
538	See Figure 2.	12/11/2007	4.5	113	20.0	119	95	90	PASS
539	See Figure 2.	12/11/2007	4.5	109	19.0	119	92	90	PASS
540	See Figure 2.	12/11/2007	5	110	18.0	119	92	90	PASS
541	See Figure 2.	12/11/2007	5	111	19.0	119	93	90	PASS
542	See Figure 2.	12/11/2007	5	114	20.0	119	96	90	PASS
543	See Figure 2.	12/11/2007	5	113	19.0	119	95	90	PASS
544	See Figure 2.	12/11/2007	5.5	109	18.0	119	92	90	PASS
545	See Figure 2.	12/11/2007	5.5	109	19.0	119	92	90	PASS
546	See Figure 2.	12/11/2007	5.5	115	19.0	119	97	90	PASS
547	See Figure 2.	12/11/2007	5.5	108	18.0	119	91	90	PASS
548	See Figure 2.	12/11/2007	6.5	113	19.0	119	95	90	PASS
549	See Figure 2.	12/11/2007	6.5	107	21.0	119	90	90	PASS
550	See Figure 2.	12/11/2007	6.5	112	19.0	119	94	90	PASS
551	See Figure 2.	12/11/2007	6.5	110	19.0	119	92	90	PASS
552	See Figure 2.	12/11/2007	6.5	115	18.0	119	97	90	PASS

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[5] *Minimum 90% relative compaction.*

Sequential Field Density Test No.	Test Location[1]	Date	Elevation (feet) [2]	Dry Density (pcf)	Moisture Content (percent)	Maximum Dry Density (pcf) [3]	Relative Compaction (percent) [4]	Required Compaction (percent) [5]	Comments
553	See Figure 2.	12/11/2007	5	114	19.0	119	96	90	PASS
554	See Figure 2.	12/11/2007	5	107	19.0	119	90	90	PASS
555	See Figure 2.	12/11/2007	5	114	19.0	119	96	90	PASS
556	See Figure 2.	12/11/2007	5	110	21.0	119	92	90	PASS
557	See Figure 2.	12/11/2007	5.5	107	21.0	119	90	90	PASS
558	See Figure 2.	12/11/2007	5.5	116	19.0	119	97	90	PASS
559	See Figure 2.	12/11/2007	5.5	113	18.0	119	95	90	PASS
560	See Figure 2.	12/12/2007	6	111	20.0	119	93	90	PASS
561	See Figure 2.	12/12/2007	6	112	21.0	119	94	90	PASS
562	See Figure 2.	12/12/2007	6	112	17.0	119	94	90	PASS
563	See Figure 2.	12/12/2007	6.5	114	18.0	119	96	90	PASS
564	See Figure 2.	12/12/2007	6.5	115	18.0	119	97	90	PASS
565	See Figure 2.	12/12/2007	6.5	112	19.0	119	94	90	PASS
566	See Figure 2.	12/12/2007	7	110	18.0	119	92	90	PASS
567	See Figure 2.	12/12/2007	7	116	19.0	119	97	90	PASS
568	See Figure 2.	12/12/2007	7	112	18.0	119	94	90	PASS
569	See Figure 2.	12/12/2007	7	114	19.0	119	96	90	PASS
570	See Figure 2.	12/12/2007	7	116	18.0	119	97	90	PASS
571	See Figure 2.	12/12/2007	7.5	112	18.0	119	94	90	PASS
572	See Figure 2.	12/12/2007	7.5	108	21.0	119	91	90	PASS
573	See Figure 2.	12/12/2007	7.5	111	21.0	119	93	90	PASS
574	See Figure 2.	12/12/2007	7.5	108	20.0	119	91	90	PASS
575	See Figure 2.	12/12/2007	7.5	108	20.0	119	91	90	PASS
576	See Figure 2.	12/12/2007	8.5	111	20.0	119	93	90	PASS
577	See Figure 2.	12/12/2007	8.5	111	19.0	119	93	90	PASS
578	See Figure 2.	12/12/2007	8	111	19.0	119	93	90	PASS
579	See Figure 2.	12/12/2007	7.5	107	19.0	119	90	90	PASS
580	See Figure 2.	12/12/2007	7.5	116	18.0	119	97	90	PASS
581	See Figure 2.	12/12/2007	7.5	109	18.0	119	92	90	PASS
582	See Figure 2.	12/12/2007	7.5	112	19.0	119	94	90	PASS
583	See Figure 2.	12/12/2007	7.5	113	18.0	119	95	90	PASS
584	See Figure 2.	12/12/2007	8.5	109	19.0	119	92	90	PASS
585	See Figure 2.	12/12/2007	8.5	108	20.0	119	91	90	PASS
586	See Figure 2.	12/12/2007	8.5	110	20.0	119	92	90	PASS

TABLE 1
SUMMARY OF DENSITY TEST DATA
Harbor Park
Pittsburg, CA 94565

Treadwell&Rollo

[1] *Approximate locations of field density tests are shown on Figure 1 attached.*
[2] *Elevations are based on Pittsburg City datumn and were provided in the field by ENTACT, the grading contractor*
[3] *As determined by ASTM D1557-07 laboratory compaction procedure*
[4] *The ratio of the in-place dry density to the maximum dry density of the same material*
[5] *Minimum 90% relative compaction.*

Sequential Field Density Test No.	Test Location[1]	Date	Elevation (feet) [2]	Dry Density (pcf)	Moisture Content (percent)	Maximum Dry Density (pcf) [3]	Relative Compaction (percent) [4]	Required Compaction (percent) [5]	Comments
587	See Figure 2.	12/12/2007	8.5	110	20.0	119	92	90	PASS
589	See Figure 2.	12/12/2007	8.5	110	19.0	119	92	90	PASS
590	See Figure 2.	12/12/2007	8.5	108	20.0	119	91	90	PASS
591	See Figure 2.	12/12/2007	7	108	21.0	119	91	90	PASS
592	See Figure 2.	12/12/2007	6	107	21.0	119	90	90	PASS
593	See Figure 2.	12/12/2007	8.5	107	20.0	119	90	90	PASS
594	See Figure 2.	12/12/2007	7.5	110	19.0	119	92	90	PASS
595	See Figure 2.	12/12/2007	8	109	19.0	119	92	90	PASS
596	See Figure 2.	12/12/2007	8	112	18.0	119	94	90	PASS
597	See Figure 2.	12/12/2007	8	109	18.0	119	92	90	PASS
598	See Figure 2.	12/12/2007	8	111	17.0	119	93	90	PASS
599	See Figure 2.	12/12/2007	7	106	17.0	119	89	90	Fail; see restest at #600
600	See Figure 2.	12/12/2007	7	110	18.0	119	92	90	PASS; retest of #599
601	See Figure 2.	12/12/2007	7.5	108	18.0	119	91	90	PASS
602	See Figure 2.	12/12/2007	6	108	21.0	119	91	90	PASS
603	See Figure 2.	12/13/2007	6	109	20.0	119	92	90	PASS
604	See Figure 2.	12/13/2007	6.5	110	19.0	119	92	90	PASS
605	See Figure 2.	12/13/2007	7	99	26.0	119	83	90	Fail; see retest at #608
606	See Figure 2.	12/13/2007	7	107	20.0	119	90	90	PASS
607	See Figure 2.	12/13/2007	7	104	23.0	119	87	90	Fail; see retest at #609
608	See Figure 2.	12/13/2007	7	108	22.0	119	91	90	PASS; retest of #605
609	See Figure 2.	12/13/2007	7	108	18.0	119	91	90	PASS; retest of #607
610	See Figure 2.	12/13/2007	7	108	20.0	119	91	90	PASS
611	See Figure 2.	12/13/2007	7	11	20.0	119	9	90	PASS
612	See Figure 2.	12/13/2007	7	108	19.0	119	91	90	PASS
613	See Figure 2.	12/13/2007	7	110	19.0	119	92	90	PASS
614	See Figure 2.	12/13/2007	7	110	20.0	119	92	90	PASS
615	See Figure 2.	12/13/2007	7.5	112	20.0	119	94	90	PASS
616	See Figure 2.	12/14/2007	7.5	112	20.0	119	94	90	PASS
617	See Figure 2.	12/14/2007	7.5	108	21.0	119	91	90	PASS
618	See Figure 2.	12/14/2007	7.5	108	22.0	119	91	90	PASS
619	See Figure 2.	12/14/2007	7.5	110	21.0	119	92	90	PASS
620	See Figure 2.	12/14/2007	8	110	20.0	119	92	90	PASS
621	See Figure 2.	12/14/2007	8	114	18.0	119	96	90	PASS

TABLE 1
SUMMARY OF DENSITY TEST DATA
Harbor Park
Pittsburg, CA 94565

Treadwell&Rollo

[1] *Approximate locations of field density tests are shown on Figure 1 attached.*
[2] *Elevations are based on Pittsburg City datumn and were provided in the field by ENTACT, the grading contractor*
[3] *As determined by ASTM D1557-07 laboratory compaction procedure*
[4] *The ratio of the in-place dry density to the maximum dry density of the same material*
[5] *Minimum 90% relative compaction.*

Sequential Field Density Test No.	Test Location[1]	Date	Elevation (feet) [2]	Dry Density (pcf)	Moisture Content (percent)	Maximum Dry Density (pcf) [3]	Relative Compaction (percent) [4]	Required Compaction (percent) [5]	Comments
622	See Figure 2.	12/14/2007	8	107	22.0	119	90	90	PASS
623	See Figure 2.	12/14/2007	8	110	20.0	119	92	90	PASS
624	See Figure 2.	12/14/2007	8	114	18.0	119	96	90	PASS
625	See Figure 2.	12/14/2007	6	107	20.0	119	90	90	PASS
626	See Figure 2.	12/14/2007	6	110	20.0	119	92	90	PASS
627	See Figure 2.	12/14/2007	4	111	18.0	119	93	90	PASS
628	See Figure 2.	12/15/2007	4.5	106	19.0	119	89	90	Fail; see retest at #629
629	See Figure 2.	12/15/2007	4.5	108	20.0	119	91	90	PASS; retest of #628
630	See Figure 2.	12/15/2007	8	106	22.0	119	89	90	Fail; see retest at #631
631	See Figure 2.	12/15/2007	8	108	20.0	119	91	90	PASS; retest of #630
632	See Figure 2.	12/15/2007	5	110	19.0	119	92	90	PASS
633	See Figure 2.	12/15/2007	5.5	109	14.0	119	92	90	PASS
634	See Figure 2.	12/15/2007	6	109	19.0	119	92	90	PASS
635	See Figure 2.	12/15/2007	8.5	101	15.0	119	85	90	Fail; see retest at #640
636	See Figure 2.	12/15/2007	8.5	102	16.0	119	86	90	Fail; see retest at #641
637	See Figure 2.	12/15/2007	8.5	102	16.0	119	86	90	Fail; see retest at #642
638	See Figure 2.	12/15/2007	8.5	105	16.0	119	88	90	Fail; see retest at #643
639	See Figure 2.	12/15/2007	7	114	18.0	119	96	90	PASS
640	See Figure 2.	12/15/2007	8.5	106	18.0	119	89	90	PASS by observation, rerolled, retest of #635
641	See Figure 2.	12/15/2007	8.5	111	18.0	119	93	90	PASS; retest of #636
642	See Figure 2.	12/15/2007	8.5	109	21.0	119	92	90	PASS; retest of #637
643	See Figure 2.	12/15/2007	8.5	112	20.0	119	94	90	PASS; see retest of #638
644	See Figure 2.	12/15/2007	0	114	16.0	119	96	90	PASS
645	See Figure 2.	12/16/2007	0.5	116	17.0	119	97	90	PASS
646	See Figure 2.	12/16/2007	1	115	16.0	119	97	90	PASS
647	See Figure 2.	12/16/2007	1.5	115	18.0	119	97	90	PASS
648	See Figure 2.	12/16/2007	2	111	21.0	119	93	90	PASS
649	See Figure 2.	12/16/2007	2.5	109	19.0	119	92	90	PASS
650	See Figure 2.	12/16/2007	3	113	19.0	119	95	90	PASS
651	See Figure 2.	12/16/2007	3	114	17.0	119	96	90	PASS
652	See Figure 2.	12/16/2007	3.5	110	17.0	119	92	90	PASS
653	See Figure 2.	12/17/2007	4	115	18.0	119	97	90	PASS
654	See Figure 2.	12/17/2007	4	107	15.0	119	90	90	PASS
655	See Figure 2.	12/17/2007	4.5	105	17.0	119	88	90	Fail; see retest at #657

TABLE 1
SUMMARY OF DENSITY TEST DATA
Harbor Park
Pittsburg, CA 94565

Treadwell&Rollo

[1] *Approximate locations of field density tests are shown on Figure 1 attached.*

[2] *Elevations are based on Pittsburg City datumn and were provided in the field by ENTACT, the grading contractor*

[3] *As determined by ASTM D1557-07 laboratory compaction procedure*

[4] *The ratio of the in-place dry density to the maximum dry density of the same material*

[5] *Minimum 90% relative compaction.*

Sequential Field Density Test No.	Test Location[1]	Date	Elevation (feet) [2]	Dry Density (pcf)	Moisture Content (percent)	Maximum Dry Density (pcf) [3]	Relative Compaction (percent) [4]	Required Compaction (percent) [5]	Comments
656	See Figure 2.	12/17/2007	4.5	92	18.0	119	77	90	Fail; see retest at #658
657	See Figure 2.	12/17/2007	4.5	110	19.0	119	92	90	PASS; retest of #655
658	See Figure 2.	12/17/2007	4.5	108	18.0	119	91	90	PASS; retest of #656
659	See Figure 2.	12/17/2007	5	117	13.0	119	98	90	PASS
660	See Figure 2.	12/17/2007	5	114	17.0	119	96	90	PASS
661	See Figure 2.	12/17/2007	5.5	105	18.0	119	88	90	Fail; see retest at #662
662	See Figure 2.	12/17/2007	5.5	113	19.0	119	95	90	PASS; retest of #661
663	See Figure 2.	12/17/2007	5	104	16.0	119	87	90	Fail; see retest at #665
664	See Figure 2.	12/17/2007	5.5	101	19.0	119	85	90	Fail; see retest at #666
665	See Figure 2.	12/17/2007	5	119	18.0	119	100	90	PASS; retest of #663
666	See Figure 2.	12/17/2007	5.5	110	19.0	119	92	90	PASS; retest of #664
667	See Figure 2.	12/17/2007	6	113	20.0	119	95	90	PASS
668	See Figure 2.	12/17/2007	6	107	16.0	119	90	90	PASS
669	See Figure 2.	12/17/2007	6	109	17.0	119	92	90	PASS
670	See Figure 2.	12/17/2007	6.5	113	19.0	119	95	90	PASS
671	See Figure 2.	12/17/2007	6.5	119	18.0	119	100	90	PASS
672	See Figure 2.	12/17/2007	6.5	115	18.0	119	97	90	PASS
673	See Figure 2.	12/17/2007	7	114	18.0	119	96	90	PASS
674	See Figure 2.	12/17/2007	7	115	19.0	119	97	90	PASS
675	See Figure 2.	12/17/2007	7	108	18.0	119	91	90	PASS
676	See Figure 2.	12/17/2007	7	114	17.0	119	96	90	PASS

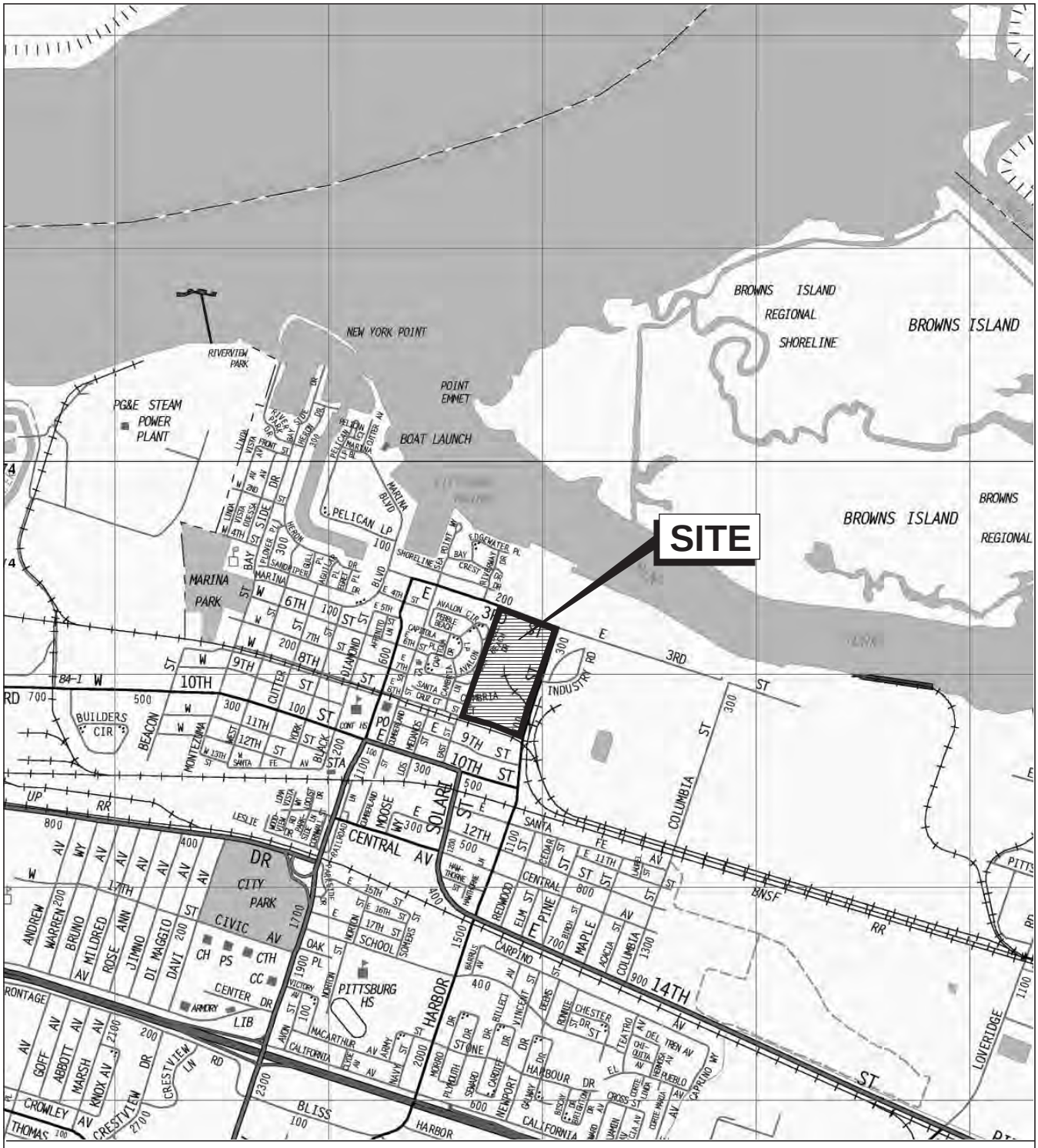
Treadwell&Rollo

TABLE 2
SUMMARY OF LABORTAORY COMPACTION CURVES
Harbor Park
Pittsburg, CA

Description	Type of Soil	Date Tested	Maximum Dry Density (pcf)[1]	Optimum Moisture Content (%)[1]
CLAY (CL), dark gray/olive gray (lime treated)	Soil Onsite	11/19/2007	102.6	18.0
CLAY (CL), dark gray/olive gray (lime treated)	Soil Onsite	11/16/2007	104.1	17.0
Poorly graded SAND (SP), graybrown with white flakes (kitty litter)	Soil Onsite	11/27/2007	111.5	10.8
Sandy CLAY (SC), dark yellow brown	Soil Onsite	11/29/2007	118.8	12.9
Clayey SAND (SP-SC) with silt and gravel, gray brown	Soil Onsite	11/15/2007	119.0	12.0
CLAY (CH), gray/dark gray	Soil Onsite	11/15/2007	100.0	20
CLAY (CL), orange brown	Soil Onsite	11/6/2007	116.0	13
CLAY (CL/CH), mottled dark brown and brown	Soil Onsite	11/6/2007	114.0	14

[1] Based on ASTM D 1557-91 laboratory compaction procedures

FIGURES



Base map: The Thomas Guide
Contra Costa County
1999

0 1/4 1/2 Mile

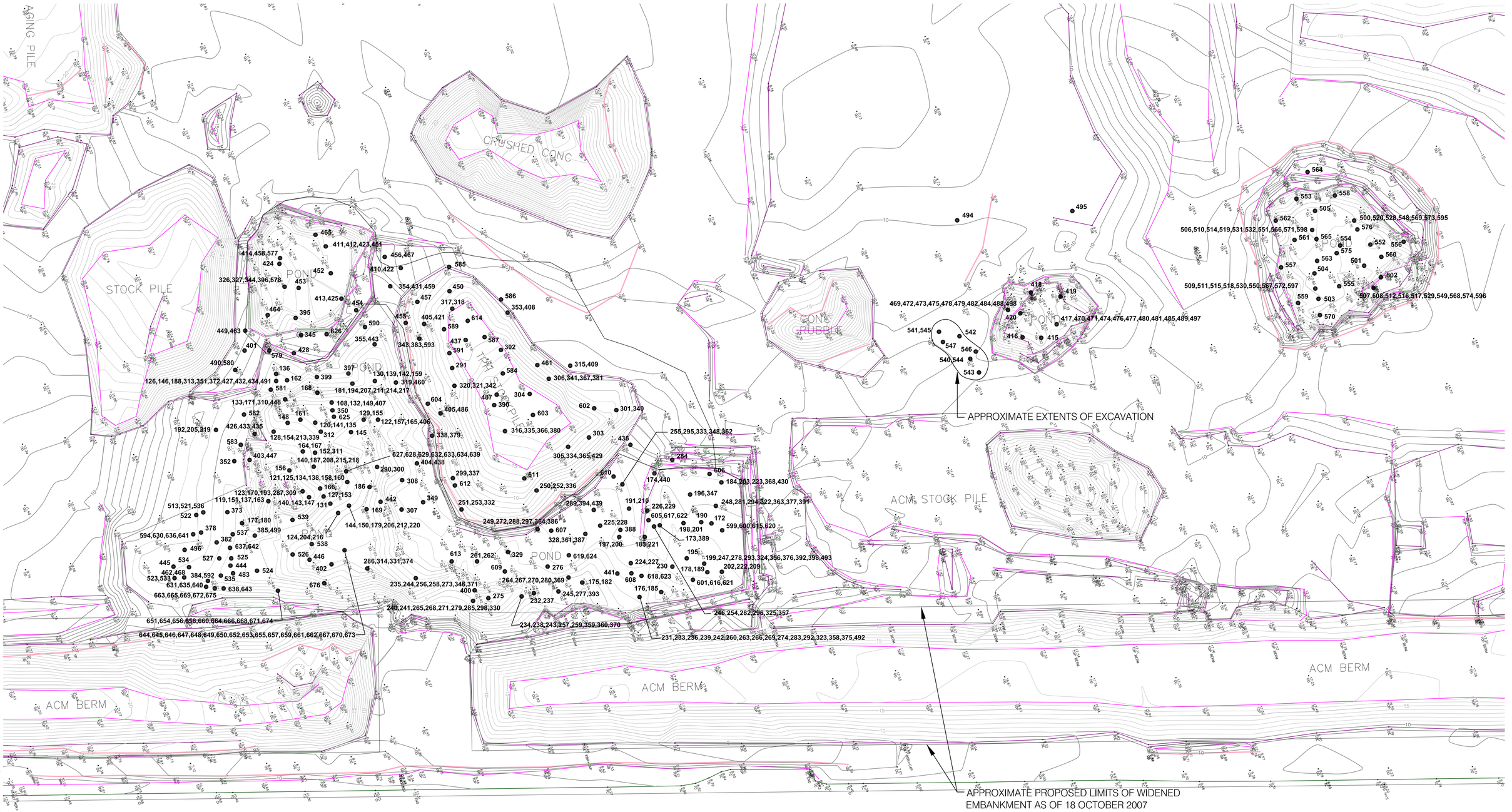
Approximate scale

HARBOR PARK
Pittsburg, California

SITE LOCATION MAP

Treadwell&Rollo

Date 07/03/08	Project No. 4245.02	Figure 1



EXPLANATION

- Approximate location of field density test by Treadwell & Rollo, Inc.

30 0 30 Feet
Approximate scale

Reference: AutoCAD drawing by Winzler & Kelly Consulting Engineers, titled "Z-HARBOR PARK VOLUMES-29.dwg" e-mailed to Treadwell & Rollo on 4 December 2007.

S:\Tgraphics-Oak\4200's\4245.02\CONSTRUCTION-FILES\OAK-424502_SITE PLAN.dwg 7/17/08

HARBOR PARK
Pittsburg, California

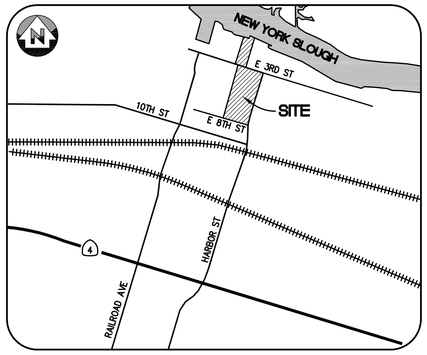
FIELD DENSITY TEST LOCATIONS

Date	Project No.	Figure
07/15/08	4245.02	2

Treadwell & Rollo

TOPOGRAPHIC SURVEY

415 & 420 EAST 3RD STREET
PITTSBURG, CALIFORNIA



VICINITY MAP
N.T.S.

LEGEND

ALL DISTANCES AND DIMENSIONS ARE SHOWN IN FEET AND DECIMALS THEREOF.

AERIAL	SURVEY	
		EDGE OF PAVEMENT
		CURB LINE
		EDGE OF CONCRETE
		PAVEMENT STRIPING
		CURB AND GUTTER
		RETAINING WALL
		STAIRWAY
		GRADE BREAK
		FLOW LINE
	SS	SANITARY SEWER
	SS	UNDOCUMENTED SANITARY SEWER
	SD	STORM DRAIN
	SD	UNDOCUMENTED STORM DRAIN
	WTR	WATER LINE
	WTR	UNDOCUMENTED WATER LINE
	G	GAS LINE
	GAS	UNDOCUMENTED GAS LINE
	RW	RECLAIMED WATER
	RW	RECLAIMED WATER PER BLOCK MAPS
	E	UNDERGROUND ELECTRIC LINE
	CMN	COMMUNICATIONS LINE
	OHE	OVERHEAD ELECTRIC LINE
	?	UNKNOWN UTILITY LINE
	X	CHAIN LINK FENCE
		AC BERM
		BUILDING OUTLINE
		SURVEY CONTROL POINT
SDMH		FOUND IRON PIPE
SSMH		STORM DRAIN MANHOLE
		SANITARY SEWER MANHOLE
		AREA DRAIN
		DROP INLET
		CATCH BASIN
		CURB INLET
	ELEC	ELECTRIC PULL BOX / VAULT
		UNKNOWN UTILITY PULL BOX
		CABLE TELEVISION BOX
		POWER POLE
WV		WATER VALVE BOX
		GAS VALVE
		WATER METER
		BACKFLOW PREVENTER
		STREET LIGHT PULL BOX
		VALVE BOX
		HARDSCAPE ELECTRIC LIGHT
		ELECTROLIER
EMH		ELECTRIC MANHOLE
COMM		COMMUNICATIONS MANHOLE
		SIGN
		GUY WIRE
		FIRE HYDRANT
		BOLLARD
95.9 TC19.3 FL18.8		SPOT ELEVATION
		TREE WITH DRIPLINE, TYPE AND DIAMETER AS INDICATED
10		CONTOURS UNDERNEATH /NOT UNDERNEATH DRIPLINES
10		CONTOURS IN DRAINAGE AREA FLOW DIRECTION INDICATED

ABBREVIATIONS

AD	– AREA DRAIN
BFP	– BACKFLOW PREVENTOR
BLDC	– BUILDING CORNER
BOLL	– BOLLARD
BOW	– BOTTOM OF WALL
BS	– BOTTOM OF STAIR
BW	– BACK OF WALK
CATV	– CABLE TELEVISION PULLBOX
CB	– CATCH BASIN
CHKSHT	– SURVEY CHECK SHOT
CI	– CURB INLET
CLF	– CHAIN LINK FENCE
CNPT	– SURVEY CONTROL POINT
COMM	– COMMUNICATIONS
CONC	– CONCRETE
DI	– DRAIN INLET
DLT	– DAYLIGHT
DW	– DOMESTIC WATER
EMH	– ELECTRICAL MANHOLE
EP	– EDGE OF PAVEMENT
EPB	– ELECTRICAL PULLBOX
FH	– FIRE HYDRANT
FL	– FLOW LINE
FLP	– FLOW POINT
FND IP	– FOUND IRON PIPE
FNDCNPT	– FOUND SURVEY CONTROL POINT
G	– GROUND
GB	– GRADE BREAK
GUY	– GUY WIRE ANCHOR
HCR	– ACCESSIBLE RAMP
HE	– HARDSCAPE ELECTRIC LIGHT
INV.	– INVERT
LIP	– LIP OF GUTTER
MISC--PB	– MISCELLANEOUS PULLBOX
P	– PAVEMENT ELEVATION
PED	– ELECTRIC / TRAFFIC PEDESTAL
PP	– POWER POLE
RAIL	– HANDRAIL / GUARDRAIL
SDMH	– STORM DRAIN MANHOLE
SSMH	– SANITARY SEWER MANHOLE
STL	– STREET LIGHT
STL	– SINGLE–ARM STREET LIGHT
STPB	– STREET LIGHT PULLBOX
TC	– TOP OF CURB
TC@CB	– TOP OF CURB AT CATCH BASIN
TOW	– TOP OF WALL
TRANS	– TRANSFORMER
TS	– TOP OF STAIR
VGUT	– VALLEY GUTTER
VLT	– VAULT
WM	– WATER METER
WP	– SURVEY WORK POINT
WPB	– WATER VAULT
WV	– WATER VALVE

BENCHMARK

NGS BENCHMARK C 563 (PID JS1885)

DESCRIPTION: BRASS DISK STAMPED C 563 1957 SET IN CONCRETE ABUTMENT ALONG THE SOUTHERN PACIFIC COMPANY RAILROAD FROM THE STATION AT PITTSBURG, IN RYE T2N R2W, 0.3 MILE EAST OF MILEPOLE 50, 0.2 MILE WEST OF THE CROSSING OF LOVERIDGE ROAD, AT WOODEN BRIDGE 50.27 OVER A SMALL CREEK, IN THE TOP OF THE NORTH END OF THE EAST CONCRETE ABUTMENT, 71 1/2 FEET SOUTH OF THE CENTER LINE OF THE ANTIOCH PITTSBURG HIGHWAY, 6.6 FEET NORTH OF THE NORTH RAIL, AND ABOUT 1/2 FOOT LOWER THAN THE TRACK.

ELEVATION=37.70 FEET (NAVD 88)

BASIS OF BEARINGS

THE BEARING N73°15'00"W, BETWEEN FOUND MONUMENTS ON EAST THIRD STREET AS SHOWN ON THAT CERTAIN RECORD OF SURVEY MAP FILED OCTOBER 7, 2003 IN BOOK 127 OF LAND SURVEY MAPS PAGE 11, CONTRA COSTA COUNTY RECORDS WAS TAKEN AS THE BASIS OF BEARINGS.

SHEET INDEX

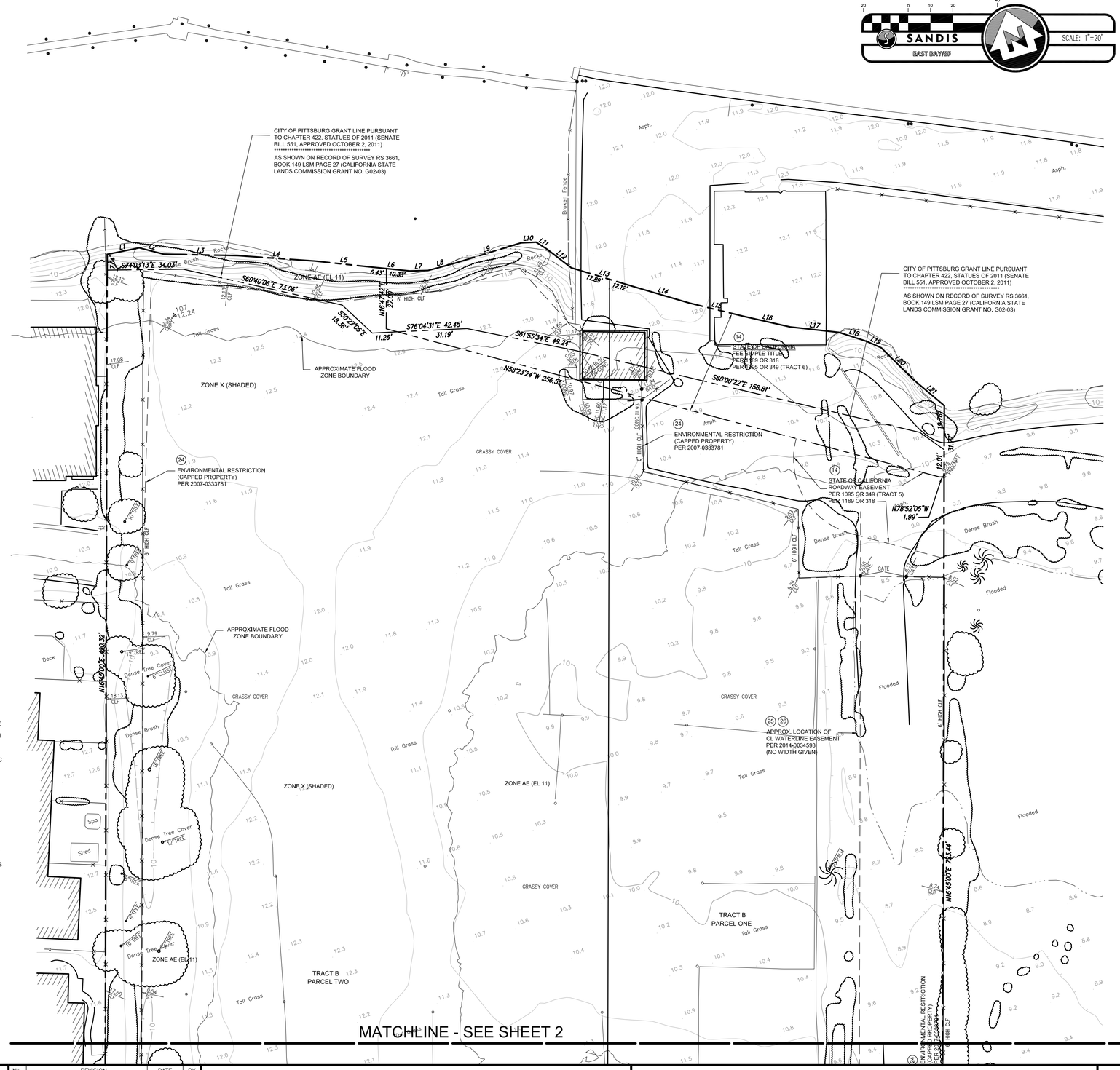
1 TOPOGRAPHIC SURVEY
2 TOPOGRAPHIC SURVEY
3 TOPOGRAPHIC SURVEY
4 TOPOGRAPHIC SURVEY
5 TOPOGRAPHIC SURVEY

UNDERGROUND UTILITY NOTE

THE TYPES, LOCATIONS, SIZES AND/OR DEPTHS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS TOPOGRAPHIC SURVEY ARE APPROXIMATE AND WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. ONLY ACTUAL EXCAVATION WILL REVEAL THE TYPES, EXTENT, SIZES, LOCATIONS AND DEPTHS OF SUCH UNDERGROUND UTILITIES. A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE ALL KNOWN UNDERGROUND UTILITIES. HOWEVER, THE ENGINEER CAN ASSUME NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF ITS DELINEATION OF SUCH UNDERGROUND UTILITIES WHICH MAY BE ENCOUNTERED, BUT WHICH ARE NOT SHOWN ON THIS SURVEY.

SURVEY NOTES

1. ALL DISTANCES AND DIMENSIONS ARE SHOWN IN FEET AND DECIMALS THEREOF.
2. DATES OF FIELD SURVEY: 2/27/2017–03/01/2017



NO PART OF THIS DOCUMENT MAY BE REPRODUCED IN ANY FORM INCLUDING PHOTOCOPY, RECORDING OR ANY INFORMATION RETRIEVABLE AND STORAGE SYSTEM, WITHOUT PERMISSION IN WRITING FROM SANDIS.

SANDIS CIVIL ENGINEERS SURVEYORS PLANNERS
SILICON VALLEY TRI-VALLEY CENTRAL VALLEY EAST BAY/SF

DATE:	3/13/2017
SCALE:	1"=20'
DRAWN BY:	SEC/CC
APPROVED BY:	CC
DRAWING NO.:	617005

No.	REVISION	DATE	BY

TOPOGRAPHIC SURVEY

415 & 420 EAST 3RD STREET
PITTSBURG CALIFORNIA

SHEET 1 OF 5 SHEETS

Copyright © 2017 by Sandis

File: X:\P\617005\(3) SURVEY\(1) MAPPING\617005 TOPO.dwg Date: Mar 13, 2017 – 5:37 PM

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20 0 10 20 40

SANDIS EAST BAY/SF SCALE: 1"=20'

MATCHLINE - SEE SHEET 1

APPROXIMATE FLOOD ZONE BOUNDARY

ZONE X (SHADED)

GRASSY COVER

Tall Grass

Dense Tree Cover

Dense Brush

Brush

Asph.

Junk

Piles

Shed

ENVIRONMENTAL RESTRICTION (CAPPED PROPERTY) PER 2007-0333781

6' HIGH CLF

S73°15'00"E 395.00'

50' RAILWAY EASEMENT PER 428 DEEDS 480 PER 3613 OR 110

GATE

SD BOX, RIM=8.61
15" INV. OUT=6.01 (S)

OHE

WTR

SS

CMN

ZONE AE (EL 11)

N16°45'00"E 300.00'

ZONE X (SHADED)

22.50' X32.05' RIGHT OF WAY EASEMENT FOR SEWAGE FACILITIES PER 6379 OR 253

CL TOB=11.75
15" INV. IN=7.25 (S)
18" INV. OUT=7.15 (N)

SSMH, RIM=11.80
18" INV. IN=0.85 (E)
18" INV. OUT=0.80 (N)

REVERSE TURN RIGHT SIGN

NO PARKING SIGN

16"ACP

AC PVMT

DRIVEWAY

ELEC

CL TOB=11.79
12" INV. IN=7.99 (E)
15" INV. IN=8.04 (W)
15" INV. OUT=8.89 (N)

S73°15'00"E 50.00'

18"PVC

SSMH

Gate

6' HIGH CLF

3' HIGH WALL

SSMH, RIM=13.34
18" INV. IN=6.39 (SE)
18" INV. IN=1.59 (E)
12" INV. IN=1.49 (S)
18" INV. OUT=1.49 (W)

SSMH, RIM=13.77
10" PIPE THRU
TOP OF VALVE=11.67
BOTTOM=9.32

SEE SHEET 3 FOR CONTINUATION

SANDIS CIVIL ENGINEERS SURVEYORS PLANNERS

SILICON VALLEY TRI-VALLEY CENTRAL VALLEY EAST BAY/SF

DATE :	3/13/2017
SCALE :	1"=20'
DRAWN BY:	SEC/CC
APPROVED BY:	CC
DRAWING NO.:	617005

No.	REVISION	DATE	BY

TOPOGRAPHIC SURVEY

415 & 420 EAST 3RD STREET

PITTSBURG CALIFORNIA

SHEET 2 OF 5 SHEETS

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SEE SHEET 2 FOR CONTINUATION

S73°15'00"E 50.00'

S73°15'00"E 631.26'

ABANDONED WELL?

0.6'HIGH WALL

1.0'HIGH WALL

1.5'HIGH WALL

SSMH, RIM=13.34
18" INV. IN=6.39 (SE)
18" INV. IN=1.59 (E)
12" INV. IN=1.49 (S)
18" INV. OUT=1.49 (W)

SSMH, RIM=13.77
10" PIPE THRU
TOP OF VALVE=11.67
BOTTOM=9.32

SSMH, RIM=11.15
18" INV. IN=5.65 (S)
24" INV. OUT=5.35 (E)
DI, RIM=10.00
15" INV. IN=6.25 (E)
18" INV. OUT=5.90 (N)

SSMH, RIM=10.31
48" INV. IN=3.11 (S)
48" INV. OUT=3.16 (N)

SSMH, RIM=10.39
18" INV. IN=1.79 (E)
18" INV. OUT=1.74 (W)

SSMH, RIM=10.23
12" INV. IN=2.03 (E)
18" INV. IN=1.73 (S)
18" INV. OUT=1.68 (W)

CB, TOBCB=10.22
12" INV. OUT=8.07

SSMH, RIM=10.59
15" INV. IN=2.22 (S)
15" INV. OUT=1.82 (N)

SSMH, RIM=10.69
15" INV. IN=2.64 (S)
15" INV. OUT=2.54 (N)

SANDIS
EAST BAY/SF
SCALE: 1"=20'

ZONE X (SHADED)
ZONE X
ZONE AE (EL 11)
GRASSY COVER
Tall Grass
Brush
Dirt
Pool
Shed
APPROXIMATE FLOOD ZONE BOUNDARY

TRACT A
PARCEL ONE

(22) RESIDENTIAL PROPERTY (PARCEL A) PER 2009-0236517
(22) RESIDENTIAL PROPERTY (PARCEL B) PER 2009-0236517
(22) RESIDENTIAL PROPERTY (PARCEL C) PER 2009-0236517
(22) RESIDENTIAL PROPERTY (PARCEL D) PER 2009-0236517

MARINA / RESTAURANT SIGN
RIGHT ARROW SIGN
STOP SIGN
NO PARKING SIGN
DO NOT PASS SIGN
5.5' HIGH TRANSFORMER
4" METAL PIPE
Dense Tree Cover

MATCHLINE - SEE SHEET 4

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SANDIS CIVIL ENGINEERS SURVEYORS PLANNERS
SILICON VALLEY TRI-VALLEY CENTRAL VALLEY EAST BAY/SF

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TOPOGRAPHIC SURVEY

415 & 420 EAST 3RD STREET
PITTSBURG CALIFORNIA

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SANDIS
EAST BAY/SF

SCALE: 1"=20'

MATCHLINE - SEE SHEET 3

MATCHLINE - SEE SHEET 5

TRACT A
PARCEL ONE

RESIDENTIAL PROPERTY (PARCEL A)
PER 2009-0236517

RESIDENTIAL PROPERTY (PARCEL C)
PER 2009-0236517

RESIDENTIAL PROPERTY (PARCEL C)
PER 2009-0236517

RESIDENTIAL PROPERTY (PARCEL D)
PER 2009-0236517

BFP RETAINING WALL
VARIES FROM 1.0'-4.5'

METAL STAIRS
WITH HANDRAIL

7' HIGH WALL
6' HIGH CLF

MAINTAIN 14' CLEAR

ZONE X

PUMP STATION?, RIM=11.4
TOP OF NUT=9.15
BOTTOM OF NUT=8.50
BOTTOM=4.90

CB, TC/BC=12.09
12" INV. IN=NOT FOUND
45° INV. IN=5.79 (S)
48" INV. OUT=5.94 (N)

SSMH, RIM=12.04
6" INV. IN=3.89 (W)
8" INV. IN=XXXX (S)
15" INV. OUT=XXXX (N)

CB, TC/BC=11.04
12" INV. IN=5.04
48" INV. IN=3.79 (S)
48" INV. OUT=3.69 (N)

DI, RIM=11.84
15" INV. OUT=7.34 (S)
15" INV. OUT=7.24 (S)

DI, RIM=12.57
15" INV. IN=6.87 (W)
18" INV. OUT=6.72 (S)

SSMH, RIM=11.88
15" INV. IN=3.78 (S)
15" INV. OUT=3.78 (N)

CB, TC/BC=10.87
(2) 8" INV. IN=8.07
12" INV. OUT=7.17

NO PARKING SIGN
KEEP RIGHT SIGN
STOP SIGN
AC PVMT
STL BASE
Asph.
Conc.
Pavers
Dense Tree Cover
Tall Grass
GRASSY COVER
Brush
Dirt
Pool
Shed

DATE:	3/13/2017
SCALE:	1"=20'
DRAWN BY:	SEC/CC
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SILICON VALLEY TRI-VALLEY CENTRAL VALLEY EAST BAY/SF

TOPOGRAPHIC SURVEY

415 & 420 EAST 3RD STREET

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SHEET 4 OF 5 SHEETS

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SANDIS
EASY BAY/SF
SCALE: 1"=20'

MATCHLINE - SEE SHEET 4

TRACT A
PARCEL TWO

TRACT A
PARCEL THREE

(22) RESIDENTIAL PROPERTY (PARCEL A)
PER 2009-0236517
(22) RESIDENTIAL PROPERTY (PARCEL C)
PER 2009-0236517

APPROXIMATE FLOOD ZONE BOUNDARY

ZONE X

ZONE X (SHADED)

GRASSY COVER

Toll Grass

Dirt

Brush

Dense Brush

Dense Tree Cover
Fence Not Visible

Dense Tree Cover
Fence Not Entered

"S73°17'27"E 631.26'

SDMH, RIM=12.46
15" INV. IN=7.06 (N)
15" INV. IN=6.06 (S)
24" INV. OUT=5.06 (E)

DI, RIM=12.92
15" INV. IN=5.82 (N)
15" INV. IN=5.52 (S)
24" INV. IN=5.42 (W)
24" INV. OUT=5.22 (E)

DI, RIM=12.96
15" INV. IN=6.86 (W)
18" INV. OUT=6.76 (N)

AD, RIM=11.56
15" INV. OUT=7.36

DI, RIM=12.08
15" INV. IN=7.28 (W)
18" INV. OUT=7.18 (N)

SDMH, RIM=12.34
15" INV. IN=4.54
24" INV. IN=4.44 (W)
24" INV. OUT=4.24 (N)

CB, TOBOB=13.00
48" INV. IN=4.80 (S)
48" INV. OUT=4.90 (N)

CB, TOBOB=13.34
12" INV. IN=9.34
48" INV. IN=5.14 (S)
48" INV. OUT=5.24 (N)

CB, TOBOB=13.65
48" INV. IN=5.25 (S)
48" INV. OUT=5.35 (N)

SDMH, RIM=13.25
15" INV. IN=4.45 (S)
15" INV. IN=4.35 (N)

CB, TOBOB=13.76
12" INV. OUT=9.81

CB, TOBOB=13.58
10" INV. OUT=10.13

CB, TOBOB=13.00
8" INV. OUT=9.90
10" INV. OUT=9.80

SSMH, RIM=16.13
8" INV. IN=5.88 (S)
8" INV. OUT=5.83 (N)

SSMH, RIM=16.24
ABANDONED
BOTTOM=14.14

SSMH, RIM=16.42
6" INV. IN=9.12 (E)
15" INV. IN=6.07 (S)
15" INV. OUT=6.02 (N)

SSMH, RIM=26.34
6" INV. IN=13.30 (W)
6" INV. OUT=17.05 (SE)

SSMH, RIM=25.44
6" INV. IN=15.94 (NW)
6" INV. OUT=15.64 (E)

SDMH, RIM=12.51
15" INV. IN=6.41 (W)
15" INV. OUT=6.31 (E)

SDMH, RIM=12.70
15" INV. IN=6.50 (W)
15" INV. OUT=6.40 (E)

SDMH, RIM=12.83
15" INV. IN=6.63 (W)
15" INV. OUT=6.53 (E)

SDMH, RIM=13.19
15" INV. IN=6.89 (W)
15" INV. OUT=6.79 (E)

SDMH, RIM=13.42
15" INV. IN=7.12 (W)
15" INV. OUT=7.02 (E)

SDMH, RIM=13.71
15" INV. IN=7.41 (W)
15" INV. OUT=7.31 (E)

SDMH, RIM=14.06
15" INV. IN=7.76 (W)
15" INV. OUT=7.66 (E)

SDMH, RIM=14.59
15" INV. IN=8.29 (W)
15" INV. OUT=8.19 (E)

SDMH, RIM=14.68
15" INV. IN=8.38 (W)
15" INV. OUT=8.28 (E)

SDMH, RIM=15.83
15" INV. IN=9.53 (W)
15" INV. OUT=9.43 (E)

SDMH, RIM=16.49
15" INV. IN=10.19 (W)
15" INV. OUT=10.09 (E)

SDMH, RIM=16.90
15" INV. IN=10.60 (W)
15" INV. OUT=10.50 (E)

SDMH, RIM=17.11
15" INV. IN=10.81 (W)
15" INV. OUT=10.71 (E)

SDMH, RIM=17.42
15" INV. IN=11.12 (W)
15" INV. OUT=11.02 (E)

SDMH, RIM=17.82
15" INV. IN=11.52 (W)
15" INV. OUT=11.42 (E)

SDMH, RIM=18.29
15" INV. IN=11.99 (W)
15" INV. OUT=11.89 (E)

SDMH, RIM=18.76
15" INV. IN=12.46 (W)
15" INV. OUT=12.36 (E)

SDMH, RIM=19.35
15" INV. IN=13.05 (W)
15" INV. OUT=12.95 (E)

SDMH, RIM=19.83
15" INV. IN=13.53 (W)
15" INV. OUT=13.43 (E)

SDMH, RIM=19.87
15" INV. IN=13.57 (W)
15" INV. OUT=13.47 (E)

SDMH, RIM=20.08
15" INV. IN=13.78 (W)
15" INV. OUT=13.68 (E)

SDMH, RIM=20.29
15" INV. IN=13.99 (W)
15" INV. OUT=13.89 (E)

SDMH, RIM=20.49
15" INV. IN=14.19 (W)
15" INV. OUT=14.09 (E)

SDMH, RIM=20.68
15" INV. IN=14.38 (W)
15" INV. OUT=14.28 (E)

SDMH, RIM=20.86
15" INV. IN=14.56 (W)
15" INV. OUT=14.46 (E)

SDMH, RIM=21.04
15" INV. IN=14.74 (W)
15" INV. OUT=14.64 (E)

SDMH, RIM=21.21
15" INV. IN=14.91 (W)
15" INV. OUT=14.81 (E)

SDMH, RIM=21.39
15" INV. IN=15.09 (W)
15" INV. OUT=14.99 (E)

SDMH, RIM=21.57
15" INV. IN=15.27 (W)
15" INV. OUT=15.17 (E)

SDMH, RIM=21.75
15" INV. IN=15.45 (W)
15" INV. OUT=15.35 (E)

SDMH,

SECOR

SECOR
INTERNATIONAL
INCORPORATED

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Rancho Cordova, CA 95670
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916-861-0430 FAX

April 24, 2008

Mr. Rob Donovan
Tesoro Refining and Marketing Company
Corporate Environmental Affairs
3450 South 344th Way, Suite 201
Auburn, Washington 98001-5931

RE: Limited Phase II Site Investigation Report
Tesoro Pittsburg Terminal
595 East Third Street
Pittsburg, California
SECOR Project No.: 77OT.43877.00

Dear Mr. Donovan:

Enclosed please find a copy of the above-cited report prepared by SECOR International Incorporated. Should you have any questions please feel free to contact the undersigned at (916) 861-0400.

Sincerely,
SECOR International Incorporated

Gary D. Haeck, Ph.D., P.G.
Senior Geologist

Enclosures

cc: Mr. Keith Kobata, Tesoro Golden Eagle Refinery

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April 24, 2008

Mr. Rob Donovan
Tesoro Refining and Marketing Company
Corporate Environmental Affairs
3450 South 344th Way, Suite 201
Auburn, Washington 98001-5931

RE: Limited Phase II Site Investigation
Tesoro Pittsburg Terminal
595 East Third Street
Pittsburg, California
SECOR Project No.: 77OT.43877.00

Dear Mr. Donovan:

SECOR conducted a Limited Phase II Investigation (Phase II) at Tesoro's Pittsburg Terminal located at 595 East Third Street, Pittsburg, California (Site) to evaluate potential environmental concerns identified in the March 21, 2008 *Phase I Environmental Site Assessment* (Phase I). The Phase II was conducted in accordance with SECOR's *Proposal for Phase I Environmental Site Assessment and Limited Phase II Investigation* dated February 20, 2008. Enclosed is a copy of the Phase II report. Below a brief summary of the results of the investigation is presented.

SUMMARY

On February 25 through February 29, 2008, SECOR supervised the advancement of 18 of the originally proposed 20 direct push soil borings (GP-1, GP-3 through GP-17, GP-19, and GP-20). The 18 soil borings were advanced to the upper water-bearing zone (approximately 12 to 15 feet below ground surface). Five of the borings (at locations GP-3, GP-7, GP-12, GP-13, and GP-15) were also advanced to the second water-bearing zone (approximately 30 to 35 feet below ground surface).

Soil samples were submitted for laboratory analysis in two phases. The first phase consisted of the analysis of soil samples collected at each boring location from approximately one-foot below grade. Deeper soil samples (generally six feet bgs) were submitted for analyses of chemicals detected in the shallow soil samples above Regional Water Quality Control Board (RWQCB) Residential Environmental Screening Levels (ESLs). A total of 18 soil samples were analyzed during the first phase. Based on the first-phase results, 17 additional soil samples were submitted for laboratory analysis. In addition, a SECOR state-certified asbestos sampling technician collected eight near-surface soil samples for asbestos analysis near soil borings GP-6, GP-8, GP-11, GP-12, GP-13, GP-14, GP-16, and GP-19.

Groundwater samples were collected from each of the 18 borings from the upper water-bearing zone at approximately 12-15 feet bgs and five groundwater samples were collected

from the second water-bearing zone (GP-3WD, GP-7WD, GP-12WD, GP-13WD, and GP-15WD) at approximately 30 to 35 feet bgs. SECOR also collected a surface water sample from the standing water located in the fenced area on the southern portion of the Site using a disposable bailer.

Total petroleum hydrocarbons as gasoline (TPHg) were not detected in any of the soil samples at concentrations above laboratory method reporting limits (MRLs). Total petroleum hydrocarbons as motor oil (TPHmo) was not detected at concentrations above the industrial ESL. Total petroleum hydrocarbons as diesel (TPHd) was detected at concentrations above the industrial ESL in seven of the shallow soil sample locations throughout the Site and were not detected above ESLs in any of the deeper soil samples.

All of the shallow and deeper soil samples contained concentrations of arsenic above the industrial ESL except the samples collected from GP-16. Nickel, vanadium, copper, and zinc also exceed their respective industrial ESLs in various shallow and deeper soil samples.

Benzo (a) pyrene was detected above the industrial ESL of 0.13 mg/kg in shallow soil samples GP-3-1 (0.150 mg/kg), GP-6-1 (0.740 mg/kg), and GP-12-1 (0.300 mg/kg). Benzo (b) fluoranthene was detected above the industrial ESL of 1.3 mg/kg in deeper soil sample GP-12-6 (2.6 mg/kg).

Volatile organic compounds (VOCs) were not detected in any of the four soil samples analyzed. Asbestos was not detected in any of the eight near surface soil samples collected throughout the Site.

The upper water-bearing zone contains TPHg concentrations above the State Water Resources Control Board (SWRCB) Water Quality Criteria of 5 ug/L at six locations, with the highest concentrations from the samples collected from borings GP-16 and GP-17. The upper water-bearing zone contains also TPHd concentrations throughout the Site that exceed the USEPA taste and odor threshold (100 ug/L) and elevated TPHmo concentrations in eight sample locations throughout the Site.

The upper water-bearing zone at boring GP-11 contains barium concentrations that slightly exceed the California primary maximum contaminant level (MCL). The upper water-bearing zone is also impacted with pentachlorphenol (PCP) within the fenced area on the southern portion of the Site at sample locations GP-16WS, GP-17WS, GP-19WS.

The second water-bearing zone contains VOC concentrations that exceed the MCLs for 1,1-dichloroethane, 1,2-dichloroethene, and trichloroethene at sample location GP-3WD. Trichloroethene was also detected above MRLs but below MCLs at upper water-bearing zone sample locations GP-3WS, GP-4WS, GP-14WS, and GP-16WS.

The surface water in the fenced area on the southern portion of the Site is impacted with 200 ug/L of arsenic, which exceeds the arsenic primary MCL of 50 ug/L.

Based on analytical results, the soil and upper-water bearing zone throughout the Site is impacted with TPHd. These impacts may be due to the current and historical use of fuel oil for dust suppression.

The soil throughout the Site is impacted with various metals (primarily arsenic), the upper-water bearing zone near the northwest corner of the Site is impacted with barium, and the surface water in the fenced storage area is impacted with arsenic. Although these metals are naturally occurring in the soils, they also have been reported in analyses of the petroleum coke at the Site. Arsenic was once used as a wood preservative and the arsenic found at the site may be related to the treated wood poles in the fenced area on the southern portion of the Site. However, arsenic also occurs naturally in soils throughout California and typically concentrations exceed the residential ESL.

VOCs were not detected in the soil at the Site. However, VOCs were detected in the upper water-bearing zone in and near the Site warehouse building and within the fenced storage area. Concentrations exceeding the primary MCLs were detected in the deep water-bearing unit near the exterior of the warehouse building. The origin of the VOCs at the Site and in the deeper water-bearing unit is not clear but may be due the reported historical use of solvent at the site or possibly an off-site source.

The upper water-bearing unit in the fenced storage area on the southern portion of the Site is impacted with PCP. The most common use for PCP is as a wood preservative (fungicide) so the PCP may be related to the treated wood pole fence and treated wood poles that were reportedly stored within the fenced area.

The soil near borings GP-3, GP-6, and GP-12 is impacted with polycyclic aromatic hydrocarbons (PAHs). The origin of the PAHs is not clear. PAHs are common constituents of creosote treated wood and are reported as being contained in petroleum coke. PAHs have not previously been detected in the petroleum coke at the Site, but were detected in the slough sediments near the Site.

Should you have any questions or concerns regarding this project please feel free to contact the undersigned at (916) 861-0400.

Sincerely,
SECOR International Incorporated

Gary D. Haeck, Ph.D., P.G.
Senior Geologist

Enclosures: Limited Phase II Investigation Report

cc: Mr. Keith Kobata, Tesoro Golden Eagle Refinery

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LIMITED PHASE II SITE INVESTIGATION REPORT FOR

TESORO REFINING AND MARKETING COMPANY

Tesoro Pittsburg Terminal
595 East Third Street
Pittsburg, CA

April 24, 2008
77OT.43877.00.0005

Prepared by

Caron R. Stofleth
Project Scientist

Reviewed by

Gary D. Haeck, Ph.D., P.G.
Senior Geologist



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LIST OF ACRONYMS

AST - Above-ground storage tank

bgs - Below ground surface

CBL - Cruz Brothers Locators

DOT - Department of Transportation

ELAP - Environmental Laboratory Accreditation Program

EMC - Environmental Management Consultants Laboratories

ESL - Environmental Screening Level

HASP - Health and Safety Plan

MCL - Maximum Contaminant Level

MRL - Method Reporting Limit

mg/kg - Milligrams per kilogram

mg/L - Milligrams per liter

NVLAP - National Voluntary Laboratory Accreditation Program

PAH - Polycyclic aromatic hydrocarbon

PCP - Pentachlorophenol

PID - Photoionization detector

PLM - Polarized Light Microscopy

PRG - Preliminary Remediation Goals

RWQCB - Regional Water Quality Control Board

SWRCB - State Water Resources Control Board

TPH - Total petroleum hydrocarbons

TPHd - Total petroleum hydrocarbons as diesel fuel

TPHg - Total petroleum hydrocarbons as gasoline

LIST OF ACRONYMS (CONTINUED)

TPHmo - Total petroleum hydrocarbons as motor oil

USA - Underground Service Alert

USEPA - United States Environmental Protection Agency

ug/L - Micrograms per liter

WDC - WDC Exploration and Wells

VOC - Volatile Organic Compound

1.0 INTRODUCTION

1.1 Background

On behalf of Tesoro Refining and Marketing Company (Tesoro), SECOR International, Incorporated (SECOR) prepared the March 21, 2008 *Phase I Environmental Site Assessment* (Phase I) of Tesoro's Pittsburg Terminal located at 595 East Third Street, Pittsburg, California (Site). The Phase I was conducted in accordance with SECOR's *Proposal for Phase I Environmental Site Assessment and Limited Phase II Investigation* dated February 20, 2008. The Phase I was completed to evaluate whether any environmental liabilities may be associated with the Site. The Phase I identified potential environmental concerns related to current and historic activities reportedly conducted at the Site. To evaluate these potential environmental concerns, SECOR conducted a Limited Phase II Investigation (Phase II) at the Site on February 24 through 29, 2008. This report has been prepared to document the results of the Phase II investigation. SECOR understands the Phase I and Phase II investigations were requested by Tesoro in connection with a potential property transfer.

1.2 Summary of Site Information

The following brief summary was abstracted from information collected during SECOR's Phase I investigation. The Site is located in an industrial area of the City of Pittsburg and is adjacent to the New York Slough, which is connected to the Suisun Bay (Figures 1 and 2). The Site is part of an onshore facility that was reportedly constructed in the 1920s for stevedoring various products. Current operations on the Site include conveying petroleum coke from the easterly adjacent petroleum coke piles through a subsurface conveyor connected to an above-ground conveyor. From the above-ground conveyor, the petroleum coke is loaded onto ships berthed at the adjacent wharf. The northeastern portion of the Site includes an asphalt-concrete paved area for employee parking. The southern portion of the Site is currently used to store miscellaneous conveyor parts, old metal equipment/parts, and wood fence poles. According to onsite personnel, the Site has been in use since the 1920s as a stevedoring facility for various products including iron ore, titanium ore (i.e., rutile), asbestos, beans, charcoal, and coffee. During Word War II, the Site was reportedly used as an army base and was the Camp Stoneman military debarkation point for soldiers headed overseas.

1.3 Completed Scope of Work

The potential environmental concerns identified in the Phase I were evaluated during the Phase II investigation. SECOR collected soil and groundwater samples to assess the following potential impacts from past and present uses of the Site.

- Potential presence of metals and polycyclic aromatic hydrocarbons (PAH's) in the subsurface soil associated with petroleum coke.
- Potential impacts to the subsurface from the onsite storage of treated wood, old engines, miscellaneous conveyor parts, "flo bins" labeled as hazardous waste, and products including slag, asbestos, beans, iron ore, and titanium ore.

- The presence of a 10,000-gallon fuel-oil railcar above-ground storage tank (AST) and the reported use of fuel oil for coke-dust suppression.
- Potential historic onsite chemical storage.
- Historic storage of asbestos at the site and potential impacts from the former adjacent Johns-Manville property (manufacturer of asbestos-containing materials).

The following scope of work was performed in this Phase II investigation:

- Advance 18 continuously-cored soil borings at the locations shown on Figure 2,
- Collect soil samples at minimum five-foot depth intervals,
- Collect grab samples from each boring of the first-encountered groundwater,
- Collect grab samples from five spatially representative borings of the second-encountered groundwater,
- Log the soils samples in accordance with the Uniform Soil Classification System and prepare boring logs to record lithological information from the continuous cores,
- Submit soil and groundwater samples for chemical laboratory analyses,
- Prepare summary tables and figures presenting the analytical data,
- Evaluate the lithological and analytical data to constrain the potential impacts,
- Prepare this report presenting the results of the Phase II investigation.

Field activities are described in detail in Section 2.0. Results and data evaluation methods are summarized in Section 3.0. Discussion, conclusions and recommendations are presented in Section 4.0.

2.0 LIMITED PHASE II FIELD ACTIVITIES

2.1 Pre-Field Work Activities

SECOR created a current site-specific Health and Safety Plan (HASP) prior to the commencement of fieldwork as required by the Occupational Health and Safety Administration Standard guidelines (29 CFR 1910.120), and by the California Occupational Health and Safety Administration guidelines (CCR Title 8, Section 5192). The HASP was reviewed by field staff and contractors before beginning field operations, and was in possession of SECOR personnel while conducting field related activities at the site.

SECOR obtained the proper permit from Contra Costa County Environmental Health for the advancement of soil borings on the Site parcel. A copy of the permit is included in Appendix A.

Prior to initiating field activities, SECOR marked the boring locations, contacted Underground Service Alert (USA) at least 48 hours prior to the initiation of field work, and contracted Cruz Brothers Locators (CBL), a private underground utility locator, to determine whether the proposed boring locations were clear of potential subsurface utilities. The CBL field staff met SECOR field staff onsite to mark the site and make adjustments to boring locations if needed due to subsurface utilities.

2.2 Drilling and Sampling Field Activities

On February 25 through February 29, 2008, SECOR supervised the advancement of 18 of the originally proposed 20 direct push soil borings (GP-1, GP-3 through GP-17, GP-19, and GP-20) at the locations shown on Figure 2. SECOR did not complete GP-2 due to the presence of stockpiled petroleum coke awaiting shipment. Boring GP-17 was repositioned to the central portion of the fenced area (where most of the historical storage activities reportedly occurred) and boring GP-18 was eliminated. SECOR also moved boring GP-20 to the east due to standing surface water and moved boring GP-3 to the north due to underground utilities. The proposed GP-5 deep groundwater sample was not collected due to time constraints.

The 18 soil borings were advanced by WDC Exploration and Wells (WDC), using a truck-mounted Geoprobe® rig equipped with dual-tube sampling equipment, to the upper water-bearing zone (approximately 15 feet below ground surface (bgs)). Five of the eighteen borings (at locations GP-3, GP-7, GP-12, GP-13, and GP-15) were also advanced to the second water-bearing zone (approximately 30 to 35 feet bgs). The rationale for the placement of each of the boring locations is summarized in Table 1. The borings were drilled and sampled in accordance with SECOR's Standard Procedures (Appendix C).

Soil borings were continuously cored and logged for lithologic description. Boring logs are included in Appendix C. A shallow soil sample (at approximately one foot bgs) was collected from each soil boring using a slide hammer and a brass sleeve. The remainder of the soil samples were collected for possible laboratory analysis at minimum five-foot intervals using Geoprobe sampling methods. These samples were collected in five-foot long acetate liners that were inserted into the sample collection tool (Macro-Core® Soil Sampler) of the Geoprobe®. Once the acetate sleeves were removed from the sampling tool, they were marked with the

sample intervals using indelible ink and described in accordance with the ASTM Method D 2488 by a SECOR scientist under the direction of a California Professional Geologist. Soil samples selected for laboratory analysis were cut into eight-inch sections from the five-foot acetate sleeves and covered with Teflon and plastic caps at each end. Soil samples were field-screened for odors, visible signs of petroleum hydrocarbons, and organic vapors using a photo ionization detector (PID) that was calibrated daily. The soil samples were named according soil boring location and sample depth. For example, soil sample GP-1-6 was collected from soil boring GP-1 at six feet bgs.

Groundwater samples were collected from each of the 18 borings from the upper water-bearing zone at approximately 12-15 feet bgs and five groundwater samples were collected from the second water-bearing zone (GP-3WD, GP-7WD, GP-12WD, GP-13WD, and GP-15WD) at approximately 30 to 35 feet bgs. The grab groundwater samples were collected from temporary well casings set in the boreholes using disposable bailers. The outer drive casing was lifted from two to five feet to allow formation water to infiltrate into the temporary well screen. The actual groundwater sample depths for each boring are depicted on the soil boring logs (Appendix C). The groundwater samples were named according to soil boring location and relative aquifer depth. For example, groundwater sample GP-3WS was collected from soil boring GP-3 in the upper water-bearing zone (shallow) and groundwater sample GP-3WD was collected from soil boring GP-3 in the second water-bearing zone (deep). SECOR also collected a surface water sample from the standing water located in the fenced area on the southern portion of the Site using a disposable bailer.

Upon completion of drilling and sampling activities the soil borings were grouted to five-feet below grade by pumping a neat-cement grout through a tremmie pipe placed at the boring bottom and completed with a bentonite seal. The boreholes were capped with an equivalent thickness of asphalt or soil patch to match finished grade.

In addition, a SECOR state-certified asbestos sampling technician collected eight near surface soil samples for asbestos analysis near soil borings GP-6, GP-8, GP-11, GP-12, GP-13, GP-14, GP-16, and GP-19 (Figure 3). A sample of the top three inches of soil (approximately three tablespoons) was collected in each suspect storage location. Each sample was collected with a clean copper-tube coring device. A plastic bag was used to contain the sample and quickly sealed to prevent the escape of the material or the introduction of contamination from outside sources. A unique sample number was assigned to each sample.

2.3 Laboratory Analyses

SECOR's proposal stated that for use as a screening criteria to determine whether deeper soil samples soil samples would be submitted for analyses, the analytical data would be compared to the United States Environmental Protection Agency (USEPA) Region Nine's Preliminary Remediation Goals (PRG) industrial soil levels. Upon further consideration regarding the potential redevelopment of the Site and following consultation with Tesoro, SECOR concluded that USEPA PRGs may not be sufficiently conservative criteria. Therefore, because the Site is located within the Regional Water Quality Control Board (RWQCB) San Francisco Region, the RWQCB residential Environmental Screening Levels (ESLs) were chosen as a more appropriate standard for screening of soil data. Also shown for comparison purposes in the summary tables are industrial ESLs and the USEPA commercial PRGs.

For the evaluation of groundwater analytical data, the results were compared to the California primary maximum contaminant levels (MCLs) where established. Total petroleum hydrocarbons (TPH) as gasoline results were compared to the State Water Resources Control Board (SWRCB), Water Quality Criteria of 5.0 micrograms per liter (ug/L) (Mckee and Wolf, 1963 and 1978) and TPH diesel results were compared to a USEPA Health Advisory, Taste and Odor Threshold Values of 100 ug/L.

Soil samples were submitted for laboratory analysis in two phases. The first phase consisted of the analysis of soil samples collected at each boring location from approximately one-foot below grade. Deeper soil samples (generally six feet bgs) were submitted for analyses of analytes detected above residential ESLs in the shallow soil samples.

A total of 18 soil samples were analyzed during the first phase. Based on the first-phase results, 17 additional soil samples were submitted for laboratory analysis. The second phase samples submitted for borings GP-11 and GP-10 were deeper than six feet (at 10 feet and 20 feet, respectively) due to recovery issues during drilling and sampling activities.

The soil and groundwater samples and the one surface water sample were transported under chain-of-custody procedures to Kiff Analytical, a California state-certified laboratory, and were selectively analyzed in accordance with Table 1 for the following:

- Total Petroleum Hydrocarbons Carbon Chain Distinction: Gas Range (TPHg-cc) by Environmental Protection Agency Method 8260B,
- TPH Carbon Chain Distinction: Diesel Range (TPHd-cc) by EPA Method 8015M,
- Polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8310 or 8270. Those samples analyzed by EPA Method 8270 were also analyzed for pentachlorophenol (PCP).
- Metals (nickel, vanadium, barium, copper, zinc, lead, and arsenic) by EPA Method 6020
- Volatile organic compounds (VOCs) by EPA Method 8260B (additional samples will be analyzed for VOCs if PID readings are relatively high).

The soil samples for asbestos analysis were transported under chain of custody protocol to Environmental Management Consultants (EMC) Laboratories, Inc. in Phoenix, Arizona. EMC is accredited under the National Institute of Standards and Technology's National Voluntary Laboratory Accreditation Program (NVLAP), and the State of Arizona and California Department of Health Services Environmental Laboratory Accreditation Program (ELAP) for the analysis of asbestos in bulk building material samples. All samples were analyzed using Polarized Light Microscopy (PLM) techniques in accordance with methodology approved by the EPA. According to the EPA, asbestos containing material is defined as material containing more than one percent asbestos. When "None Detected" (ND) appears in this report, it should be interpreted as meaning no asbestos was observed in the sample material above the reliable limit of detection for the PLM method, which is material dependent and is something less than one percent.

2.4 Investigation Derived Wastes

Soil cuttings and decontamination rinse water generated during the site assessment activities are temporarily stored in properly labeled Department of Transportation (DOT) approved 55-gallon steel drums. These drums are staged onsite pending laboratory characterization as non-hazardous waste. A licensed waste removal contractor will transport the drums offsite for disposal following characterization.

3.0 RESULTS AND DATA EVALUATION

3.1 Subsurface Conditions

Surface conditions at the Site consisted of fine-grained soils and silty gravel fill material with paved areas of asphaltic concrete and local concrete areas. Non-surface soils consist primarily of silts and clays (with local gravelly fill) interbedded with layers of sandy silt and silt sand to approximate depths of 10 to 15 feet bgs. In several areas throughout the site, the top five feet of soil exhibited dark staining associated with petroleum coke. Beneath 10 to 15 feet bgs, fine to medium-grained sand is present to approximately 13 to 20 feet bgs, and silts and clays are present to a depth of approximately 30 feet bgs. The soil between 30 to 35 feet bgs consists mainly of a fine to medium-grained sand. In general, and dependant upon surface elevations, local subsurface soil conditions indicate a shallow groundwater-bearing zone between approximately 10 feet bgs and approximately 15 feet bgs. A less permeable silty clay layer appears continuous beneath the Site extending from approximate depths of 15 to 20 feet bgs to 30 feet bgs. This silt clay layer acts as an aquitard between the shallow water-bearing zone and the deeper water-bearing zone. During assessment activities, field screening results (PID readings) were not reported above background levels (zero) in any soil samples. PID readings are recorded on the boring logs (Appendix C).

3.2 Soil Analytical Results

As discussed above, soil samples were submitted in two phases, with the shallow soil samples in the first-phase and the deeper soil samples in the second-phase. Laboratory analytical results for the soil samples are summarized in Tables 2 through 5 and are presented on Figures 3 and 4. Copies of the certified laboratory analytical reports and chain-of-custody documentation are presented in Appendix D.

As discussed in Section 2.3, RWQCB-San Francisco Region (SFR) residential ESLs were used to screen shallow soil samples results to determine whether deeper samples from the same boring should be submitted for analyses. During the investigation, the more conservative RWQCB residential ESLs were chosen because SECOR was not certain about the potential redevelopment future of the Site. Subsequent information indicates that a commercial/industrial land use will likely follow Site redevelopment. As such, the RWQCB residential ESLs are not appropriate as a standard with which to evaluate the soil analytical data.

Several such standards are available. In addition to USEPA Region Nine PRGs and RWQCB SFR ESLs, the California Environmental Protection Agency (Cal/EPA) published the California Human Health Screening Levels (CHHSLs) in 2005. The CHHSLs were developed by the Office of Environmental Health Hazard Assessment on behalf of Cal/EPA. The CHHSLs are a list of 54 chemical soil or soil gas concentrations that Cal/EPA considers to be below thresholds of concern for risks to human health. The CHHSLs were developed with similar methods to those used to develop the USEPA PRGs, but utilize Cal/EPA-specific toxicity factors rather than USEPA published toxicity data. The CHHSLs differ from the more comprehensive list of RWQCB ESLs in that the CHHSLs do not consider a number of other environmental concerns. Therefore, because post-redevelopment land use will be commercial/industrial and the Site is

located within the RWQCB San Francisco Region, the RWQCB SFR industrial ESLs were used to evaluate the soil analytical data.

TPHg was not detected in any of the soil samples at concentrations above laboratory method reporting limits (MRLs). TPHd was detected at concentrations above the industrial ESL of 150 milligrams per kilogram (mg/kg) in seven of the first-phase soil samples at concentrations ranging from 210 mg/kg (GP-8-1) to 770 mg/kg (GP-14-1). TPHd was not detected at concentrations above the ESLs in the second-phase soil samples. Total petroleum hydrocarbons as motor oil (TPHmo) was detected at concentrations ranging from 13 mg/kg (GP-20-4) to 2,000 (GP-8-1), which are all below the industrial ESL of 2,500 mg/kg. TPH concentrations in the soil samples are summarized in Table 2 and depicted on Figure 3.

All of the first and second-phase soil samples contained concentrations of arsenic above the industrial ESL of 1.5 mg/kg, except those collected from GP-16. Arsenic concentrations in the first-phase samples ranged from 0.787 mg/kg (GP-16B-0) to 38.8 mg/kg (GP-6-1). Arsenic concentrations in the deeper second-phase samples ranged from 1.49 mg/kg (GP-16-6) to 22.3 (GP-12-6).

Nickel was detected above the industrial ESL in shallow first-phase soil sample GP-16B-0 at a concentration of 175 mg/kg. Vanadium was detected at concentrations above the industrial ESL of 190 mg/kg only in first phase sample GP-16B-0 (223 mg/kg) and second-phase sample GP-16-6 (633 mg/kg). Copper was detected above the industrial ESL of 230 mg/kg in six of the shallow first-phase soil samples at concentrations ranging from 254 mg/kg (GP-19-1) to 1,520 mg/kg (GP-16B-0) and one of the deeper second-phase samples at a concentration of 4,770 mg/kg (GP-16-6). Zinc was detected above the industrial ESL of 600 mg/kg in four of the shallow first-phase soil samples at concentrations ranging from 618 mg/kg (GP-7-1) to 6,230 mg/kg (GP-6-1) and one of the deeper second- phase samples at a concentration of 2,010 mg/kg (GP-12-6). SECOR analyzed for lead in three soil borings at the Site (GP-3-1, GP-4-1, and GP-14-1). Lead was not detected above the industrial ESL of 750 mg/kg in any of the samples. Barium was not detected above the industrial ESL of 1,500 mg/kg in any of the soil samples. Metal concentrations detected in the soil samples are summarized in Table 3 and depicted on Figure 3

SECOR analyzed four soil samples for VOCs (GP-3-1, GP-4-1, GP-14-1, and GP-20-1). VOCs were not detected in any of these soil samples above laboratory reporting limits (Table 4).

All of the shallow first-phase soil samples were analyzed for PAHs by either Method 8310 or 8270. Those samples analyzed with Method 8270 were also analyzed for PCP. PCP was only detected in soil sample GP-16-6 at a concentration of 3.0 mg/kg, which is below the industrial ESL of 5 mg/kg. Benzo (a) pyrene was detected above the industrial ESL of 0.13 mg/kg in shallow first-phase samples GP-3-1 (0.150 mg/kg), GP-6-1 (0.740 mg/kg), and GP-12-1 (0.300 mg/kg). Benzo (b) fluoranthene was detected above the industrial ESL of 1.3 mg/kg in deeper second-phase sample GP-12-6 (2.6 mg/kg). The concentrations of PAHs in the soil are summarized in Table 5 and depicted on Figure 4.

3.3 Asbestos Results

Asbestos was not detected in any of the eight near-surface soil samples collected throughout the Site. The certified laboratory analytical reports and chain-of-custody documentation are presented in Appendix D. The table below summarizes the sample locations and laboratory results for the samples analyzed for asbestos.

Asbestos Sample Log and Analysis Results
Tesoro Facility, Pittsburg Terminal
Bulk sample analyses completed by polarized light microscopy (PLM)

Boring Location	Asbestos Sample Location	Results
GP-6	South of GP-6 and conveyor equipment.	No Asbestos Detected
GP-8	4 feet Southwest of Boring Hole	No Asbestos Detected
GP-11	3 feet South of Boring Hole	No Asbestos Detected
GP-12	58 feet Directly East of Boring Hole	No Asbestos Detected
GP-13	1 foot South of Boring Hole	No Asbestos Detected
GP-14	1 foot West of Boring Hole	No Asbestos Detected
GP-16	7 feet West of Boring Hole	No Asbestos Detected
GP-19	10 feet North of Boring Hole	No Asbestos Detected

3.4 Groundwater Analytical Results

Laboratory analytical results for the groundwater samples and one surface water sample are summarized in Tables 6 through 9 and are presented on Figures 5 and 6. The certified laboratory analytical report and chain-of-custody documentation are presented in Appendix D.

The upper water–bearing zone was generally encountered in the soil borings from 12 to 15 feet bgs and the second water-bearing zone was generally encountered at 30 to 35 feet bgs. TPHg was detected in 6 of the 23 groundwater samples at concentrations ranging from 53 ug/L to 640 ug/L. All six samples results exceeded the SWRCB Water Quality Criteria of 5 ug/L.

Fourteen of the eighteen shallow groundwater samples contained TPHd concentrations greater than the USEPA Taste and Odor Threshold of 100 ug/L with concentrations ranging from 100 ug/L (GP-7WS) to 2,800 (GP-9WS). TPHd was also detected in all of the five deep groundwater samples at concentrations ranging from 140 ug/L (GP-3WD and GP-7WD) to 750 ug/L (GP-13WD). TPHmo was detected in shallow groundwater samples GP-6WS (640 ug/L), GP-9WS (13,000 ug/L), GP-10WS (130 ug/L), GP-12WS (3,600 ug/L), and GP-20WS (4,900). Concentrations of TPHmo were also detected in deep groundwater samples GP-7WD (120

ug/L), GP-12WD (710 ug/L) and GP-13WD (700 ug/L). The concentrations of TPH detected in the groundwater samples and one surface water sample are summarized in Table 6 and shown on Figure 5.

Barium was detected in one shallow groundwater sample GP-11WS (1,100 ug/L) above the primary MCL of 1,000 ug/L. The grab surface water sample collected in fenced area on the southern portion of the Site contained arsenic at a concentration of 200 ug/L, which is above its primary MCL of 50 ug/L. The metal concentrations detected in groundwater and the surface water sample are summarized in Table 7 and shown on Figure 5.

Six groundwater samples were analyzed for volatile organic compounds (GP-3WS, GP-3WD, GP-4WS, GP-14WS, GP-16WS, and GP-20WS). Groundwater sample GP-3WD contained concentrations of 1,1 dicholorethane (17 ug/L) and trichloroethene (12 ug/L) above the primary MCL of 5 ug/L and 1,1 dichlrorethene above its primary MCL of 6 ug/L. The remaining samples analyzed for VOCs did not contain concentrations of analytes above their respective primary MCLs. VOC concentrations in the groundwater are summarized in Table 8 and shown on Figure 6.

All of the groundwater samples were analyzed for PAHs by either Method 8310 or 8270. Those samples analyzed with method 8270 were also analyzed for PCP. PAH concentrations were not detected above MRLs or primary MCLs in any of the groundwater samples. Shallow groundwater samples GP-16WS (91 ug/L), GP-17WS (26 ug/L), and GP-19WS (21 ug/L) contained concentrations of PCP above the primary MCL of 1 ug/L. PAH and PCP groundwater data are summarized in Table 9 and depicted on Figure 6.

4.0 DISCUSSION AND CONCLUSIONS

4.1 Total Petroleum Hydrocarbon Soil Results

The shallow soil samples (generally from 1.0 to 1.5 feet bgs) in most locations throughout the Site contain detectable TPHd and TPHmo. TPHd concentrations exceed the industrial ESL at seven sample locations, as shown on Figure 3. These impacts may be related to the use of fuel oil for dust suppression at the Site.

4.2 Metals in Soil Results

The shallow and deep soil samples throughout the Site are impacted with arsenic above the industrial ESL. Nickel, vanadium, copper, and zinc also exceed their respective industrial ESLs at one or more of the shallow and deep soil sample locations. Although these metals are naturally occurring in the soils, these metals also were detected in coke and reported in a RWQCB February 27, 2006 *Staff Report* entitled *Tesoro Petroleum Coke Storage and Handling Facility Pittsburg, Contra Costa County.* The report also states that petroleum coke can contain trace amounts of metals and PAHs. The *Staff Report* indicated previous analyses of the coke stored at the Site found minor amounts of copper, nickel, vanadium, and zinc. Arsenic was commonly used as a wood preservative and may be related to the treated wood poles stored at the site. However, arsenic also occurs naturally in soils throughout California at concentrations that commonly exceed the arsenic ESL of 0.38 mg/kg. Data presented in a report entitled *Background Concentrations of Trace and Major Elements in California Soils* (Bradford et. al, 1996) indicate that arsenic concentrations in California range from 0.59 to 11 mg/kg with a mean of 3.54 mg/kg.

4.3 PAHs in Soil Results

The PAHs benzo (a) pyrene and benzo (b) fluoranthene were detected in the soil at the Site above the respective ESLs. Benzo (a) pyrene was detected above the industrial ESL of 0.13 mg/kg in shallow first-phase samples GP-3-1 (0.150 mg/kg), GP-6-1 (0.740 mg/kg), and GP-12-1 (0.300 mg/kg). Benzo (b) fluoranthene was detected above the industrial ESL of 1.3 mg/kg in deeper second-phase sample GP-12-6 (2.6 mg/kg). The source of the PAHs is not clear. However, PAHs are common constituents of creosote-treated wood and are reported by the RWQCB *Staff Report* as being contained in coke. Based on the RWQCB *Staff Report*, PAHs were not previously detected in the petroleum coke at the Site but were detected in the slough sediments near the Site.

PCP was detected in only one soil sample (GP-16-6) at a concentration (3.0 mg/kg) which is below the industrial ESL (5.0 mg/kg). This sample was collected from within the fenced area where treated-wood poles were stored. The boring was located adjacent to a treated-wood pole fence. PCP is most commonly used as a wood preservative.

4.4 Asbestos in Soil Results

None of the eight representative near-surface soil samples collected at the Site tested positive

for asbestos. Therefore, based on these data, no special handling requirements pertaining to surface soils appear to be applicable to future movement of the soil at the Site. Although SECOR believes that the collected samples provide a good representation of potentially asbestos-contaminated areas, the potential exists that asbestos could be present in areas that were not sampled. These areas could be encountered during future demolition or grading activities at the Site. If suspect asbestos containing materials are discovered, representative samples should be collected and analyzed prior to disturbance of the material or soil.

4.5 Groundwater and Surface Water Results

The upper water-bearing zone contains TPHg concentrations above the SWRCB Water Quality Criteria of 5 ug/L at six locations with the highest concentration from the samples collected from borings GP-16 (640 ug/L) and GP-17 (180 ug/L). The concentrations of TPHg detected in the upper water-bearing zone are all less that 1.0 milligram per liter.

The upper water-bearing zone also contains TPHd concentrations throughout the Site that exceed the USEPA taste and odor threshold (100 ug/L) and elevated TPHmo concentrations in seven sample locations throughout the Site (Figure 5). The presence of TPHd and TPHmo in the groundwater at the Site may be due to the current and historical use of fuel oil for dust suppression.

The upper water-bearing zone contains barium concentrations which exceed the MCL at the location of boring GP-11. The concentrations of barium in the groundwater may be due to concentrations of barium present in the petroleum coke currently and/or historically stored at the Site.

The upper water-bearing zone also contains PCP concentrations which exceed the MCL (1.0 ug/L) within the fenced area on the southern portion of the Site at sample locations GP-16WS, GP-17WS, GP-19WS. The most common use for PCP is as a wood preservative (fungicide) and the detected PCP may be related to the treated-wood pole fence and treated-wood poles reported to have been stored in the fenced area. As discussed above, the soil sample GP-16-6 contained a PCP concentration of 3.0 mg/kg, equal to the residential ESL.

The second water-bearing zone contains VOC concentrations that exceed the MCLs for 1,1-dichloroethane, 1,2-dichloroethene, and trichloroethene at sample location GP-3WD. Trichloroethene was also detected above MRLs but below MCLs at upper water-bearing zone sample locations GP-3WS, GP-4WS, GP-14WS, and GP-16WS. As discussed above, VOCs were not detected in any of the four soil samples analyzed. `

The origin of the VOCs in the deeper water-bearing unit is not clear but may be due the reported historical use of solvent at the site or possibly an off-site source. As recorded in SECOR's March 21, 2008 Phase I, the adjacent Johns Manville property is being investigated by the RWQCB for soil and groundwater impacted with petroleum hydrocarbons and trichloroethene.

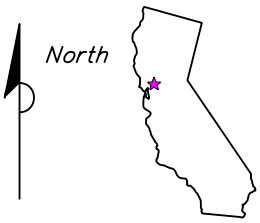
The surface water in the fenced area on the southern portion of the Site is impacted with 200 ug/L of arsenic, which exceeds the arsenic primary MCL of 50 ug/L. All soil samples collected contained arsenic at concentrations exceeding the residential ESLs.

5.0 LIMITATIONS

This report was prepared in accordance with the scope of work outlined in SECOR's contract and with generally accepted professional engineering and environmental consulting practices existing at the time this report was prepared and applicable to the location of the site. It was prepared for the exclusive use of Tesoro, for the express purpose stated above. Any re-use of this report for a different purpose or by others not identified above shall be at the user's sole risk without liability to SECOR. To the extent that this report is based on information provided to SECOR by third parties, SECOR may have made efforts to verify this third party information, but SECOR cannot guarantee the completeness or accuracy of this information. The opinions expressed and data collected are based on the conditions of the site existing at the time of the field investigation. No other warranties, expressed or implied are made by SECOR.

FIGURES





1 1/2 0 1

SCALE (MILES)

1000 0 1000 2000 3000 4000 5000 6000 7000

SCALE (FEET)

REFERENCE: USGS 7.5 MINUTE QUADRANGLE, HOOKER BAY, CALIFORNIA

SECOR
3017 KILGORE ROAD, SUITE 100
RANCHO CORDOVA, CALIFORNIA
PHONE: (916) 861-0400/861-0430 (FAX)

FOR:
TESORO
PITTSBURG TERMINAL
395 EAST 3RD STREET
PITTSBURG, CALIFORNIA

SITE LOCATION MAP

FIGURE: **1**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
77OT.43877.00	MDR	CS	GH	02/13/08



LEGEND:

- GEOPROBE® BORING LOCATIONS
- SURFACE SAMPLE LOCATION FOR GEOPOROBE® GP-16
- SITE BOUNDARY

N

0 75 150

APPROXIMATE SCALE IN FEET

REFERENCE: THIS FIGURE IS BASED ON A IMAGE FROM GOOGLE EARTH, AND IS INTENDED FOR ILLUSTRATION ONLY.

SECOR
3017 KILGORE ROAD, SUITE 100
RANCHO CORDOVA, CALIFORNIA
PHONE: (916) 861-0400/861-0430 (FAX)

FOR: TESORO
PITTSBURG TERMINAL
595 EAST 3RD STREET
PITTSBURG, CALIFORNIA

SITE PLAN WITH SOIL BORING LOCATIONS

FIGURE: **2**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
77OT.43877.00	MDR	CS	GH	02/13/08

FILEPATH:Q:\CADD-77\TESORO\PITTSBURG TERMINAL\FIG-2 SITE PLAN.dwg | Layout Tab: Layout1 | Drafter: mramirez | Apr 24, 2008 at 15:47



GP-10	TPHg	TPHd	TPH-MO	ARSENIC	NICKEL	BARIUM	VANADIUM	COPPER	ZINC
2-FEET	<1.0	13	33	5.23	23.6	182	83.2	70.4	107
20-FEET	NA	NA	NA	2.68	NA	NA	36.6	NA	NA

GP-11	TPHg	TPHd	TPH-MO	ARSENIC	NICKEL	BARIUM	VANADIUM	COPPER	ZINC
1-FOOT	<1.0	230	1,600	5.36	41.4	123	45.7	94.6	104
10-FEET	NA	48	180	4.56	NA	NA	36.6	NA	NA

GP-9	TPHg	TPHd	TPH-MO	ARSENIC	NICKEL	BARIUM	VANADIUM	COPPER	ZINC
1-FOOT	<1.0	46	350	4.43	18.1	107	31.3	40.1	102
6-FEET	NA	NA	NA	2.25	NA	NA	49.2	NA	NA

GP-7	TPHg	TPHd	TPH-MO	ARSENIC	NICKEL	BARIUM	VANADIUM	COPPER	ZINC
1-FOOT	<1.0	120	490	10.2	37.2	202	45.3	376	618
6-FEET	NA	2.8	<10	4.06	NA	NA	36.7	16.8	49.5

GP-8	TPHg	TPHd	TPH-MO	ARSENIC	NICKEL	BARIUM	VANADIUM	COPPER	ZINC
1-FOOT	<1.0	210	2,000	3.11	20.8	89.2	37.4	631	174
6-FEET	NA	1.8	<10	3.39	NA	NA	38.9	21.9	NA

GP-12	TPHg	TPHd	TPH-MO	ARSENIC	NICKEL	BARIUM	VANADIUM	COPPER	ZINC
1-FOOT	<1.0	300	1,000	21.4	54.6	655	29.7	744	5,080
6-FEET	NA	20	40	22.3	NA	NA	37.7	163	2,010

GP-6	TPHg	TPHd	TPH-MO	ARSENIC	NICKEL	BARIUM	VANADIUM	COPPER	ZINC
1-FOOT	<1.0	330	880	38.8	55.6	951	35.7	695	6,230
6-FEET	NA	2.6	<10	3.92	NA	81.2	31.0	15.0	39.7

GP-16B	TPHg	TPHd	TPH-MO	ARSENIC	NICKEL	BARIUM	VANADIUM	COPPER	ZINC
SURFACE	<1.0	50	100	0.787	175	88.4	223	1,520	66.8

GP-5	TPHg	TPHd	TPH-MO	ARSENIC	NICKEL	BARIUM	VANADIUM	COPPER	ZINC
1-FOOT	<1.0	4.2	<10	5.34	65.7	255	41.4	22.6	48.2
6-FEET	NA	NA	NA	5.70	NA	NA	48.0	NA	NA

GP-16	TPHg	TPHd	TPH-MO	ARSENIC	NICKEL	BARIUM	VANADIUM	COPPER	ZINC
6-FOOT	NA	22	51	1.49	142	11.3	633	4,770	32.8

GP-15	TPHg	TPHd	TPH-MO	ARSENIC	NICKEL	BARIUM	VANADIUM	COPPER	ZINC
1-FOOT	<1.0	82	310	2.84	15.5	146	21.5	46.3	152
6-FEET	NA	6.2	<10	2.97	NA	NA	22.3	NA	NA

GP-17	TPHg	TPHd	TPH-MO	ARSENIC	NICKEL	BARIUM	VANADIUM	COPPER	ZINC
1-FOOT	<1.0	5.1	<10	1.98	21.3	174	20.4	12.5	63.5
5-FEET	NA	NA	NA	2.60	NA	NA	26.4	NA	NA

GP-14	TPHg	TPHd	TPH-MO	ARSENIC	NICKEL	BARIUM	VANADIUM	COPPER	ZINC	LEAD
1-FOOT	<1.0	770	1,700	10.6	28.6	220	38.6	128	1,040	674
6-FEET	NA	<1.0	<10	3.50	NA	NA	33.1	NA	36.6	4.50

GP-13	TPHg	TPHd	TPH-MO	ARSENIC	NICKEL	BARIUM	VANADIUM	COPPER	ZINC
1-FOOT	<1.0	7.8	25	2.47	27.1	116	36.6	24.1	44.5
6-FEET	NA	NA	NA	3.31	NA	NA	27.2	NA	NA

GP-4	TPHg	TPHd	TPH-MO	ARSENIC	NICKEL	BARIUM	VANADIUM	COPPER	ZINC	LEAD
1-FOOT	<1.0	7.9	14	10.1	22.6	98.0	49.8	23.2	45.1	6.48
6-FEET	NA	NA	NA	3.17	NA	NA	44.0	NA	NA	NA

GP-19	TPHg	TPHd	TPH-MO	ARSENIC	NICKEL	BARIUM	VANADIUM	COPPER	ZINC
1-FOOT	<1.0	410	1,100	4.28	21.7	170	35.2	254	291
6-FEET*	NA	2.0	<10	2.92	NA	NA	22.3	10.4	NA

GP-1	TPHg	TPHd	TPH-MO	ARSENIC	NICKEL	BARIUM	VANADIUM	COPPER	ZINC
1-FOOT	<1.0	5.2	21	4.48	20.8	157	39.8	19.7	43.3
6-FEET	NA	NA	NA	4.62	NA	NA	36.6	NA	NA

GP-3	TPHg	TPHd	TPH-MO	ARSENIC	NICKEL	BARIUM	VANADIUM	COPPER	ZINC	LEAD
1-FOOT	<1.0	220	860	5.51	47.4	198	44.1	33.1	157	551
6-FEET	NA	3.0	<10	2.13	NA	NA	27.2	NA	NA	4.25

GP-20	TPHg	TPHd	TPH-MO	ARSENIC	NICKEL	BARIUM	VANADIUM	COPPER	ZINC
4-FEET	<1.0	14	13	3.24	28.9	139	64.4	20.5	45.5
6-FEET	NA	NA	NA	2.20	NA	NA	34.7	NA	NA

LEGEND:

- GEOPROBE® BORING LOCATIONS
- SURFACE SAMPLE LOCATION FOR GEOPOROBE® GP-16

BGS — BELOW GROUND SURFACE
NA — NOT ANALYZED
* — SAMPLE GP-13-6 COLLECTED FROM 4.5 TO 5 FEET BGS

SAMPLE ID — ANALYTES

GP-1	TPHg	TPHd	TPH-MO	ARSENIC	NICKEL	BARIUM	VANADIUM	COPPER	ZINC
1-FOOT	<50	88	130	15	4.0	980	<20	14	<20
6-FEET	<50	88	130	15	4.0	980	<20	14	<20

SAMPLE DEPTH (BGS) — CONCENTRATION IN mg/kg

NUMBERS IN **BOLD** ARE DETECTIONS ABOVE THE LABORATORY METHOD REPORTING LIMITS

ANALYTES:

TPHg — TOTAL PETROLEUM HYDROCARBONS AS GASOLINE (mg/kg)
TPHd — TOTAL PETROLEUM HYDROCARBONS AS DIESEL (mg/kg)
TPH-MO — TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL (mg/kg)
mg/kg — MILLIGRAMS PER KILOGRAM

N

0 75 150

APPROXIMATE SCALE IN FEET

REFERENCE: THIS FIGURE IS BASED ON A IMAGE FROM GOOGLE EARTH, AND IS INTENDED FOR ILLUSTRATION ONLY.

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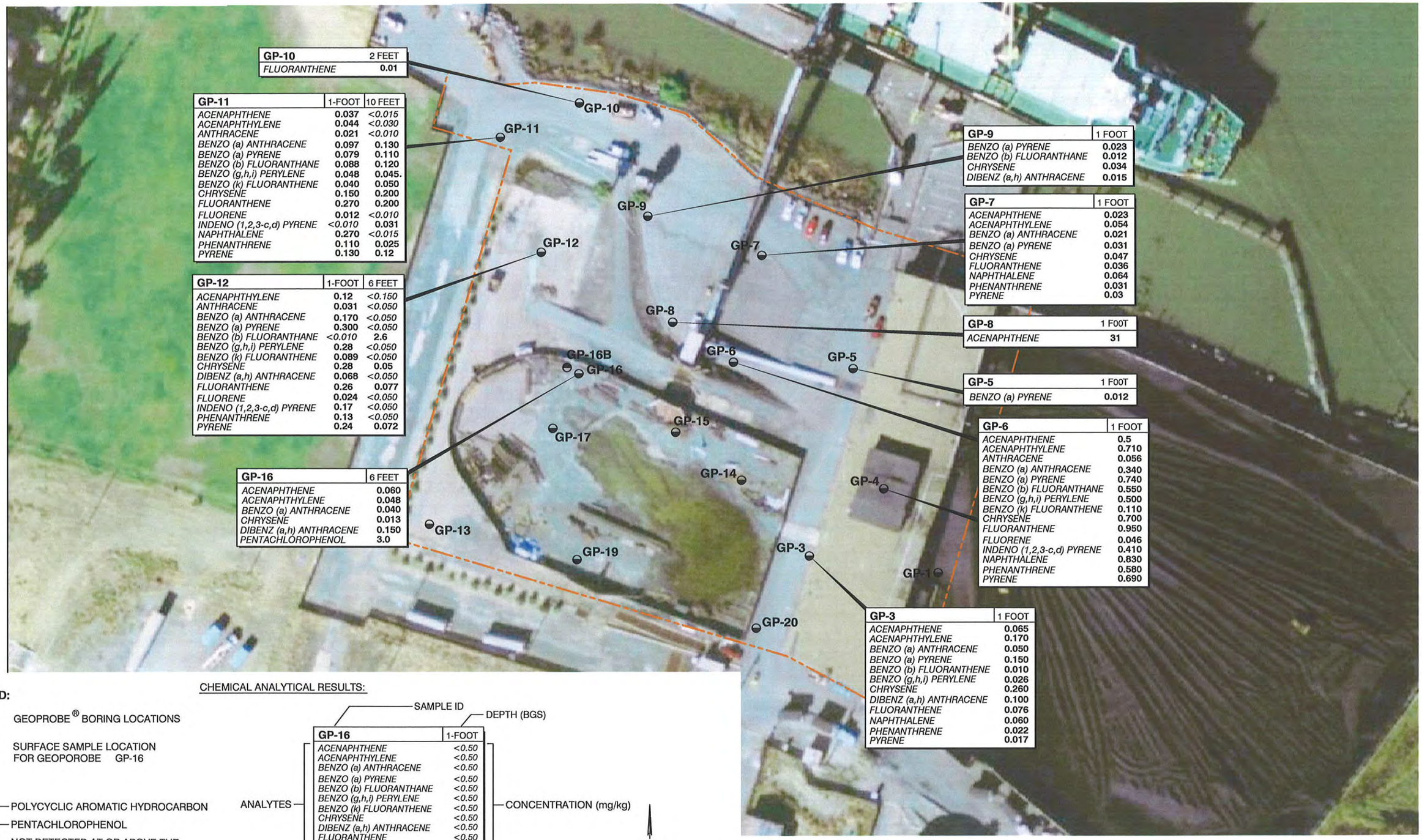
FOR: TESORO
PITTSBURG TERMINAL
595 EAST 3RD STREET
PITTSBURG, CALIFORNIA

TOTAL PETROLEUM HYDROCARBON AND METAL CONCENTRATIONS IN SOIL

FIGURE: **3**

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GP-10	2 FEET
FLUORANTHENE	0.01

GP-11	1-FOOT	10 FEET
ACENAPHTHENE	0.037	<0.015
ACENAPHTHYLENE	0.044	<0.030
ANTHRACENE	0.021	<0.010
BENZO (a) ANTHRACENE	0.097	0.130
BENZO (a) PYRENE	0.079	0.110
BENZO (b) FLUORANTHANE	0.088	0.120
BENZO (g,h,i) PERYLENE	0.048	0.045.
BENZO (k) FLUORANTHENE	0.040	0.050
CHRYSENE	0.150	0.200
FLUORANTHENE	0.270	0.200
FLUORENE	0.012	<0.010
INDENO (1,2,3-c,d) PYRENE	<0.010	0.031
NAPHTHALENE	0.270	<0.015
PHENANTHRENE	0.110	0.025
PYRENE	0.130	0.12

GP-12	1-FOOT	6 FEET
ACENAPHTHYLENE	0.12	<0.150
ANTHRACENE	0.031	<0.050
BENZO (a) ANTHRACENE	0.170	<0.050
BENZO (a) PYRENE	0.300	<0.050
BENZO (b) FLUORANTHANE	<0.010	2.6
BENZO (g,h,i) PERYLENE	0.28	<0.050
BENZO (k) FLUORANTHENE	0.089	<0.050
CHRYSENE	0.28	0.05
DIBENZ (a,h) ANTHRACENE	0.068	<0.050
FLUORANTHENE	0.26	0.077
FLUORENE	0.024	<0.050
INDENO (1,2,3-c,d) PYRENE	0.17	<0.050
PHENANTHRENE	0.13	<0.050
PYRENE	0.24	0.072

GP-16	6 FEET
ACENAPHTHENE	0.060
ACENAPHTHYLENE	0.048
BENZO (a) ANTHRACENE	0.040
CHRYSENE	0.013
DIBENZ (a,h) ANTHRACENE	0.150
PENTACHLOROPHENOL	3.0

GP-9	1 FOOT
BENZO (a) PYRENE	0.023
BENZO (b) FLUORANTHANE	0.012
CHRYSENE	0.034
DIBENZ (a,h) ANTHRACENE	0.015

GP-7	1 FOOT
ACENAPHTHENE	0.023
ACENAPHTHYLENE	0.054
BENZO (a) ANTHRACENE	0.021
BENZO (a) PYRENE	0.031
CHRYSENE	0.047
FLUORANTHENE	0.036
NAPHTHALENE	0.064
PHENANTHRENE	0.031
PYRENE	0.03

GP-8	1 FOOT
ACENAPHTHENE	31

GP-5	1 FOOT
BENZO (a) PYRENE	0.012

GP-6	1 FOOT
ACENAPHTHENE	0.5
ACENAPHTHYLENE	0.710
ANTHRACENE	0.056
BENZO (a) ANTHRACENE	0.340
BENZO (a) PYRENE	0.740
BENZO (b) FLUORANTHANE	0.550
BENZO (g,h,i) PERYLENE	0.500
BENZO (k) FLUORANTHENE	0.110
CHRYSENE	0.700
FLUORANTHENE	0.950
FLUORENE	0.046
INDENO (1,2,3-c,d) PYRENE	0.410
NAPHTHALENE	0.830
PHENANTHRENE	0.580
PYRENE	0.690

GP-3	1 FOOT
ACENAPHTHENE	0.065
ACENAPHTHYLENE	0.170
BENZO (a) ANTHRACENE	0.050
BENZO (a) PYRENE	0.150
BENZO (b) FLUORANTHENE	0.010
BENZO (g,h,i) PERYLENE	0.026
CHRYSENE	0.260
DIBENZ (a,h) ANTHRACENE	0.100
FLUORANTHENE	0.076
NAPHTHALENE	0.060
PHENANTHRENE	0.022
PYRENE	0.017

LEGEND:

- GEOPROBE® BORING LOCATIONS
- SURFACE SAMPLE LOCATION FOR GEOPOROBE GP-16

PAH — POLYCYCLIC AROMATIC HYDROCARBON
PCP — PENTACHLOROPHENOL
< — NOT DETECTED AT OR ABOVE THE LABORATORY REPORTING LIMIT
BGS — BELOW GROUND SURFACE
mg/kg — MILLIGRAMS PER KILOGRAM

CHEMICAL ANALYTICAL RESULTS:

SAMPLE ID — GP-16 | DEPTH (BGS) — 1-FOOT

ANALYTES	CONCENTRATION (mg/kg)
ACENAPHTHENE	<0.50
ACENAPHTHYLENE	<0.50
BENZO (a) ANTHRACENE	<0.50
BENZO (a) PYRENE	<0.50
BENZO (b) FLUORANTHANE	<0.50
BENZO (g,h,i) PERYLENE	<0.50
BENZO (k) FLUORANTHENE	<0.50
CHRYSENE	<0.50
DIBENZ (a,h) ANTHRACENE	<0.50
FLUORANTHENE	<0.50
FLUORENE	<0.50
INDENO (1,2,3-c,d) PYRENE	<0.50
NAPHTHALENE	<0.50
PHENANTHRENE	<0.50
PYRENE	<0.50

NUMBERS IN **BOLD** ARE DETECTIONS ABOVE THE LABORATORY METHOD REPORTING LIMITS

N

0 75 150

APPROXIMATE SCALE IN FEET

REFERENCE: THIS FIGURE IS BASED ON A IMAGE FROM GOOGLE EARTH, AND IS INTENDED FOR ILLUSTRATION ONLY.

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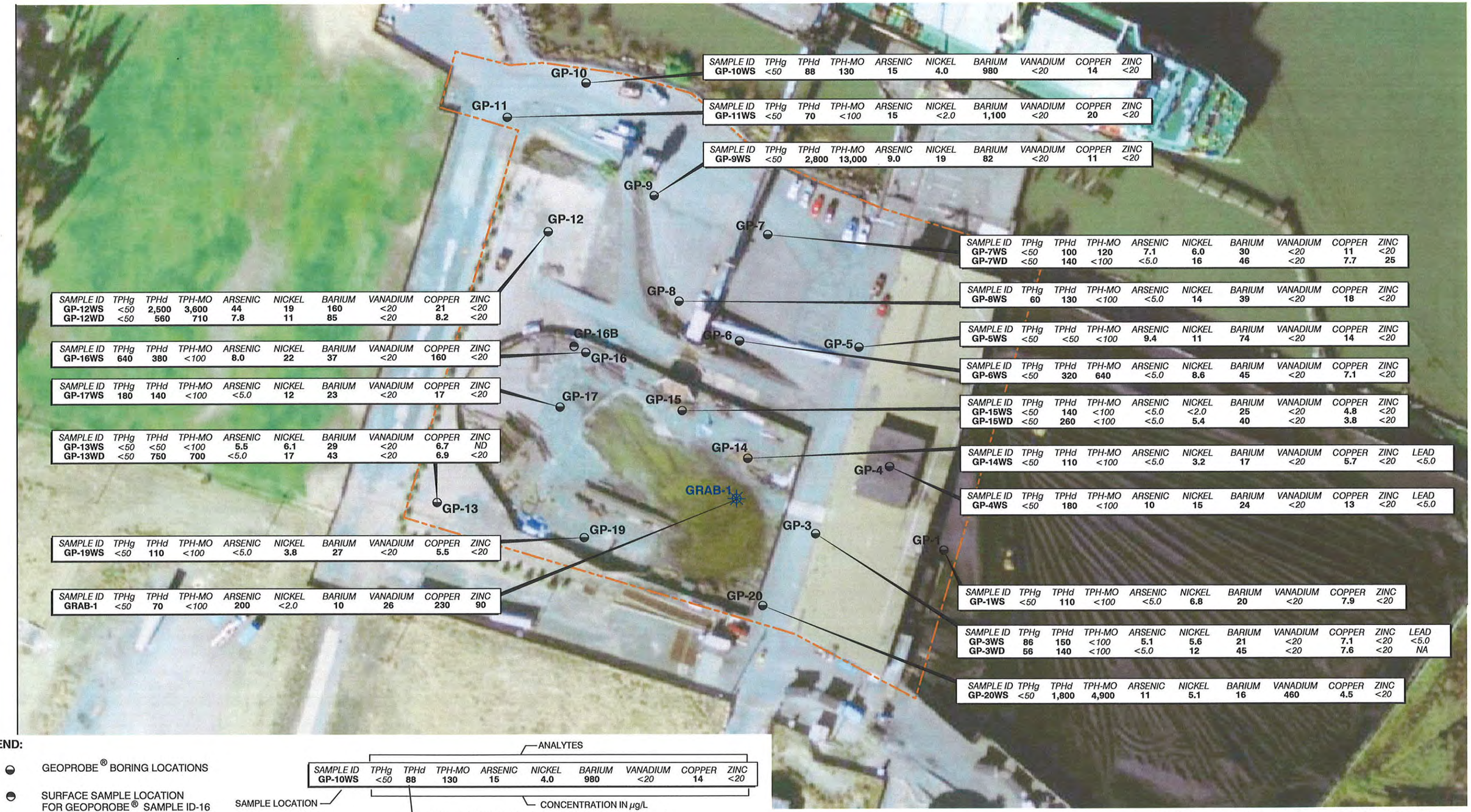
FOR:
TESORO
PITTSBURG TERMINAL
595 EAST 3RD STREET
PITTSBURG, CALIFORNIA

PAH AND PCP CONCENTRATIONS IN SOIL

FIGURE: **4**

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LEGEND:

- GEOPROBE® BORING LOCATIONS
- SURFACE SAMPLE LOCATION FOR GEOPOROBE® SAMPLE ID-16
- SURFACE WATER SAMPLE LOCATION

GP-3WS — GEOPROBE SHALLOW GRAB SAMPLE
GP-3WD — GEOPROBE DEEP GRAB SAMPLE
WS — SHALLOW GRAB SAMPLES (12-15 FEET BGS)
WD — DEEP GRAB SAMPLES (30-35 FEET BGS)
BGS — BELOW GROUND SURFACE

ANALYTES

SAMPLE ID	TPHg	TPHd	TPH-MO	ARSENIC	NICKEL	BARIUM	VANADIUM	COPPER	ZINC
GP-10WS	<50	88	130	15	4.0	980	<20	14	<20

SAMPLE LOCATION — CONCENTRATION IN µg/L

NUMBERS IN **BOLD** ARE DETECTIONS ABOVE THE LABORATORY METHOD REPORTING LIMITS

ANALYTES:

TPHg — TOTAL PETROLEUM HYDROCARBONS AS GASOLINE (µg/L)
TPHd — TOTAL PETROLEUM HYDROCARBONS AS DIESEL (µg/L)
TPH-MO — TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL (µg/L)
µg/L — MICROGRAM PER LITER

N

0 75 150

APPROXIMATE SCALE IN FEET

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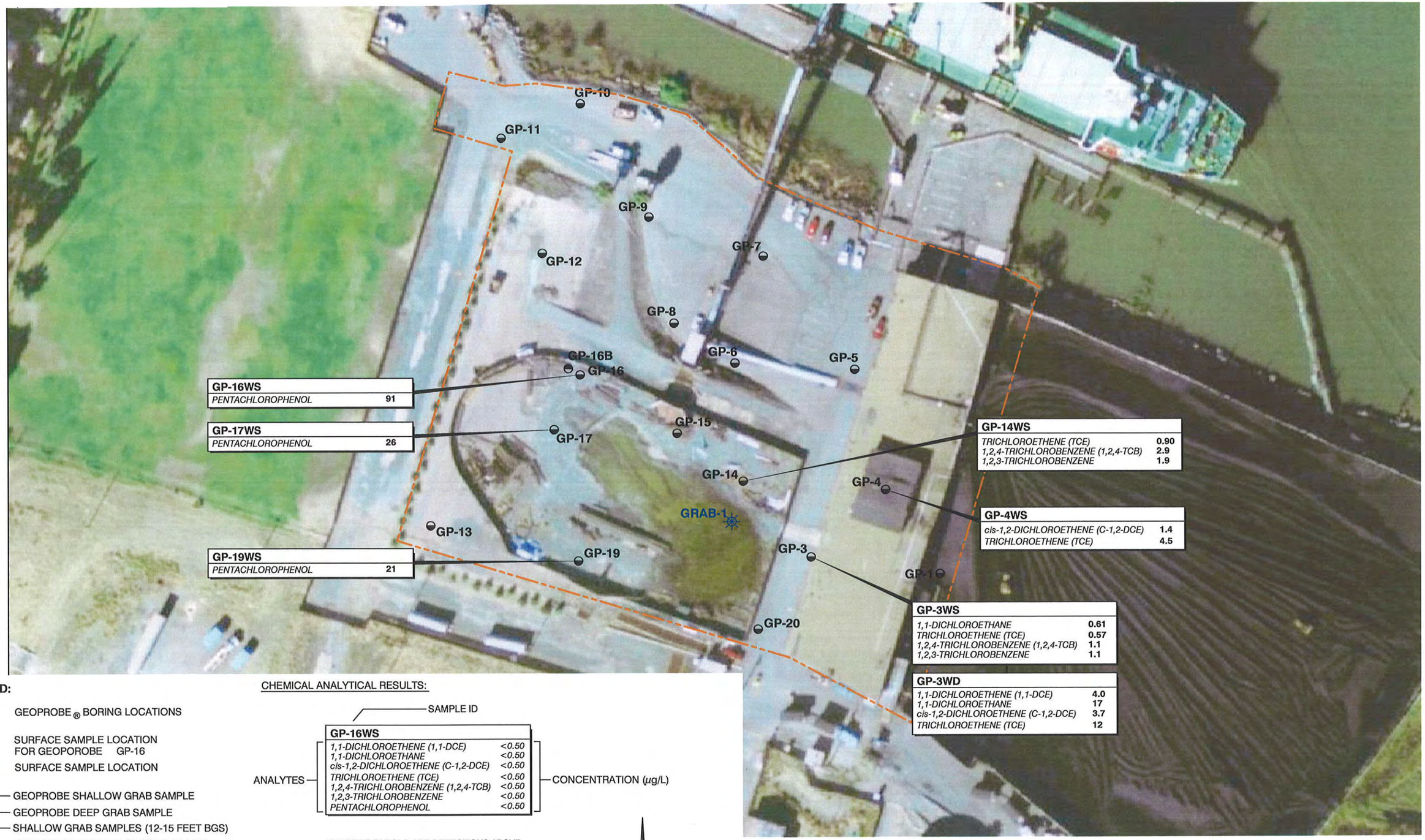
FOR: TESORO
PITTSBURG TERMINAL
595 EAST 3RD STREET
PITTSBURG, CALIFORNIA

TOTAL PETROLEUM HYDROCARBON AND METAL CONCENTRATIONS IN GROUNDWATER

FIGURE: **5**

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LEGEND:

- GEOPROBE® BORING LOCATIONS
- SURFACE SAMPLE LOCATION FOR GEOPOROBE GP-16
- SURFACE SAMPLE LOCATION

GP-3WS — GEOPROBE SHALLOW GRAB SAMPLE
GP-3WD — GEOPROBE DEEP GRAB SAMPLE
WS — SHALLOW GRAB SAMPLES (12-15 FEET BGS)
WD — DEEP GRAB SAMPLES (30-35 FEET BGS)
PAH — POLYCYCLIC AROMATIC HYDROCARBON
PCP — PENTACHLOROPHENOL
VOC — VOLATILE ORGANIC COMPOUND
BGS — BELOW GROUND SURFACE
µg/L — MICROGRAMS PER LITER

REFERENCE: THIS FIGURE IS BASED ON A IMAGE FROM GOOGLE EARTH, AND IS INTENDED FOR ILLUSTRATION ONLY.

CHEMICAL ANALYTICAL RESULTS:

SAMPLE ID

GP-16WS	
1,1-DICHLOROETHENE (1,1-DCE)	*<0.50*
1,1-DICHLOROETHANE	*<0.50*
cis-1,2-DICHLOROETHENE (C-1,2-DCE)	*<0.50*
TRICHLOROETHENE (TCE)	*<0.50*
1,2,4-TRICHLOROBENZENE (1,2,4-TCB)	*<0.50*
1,2,3-TRICHLOROBENZENE	*<0.50*
PENTACHLOROPHENOL	*<0.50*

ANALYTES — CONCENTRATION (µg/L)

NUMBERS IN **BOLD** ARE DETECTIONS ABOVE THE LABORATORY METHOD REPORTING LIMITS

N

0 75 150

APPROXIMATE SCALE IN FEET

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FOR: TESORO
PITTSBURG TERMINAL
595 EAST 3RD STREET
PITTSBURG, CALIFORNIA

PAH, VOC AND PCP CONCENTRATIONS IN GROUNDWATER

FIGURE: **6**

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TABLES

TABLE 1

Sampling and Analysis Detail

Tesoro Pittsburg Terminal Site

595 E 3rd Street, Pittsburg, CA 94565

Area of Concern	Rationale	Soil Sample Locations	Estimated Groundwater Sample Depth (ft bgs)	Lab Analyses
Subsurface petroleum coke conveyor adjacent to west side of warehouse building	A review of RWQCB documents suggest areas near conveyors may be impacted.	GP-5 through GP-9	First-encountered groundwater (approximately 10 ft bgs) for borings GP-5 through GP-9. Second-encountered groundwater for borings GP-5* and GP-7 (approximately 30 feet bgs).	All borings analyzed for TPHg-cc, TPHd-cc, PAHs (8310), and 6 metals. Asbestos samples will be collected near GP-6 and
Interior of warehouse building.	Previous uses of this building since 1920s may have included storage of slag, asbestos, beans, titanium ore, and iron ore, maintenance operations, or other unknown uses. In addition, an area of old equipment storage including rollers and engines was observed during the Phase I ESA site walk.	GP-3 through GP-4	First-encountered groundwater (approximately 10 ft bgs) for borings GP-3 and GP-4. Second-encountered groundwater for boring GP-3 (approximately 30 feet bgs).	All borings analyzed for TPHg-cc, TPHd-cc, PAHs (8310), 6 metals + lead, and VOCs (8260B).
Fenced storage area on the south-central portion of the Site	Historical products potentially stored in and transferred through this area include: slag, asbestos, beans, titanium ore, iron ore. In addition, old treated wood poles, old engines, miscellaneous conveyor parts, two "flo-bins" labeled as hazardous waste, and accumulated storm water were observed in this area. An underground conveyor tunnel extends in a north-south orientation through this area.	GP-13 through GP-17, and GP-19**	First-encountered groundwater (approximately 10 ft bgs) for all borings except GP-13 and GP-15 which will be advanced to second-encountered groundwater (approximately 30 feet bgs).	All borings analyzed for TPHg-cc, TPHd-cc, PAHs (8270), and 6 metals. GP-14, GP-16, GP-18**, and GP-19 will also be analyzed for lead and VOCs (8260B). Asbestos samples will be collected near GP-13, GP 14, GP-16, and GP-19.

TABLE 1

Sampling and Analysis Detail

Tesoro Pittsburg Terminal Site

595 E 3rd Street, Pittsburg, CA 94565

Area of Concern	Rationale	Soil Sample Locations	Estimated Groundwater Sample Depth (ft bgs)	Lab Analyses
Medium fuel oil railcar AST adjacent to southeast side of warehouse building	AST holds oil used for dust suppression. AST contained in concrete secondary containment area. Concrete appeared to be cracked and old.	GP-1	First-encountered groundwater (approximately 10 ft bgs)	TPHg-cc, TPHd-cc, PAHs (8310), 6 metals
Coke stockpile area - along eastern Site boundary	Coke is reportedly stockpiled on unlined exposed soil.	GP-2**	First-encountered groundwater (approximately 10 ft bgs)	TPHg-cc, TPHd-cc, PAHs (8310), 6 metals
Area west and northwest of fenced storage area	These areas appeared to be storage areas in historical aerial photographs, and were areas located adjacent to Johns-Manville property. Dark and white-colored piles were observed in the northeast area in a 1986 aerial photo at the site.	GP-9 through GP-12	First-encountered groundwater (approximately 10 ft bgs) for all borings except GP-12 which will be advanced to second-encountered groundwater (approximately 30 feet bgs).	All borings analyzed for TPHg-cc, TPHd-cc, PAHs (8310), and 6 metals. Asbestos samples will be collected near GP-11 and GP-12.
Storage and Pump feature shown on 1987 drawing near the southeast exterior corner of the fenced storage area. Feature indicated as containing 1% solution of dos 101 and water.	Potential former chemical storage area.	GP-20	First-encountered groundwater (approximately 10 ft bgs)	TPHg-cc, TPHd-cc, PAHs (8270), and 6 metals

TABLE 1

Sampling and Analysis Detail

Tesoro Pittsburg Terminal Site

595 E 3rd Street, Pittsburg, CA 94565

Area of Concern	Rationale	Soil Sample Locations	Estimated Groundwater Sample Depth (ft bgs)	Lab Analyses

Notes:

TPHg-cc = Total Petroleum Hydrocarbons Carbon Chain Distinction: Gas Range by EPA Method 8260B.

TPHd-cc = Total Petroleum Hydrocarbons Carbon Chain Distinction: Diesel Range by EPA Method 8015M

PAHs = Polycyclic Aromatic Hydrocarbons by EPA Method 8310 or 8270

6 Metals = Arsenic, Nickel, Vanadium, Barium, Copper, and Zinc by EPA Method 6020

VOCs = Volatile Organic Compounds by EPA Method 8260B

RWQCB = Regional Water Quality Control Board

ESA = Environmental Site Assessment

ft bgs = feet below ground surface

* GP-5 was only advanced to the first encountered water-bearing zone.

**Soil borings GP-2 and GP-18 were not completed during the Phase II Site Investigation.

TABLE 2
Total Petroleum Hydrocarbon Concentrations in Soil
Tesoro Pittsburg Terminal
595 East 3rd Street Pittsburg, CA

Total Petroleum Hydrocarbons in soil		TPHg	TPHd	TPHmo	C8 to C9 Fraction	C10 to C11 Fraction	C12 to C13 Fraction	C14 to C15 Fraction	C16 to C17 Fraction	C18 to C19 Fraction	C20 to C21 Fraction	C22 to C23 Fraction	C24 to C25 Fraction	C26 to C27 Fraction	C28 to C29 Fraction	C30 to C31 Fraction	C32 to C33 Fraction	C34 to C35 Fraction	C36 to C37 Fraction	C38 to C39 Fraction	C40 Fraction
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Residential ESL		1.0E+02	1.0E+02	4.1E+02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Commercial/Industrial ESL		**4.5E+02**	**1.5E+02**	**2.5E+03**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Samples	**Date**																				
GP-1-1	2/28/2008	< 1.0	5.2	21	<0.04	<0.04	0.19	0.24	0.34	0.59	0.60	0.67	0.72	0.75	1.1	3.0	7.8	3.3	2.4	2.4	1.7
GP-3-1	2/29/2008	< 1.0	**220** [a]	860	<0.04	<0.04	0.04	0.56	1.9	6.0	13	28	34	54	94	169	149	165	154	140	76
GP-3-6	2/29/2008	NA	3.0 [a]	<10	NA	<0.04	<0.04	0.63	0.09	0.11	0.34	0.36	0.45	0.56	0.44	0.59	0.76	0.63	0.70	0.54	0.09
GP-4-1	2/28/2008	< 1.0	7.9 [a]	14	<0.04	<0.04	0.32	0.59	0.69	0.89	1.1	1.1	1.2	0.7	1.3	2.5	4.6	2.4	1.9	1.7	0.5
GP-5-1	2/28/2008	< 1.0	4.2 a	< 10	<0.04	<0.04	0.13	0.22	0.27	0.34	0.43	0.55	0.57	0.96	0.68	0.49	0.41	0.37	0.42	0.42	0.20
GP-6-1	2/29/2008	< 1.0	**330** [a]	880	<0.04	<0.04	0.09	2.0	6.0	18	32	42	58	71	109	183	172	167	155	137	59
GP-6-6	2/29/2008	NA	2.6 [a]	<10	NA	<0.04	<0.04	0.04	0.07	0.16	0.18	0.29	0.36	0.49	0.95	1.6	1.6	1.7	1.8	1.8	0.89
GP-7-1	2/26/2008	< 1.0	120 [a]	490	<0.04	<0.04	0.12	1.5	3.1	5.5	10	17	21	31	40	89	83	86	95	83	54
GP-7-6	2/26/2008	NA	2.8 [a]	<10	NA	<0.04	<0.04	0.41	0.19	0.26	0.30	0.38	0.37	0.38	0.45	0.74	0.83	0.85	0.39	0.34	0.11
GP-8-1	2/26/2008	< 1.0	**210** [a]	2,000	<0.04	<0.04	0.22	2.3	3.6	5.8	9.6	20	23	52	108	255	264	352	436	394	244
GP-8-6	2/26/2008	NA	1.8 [a]	<10	NA	<0.04	0.10	0.09	0.16	0.22	0.24	0.26	0.19	0.21	0.34	0.63	0.45	0.44	0.16	0.29	0.08
GP-9-1	2/26/2008	< 1.0	46	350	<0.04	<0.04	0.41	2.5	0.60	1.1	1.6	2.9	5.0	10	24	49	53	60	70	81	35
GP-10-2	2/29/2008	< 1.0	13 [a]	33	<0.04	<0.04	0.04	0.47	0.90	1.1	1.4	1.6	1.7	2.6	3.3	7.5	5.2	6.3	6.1	5.7	2.3
GP-11-1	2/26/2008	< 1.0	**230** [a]	1,600	<0.04	<0.04	0.26	0.48	0.92	14	21	27	37	57	82	218	246	282	301	374	212
GP-11-10	2/26/2008	NA	48 [a]	180	NA	<0.04	<0.04	0.42	1.1	2.7	4.5	6.8	8.7	8.7	16	29	30	36	33	35	13
GP-12-1	2/25/2008	< 1.0	**300** [a]	1,000	<0.04	<0.04	0.17	3.2	8.1	18	33	47	53	66	83	189	178	186	222	170	99
GP-12-6	2/25/2008	NA	20 [a]	40	NA	<0.04	0.08	0.53	0.78	1.7	2.3	2.6	3.8	4.1	4.2	7.0	11	6.9	7.4	5.9	2.1
GP-13-1	2/25/2008	< 1.0	7.8 [a]	25	<0.04	<0.04	<0.04	0.08	0.16	0.34	0.64	1.0	1.4	1.8	2.5	5.4	4.6	5.2	4.1	4.1	2.0
GP-14-1	2/28/2008	< 1.0	**770** [a]	1,700	<0.04	0	4.2	7.3	17	41	86	130	116	161	228	397	317	335	293	249	129
GP-14-6	2/28/2008	NA	<1.0	<10	NA	<0.04	<0.04	0.05	0.05	0.14	0.10	0.07	0.07	0.08	0.20	0.25	0.27	0.13	0.09	0.11	0.05
GP-15-1	2/27/2008	< 1.0	82 [a]	310	<0.04	<0.04	0.11	1.0	2.6	5.5	7.1	12	14	19	23	66	64	37	54	51	33
GP-15-6	2/27/2008	NA	6.2	<10	NA	<0.04	0.13	0.47	1.0	1.3	0.95	0.8	0.53	0.57	0.41	0.69	0.5	0.57	0.43	0.41	0.18
GP-16B-0	2/27/2008	< 1.0	50	100	<0.04	<0.04	0.14	0.64	3.2	9.1	9.3	6.5	5.9	6.3	9.3	24	22	15	21	15	6.7
GP-16-6	2/27/2008	NA	22 [a]	51	NA	<0.04	<0.04	0.47	3.5	1.8	2.2	2.6	2.4	3.6	5.5	8.9	7.7	9.6	10.2	9.5	4.9
GP-17-1	2/27/2008	< 1.0	5.1 [a]	< 10	<0.04	<0.04	<0.04	0.04	0.33	0.46	0.62	0.74	0.74	0.87	1.2	0.93	0.62	0.48	0.36	0.31	0.11
GP-19-1	2/27/2008	< 1.0	**410** [a]	1,100	<0.04	<0.04	0.15	2.0	4.3	9.2	13	15	18	24	30	234	172	167	194	216	130
GP-19-6	2/28/2008	NA	2.0 [a]	<10	NA	<0.04	<0.04	0.06	0.10	0.23	0.24	0.34	0.28	0.29	0.41	0.75	0.55	0.56	0.44	0.44	0.17
GP-20-4	2/28/2008	< 1.0	14 [a]	13	<0.04	<0.04	0.16	0.29	0.51	1.0	1.3	1.8	1.8	2.8	4.1	2.2	2.3	2.5	2.8	2.2	1.0

Notes:
(mg/kg) = Milligrams per kilogram
NA = Not analyzed
-- = Not applicable, not established
TPHg = total petroleum hydrocarbons as gasoline (analyzed by EPA Method 8260B)
TPHd = total petroleum hydrocarbons as diesel fuel (analyzed by EPA Method 8015M)
TPHmo = total petroleum hydrocarbons as motor oil (analyzed by EPA Method 8015M)
ESLs = Regional Water Quality Control Board Environmental Screening Levels
a = Hydrocarbons are higher boiling point than typical diesel fuel
Analytical results in **bold** type exceed the RWQCB-SF region industrial ESL.

TABLE 3
Metal Concentrations in Soil
Tesoro Pittsburg Terminal
595 East 3rd Street Pittsburg, CA

Metals in soil		Arsenic	Nickel	Barium	Vanadium	Copper	Zinc	Lead
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Industrial PRG		1.6E+00	2.0E+04	6.7E+04	1.0E+03	4.1E+04	1.0E+05	8.0E+02
Residential ESL		3.8E-01	1.5E+02	7.5E+02	1.5E+01	2.3E+02	6.0E+02	2.0E+02
Commercial/Industrial ESL		**1.5E+00**	**1.5E+02**	**1.5E+03**	**1.9E+02**	**2.3E+02**	**6.0E+02**	**7.5E+02**
Sampled	**Date**							
GP-1-1	2/28/2008	**4.48**	20.8	157	39.8	19.7	43.3	NA
GP-1-6	2/28/2008	**4.62**	NA	NA	36.6	NA	NA	NA
GP-3-1	2/29/2008	**5.51**	47.4	198	44.1	33.1	157	551
GP-3-6	2/29/2008	**2.13**	NA	NA	27.2	NA	NA	4.25
GP-4-1	2/28/2008	**10.1**	22.6	98.0	49.8	23.2	45.1	6.48
GP-4-6	2/28/2008	**3.17**	NA	NA	44.0	NA	NA	NA
GP-5-1	2/28/2008	**5.34**	65.7	255	41.4	22.6	48.2	NA
GP-5-6	2/28/2008	**5.70**	NA	NA	48.0	NA	NA	NA
GP-6-1	2/29/2008	**38.8**	55.6	951	35.7	**695**	**6,230**	NA
GP-6-6	2/29/2008	**3.92**	NA	81.2	31.0	15.0	39.7	NA
GP-7-1	2/26/2008	**10.2**	37.2	202	45.3	**376**	**618**	NA
GP-7-6	2/26/2008	**4.06**	NA	NA	36.7	16.8	49.5	NA
GP-8-1	2/26/2008	**3.11**	20.8	89.2	37.4	**631**	174	NA
GP-8-6	2/26/2008	**3.39**	NA	NA	38.9	21.9	NA	NA
GP-9-1	2/26/2008	**4.43**	18.1	107	31.3	40.1	102	NA
GP-9-6	2/26/2008	**2.25**	NA	NA	49.2	NA	NA	NA
GP-10-2	2/29/2008	**5.23**	23.6	182	83.2	70.4	107	NA
GP-10-20	2/29/2008	**2.68**	NA	NA	36.6	NA	NA	NA
GP-11-1	2/26/2008	**5.36**	41.4	123	45.7	94.6	104	NA
GP-11-10	2/26/2008	**4.56**	NA	NA	36.6	NA	NA	NA
GP-12-1	2/25/2008	**21.4**	54.6	655	29.7	**744**	**5,080**	NA
GP-12-6	2/25/2008	**22.3**	NA	NA	37.7	163	**2,010**	NA
GP-13-1	2/25/2008	**2.47**	27.1	116	36.6	24.1	44.5	NA
GP-13-6 *	2/25/2008	**3.31**	NA	NA	27.2	NA	NA	NA
GP-14-1	2/28/2008	**10.6**	28.9	220	38.6	128	**1,040**	674
GP-14-6	2/28/2008	**3.50**	NA	NA	33.1	NA	36.6	4.50
GP-15-1	2/27/2008	**2.84**	15.5	146	21.5	46.3	152	NA
GP-15-6	2/27/2008	**2.97**	NA	NA	22.3	NA	NA	NA
GP-16B-0	2/27/2008	0.787	**175**	88.4	**223**	**1,520**	66.8	NA
GP-16-6	2/27/2008	1.49	142	11.3	**633**	**4,770**	32.8	NA
GP-17-1	2/27/2008	**1.98**	21.3	174	20.4	12.5	63.5	NA
GP-17-6	2/27/2008	**2.60**	NA	NA	26.4	NA	NA	NA
GP-19-1	2/27/2008	**4.28**	21.7	170	35.2	**254**	291	NA
GP-19-6	2/27/2008	**2.92**	NA	NA	22.3	10.4	NA	NA
GP-20-4	2/28/2008	**3.24**	28.9	139	64.4	20.5	45.5	NA
GP-20-6	2/28/2008	**2.20**	NA	NA	34.7	NA	NA	NA

Notes:
(mg/kg) = Milligrams per kilogram
ESLs = Regional Water Quality Control Board Environmental screening levels
PRG = United States Environmental Protection Agency Region Nine's Preliminary Remediation Goals
NA = Not analyzed
All samples analyzed using EPA Method 6020
*Sample GP-13-6 was collected from 4.5 to 5 feet below ground surface
Analytical results in **bold** type exceed the RWQCB-SF region residential ESL.

Table 4
Volatile Organic Compounds in Soil
Tesoro Pittsburg Terminal
595 East 3rd Street Pittsburg, California

VOC's in soil		VOC's in soil	Chloromethane	Vinyl Chloride	Bromomethane	Chloroethane	Trichlorofluoromethane	1,1-Dichloroethene (1,1-DCE)	Methylene Chloride (MeCl2)	trans-1 ,2-Dichloroethene	1,1-Dichloroethane	2,2-Dichloropropane	cis-1 ,2-Dichloroethene (c-1,2-DCE)	Chloroform	Bromochloromethane	1,1,1 ,1-Trichloroethane (TCA)	1,1-Dichloropropene	1 ,2-Dichloroethane (DCA)	Carbon Tetrachloride	Benzene	Trichloroethene (TCE)	1 ,2-Dichloropropane	Bromodichloromethane	Dibromomethane	cis-1 ,3-Dichloropropene	Toluene	trans-1 ,3-Dichloropropene	1,1,2-Trichloroethane (1,1,2-TCA)	1 ,3-Dichloropropane	Tetrachloroethene (PCE)
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Industrial PRG		3.1E+02	1.6E+02	--	1.3E+01	6.5E+00	2.0E+03	--	2.1E+01	--	1.7E+03	--	--	4.7E-01	--	1.2E+03	--	6.03E-01	5.5E-01	1.4E+00	1.1E-01	7.4E-01	1.8E+00	--	1.76E+00	5.2E+02	--	1.6E+00	3.6E+02	1.3E+00
Residential ESL		5.8E+00	6.4E+00	2.1E-02	6.9E-01	1.0E+01	--	4.1E-02	6.9E+00	1.0E+01	2.2E+00	--	6.4E+00	6.7E-01	5.6E-01	2.7E+02	--	2.2E-01	2.0E-02	1.2E-01	3.4E-01	4.6E-01	5.6E-01	--	1.70E-01	2.9E+01	1.7E-01	4.9E-01	--	3.4E-01
Commercial/Industrial ESL		**1.4E+01**	**6.4E+00**	**4.7E-02**	**2.3E+00**	**1.1E+01**	**--**	**8.8E-02**	**1.6E+01**	**3.4E+01**	**4.7E+00**	**--**	**2.2E+01**	**1.4E+00**	**1.2E+00**	**9.4E+02**	**--**	**4.8E-01**	**4.4E-02**	**2.6E-01**	**8.5E-01**	**1.0E+00**	**1.2E+00**	**--**	**3.60E-01**	**2.9E+01**	**3.6E-01**	**1.1E+00**	**--**	**8.5E-01**
Samples	**Date**																													
GP-3-1	2/29/2008	< 0.0050	< 0.0050	< 0.0050	< 0.020	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
GP-4-1	2/28/2008	< 0.0050	< 0.0050	< 0.0050	< 0.020	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
GP-14-1	2/28/2008	< 0.0050	< 0.0050	< 0.0050	< 0.020	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
GP-20-4	2/28/2008	< 0.0050	< 0.0050	< 0.0050	< 0.020	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050

VOC's in soil		Dibromochloromethane	1 ,2-Dibromoethane (EDB)	Chlorobenzene	1,1,1 ,2-Tetrachloroethane	Ethylbenzene	P,M-Xylene	O-Xylene	Styrene	Isopropyl benzene	Bromoform	1,1 ,2,2-Tetrachloroethane	1 ,2,3-Trichloropropane	n-Propylbenzene	Bromobenzene	1 ,3,5-Trimethylbenzene	2+4-Chlorotoluene	tert-Butylbenzene	1 ,2,4-Trimethylbenzene	sec-Butylbenzene	p-Isopropyltoluene	1 ,3-Dichlorobenzene (1,3-DCB)	1 ,4-Dichlorobenzene	n-Butylbenzene	1 ,2-Dichlorobenzene	1 ,2-Dibromo-3-chloropropane	1 ,2,4-Trichlorobenzene (1,2,4-TCB)	Hexachlorobutadiene	Naphthalene	1 ,2,3-Trichlorobenzene
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Industrial PRG		2.6E+00	7.3E-02	5.3E+02	7.3E+00	4.0E+02	--	--	1.7E+03	2.0E+03	2.18E+02	9.3E-01	7.6E-02	2.40E+02	9.2E+01	7.0E+01	--	3.9E+02	1.7E+02	2.2E+02	--	6.0E+02	7.9E+00	2.4E+02	6.0E+02	2.0E+00	2.2E+02	2.2E+01	--	--
Residential ESL		5.80E+00	1.9E-02	3.0E+01	2.0E+00	3.3E+01	3.10E+01	--	1.6E+01	--	6.1E+01	2.6E-01	--	--	--	--	--	--	--	--	--	3.0E+01	1.2E+00	--	1.1E+01	6.9E-02	7.8E+00	2.4E+00	1.3E+00	--
Commercial/Industrial ESL		**1.40E+01**	**4.2E-02**	**3.0E+01**	**4.4E+00**	**3.3E+01**	**1.00E+02**	**--**	**1.6E+01**	**--**	**1.1E+02**	**5.8E-01**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**3.0E+01**	**2.6E+00**	**--**	**1.1E+01**	**2.5E-01**	**2.7E+01**	**2.2E+01**	**2.8E+00**	**--**
Samples	**Date**																													
GP-3-1	2/29/2008	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
GP-4-1	2/28/2008	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
GP-14-1	2/28/2008	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
GP-20-4	2/28/2008	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050

Notes:
(mg/kg) = Milligrams per kilogram
ESLs = Regional Water Quality Control Board Environmental screening levels
PRG = United States Environmental Protection Agency Region Nine's Preliminary Remediation Goals
All samples analyzed using EPA Method 8260B
Analytical results in **bold** type exceed the RWQCB-SF region industrial ESL.

TABLE 5
PAH and PCP
Concentrations in Soil
Tesoro Pittsburg Terminal
595 East 3rd Street Pittsburg, California

PAHs and PCP in Soil		Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) Anthracene	Benzo (a) Pyrene	Benzo (b) Fluoranthene	Benzo (g,h,i) Perylene	Benzo (k) Fluoranthene	Chrysene	Dibenz (a,h) Anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-c,d) Pyrene	Naphthalene	Pentachlorophenol	Phenanthrene	Pyrene
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Industrial PRG		2.9E+04	--	1.0E+05	2.1E+00	2.1E-01	2.1E+00	--	2.1E+01	2.1E+02	2.1E-01	2.2E+04	2.6E+04	2.1E+00	1.9E+02	9.0E+00	--	2.9E+04
Residential ESL		1.6E+02	3.7E+02	4.0E+01	3.8E-01	3.8E-02	3.8E-01	3.5E+01	3.8E-01	4.0E+01	6.2E-02	4.0E+01	4.1E+02	6.2E-01	1.3E+00	3.0E+00	4.0E+01	5.0E+02
Commercial/Industrial ESL		**1.6E+02**	**8.3E+02**	**4.0E+01**	**1.3E+00**	**1.3E-01**	**1.3E+00**	**3.5E+01**	**1.3E+00**	**4.0E+01**	**2.1E-01**	**4.0E+01**	**1.0E+03**	**2.1E+00**	**2.8E+00**	**5.0E+00**	**4.0E+01**	**1.0E+03**
Samples	**Date**																	
GP-1-1	2/28/2008	<0.015	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.015	NA	<0.010	<0.010
GP-3-1	2/29/2008	0.065	0.170	<0.010	0.050	**0.150**	0.010	0.026	<0.010	0.260	0.100	0.076	<0.010	<0.010	0.060	NA	0.022	0.017
GP-3-6	2/29/2008	<0.015	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.015	NA	<0.010	<0.010
GP-4-1	2/28/2008	<0.015	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.015	NA	<0.010	<0.010
GP-5-1	2/28/2008	<0.015	<0.030	<0.010	<0.010	0.012	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.015	NA	<0.010	<0.010
GP-6-1	2/29/2008	0.500	0.710	0.056	0.340	**0.740**	0.550	0.500	0.110	0.700	<0.010	0.950	0.046	0.410	0.830	NA	0.580	0.690
GP-6-6	2/29/2008	<0.015	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.015	NA	<0.010	<0.010
GP-7-1	2/26/2008	0.023	0.054	<0.010	0.021	0.031	<0.010	<0.010	<0.010	0.047	<0.010	0.036	<0.010	<0.010	0.067	NA	0.031	0.030
GP-8-1	2/26/2008	31	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.015	NA	<0.010	<0.010
GP-9-1	2/26/2008	<0.015	<0.030	<0.010	<0.010	0.023	0.012	<0.010	<0.010	0.034	0.015	<0.010	<0.010	<0.010	<0.015	NA	<0.010	<0.010
GP-10-2	2/29/2008	<0.015	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	<0.010	<0.010	<0.015	NA	<0.010	<0.010
GP-11-1	2/26/2008	0.037	0.044	0.021	0.097	0.079	0.088	0.048	0.040	0.150	<0.010	0.270	0.012	<0.010	0.270	NA	0.110	0.130
GP-11-10	2/26/2008	<0.015	<0.030	<0.010	0.130	0.110	0.120	0.045	0.050	0.200	<0.010	0.200	<0.010	0.031	<0.015	NA	0.025	0.120
GP-12-1	2/25/2008	<0.015	0.120	0.031	0.170	**0.300**	<0.010	0.280	0.089	0.280	0.068	0.260	0.024	0.170	<0.015	NA	0.130	0.24
GP-12-6	2/25/2008	<0.075	<0.150	<0.050	<0.050	<0.050	**2.6**	<0.050	<0.050	0.05	<0.050	0.077	<0.050	<0.050	<0.075	NA	<0.050	0.072
GP-13-1	2/25/2008	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<0.50	<0.50
GP-14-1	2/28/2008	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<0.50	<0.50
GP-15-1	2/27/2008	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<0.50	<0.50
GP-16 B-0	2/27/2008	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<0.50	<0.50
GP-16-6	2/27/2008	0.060	0.048	<0.010	0.040	<0.010	<0.010	<0.010	<0.010	0.013	0.150	<0.010	<0.010	<0.010	<0.015	3.0	<0.010	<0.010
GP-17-1	2/27/2008	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<0.50	<0.50
GP-19-1	2/27/2008	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<0.50	<0.50
GP-20-4	2/28/2008	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<0.50	<0.50

Notes:
(mg/kg) = Milligrams per kilogram
ESLs = Regional Water Quality Control Board Environmental Screening Levels
PRG = United States Environmental Protection Agency Region Nine's Preliminary Remediation Goals
PAH = Polycyclic aromatic hydrocarbon
PCP = Pentachlorophenol
NA = Not analyzed
-- = Not applicable/not established
* Samples GP-1 through GP-12 and GP-16-6 were analyzed with EPA Method 8310. Samples GP-13 through GP-15, GP-17, GP-19, and GP-20 were analzyed with EPA Method 8270.
* The results for samples GP-1 through GP-12 and GP-16-6 were converted from micrograms per killigram to milligrams per kilogram.
Analytical results in **bold** type exceed the RWQCB-SF region industrial ESL.

TABLE 6
Total Petroleum Hydrocarbon Concentrations in Groundwater
Tesoro Pittsburg Terminal
595 East 3rd Street Pittsburg, CA

Total Petroleum Hydrocarbons in Water		TPHg	TPHd	TPHmo	C8 to C9 Fraction	C10 to C11 Fraction	C12 to C13 Fraction	C14 to C15 Fraction	C16 to C17 Fraction	C18 to C19 Fraction	C20 to C21 Fraction	C22 to C23 Fraction	C24 to C25 Fraction	C26 to C27 Fraction	C28 to C29 Fraction	C30 to C31 Fraction	C32 to C33 Fraction	C34 to C35 Fraction	C36 to C37 Fraction	C38 to C39 Fraction	C40 Fraction
		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
USEPA Taste and Odor Threshold*		--	**1.0E+02**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SWRCB Water Quality Criteria**		**5.0E+00**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Samples	**Date**																				
Grab-1	2/27/2008	< 50	70	< 100	6	<2	2	6	8	11	12	11	12	5	4	3	2	<2	<2	<2	<2
GP-1WS	2/28/2008	**53** [d]	**110**	< 100	4	<2	<2	8	9	15	11	13	14	25	12	5	4	4	3	4	<2
GP-3WS	2/29/2008	**86**	**150** [a]	< 100	6	<2	<2	12	18	35	20	25	14	13	10	2	<2	<2	<2	<2	<2
GP-3WD	2/29/2008	**56**	**140**	< 100	8	<2	<2	8	13	26	21	22	19	18	14	16	13	12	11	10	6
GP-4WS	2/28/2008	< 50	**180**	< 100	5	<2	3	11	12	22	17	25	32	41	22	6	5	5	5	4	2
GP-5WS	2/28/2008	< 50	< 50	< 100	3	<2	<2	4	5	5	8	5	6	3	<2	3	<2	2	<2	<2	<2
GP-6WS	2/29/2008	< 50	**320**	640	<2	<2	<2	5	10	24	30	46	53	75	88	124	114	117	124	103	57
GP-7WS	2/26/2008	< 50	**100**	< 100	7	3	3	7	12	13	13	13	14	12	11	6	6	4	4	4	<2
GP-7WD	2/26/2008	< 50	**140** [a]	120	5	<2	2	7	11	16	11	14	15	13	52	6	5	5	5	4	2
GP-8WS	2/27/2008	**60**	**130**	< 100	7	<2	<2	<2	<2	<2	<2	<2	<2	<2	167	8	7	7	7	6	3
GP-9WS	2/26/2008	< 50	**2,800** [a]	13,000	6	<2	24	194	69	31	41	130	304	761	1,462	2,195	2,202	2,515	2,793	2,453	1,597
GP-10WS	2/29/2008	< 50	88 [a]	130	5	<2	<2	5	7	10	8	12	12	14	20	23	26	24	24	22	8
GP-11WS	2/26/2008	< 50	70	< 100	7	<2	2	7	7	8	8	8	10	9	10	5	4	4	3	<2	<2
GP-12WS	2/25/2008	< 50	**2,500** [a]	3,600	5	8	17	55	104	171	294	375	405	596	594	801	698	585	574	479	492
GP-12WD	2/25/2008	< 50	**560** [a]	710	6	5	7	14	42	69	69	80	81	94	109	164	137	128	115	112	53
GP-13WS	2/25/2008	< 50	< 50	< 100	6	4	5	7	4	5	6	6	7	4	3	11	7	7	5	4	<2
GP-13WD	2/26/2008	< 50	**750** [b]	700 [c]	11	8	32	57	46	64	55	80	95	220	98	66	48	64	36	46	26
GP-14WS	2/28/2008	< 50	**110**	< 100	8	<2	5	12	11	18	10	14	11	25	10	4	3	3	3	3	<2
GP-15WS	2/27/2008	< 50	**140**	< 100	5	<2	<2	9	13	20	20	18	23	22	14	7	6	6	5	5	2
GP-15WD	2/27/2008	< 50	**260**	< 100	8	5	6	16	22	35	30	31	42	42	28	19	16	15	14	12	6
GP-16WS	2/27/2008	**640**	**380**	< 100	5	4	20	65	122	47	37	32	23	24	17	8	8	6	6	5	<2
GP-17WS	2/27/2008	**180**	**140**	< 100	6	<2	5	13	29	28	15	16	15	12	14	6	5	4	3	2	<2
GP-19WS	2/28/2008	< 50	**110**	< 100	4	<2	3	10	22	19	10	10	11	18	6	6	4	4	4	3	<2
GP-20WS	2/28/2008	< 50	**1,800** [a]	4,900	4	<2	8	34	68	102	157	202	263	423	608	934	872	862	966	808	452

Notes:
(ug/L) = Micrograms per Liter
WS = Shallow water sample
WD = Deep water sample
-- = Not applicable/not established
* = Taste and Odor Threshold from US Environmental Protection Agency Advisory
** = State Water Resources Control Board Water Quality Criteria
TPHg = total petroleum hydrocarbons as gasoline (analyzed by EPA Method 8260B)
TPHd = total petroleum hydrocarbons as diesel fuel (analyzed by EPA Method 8015M)
TPHmo = total petroleum hydrocarbons as motor oil (analyzed by EPA M
a = Hydrocarbons are higher boiling point than typical diesel fuel
b = Discrete peaks, higher boiling hydrocarbons present, atypical for diesel fuel
c = Discrete peaks in motor oil range, atypical for motor oil
d = Primary compounds not found in typical gasoline
Analytical results in **bold** type exceed the RWQCB Water Quality Criteria or USEPA Taste and Odor Threshold.

TABLE 7
Metal Concentrations in Groundwater
Tesoro Pittsburg Terminal
595 East 3rd Street Pittsburg, CA

Metals in water		Arsenic	Nickel	Barium	Vanadium	Copper	Zinc	Lead
		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
CDPH Primary MCL		**50**	**100**	**1,000**	**50***	**1,300**	**5,000****	**15**
SAMPLE ID	**Date**							
Grab-1	2/27/2008	**200**	<2.0	10	26	230	90	NA
GP-1WS	2/28/2008	<5.0	6.8	20	<20	7.9	<20	NA
GP-3WS	2/29/2008	5.1	5.6	21	<20	7.1	<20	<5.0
GP-3WD	2/29/2008	<5.0	12	45	<20	7.6	<20	NA
GP-4WS	2/28/2008	10	15	24	<20	13	<20	<5.0
GP-5WS	2/28/2008	9.4	11	74	<20	14	<20	NA
GP-6WS	2/29/2008	<5.0	8.6	45	<20	7.1	<20	NA
GP-7WS	2/26/2008	7.1	6.0	30	<20	11	<20	NA
GP-7WD	2/26/2008	<5.0	16	46	<20	7.7	25	NA
GP-8WS	2/27/2008	<5.0	14	39	<20	18	<20	NA
GP-9WS	2/26/2008	9.0	19	82	<20	11	<20	NA
GP-10WS	2/29/2008	15	4.0	980	<20	14	<20	NA
GP-11WS	2/26/2008	15	<2.0	**1,100**	<20	20	<20	NA
GP-12WS	2/25/2008	44	19	160	<20	21	45	NA
GP-12WD	2/25/2008	7.8	11	85	<20	8.2	<20	NA
GP-13WS	2/25/2008	5.5	6.1	29	<20	6.7	<20	NA
GP-13WD	2/26/2008	<5.0	17	43	<20	6.9	<20	NA
GP-14WS	2/28/2008	<5.0	3.2	17	<20	5.7	<20	<5.0
GP-15WS	2/27/2008	<5.0	<2.0	25	<20	4.8	<20	NA
GP-15WD	2/27/2008	<5.0	5.4	40	<20	3.8	<20	NA
GP-16WS	2/27/2008	8.0	22	37	<20	160	<20	NA
GP-17WS	2/27/2008	<5.0	12	23	<20	17	<20	NA
GP-19WS	2/28/2008	<5.0	3.8	27	<20	5.5	<20	<5.0
GP-20WS	2/28/2008	11	5.1	16	460	4.5	<20	NA

Notes:
(ug/L) = Micrograms per Liter
WS = Shallow water sample
WD = Deep water sample
CDPH = California Department of Public Health
MCLs = Maximum contaminant levels
NA = Not analyzed
All samples analyzed using EPA Method 6020
* CDPH notification level for drinking water
** CDPH secondary MCL
Analytical results in **bold** type exceed the MCLs.

Table 8
Volatile Organic Compounds in Groundwater
Tesoro Pittsburg Terminal
595 East 3rd Street Pittsburg, California

Volatile Organic Compounds in Groundwater		Dichlorodifluoromethane	Chloromethane	Vinyl Chloride	Bromomethane	Chloroethane	Trichlorofluoromethane	1,1-Dichloroethene (1,1-DCE)	Methylene Chloride (MeCl2)	trans-1 ,2-Dichloroethene	1,1-Dichloroethane	2,2-Dichloropropane	cis-1 ,2-Dichloroethene (c-1,2-DCE)	Chloroform	Bromochloromethane	1,1 ,1-Trichloroethane (TCA)	1,1-Dichloropropene	1 ,2-Dichloroethane (DCA)	Carbon Tetrachloride	Benzene	Trichloroethene (TCE)	1 ,2-Dichloropropane	Bromodichloromethane	Dibromomethane	cis-1 ,3-Dichloropropene	Toluene	trans-1 ,3-Dichloropropene	1,1 ,2-Trichloroethane (1,1,2-TCA)	1 ,3-Dichloropropane	Tetrachloroethene (PCE)
		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
CDPH Primary MCL		**1,000***	**--**	**0.5**	**--**	**--**	**150**	**6**	**--**	**10**	**5**	**--**	**6**	**80**	**80**	**200**	**--**	**0.5**	**0.5**	**1**	**5**	**5**	**80**	**--**	**0.5**	**150**	**0.5**	**5**	**--**	**5**
Samples	**Date**																													
GP-3WS	2/29/2008	< 0.50	< 0.50	< 0.50	< 20	< 0.50	< 0.50	< 0.50	< 5.0	< 0.50	0.61	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.57	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
GP-3WD	2/29/2008	< 0.50	< 0.50	< 0.50	< 20	< 0.50	< 0.50	4.0	< 5.0	< 0.50	**17**	< 0.50	3.7	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	**12**	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
GP-4WS	2/28/2008	< 0.50	<0.80 [a]	< 0.50	< 20	< 0.50	< 0.50	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50	1.4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
GP-14WS	2/28/2008	< 0.50	< 0.50	< 0.50	< 20	< 0.50	< 0.50	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.90	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
GP-16WS	2/27/2008	< 0.50	< 0.50	< 0.50	< 20	< 0.50	< 0.50	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	<0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
GP-20WS	2/28/2008	< 0.50	< 0.50	< 0.50	< 20	< 0.50	< 0.50	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50

Volatile Organic Compounds in Groundwater		Dibromochloromethane	1 ,2-Dibromoethane (EDB)	Chlorobenzene	1,1,1 ,2-Tetrachloroethane	Ethylbenzene	P,M-Xylene	O-Xylene	Styrene	Isopropyl benzene	Bromoform	1,1 ,2,2-Tetrachloroethane	1 ,2,3-Trichloropropane	n-Propylbenzene	Bromobenzene	1 ,3,5-Trimethylbenzene	2+4-Chlorotoluene	tert-Butylbenzene	1 ,2,4-Trimethylbenzene	sec-Butylbenzene	p-Isopropyltoluene	1 ,3-Dichlorobenzene (1,3-DCB)	1 ,4-Dichlorobenzene	n-Butylbenzene	1 ,2-Dichlorobenzene	1 ,2-Dibromo-3-chloropropane	1 ,2,4-Trichlorobenzene (1,2,4-TCB)	Hexachlorobutadiene	Naphthalene	1 ,2,3-Trichlorobenzene
		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
CDPH Primary MCL		**80**	**0.05**	**70**	**--**	**300**	**1,750****	**1,750****	**100**	**--**	**80**	**1**	**0.005***	**260***	**--**	**330***	**140***	**260***	**330***	**260***	**--**	**600***	**5**	**--**	**600**	**0.2**	**5**	**--**	**17***	**--**
Samples	**Date**																													
GP-3WS	2/29/2008	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.1	< 0.50	<0.50	1.1
GP-3WD	2/29/2008	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	<0.50	< 0.50
GP-4WS	2/28/2008	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	<0.50	< 0.50
GP-14WS	2/28/2008	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.9	< 0.50	<0.50	1.9
GP-16WS	2/27/2008	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	<0.50	< 0.50
GP-20WS	2/28/2008	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	<0.50	< 0.50

Notes:
(ug/L) = Micrograms per Liter
WS = Shallow Water sample
WD = Deep water sample
CDPH = California Department of Public Health
MCLs = Maximum Contaminant Levels
-- = Not applicable/not established
All samples analyzed using EPA Method 8260B.
*CDPH notification level for drinking water.
**MCL listed for P, M-Xylene and O-Xylene is for total xylenes.
a = Method reporting limit increased due to the presence of an interfering compound.
Analytical results in **bold** type exceed the MCLs.

TABLE 9
PAH and PCP
Concentrations in Groundwater
Tesoro Pittsburg Terminal
595 East 3rd Street Pittsburg, California

PAHs and PCP in Groundwater		Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) Anthracene	Benzo (a) Pyrene	Benzo (b) Fluoranthene	Benzo (g,h,i) Perylene	Benzo (k) Fluoranthene	Chrysene	Dibenz (a,h) Anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-c,d) Pyrene	Naphthalene	Pentachlorophenol	Phenanthrene	Pyrene
		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
CDPH Primary MCL		--	--	--	**0.1***	**0.2**	--	--	--	--	--	--	--	--	**17****	**1**	--	--
Samples	**Date**																	
Grab-1	2/27/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
GP-1WS	2/28/2008	<1.0	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	<1.0
GP-3WS	2/29/2008	<1.4	<1.4	<1.4	<1.4	<0.28	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	NA	<1.4	<1.4
GP-3WD	2/29/2008	<1.3	<1.3	<1.3	<1.3	<0.26	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	NA	<1.3	<1.3
GP-4WS	2/28/2008	<1.1	<1.1	<1.1	<1.1	<0.22	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	NA	<1.1	<1.1
GP-5WS	2/28/2008	<1.0	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	<1.0
GP-6WS	2/29/2008	<1.1	<1.1	<1.1	<1.1	<0.22	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	NA	<1.1	<1.1
GP-7WS	2/26/2008	<1.0	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	<1.0
GP-7WD	2/26/2008	<1.0	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	<1.0
GP-8WS	2/27/2008	<1.2	<1.2	<1.2	<1.2	<0.25	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	NA	<1.2	<1.2
GP-9WS	2/26/2008	<1.1	<1.1	<1.1	<1.1	<0.22	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	NA	<1.1	<1.1
GP-10WS	2/29/2008	<1.0	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	<1.0
GP-11WS	2/26/2008	<1.0	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	<1.0
GP-12WS	2/25/2008	<1.0	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	<1.0
GP-12WD	2/25/2008	<1.2	<1.2	<1.2	<1.2	<0.24	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	NA	<1.2	<1.2
GP-13WS	2/25/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
GP-13WD	2/26/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
GP-14WS	2/28/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
GP-15WS	2/27/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
GP-15WD	2/27/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
GP-16WS	2/27/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	**91**	<10	<10
GP-17WS	2/27/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	**26**	<10	<10
GP-19WS	2/28/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	**21**	<10	<10
GP-20WS	2/28/2008	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10

Notes:

(ug/L) = Micrograms per Liter

WS = Shallow water sample

WD = Deep water sample

* = U.S. Environmental Protection Agency Primary MCL

** = CDPH Notification Level for Drinking Water

MCLs = Maximum contaminant levels

NA = Not analyzed

PAH = Polycylic aromatic hydrocarbons

PCP = Pentachlorophenol

Samples GP-1 through GP-12 were analyzed with EPA Method 8310. Samples GP-13 through GP-20 were analzyed with EPA Method 8270.

Analytical results in **bold** type exceed the MCLs.

APPENDIX A
PERMITS

Limited Phase II Site Investigation
Tesoro Pittsburg Terminal
595 East Third Street
Pittsburg, CA
77OT.43877.00.0005
April 24, 2008

CONTRA COSTA
ENVIRONMENTAL HEALTH DIVISION
2120 DIAMOND BOULEVARD, SUITE 200
CONCORD, CA 94520
(925) 692-2500
www.cocoeh.org

Well Permit

WP00009225

PR Number:	**31600**	**PE Number:**	**4301**
Date Received:	**19 FEBRUARY 2008**	**Permit Number:**	**08B-2010**

Permit Approved/Issued by: Environmental Health Specialist **Date Issued: 20 February 2008**

NEW WELL	(30) SOIL BORINGS	WELL ABANDONMENT	REPAIR

The issuance of this permit by Contra Costa County Environmental Health Division does not guarantee a satisfactory and an indefinite operation of any well. Permit expires in 180 calendar days from date of approval. Permits are non-transferable, and can be suspended or revoked. If more time is required for the project, a time extension may be granted if reasons warrant it in writing.

PROJECT SITE INFORMATION

Site Address:	**595 EAST 3RD ST, PITTSBURG**		
APN:	**073 010 013**	**Lot/Parcel #:**	
Subdivision #:		**Minor Subdivision #:**	

DRILLER / CONSULTANT INFORMATION

Driller:	**WDC**	**Contact Person:**	**CHRIS TATUM**
Phone #:	**510 236-0168**	**FAX#:**	**530 662-1592**
Consultant:	**SECOR INTERNATIONAL**	**Contact Person:**	**B RORIE**
Phone #:	**916 861-0400**	**FAX#:**	**916 861-0430**

LEGAL OWNER INFORMATION

Legal Owner Name:	**TESORO ENVIRONMENTAL RESOURCES**		
Owner Address:	**3450 SOUTH 344TH WAY, STE 201**		
City/State/Zip:	**AUBURN, WA 98001-5931**		
Phone #:	**253 896-8708**	**Alternate Phone #:**	

Prior to any drilling construction or destruction of a well, requests for inspection appointment must be received 24 to 48 hours in advance (excluding weekends and holidays) by faxing your written request to (925) 692-2504 or email to ehlu@hsd.cccounty.us. Voice mail messages are not acceptable.

Well drillers must posses a valid C-57 license and must have on file a performance bond of $5,000.00 with Contra Costa County before commencing with any well construction, destruction or repairs.

WELL PERMIT CONDITIONS:

1. Proper annular seals and surface construction features are to be installed and required water analyses completed within 30 days of commencing drilling.
2. Monitoring well/soil boring shall be destroyed pursuant to County regulations within 30 days of completing monitoring activities.
3. Other: _____

_____

Final Approval by: _____ **Date:** _____

(08/02)

APPENDIX B
FIELD AND LABORATORY PROCEDURES

Limited Phase II Site Investigation
Tesoro Pittsburg Terminal
595 East Third Street
Pittsburg, CA
77OT.43877.00.0005
April 24, 2008

SECOR INTERNATIONAL INCORPORATED
STANDARD PROCEDURE FOR HYDRAULIC PUSH (GEOPROBE) DRILLING

Prior to drilling, all boring locations are marked with white paint or other discernible marking and cleared for underground utilities through Underground Service Alert (USA). In addition, the first four feet of each borehole are drilled with a hand auger or posthole digger to clear the borehole location for underground utilities.

Once predrilling efforts to identify subsurface structures are complete, precleaned push rods (typically one to two inches in diameter) are advanced using a hydraulic push type rig for the purpose of collecting samples and evaluating subsurface conditions. Upon arriving at the designated sampling point, the pointed push tip is retracted to expose the sampler lined with brass, stainless steel or plastic sample tubes. The sampler is pushed, or driven using a hydraulic hammer, into underlying soil approximately 12 to 18 inches to fill the sample tubes. Once the sample is collected, the rods and sampler are retracted and the sample tubes are removed from the sampler head. The sampler head is then cleaned, filled with clean sample tubes, inserted into the borehole and advanced to the next sampling point where the sample collection process is repeated.

Upon completion of drilling and sampling the rods are retracted and the resulting borehole is filled with concrete, bentonite grout, hydrated bentonite chips or pellets as required by the regulatory agency. In areas where the borehole penetrates asphalt or concrete, the borehole is capped with an equivalent thickness of asphalt or concrete patch to match finish grade.

During the sampling process a physical description of observed soil characteristics (i.e. moisture content, consistency, odor, color, etc.), drilling difficulty and soil type as a function of depth are described on boring logs in accordance with the Unified Soil Classification System (USCS).

No soil cuttings are generated during drilling as the underlying soils are displaced by the push rods. However, hand auger cuttings generated in the upper four feet during the initial utility clearance may be compacted in the upper portion of the hole immediately under the asphalt cap.

Related Procedures:

- *Standard Procedure for Soil Sampling—Split Spoon Sampling*
- *Standard Procedure for Equipment Decontamination*

SECOR INTERNATIONAL INCORPORATED

STANDARD PROCEDURE FOR EQUIPMENT DECONTAMINATION

Equipment that could potentially contact subsurface media and compromise the integrity of the samples is carefully decontaminated prior to drilling and sampling. Drill augers and other large pieces of equipment are decontaminated using high pressure hot water spray. Samplers, groundwater pumps, liners and other equipment are decontaminated in an Alconox scrub solution and double rinsed in clean tap water rinse followed by a final distilled water rinse.

The rinsate and other wastewater are contained in 55-gallon California Department of Transportation (DOT)-approved drums, labeled (to identify the contents, generation date and project) and stored pending waste profiling and disposal.

APPENDIX C
BORING LOGS

Limited Phase II Site Investigation
Tesoro Pittsburg Terminal
595 East Third Street
Pittsburg, CA
77OT.43877.00.0005
April 24, 2008

PROJECT: Tesoro Pittsburg
LOCATION: Pittsburg, CA
PROJECT NUMBER: 77OT.43877.00

WELL / PROBEHOLE / BOREHOLE NO: **GP-1** PAGE 1 OF 1

SECOR

DRILLING: STARTED 2/28/08 COMPLETED: 2/28/08

DRILLING COMPANY: WDC
DRILLING EQUIPMENT: GEOPROBE
DRILLING METHOD: Direct Push
SAMPLING EQUIPMENT: Clear PVC

NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
1st WATER DTW ft): 11.5 2/28/08 BOREHOLE DEPTH (ft): 15.0
2nd WATER DTW (ft): WELL DEPTH (ft): ---
WELL CASING DIAMETER (in): --- BOREHOLE DIAMETER (in): 3.25
LOGGED BY: B Rorie CHECKED BY: G. Haeck

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Borehole Backfill
		ML	**SILT**; ML; silty coke		945 GP-1-1'			0		
			SILT WITH CLAY; 10YR 2/1 black; low plasticity; soft; wet; no odor; stained by coke (0, 10, 90)							
		CL	**SILTY CLAY**; CL; 10YR 5/3 brown; medium plasticity; stiff; moist; no odor; slight staining (0, 5, 95)							
5					1045 GP-1-6'			0	5	
										Grout
10					1050 GP-1-10'			0	10	
		SM	**SILTY SAND**; SM; 10YR 5/3 brown; fine to medium-grained; loose; wet; no odor; (0, 80, 20)							
			Grab groundwater sample 13 to 15 feet bgs		1105 GP-1WS					
15			Hole terminated at 15 feet.		1100 GP-1-15'			0	15	

GEO FORM 304 TESORO PITTSBURG.GPJ SECOR INTL.GDT 4/24/08

PROJECT:	Tesoro Pittsburg	WELL / PROBEHOLE / BOREHOLE NO:	SECOR
LOCATION:	Pittsburg, CA	**GP-3** PAGE 1 OF 1	
PROJECT NUMBER:	77OT.43877.00		
DRILLING: STARTED 2/29/08	COMPLETED: 2/29/08	NORTHING (ft):	EASTING (ft):
		LATITUDE:	LONGITUDE:
DRILLING COMPANY:	WDC	GROUND ELEV (ft):	TOC ELEV (ft):
DRILLING EQUIPMENT:	GEOPROBE	1st WATER DTW ft): 16 2/29/08	BOREHOLE DEPTH (ft): 30.0
DRILLING METHOD:	Direct Push	2nd WATER DTW (ft): 30 2/29/08	WELL DEPTH (ft): ---
SAMPLING EQUIPMENT:	Clear PVC	WELL CASING DIAMETER (in): ---	BOREHOLE DIAMETER (in): 3.25
		LOGGED BY: B Rorie	CHECKED BY: G. Haeck

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Borehole Backfill
			Top 6" asphalt							
		GM	**SILTY GRAVEL**; GM; fill material							
		CL	**SILTY CLAY**; CL; 10YR 2/1 black; medium plasticity; stiff; moist; no odor; stained throughout (5, 5, 90)		1015 GP-3-1'			0		
5			10YR 3/3 dark brown; soft; dry; (0, 5, 95) same as above		1045 GP-3-6'			0	5	
10		SM	**SILTY SAND**; SM; 10YR 4/3 brown; fine to medium-grained; soft; wet; no odor; no staining; (0, 70, 30)		1050 GP-3-10'			0	10	
		ML	**SILT WITH CLAY SOME SAND**; ML; 10YR 4/3 brown; low plasticity; stiff; moist; no odor; (0, 15, 85)							
15		CL	**SILTY CLAY**; CL; 10YR 4/3 yellow brown; medium plasticity; stiff; dry; (0, 5, 95)		1055 GP-3-15'			0	15	Grout
		SM	**SILTY SAND**; SM; 10YR 3/6 yellow brown; medium-grained; low plasticity; wet; (0, 65, 35)							
			Grab groundwater sample, 15 to 20 feet bgs		1215 GP-3WS					
20					1115 GP-3-20'			0	20	
		CL	**SILTY CLAY**; CL; 10YR 3/6 yellow brown; medium plasticity; stiff; moist; (0, 5, 95)							
25					1245 GP-3-25'			0	25	
			Same as above with little sand (0, 10, 90), grab groundwater sample, 25-30 feet bgs		1300 GP-3WD					
30			Hole terminated at 30.01 feet.		1300 GP-3-30'			0	30	

GEO FORM 304 TESORO PITTSBURG.GPJ SECOR INTL.GDT 4/24/08

PROJECT:	Tesoro Pittsburg	WELL / PROBEHOLE / BOREHOLE NO:	
LOCATION:	Pittsburg, CA	**GP-4** PAGE 1 OF 1	SECOR
PROJECT NUMBER:	77OT.43877.00		
DRILLING: STARTED 2/28/08	COMPLETED: 2/28/08	NORTHING (ft):	EASTING (ft):
		LATITUDE:	LONGITUDE:
DRILLING COMPANY:	WDC	GROUND ELEV (ft):	TOC ELEV (ft):
DRILLING EQUIPMENT:	GEOPROBE	1st WATER DTW ft): 10.5 2/28/08	BOREHOLE DEPTH (ft): 15.0
DRILLING METHOD:	Direct Push	2nd WATER DTW (ft):	WELL DEPTH (ft): ---
SAMPLING EQUIPMENT:	Clear PVC	WELL CASING DIAMETER (in): ---	BOREHOLE DIAMETER (in): 3.25
		LOGGED BY: B Rorie	CHECKED BY: G. Haeck

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Borehole Backfill
			Top 1' concrete							
		CL	**SILTY CLAY**; CL; 2.5 Y 5/2 gray brown; medium plasticity; stiff; moist; no odor; slight staining (5, 5, 90)		1035 GP-4-1'			0		
5									5	
					1210 GP-4-6'			0		
			10YR 5/1 yellow brown; same as above							Grout
10		SM	**SILTY SAND**; SM; 10YR 4/3 brown; medium-grained; low plasticity; very loose; wet; no odor; (0, 85, 15)		1215 GP-4-10'			0	10	
			Grab groundwater sample 13 to 15 feet bgs		1240 GP-4WS					
15			Hole terminated at 15 feet.		1225 GP-4-15'			0	15	

GEO FORM 304 TESORO PITTSBURG.GPJ SECOR INTL.GDT 4/24/08

PROJECT: Tesoro Pittsburg
LOCATION: Pittsburg, CA
PROJECT NUMBER: 77OT.43877.00

WELL / PROBEHOLE / BOREHOLE NO: **GP-5** PAGE 1 OF 1

SECOR

DRILLING: STARTED 2/28/08 COMPLETED: 2/28/08

DRILLING COMPANY: WDC
DRILLING EQUIPMENT: GEOPROBE
DRILLING METHOD: Direct Push
SAMPLING EQUIPMENT: Clear PVC

NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
1st WATER DTW ft): 13.5 2/28/08 BOREHOLE DEPTH (ft): 15.0
2nd WATER DTW (ft): WELL DEPTH (ft): ---
WELL CASING DIAMETER (in): --- BOREHOLE DIAMETER (in): 3.25
LOGGED BY: B Rorie CHECKED BY: G. Haeck

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Borehole Backfill
			Top 6" asphalt							
		GM	**SILTY GRAVEL WITH SAND**; GM; dark gray; fill material							
		ML	**SILT WITH CLAY**; ML; 10YR 3/3 dark brown; low plasticity; stiff; dry; no odor; Black staining (5, 5, 90)		1400 GP-5-1'			0		
			10YR 2/1 black; same as above							
5					1420 GP-5-6'			0	5	Grout
			10YR 4/1 dark gray; soft; moist; little sand (0, 10, 90), same as above							
10					1425 GP-5-10'			0	10	
			SANDY SILT SOME CLAY; 10YR 4/2 dark gray brown; low plasticity; soft; wet; no odor; no staining; (0, 30, 70)							
		SM	**SILTY SAND LITTLE CLAY**; SM; 10YR 4/3 brown; medium-grained; loose; wet; no odor; no staining; (0, 60, 40), grab groundwater sample 13 to 15 feet bgs		1445 GP-5WS					
		ML	**SANDY SILT WITH CLAY**; ML; 10YR 4/3 brown; low plasticity; stiff; moist; no odor; (0, 25, 75)							
15			Hole terminated at 15 feet.		1435 GP-5-15'			0	15	

GEO FORM 304 TESORO PITTSBURG.GPJ SECOR INTL.GDT 4/24/08

PROJECT: Tesoro Pittsburg
LOCATION: Pittsburg, CA
PROJECT NUMBER: 77OT.43877.00

WELL / PROBEHOLE / BOREHOLE NO: **GP-6** PAGE 1 OF 1

SECOR

DRILLING: STARTED 2/29/08 COMPLETED: 2/29/08

DRILLING COMPANY: WDC
DRILLING EQUIPMENT: GEOPROBE
DRILLING METHOD: Direct Push
SAMPLING EQUIPMENT: Clear PVC

NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
1st WATER DTW ft): 11.5 2/29/08 BOREHOLE DEPTH (ft): 15.0
2nd WATER DTW (ft): WELL DEPTH (ft): ---
WELL CASING DIAMETER (in): --- BOREHOLE DIAMETER (in): 3.25
LOGGED BY: B Rorie CHECKED BY: G. Haeck

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Borehole Backfill
			Top 6" asphalt							
		GM	**SILTY GRAVEL**; GM; gray; fill							
		ML	**CLAYEY SILT**; ML; 10YR 2/1 black; medium plasticity; stiff; dry; no odor; staining (5, 5, 90)		815 GP-6-1'			0		
5			10YR 5/3 brown; same as above						5	
			SANDY SILT SOME CLAY; 10YR 4/3 yellow brown; low plasticity; moist; no staining; (5, 25, 70)		935 GP-6-6'			0		
		SM	**SILTY SAND**; SM; 10YR 5/4 yellow brown; fine to medium-grained; loose; wet; (0, 60, 40)							Grout
10		ML	**SANDY SILT**; ML; 10YR 5/4 yellow brown; low plasticity; soft; moist; (0, 40, 60)		945 GP-6-10'			0	10	
		SM	**SILTY SAND TRACE GRAVEL**; SM; 10YR 4/3 yellow brown; fine to medium-grained; very loose; wet; poorly graded; (5, 65, 30), grab groundwater sample 12 to 15 feet bgs		955 GP-6WS					
15			Hole terminated at 15 feet.		950 GP-6-15'			0	15	

GEO FORM 304 TESORO PITTSBURG.GPJ SECOR INTL.GDT 4/24/08

PROJECT:	Tesoro Pittsburg	WELL / PROBEHOLE / BOREHOLE NO:	SECOR
LOCATION:	Pittsburg, CA	**GP-7** PAGE 1 OF 1	
PROJECT NUMBER:	77OT.43877.00		
DRILLING: STARTED 2/26/08	COMPLETED: 2/26/08	NORTHING (ft):	EASTING (ft):
		LATITUDE:	LONGITUDE:
DRILLING COMPANY:	WDC	GROUND ELEV (ft):	TOC ELEV (ft):
DRILLING EQUIPMENT:	GEOPROBE	1st WATER DTW ft): 13 2/26/08	BOREHOLE DEPTH (ft): 30.0
DRILLING METHOD:	Direct Push	2nd WATER DTW (ft): 30 2/26/08	WELL DEPTH (ft): ---
SAMPLING EQUIPMENT:	Clear PVC	WELL CASING DIAMETER (in): ---	BOREHOLE DIAMETER (in): 3.25
		LOGGED BY: B Rorie	CHECKED BY: G. Haeck

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Borehole Backfill
			Top 6" asphalt							
		GM	**SILTY GRAVEL**; GM; dark gray; fill							
		ML	**CLAYEY SILT**; ML; 10YR 3/3 dark brown; low plasticity; stiff; dry; no odor; no staining; (10, 5, 85)		1030 GP-7-1'			0		
5		CL	**SILTY CLAY**; CL; 10YR 5/4 yellow brown; medium plasticity; stiff; moist; no odor; no staining; (0, 10, 90)		1420 GP-7-6'			0	5	
			Same as above with 15% sand							
10					1425 GP-7-10'			0	10	
		ML	**SILT WITH SAND**; ML; 10YR 3/3 yellow brown; low plasticity; soft; wet; no odor; no staining; (0, 20, 80)		1430 GP-7-15'			0	15	Grout
			SANDY SILT WITH CLAY; 7.5 YR 5/6 dark brown; soft; grab groundwater sample 16-20 feet bgs		1440 GP-7 WS					
20					1435 GP-7-20'			0	20	
		CL	**CLAY WITH SILT**; CL; 10YR 3/3 yellow brown; medium plasticity; stiff; moist; (0, 5, 95)							
25					1610 GP-7-25'			0	25	
			Grab groundwater sample 25 to 30 feet bgs		1620 GP-7WD					
		ML	**SANDY SILT**; ML; 10YR 3/3 yellow brown; non plastic; soft; wet; (0, 25, 75)							
30			Hole terminated at 30 feet.		1615 GP-7-30'			0	30	

GEO FORM 304 TESORO PITTSBURG.GPJ SECOR INTL.GDT 4/24/08

PROJECT: Tesoro Pittsburg
LOCATION: Pittsburg, CA
PROJECT NUMBER: 77OT.43877.00

WELL / PROBEHOLE / BOREHOLE NO: **GP-8** PAGE 1 OF 1

SECOR

DRILLING: STARTED 2/26/08 COMPLETED: 2/27/08

DRILLING COMPANY: WDC
DRILLING EQUIPMENT: GEOPROBE
DRILLING METHOD: Direct Push
SAMPLING EQUIPMENT: Clear PVC

NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
1st WATER DTW ft): 13.5 2/26/08 BOREHOLE DEPTH (ft): 15.0
2nd WATER DTW (ft): WELL DEPTH (ft): ---
WELL CASING DIAMETER (in): --- BOREHOLE DIAMETER (in): 3.25
LOGGED BY: B Rorie CHECKED BY: G. Haeck

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Borehole Backfill
			Top 6" asphalt							
		GM	**SILTY GRAVEL**; GM; fill material							
		CL	**SILTY CLAY**; CL; 10YR 3/3 dark brown; medium plasticity; stiff; moist; no odor; slight staining (10, 5, 85)		1400 GP-8-1'			0		
5			Same as above, no gravel, (0, 5, 95)		1410 GP-8-5'			0	5	Grout
10			10YR 5/4 yellow brown; same as above		740 GP-8-10'			0	10	
		ML	Grab groundwater sample 11 to 15 feet bgs **SANDY SILT**; ML; 10YR 5/4 yellow brown; non plastic; soft; wet; no odor; no staining; (0, 40, 60)		810 GP-8WS					
15			Hole terminated at 15 feet.		750 GP-8-15'			0	15	

GEO FORM 304 TESORO PITTSBURG.GPJ SECOR INTL.GDT 4/24/08

PROJECT: Tesoro Pittsburg
LOCATION: Pittsburg, CA
PROJECT NUMBER: 77OT.43877.00

WELL / PROBEHOLE / BOREHOLE NO: **GP-9** PAGE 1 OF 1

SECOR

DRILLING: STARTED 2/26/08 COMPLETED: 2/26/08

DRILLING COMPANY: WDC
DRILLING EQUIPMENT: GEOPROBE
DRILLING METHOD: Direct Push
SAMPLING EQUIPMENT: Clear PVC

NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
1st WATER DTW ft): 13 2/26/08 BOREHOLE DEPTH (ft): 15.0
2nd WATER DTW (ft): WELL DEPTH (ft): ---
WELL CASING DIAMETER (in): --- BOREHOLE DIAMETER (in): 3.25
LOGGED BY: B Rorie CHECKED BY: G. Haeck

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Borehole Backfill
			Top 6" asphalt							
		ML	**SILT**; ML; poor recovery, saturated non-cohesive		1230 GP-9-1'			0		
		CL	**SILTY CLAY**; CL; 10YR 3/3 dark brown; medium plasticity; stiff; moist; no odor; slight staining (5, 5, 90)							
5		ML	**SANDY SILT SOME CLAY**; ML; 10YR 4/1 dark gray; low plasticity; very soft; wet; no odor; staining throughout (0, 35, 65)		1300 GP-9-5'			0	5	
		CL	**SILTY CLAY**; CL; 10YR 3/3 dark gray; medium plasticity; stiff; moist; no odor; Some staining (0, 10, 90)							Grout
10					1320 GP-9-10'			0	10	
		SM	**SILTY SAND**; SM; 10YR 5/8 yellow brown; medium-grained; low plasticity; very loose; wet; no odor; poorly graded; (0, 80, 20) grab groundwater sample 11 to 15 feet bgs		1345 GP-9-WS					
15			Hole terminated at 15 feet.		1325 GP-9-15'			0	15	

GEO FORM 304 TESORO PITTSBURG.GPJ SECOR INTL.GDT 4/24/08

PROJECT: Tesoro Pittsburg
LOCATION: Pittsburg, CA
PROJECT NUMBER: 77OT.43877.00

WELL / PROBEHOLE / BOREHOLE NO: **GP-10** PAGE 1 OF 1

SECOR

DRILLING: STARTED 2/29/08 COMPLETED: 2/29/08

DRILLING COMPANY: WDC
DRILLING EQUIPMENT: GEOPROBE
DRILLING METHOD: Direct Push
SAMPLING EQUIPMENT: Clear PVC

NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
1st WATER DTW ft): 5.5 2/29/08 BOREHOLE DEPTH (ft): 20.0
2nd WATER DTW (ft): WELL DEPTH (ft): ---
WELL CASING DIAMETER (in): --- BOREHOLE DIAMETER (in): 3.25
LOGGED BY: B Rorie CHECKED BY: G. Haeck

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Borehole Backfill
			Top 6" asphalt							
		GM	**SILTY GRAVEL**; GM; fill							
		GW	**SANDY GRAVEL**; GW; gray; dry; angular gravel (85, 15, 0)		740 GP-10-2'			0		
		ML	**SILT WITH SAND SOME GRAVEL**; ML; 10YR 2/1 black; low plasticity; soft; dry; some clay (15, 20, 65)							
5			No recovery too much water from 5' to 10'						5	
10			No recovery from 10' to 15', all water and gravel, water is dark gray, possible subsurface void near rip-rap fill along shore						10	Grout
15			No recorvery from 15' - 17.5' all water						15	
		CL	**CLAY**; CL; 10 YR 3/1 very dark gray; low plasticity; very soft; saturated; slight odor staining throughout, presence of organic material, trace of gravel, angular (5, 0, 95), grab groundwater sample 17 to 20 feet bgs		820 GP-10WS					
20			Hole terminated at 20 feet.		835 GP-10-20'			0	20	

GEO FORM 304 TESORO PITTSBURG.GPJ SECOR INTL.GDT 4/24/08

PROJECT:	Tesoro Pittsburg
LOCATION:	Pittsburg, CA
PROJECT NUMBER:	77OT.43877.00
DRILLING:	STARTED 2/26/08 COMPLETED: 2/26/08
DRILLING COMPANY:	WDC
DRILLING EQUIPMENT:	GEOPROBE
DRILLING METHOD:	Direct Push
SAMPLING EQUIPMENT:	Clear PVC

WELL / PROBEHOLE / BOREHOLE NO: **GP-11** PAGE 1 OF 1

SECOR

NORTHING (ft):	EASTING (ft):
LATITUDE:	LONGITUDE:
GROUND ELEV (ft):	TOC ELEV (ft):
1st WATER DTW ft): 14.50 2/26/08	BOREHOLE DEPTH (ft): 20.0
2nd WATER DTW (ft):	WELL DEPTH (ft): ---
WELL CASING DIAMETER (in): ---	BOREHOLE DIAMETER (in): 3.25
LOGGED BY: B Rorie	CHECKED BY: G. Haeck

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Borehole Backfill
		GM	**SILTY GRAVEL WITH SAND**; GM; fill material							
		ML	**CLAYEY SILT WITH GRAVEL**; ML; 10YR 3/2 dark brown; medium plasticity; stiff; dry; no odor; slight staining looks like fill material due to angularity of gravel (20, 10, 70)		900 GP-11-1'			0		
5			No recovery from 5-10 feet bgs, very saturated silty sand on core barrel.						5	
10		ML	**SILT WITH CLAY**; ML; 10YR 3/1 very dark gray; medium plasticity; stiff; dry; no odor; staining throughout, presence of roots (0, 5, 95)		1110 GP-11-10'			0	10	Grout
			SANDY SILT WITH CLAY; 10YR 5/3 brown; soft; moist; (0, 25, 75)						▽	
15					1115 GP-11-15'			0	15	
		CL	**SILTY CLAY TRACE SAND**; CL; 10YR 5/1 gray; medium plasticity; soft; moist; no odor; (0, 10, 90)							
		SM	**SILTY SAND**; SM; 10YR 4/1 dark gray; fine to medium-grained; low plasticity; loose; saturated; no odor; no staining; (0, 75, 25), grab groundwater sample 15 to 20 feet bgs		1145 GP-11WS					
20			Hole terminated at 20.01 feet.		1125 GP-11-20'			0	20	

GEO FORM 304 TESORO PITTSBURG.GPJ SECOR INTL.GDT 4/24/08

PROJECT: Tesoro Pittsburg
LOCATION: Pittsburg, CA
PROJECT NUMBER: 77OT.43877.00

WELL / PROBEHOLE / BOREHOLE NO: **GP-12** PAGE 1 OF 1

SECOR

DRILLING: STARTED 2/25/08 COMPLETED: 2/25/08

DRILLING COMPANY: WDC
DRILLING EQUIPMENT: GEOPROBE
DRILLING METHOD: Direct Push
SAMPLING EQUIPMENT: Clear PVC

NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
1st WATER DTW ft): 13.5 2/25/08 BOREHOLE DEPTH (ft): 30.0
2nd WATER DTW (ft): 30 2/25/08 WELL DEPTH (ft): ---
WELL CASING DIAMETER (in): --- BOREHOLE DIAMETER (in): 3.25
LOGGED BY: B Rorie CHECKED BY: G. Haeck

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Borehole Backfill
			Top 6" asphalt							
		GM	**SILTY GRAVEL**; GM							
		ML	**CLAYEY SILT**; ML; 10YR 3/3 dark brown; low plasticity; soft; wet; no odor; slight staining (10, 10, 80)		1010 GP-12-1'			0		
			SILT WITH SAND AND GRAVEL; GLEY1 3/0 black; low plasticity; loose; wet; strong HC odor; stained throughout (5, 30, 65)		1030 GP-12-6'			0		
5		CL	**LEAN CLAY**; CL; GLEY1 2/5 black; medium plasticity; stiff; moist; strong HC odor; stained throughout, presence of roots calcium carbonate (0, 5, 95)						5	
			GLEY2 5/1 greenish gray; same as above							
10					1030 GP-12-10'			0	10	
		ML	**SILT WITH SAND**; ML; GLEY2 4/1 dark blueish gray; low plasticity; soft; wet; slight HC odor; some staining (0, 20, 80)							
					1140 GP-12WS				▽	
		SM	**SILTY SAND**; SM; 2.5Y 4/4 olive brown; fine to medium-grained; loose; wet; no odor; no staining; (0, 75, 25), grab groundwater sample 11 to 15 feet bgs							
15			Very loose; (0, 90, 10), same as above		1130 GP-12-15'			0	15	← Grout
20		CL	**SILTY CLAY**; CL; 2.5Y 5/6 light olive brown; medium plasticity; stiff; dry; no odor; no staining; calcium carbonate (0, 5, 95)		1215 GP-12-20'			0	20	
25		SM	**SILTY SAND TRACE GRAVEL**; SM; 2.5 Y 4/3 olive brown; fine to medium-grained; low plasticity; loose; saturated; no odor; no staining; well graded; (5, 75, 20)		1230 GP-12-25'			0	25	
			Grab groundwater sample 27 to 30 feet bgs		1245 GP-12WD					
		ML	**SANDY SILT WITH CLAY**; ML; 2.5Y 4/3 olive brown; low plasticity; soft; moist; (5, 40, 55)							
30			Hole terminated at 30 feet.		1245 GP-12-30'			0	▼ 30	

GEO FORM 304 TESORO PITTSBURG.GPJ SECOR INTL.GDT 4/24/08

PROJECT: Tesoro Pittsburg
LOCATION: Pittsburg, CA
PROJECT NUMBER: 77OT.43877.00

WELL / PROBEHOLE / BOREHOLE NO: **GP-13** PAGE 1 OF 1

SECOR

DRILLING: STARTED 2/25/08 COMPLETED: 2/25/08

DRILLING COMPANY: WDC
DRILLING EQUIPMENT: GEOPROBE
DRILLING METHOD: Direct Push
SAMPLING EQUIPMENT: Clear PVC

NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
1st WATER DTW (ft): 10 2/25/08 BOREHOLE DEPTH (ft): 30.0
2nd WATER DTW (ft): 30 2/25/08 WELL DEPTH (ft): ---
WELL CASING DIAMETER (in): --- BOREHOLE DIAMETER (in): 3.25
LOGGED BY: B Rorie CHECKED BY: G. Haeck

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Borehole Backfill
		GM	**SILTY GRAVEL**; GM; over asphatic road material							
		ML	**CLAYEY SILT**; ML; 7.5 Y 3/4 dark brown; medium plasticity; stiff; dry; no odor; slight staining and presence of roots (5,10,85)		1400 GP-13-1'			0		
5			Same as above, sample actually collected at 4.5 to 5.0 feet bgs		1420 GP-13-6'				5	
			No recovery from 5'-10' driller did not insert liner, soil at 5' end of sampler appeared silty. Soil at 10' end appeared sandy							
10		SM	**SILTY SAND**; SM; 10YR 5/4 yellow brown; fine to medium-grained; loose; wet; no odor; no staining; (0, 80, 20) grab groundwater sample 10 to 15 feet bgs		1430 GP-13-10'				10	
					1500 GP-13WS					
		ML	**SILT WITH SAND**; ML; 10YR 5/4 yellow brown; low plasticity; soft; wet; no odor; no staining; (0, 45, 55)							
15		SW	**SAND**; SW; 10YR 5/4 brown yellow; medium-grained; very loose; wet; no odor; (0, 95, 5)		1440 GP-13-15'				15	Grout
		CL	**SILTY CLAY**; CL; 10YR 6/6 brown yellow; medium plasticity; stiff; moist; no odor; presence of calcium carbonate (0, 5, 95)							
20					1540 GP-13-20'				20	
		ML	**SILTY CLAY WITH SAND**; same as above (0, 15, 85)		1545 GP-13-25'				25	
25			**SILT WITH CLAY**; ML; 10YR 6/6 brown yellow; medium plasticity; stiff; wet; no odor							
			Grab groundwater sample 25 to 30 feet bgs		1535 GP-13WD					
30			Hole terminated at 30 feet.		1550 GP-13-30'			0	30	

GEO FORM 304 TESORO PITTSBURG.GPJ SECOR INTL.GDT 4/24/08

PROJECT: Tesoro Pittsburg	WELL / PROBEHOLE / BOREHOLE NO: **GP-14** PAGE 1 OF 1
LOCATION: Pittsburg, CA	SECOR
PROJECT NUMBER: 77OT.43877.00	
DRILLING: STARTED 2/28/08 COMPLETED: 2/28/08	NORTHING (ft): EASTING (ft):
	LATITUDE: LONGITUDE:
DRILLING COMPANY: WDC	GROUND ELEV (ft): TOC ELEV (ft):
DRILLING EQUIPMENT: GEOPROBE	1st WATER DTW ft): 12.5 2/28/08 BOREHOLE DEPTH (ft): 15.0
DRILLING METHOD: Direct Push	2nd WATER DTW (ft): WELL DEPTH (ft): ---
SAMPLING EQUIPMENT: Clear PVC	WELL CASING DIAMETER (in): --- BOREHOLE DIAMETER (in): 3.25
	LOGGED BY: B Rorie CHECKED BY: G. Haeck

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Borehole Backfill
		GM	**SILTY GRAVEL**; GM; with sand top 6"							
			Silty gravel with sand, fill material							
		CL	**SILTY CLAY**; CL; 10YR 3/1 very dark gray; medium plasticity; stiff; dry; no odor; stained by coke throughout, some gravel (10, 5, 85)		0840 GP-14-1'			0		
5			10YR 5/3 brown; slight staining (0, 5, 95), same as above						5	
					0910 GP-14-6'			0		
			Same as above, moist							Grout
10					0915 GP-14-10'			0	10	
		SM	**SILTY SAND**; SM; 10YR 5/3 brown; fine-grained; loose; wet; no odor; (0, 60, 40)							
			Grab groundwater sample 13 to 15 feet bgs		940 GP-14WS					
15			Hole terminated at 15 feet.		0920 GP-14-15'			0	15	

GEO FORM 304 TESORO PITTSBURG.GPJ SECOR INTL.GDT 4/24/08

PROJECT: Tesoro Pittsburg
LOCATION: Pittsburg, CA
PROJECT NUMBER: 77OT.43877.00

WELL / PROBEHOLE / BOREHOLE NO: **GP-15** PAGE 1 OF 1

SECOR

DRILLING: STARTED 2/27/08 COMPLETED: 2/27/08

DRILLING COMPANY: WDC
DRILLING EQUIPMENT: GEOPROBE
DRILLING METHOD: Direct Push
SAMPLING EQUIPMENT: Clear PVC

NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
1st WATER DTW ft): 13 2/27/08 BOREHOLE DEPTH (ft): 35.0
2nd WATER DTW (ft): 30 2/27/08 WELL DEPTH (ft): ---
WELL CASING DIAMETER (in): --- BOREHOLE DIAMETER (in): 3.25
LOGGED BY: B Rorie CHECKED BY: G. Haeck

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Borehole Backfill
		GM	**SILTY GRAVEL**; GM; fill							
			Same as above, presence of coke							
		ML	**CLAYEY SILT**; ML; 10YR 5/8 yellow brown; medium plasticity; stiff; moist; no odor; trace of gravel, angular, stained with coke (5, 5, 90)		915 GP-15-1'			0		
			Same as above, no more coke present							
5					925 GP-15-6'			0	5	
10			Same as above		930 GP-15-10'			0	10	
			Grab groundwater sample 11 to 15 feet bgs		1015 GP-15WS					
		SM	**SILTY SAND**; SM; 10YR 5/6 yellow brown; fine-grained; loose; wet; no odor; no staining; (0, 60, 40)							
15			**SAND SOME SILT**; medium-grained; wet; (0, 70, 30)		940 GP-15-15'			0	15	
		ML	**SANDY SILT**; ML; 10YR 5/6 yellow brown; fine-grained; low plasticity; very soft; wet; no odor; no staining; (0, 40, 60)							Grout
20		SM	**SILTY SAND**; SM; 10YR 4/3 brown; low plasticity; very loose; wet; trace of gravel, (5, 75, 20)		1040 GP-15-20'			0	20	
		CL	**SILTY CLAY**; CL; 10YR 5/6 yellow brown; high plasticity; stiff; moist; no odor; no staining; (0, 10, 90)							
25					1045 GP-15-25'			0	25	
30		SM	**SILTY SAND**; SM; 10YR 3/3 dark brown; medium-grained; low plasticity; very loose; wet; no odor; no staining; large amount of mica present, (0, 90, 10) grab groundwater sample 30 to 35 feet bgs		1100 GP-15-30'			0	30	
					1130 GP-15WD					
35			Same as above		1125 GP-15-35'			0	35	
			Hole terminated at 35 feet.							

GEO FORM 304 TESORO PITTSBURG.GPJ SECOR INTL.GDT 4/24/08

PROJECT: Tesoro Pittsburg
LOCATION: Pittsburg, CA
PROJECT NUMBER: 77OT.43877.00

WELL / PROBEHOLE / BOREHOLE NO: **GP-16 GP-16B** PAGE 1 OF 1

SECOR

DRILLING: STARTED 2/27/08 COMPLETED: 2/27/08

DRILLING COMPANY: WDC
DRILLING EQUIPMENT: GEOPROBE
DRILLING METHOD: Direct Push
SAMPLING EQUIPMENT: Clear PVC

NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
1st WATER DTW ft): 16.5 2/27/08 BOREHOLE DEPTH (ft): 20.0
2nd WATER DTW (ft): WELL DEPTH (ft): ---
WELL CASING DIAMETER (in): --- BOREHOLE DIAMETER (in): 3.25
LOGGED BY: B Rorie CHECKED BY: G. Haeck

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Borehole Backfill
		ML	**SILT**; ML; 10YR 3/1 very dark gray; moist; from boring GP-16B, silty coke		1349 GP-16B-0			0		
		GM	**GRAVEL**; GM; gray; fine-grained; moist; angular gravel, fill, from boring GP-16							
			Same as above with trace of fines							
5					1350 GP-16-6'			0	5	
		ML	**SILT WITH CLAY**; ML; 10YR 2/1 black; medium plasticity; stiff; moist; no odor; stained throughout (0, 5, 95)		1355 GP-16-7'			0		
10		CL	**SILTY CLAY**; CL; 10YR 5/3 yellow brown; medium plasticity; stiff; dry; no odor; no staining; (0, 5, 95)		1400 GP-16-10'			0	10	Grout
15					1415 GP-16-15'			0	15	
		ML	**SILT WITH CLAY**; ML; 10YR 4/3 brown; low plasticity; soft; wet; no odor; no staining; (0, 35, 65)							
			Grab groundwater sample 16 to 20 feet bgs		1440 GP-16WS					
20			Hole terminated at 20 feet.		1420 GP-16-20'			0	20	

GEO FORM 304 TESORO PITTSBURG.GPJ SECOR INTL.GDT 4/24/08

PROJECT:	Tesoro Pittsburg	WELL / PROBEHOLE / BOREHOLE NO:	**GP-17** PAGE 1 OF 1
LOCATION:	Pittsburg, CA		SECOR
PROJECT NUMBER:	77OT.43877.00		
DRILLING: STARTED	2/27/08 COMPLETED: 2/27/08	NORTHING (ft):	EASTING (ft):
		LATITUDE:	LONGITUDE:
DRILLING COMPANY:	WDC	GROUND ELEV (ft):	TOC ELEV (ft):
DRILLING EQUIPMENT:	GEOPROBE	1st WATER DTW ft): 11 2/27/08	BOREHOLE DEPTH (ft): 15.0
DRILLING METHOD:	Direct Push	2nd WATER DTW (ft):	WELL DEPTH (ft): ---
SAMPLING EQUIPMENT:	Clear PVC	WELL CASING DIAMETER (in): ---	BOREHOLE DIAMETER (in): 3.25
		LOGGED BY: B Rorie	CHECKED BY: G. Haeck

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Borehole Backfill
		GM	**SILTY GRAVEL**; GM; gray; probable fill							
		CL	**SILTY CLAY**; CL; 10YR 5/3 brown; low plasticity; stiff; dry; no odor; some staining (5, 5, 90)		1450 GP-17-1'			0		
5			Same as above with some sand (0, 10, 90)		1530 GP-17-6'			0	5	Grout
10		SM	**SILTY SAND**; SM; 10YR 5/3 brown; medium-grained; very loose; wet; no odor; no staining; (0, 70, 30)		1535 GP-17-10'			0	10	
			Grab groundwater sample 11 to 15 feet bgs		1555 GP-17WS					
		ML	**SILT WITH SAND AND CLAY**; ML; 10YR 5/3 brown; low plasticity; stiff; moist; no odor; no staining; (0, 20, 80)							
15			Hole terminated at 15 feet.		1540 GP-17-15'			0	15	

GEO FORM 304 TESORO PITTSBURG.GPJ SECOR INTL.GDT 4/24/08

PROJECT: Tesoro Pittsburg
LOCATION: Pittsburg, CA
PROJECT NUMBER: 77OT.43877.00

WELL / PROBEHOLE / BOREHOLE NO: **GP-19** PAGE 1 OF 1

SECOR

DRILLING: STARTED 2/28/08 COMPLETED: 2/28/08

DRILLING COMPANY: WDC
DRILLING EQUIPMENT: GEOPROBE
DRILLING METHOD: Direct Push
SAMPLING EQUIPMENT: Clear PVC

NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
1st WATER DTW ft): 12.5 2/27/08 BOREHOLE DEPTH (ft): 15.0
2nd WATER DTW (ft): WELL DEPTH (ft): ---
WELL CASING DIAMETER (in): --- BOREHOLE DIAMETER (in): 3.25
LOGGED BY: B Rorie CHECKED BY: G. Haeck

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Borehole Backfill
		GM	**SILTY GRAVEL**; GM; gray; fill							
		ML	**SILT WITH CLAY**; ML; 10YR 5/3 brown; low plasticity; stiff; dry; no odor; staining from coke (10, 5, 85)		1500 GP-19-1'			0		
5		CL	**SILTY CLAY**; CL; 10YR 5/3 brown; medium plasticity; stiff; dry; no odor; no staining; (0, 5, 95)		745 GP-19-6'			0	5	Grout
		ML	**SILTY CLAY SOME SAND**; ML; 10YR 5/3 brown; medium plasticity; stiff; moist; no odor; (0, 15, 85)		750 GP-19-10'			0		
10		SM	**SILTY SAND**; SM; 10YR 5/3 brown; fine to medium-grained; very loose; wet; no odor; (0, 75, 25),						10	
			Grab groundwater sample 13 to 15 feet bgs		800 GP-19WS					
15			Hole terminated at 15 feet.		755 GP-19-15'			0	15	

GEO FORM 304 TESORO PITTSBURG.GPJ SECOR INTL.GDT 4/24/08

PROJECT: Tesoro Pittsburg
LOCATION: Pittsburg, CA
PROJECT NUMBER: 77OT.43877.00

WELL / PROBEHOLE / BOREHOLE NO: **GP-20** PAGE 1 OF 1

SECOR

DRILLING: STARTED 2/28/08 COMPLETED: 2/28/08

DRILLING COMPANY: WDC
DRILLING EQUIPMENT: GEOPROBE
DRILLING METHOD: Direct Push
SAMPLING EQUIPMENT: Clear PVC

NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
1st WATER DTW ft): 11.5 2/28/08 BOREHOLE DEPTH (ft): 15.0
2nd WATER DTW (ft): WELL DEPTH (ft): ---
WELL CASING DIAMETER (in): --- BOREHOLE DIAMETER (in): 3.25
LOGGED BY: B Rorie CHECKED BY: G. Haeck

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Borehole Backfill
			Top 8" asphalt							
		GM	**SILTY GRAVEL WITH SAND**; GM; gravelly fill							
			Brick layer from 2' to 3.5'							
		GM	**SILTY GRAVEL WITH SAND**; GM; gravelly fill							
		ML	**SILT WITH CLAY AND GRAVEL**; ML; 10YR 2/1 black; medium plasticity; stiff; wet; no odor; staining throughout (15, 10, 75)		1520 GP-20-4'			0		
5					1530 GP-20-6'			0	5	
		CL	**CLAY WITH SILT**; CL; 10YR 4/2 dark grayish brown; medium plasticity; stiff; moist; no odor; trace of gravel (5, 10, 85)							Grout
10					1535 GP-20-10'			0	10	
		ML	**SILT WITH CLAY**; ML; 10YR 4/3 brown; fine-grained; medium plasticity; soft; wet; no odor; no staining; some sand (0, 15, 85)							
			Grab groundwater sample 12 to 15 feet bgs		1600 GP-20WS					
15			Hole terminated at 15 feet.		1545 GP-20-15'			0	15	

GEO FORM 304 TESORO PITTSBURG.GPJ SECOR INTL.GDT 4/24/08

APPENDIX D
LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION

Limited Phase II Site Investigation
Tesoro Pittsburg Terminal
595 East Third Street
Pittsburg, CA
77OT.43877.00.0005
April 24, 2008

KIFF Analytical LLC

Report Number : 61241
Date : 3/14/2008

Todd Brown
SECOR International, Inc.
3017 Kilgore Road, Suite 100
Rancho Cordova, CA 95670

Subject : 3 Soil Samples and 3 Water Samples
Project Name : Tesoro Pittsburg Terminal Phase II
Project Number : 77OT.43877.00

Dear Mr. Brown,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,



Joel Kiff

KIFF Analytical LLC

Report Number : 61241
Date : 3/14/2008

Subject : 3 Soil Samples and 3 Water Samples
Project Name : Tesoro Pittsburg Terminal Phase II
Project Number : 77OT.43877.00

Case Narrative

Matrix Spike/Matrix Spike Duplicate Results associated with samples GP-13-1 and GP-12-1 for the analyte TPH as Diesel were affected by the analyte concentrations already present in the un-spiked sample.

Matrix Spike/Matrix Spike Duplicate Results associated with sample GP-12-1 for the analyte Toluene were outside of control limits. This may indicate a bias for the sample that was spiked. Since the LCS recoveries were within control limits, no data are flagged.

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61241
Date : 3/14/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**
Project Number : **77OT.43877.00**

Sample : **GP-12-1** Matrix : Soil Lab Number : 61241-01
Sample Date :2/25/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	2/29/2008
Toluene - d8 (Surr)	99.8		% Recovery	EPA 8260B	2/29/2008
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	2/29/2008
TPH as Diesel	**300**	5.0	mg/Kg	M EPA 8015	2/29/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**1000**	40	mg/Kg	M EPA 8015	2/29/2008
1-Chlorooctadecane (Diesel Surrogate)	88.9		% Recovery	M EPA 8015	2/29/2008

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61241

Date : 3/14/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00**

Sample : **GP-12-6** Matrix : Soil Lab Number : 61241-02

Sample Date :2/25/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**20**	1.0	mg/Kg	M EPA 8015	3/8/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**40**	10	mg/Kg	M EPA 8015	3/8/2008
1-Chlorooctadecane (Diesel Surrogate)	75.0		% Recovery	M EPA 8015	3/8/2008

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61241
Date : 3/14/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**
Project Number : **77OT.43877.00**

Sample : **GP-12 WS** Matrix : Water Lab Number : 61241-03
Sample Date :2/25/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	2/29/2008
Toluene - d8 (Surr)	99.7		% Recovery	EPA 8260B	2/29/2008
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	2/29/2008
TPH as Diesel	**2500**	50	ug/L	M EPA 8015	2/27/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**3600**	100	ug/L	M EPA 8015	2/27/2008
Octacosane (Diesel Surrogate)	99.6		% Recovery	M EPA 8015	2/27/2008

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61241
Date : 3/14/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**
Project Number : **77OT.43877.00**

Sample : **12WD** Matrix : Water Lab Number : 61241-09
Sample Date :2/25/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	3/5/2008
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	3/5/2008
4-Bromofluorobenzene (Surr)	104		% Recovery	EPA 8260B	3/5/2008
TPH as Diesel	**560**	50	ug/L	M EPA 8015	2/27/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**710**	100	ug/L	M EPA 8015	2/27/2008
Octacosane (Diesel Surrogate)	106		% Recovery	M EPA 8015	2/27/2008

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61241
Date : 3/14/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**
Project Number : **77OT.43877.00**

Sample : **GP-13-1** Matrix : Soil Lab Number : 61241-10
Sample Date :2/25/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	2/26/2008
Toluene - d8 (Surr)	98.0		% Recovery	EPA 8260B	2/26/2008
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	2/26/2008
TPH as Diesel	**7.8**	1.0	mg/Kg	M EPA 8015	2/28/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**25**	10	mg/Kg	M EPA 8015	2/28/2008
1-Chlorooctadecane (Diesel Surrogate)	84.5		% Recovery	M EPA 8015	2/28/2008

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61241
Date : 3/14/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**
Project Number : **77OT.43877.00**

Sample : **GP-13WS** Matrix : Water Lab Number : 61241-12
Sample Date :2/25/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	2/29/2008
Toluene - d8 (Surr)	99.1		% Recovery	EPA 8260B	2/29/2008
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	2/29/2008
TPH as Diesel	**< 50**	50	ug/L	M EPA 8015	2/27/2008
TPH as Motor Oil	**< 100**	100	ug/L	M EPA 8015	2/27/2008
Octacosane (Diesel Surrogate)	98.8		% Recovery	M EPA 8015	2/27/2008

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61241

Date : 3/14/2008

QC Report : Method Blank Data

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	< 50	50	ug/L	M EPA 8015	2/27/2008
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	2/27/2008
Octacosane (Diesel Surrogate)	105		%	M EPA 8015	2/27/2008
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	2/28/2008
TPH as Motor Oil	< 10	10	mg/Kg	M EPA 8015	2/28/2008
1-Chlorooctadecane (Diesel Surrogate)	84.0		%	M EPA 8015	2/28/2008
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	3/8/2008
TPH as Motor Oil	< 10	10	mg/Kg	M EPA 8015	3/8/2008
1-Chlorooctadecane (Diesel Surrogate)	70.8		%	M EPA 8015	3/8/2008
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	2/26/2008
Toluene - d8 (Surr)	99.1		%	EPA 8260B	2/26/2008
4-Bromofluorobenzene (Surr)	100		%	EPA 8260B	2/26/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	2/29/2008
Toluene - d8 (Surr)	98.8		%	EPA 8260B	2/29/2008
4-Bromofluorobenzene (Surr)	102		%	EPA 8260B	2/29/2008
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	3/1/2008
Toluene - d8 (Surr)	101		%	EPA 8260B	3/1/2008
4-Bromofluorobenzene (Surr)	101		%	EPA 8260B	3/1/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	3/4/2008
Toluene - d8 (Surr)	99.3		%	EPA 8260B	3/4/2008
4-Bromofluorobenzene (Surr)	95.8		%	EPA 8260B	3/4/2008

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61241

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 3/14/2008

Project Name : **Tesoro Pittsburg Terminal**

Project Number : **77OT.43877.00**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
TPH as Diesel	Blank	<50	1000	1000	1020	1100	ug/L	M EPA 8015	2/27/08	102	110	7.90	70-130	25
TPH as Diesel	61306-10	63	20.0	20.0	72.7	143	mg/Kg	M EPA 8015	2/29/08	87.3	172	65.3	60-140	25
TPH as Diesel	61426-05	<1.0	20.0	20.0	21.6	22.1	mg/Kg	M EPA 8015	3/8/08	108	111	2.42	60-140	25
Benzene	61241-02	<0.0050	0.0391	0.0393	0.0367	0.0349	mg/Kg	EPA 8260B	2/26/08	94.0	88.7	5.79	70-130	25
Toluene	61241-02	<0.0050	0.0391	0.0393	0.0343	0.0331	mg/Kg	EPA 8260B	2/26/08	87.9	84.2	4.34	70-130	25
Methyl-t-Butyl Ether	61241-02	<0.0050	0.0391	0.0393	0.0305	0.0302	mg/Kg	EPA 8260B	2/26/08	78.1	76.8	1.62	70-130	25
Benzene	61286-01	<0.50	39.7	40.0	39.3	40.1	ug/L	EPA 8260B	2/29/08	99.1	100	1.25	70-130	25
Toluene	61286-01	<0.50	39.7	40.0	40.1	40.6	ug/L	EPA 8260B	2/29/08	101	101	0.373	70-130	25
Benzene	61241-01	<0.0050	0.0398	0.0398	0.0320	0.0319	mg/Kg	EPA 8260B	2/29/08	80.3	80.1	0.222	70-130	25
Toluene	61241-01	<0.0050	0.0398	0.0398	0.0269	0.0259	mg/Kg	EPA 8260B	2/29/08	67.6	65.1	3.86	70-130	25
Methyl-t-Butyl Ether	61241-01	<0.0050	0.0398	0.0398	0.0292	0.0345	mg/Kg	EPA 8260B	2/29/08	73.3	86.6	16.6	70-130	25
Benzene	61290-05	<0.50	40.0	40.0	41.5	40.5	ug/L	EPA 8260B	3/4/08	104	101	2.56	70-130	25
Toluene	61290-05	<0.50	40.0	40.0	41.6	41.2	ug/L	EPA 8260B	3/4/08	104	103	0.956	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61241

QC Report : Laboratory Control Sample (LCS)

Date : 3/14/2008

Project Name : **Tesoro Pittsburg Terminal**

Project Number : **77OT.43877.00**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
TPH as Diesel	20.0	mg/Kg	M EPA 8015	2/28/08	75.8	70-130
TPH as Diesel	20.0	mg/Kg	M EPA 8015	3/8/08	88.3	70-130
Benzene	0.0398	mg/Kg	EPA 8260B	2/26/08	81.5	70-130
Toluene	0.0398	mg/Kg	EPA 8260B	2/26/08	79.7	70-130
Methyl-t-Butyl Ether	0.0398	mg/Kg	EPA 8260B	2/26/08	81.4	70-130
Benzene	40.0	ug/L	EPA 8260B	2/29/08	101	70-130
Toluene	40.0	ug/L	EPA 8260B	2/29/08	103	70-130
Benzene	0.0395	mg/Kg	EPA 8260B	2/29/08	97.5	70-130
Toluene	0.0395	mg/Kg	EPA 8260B	2/29/08	95.7	70-130
Methyl-t-Butyl Ether	0.0395	mg/Kg	EPA 8260B	2/29/08	93.1	70-130
Benzene	40.0	ug/L	EPA 8260B	3/4/08	104	70-130
Toluene	40.0	ug/L	EPA 8260B	3/4/08	103	70-130

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Calscience
Environmental
Laboratories, Inc.

Supplemental Report 1

March 06, 2008

Joel Kiff
Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Subject: **Calscience Work Order No.: 08-02-1943**
Client Reference: Tesoro Pittsburg Terminal Phase II

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 2/27/2008 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Amanda Porter

Calscience Environmental
Laboratories, Inc.
Amanda Porter
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/27/08
Work Order No: 08-02-1943
Preparation: EPA 3050B
Method: EPA 6020
Units: mg/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-12-1	**08-02-1943-1-A**	**02/25/08 10:10**	**Solid**	**ICP/MS A**	**02/29/08**	**02/29/08 13:00**	**080229L03**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	21.4	0.200	1		Nickel	54.6	0.100	1	
Barium	655	0.100	1		Vanadium	29.7	0.100	1	
Copper	744	0.100	1		Zinc	5080	1.00	1	

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-13-1	**08-02-1943-10-A**	**02/25/08 14:00**	**Solid**	**ICP/MS A**	**02/29/08**	**02/29/08 13:04**	**080229L03**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	2.47	0.200	1		Nickel	27.1	0.100	1	
Barium	116	0.100	1		Vanadium	36.6	0.100	1	
Copper	24.1	0.100	1		Zinc	44.5	1.00	1	

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**096-10-002-1,049**	**N/A**	**Solid**	**ICP/MS A**	**02/29/08**	**02/29/08 12:12**	**080229L03**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	ND	0.200	1		Nickel	ND	0.100	1	
Barium	ND	0.100	1		Vanadium	ND	0.100	1	
Copper	ND	0.100	1		Zinc	ND	1.00	1	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	02/27/08
2795 2nd Street, Suite 300		Work Order No:	08-02-1943
Davis, CA 95616-6593		Preparation:	EPA 3545
		Method:	EPA 8310
		Units:	ug/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-12-1	**08-02-1943-1-A**	**02/25/08 10:10**	**Solid**	**HPLC 5**	**03/03/08**	**03/03/08 21:23**	**080303L07**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	15	1		Benzo (a) Anthracene	170	10	1	
Acenaphthylene	120	30	1		Chrysene	280	10	1	
Acenaphthene	ND	15	1		Benzo (b) Fluoranthene	ND	10	1	
Fluorene	24	10	1		Benzo (k) Fluoranthene	89	10	1	
Phenanthrene	130	10	1		Benzo (a) Pyrene	300	10	1	
Anthracene	31	10	1		Dibenz (a,h) Anthracene	68	10	1	
Fluoranthene	260	10	1		Benzo (g,h,i) Perylene	280	10	1	
Pyrene	240	10	1		Indeno (1,2,3-c,d) Pyrene	170	10	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	65	40-160	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-07-002-1,003**	**N/A**	**Solid**	**HPLC 5**	**03/03/08**	**03/03/08 18:40**	**080303L07**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	15	1		Benzo (a) Anthracene	ND	10	1	
Acenaphthylene	ND	30	1		Chrysene	ND	10	1	
Acenaphthene	ND	15	1		Benzo (b) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
Anthracene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Fluoranthene	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Pyrene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	82	40-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	02/27/08
2795 2nd Street, Suite 300		Work Order No:	08-02-1943
Davis, CA 95616-6593		Preparation:	EPA 3510C
		Method:	EPA 8310
		Units:	ug/L

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-12WS	**08-02-1943-3-B**	**02/25/08 11:40**	**Aqueous**	**HPLC 5**	**03/03/08**	**03/04/08 01:11**	**080303L09**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	1.0	1		Benzo (a) Anthracene	ND	1.0	1	
Acenaphthylene	ND	1.0	1		Chrysene	ND	1.0	1	
Acenaphthene	ND	1.0	1		Benzo (b) Fluoranthene	ND	1.0	1	
Fluorene	ND	1.0	1		Benzo (k) Fluoranthene	ND	1.0	1	
Phenanthrene	ND	1.0	1		Benzo (a) Pyrene	ND	0.20	1	
Anthracene	ND	1.0	1		Dibenz (a,h) Anthracene	ND	1.0	1	
Fluoranthene	ND	1.0	1		Benzo (g,h,i) Perylene	ND	1.0	1	
Pyrene	ND	1.0	1		Indeno (1,2,3-c,d) Pyrene	ND	1.0	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	63	40-160	

GP-12WD	**08-02-1943-9-B**	**02/25/08 12:45**	**Aqueous**	**HPLC 5**	**03/03/08**	**03/04/08 01:44**	**080303L09**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	1.2	1.19		Benzo (a) Anthracene	ND	1.2	1.19	
Acenaphthylene	ND	1.2	1.19		Chrysene	ND	1.2	1.19	
Acenaphthene	ND	1.2	1.19		Benzo (b) Fluoranthene	ND	1.2	1.19	
Fluorene	ND	1.2	1.19		Benzo (k) Fluoranthene	ND	1.2	1.19	
Phenanthrene	ND	1.2	1.19		Benzo (a) Pyrene	ND	0.24	1.19	
Anthracene	ND	1.2	1.19		Dibenz (a,h) Anthracene	ND	1.2	1.19	
Fluoranthene	ND	1.2	1.19		Benzo (g,h,i) Perylene	ND	1.2	1.19	
Pyrene	ND	1.2	1.19		Indeno (1,2,3-c,d) Pyrene	ND	1.2	1.19	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	63	40-160	

Method Blank	**099-07-003-1,086**	**N/A**	**Aqueous**	**HPLC 5**	**03/03/08**	**03/03/08 23:01**	**080303L09**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	1.0	1		Benzo (a) Anthracene	ND	1.0	1	
Acenaphthylene	ND	1.0	1		Chrysene	ND	1.0	1	
Acenaphthene	ND	1.0	1		Benzo (b) Fluoranthene	ND	1.0	1	
Fluorene	ND	1.0	1		Benzo (k) Fluoranthene	ND	1.0	1	
Phenanthrene	ND	1.0	1		Benzo (a) Pyrene	ND	0.20	1	
Anthracene	ND	1.0	1		Dibenz (a,h) Anthracene	ND	1.0	1	
Fluoranthene	ND	1.0	1		Benzo (g,h,i) Perylene	ND	1.0	1	
Pyrene	ND	1.0	1		Indeno (1,2,3-c,d) Pyrene	ND	1.0	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	83	40-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	02/27/08
2795 2nd Street, Suite 300		Work Order No:	08-02-1943
Davis, CA 95616-6593		Preparation:	EPA 3510B
		Method:	EPA 8270C
		Units:	ug/L

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-13WS	**08-02-1943-12-A**	**02/25/08 15:00**	**Aqueous**	**GC/MS P**	**02/27/08**	**02/28/08 21:07**	**080227L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	10	1		Benzo (a) Anthracene	ND	10	1	
Acenaphthylene	ND	10	1		Chrysene	ND	10	1	
Acenaphthene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (b) Fluoranthene	ND	10	1	
Pentachlorophenol	ND	10	1		Benzo (a) Pyrene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Anthracene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Fluoranthene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Pyrene	ND	10	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	52	7-121		Phenol-d6	29	1-127	
Nitrobenzene-d5	97	50-146		2-Fluorobiphenyl	117	42-138	
2,4,6-Tribromophenol	128	41-137		p-Terphenyl-d14	238	47-173	2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-003-2,352**	**N/A**	**Aqueous**	**GC/MS P**	**02/27/08**	**02/28/08 12:38**	**080227L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	10	1		Benzo (a) Anthracene	ND	10	1	
Acenaphthylene	ND	10	1		Chrysene	ND	10	1	
Acenaphthene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (b) Fluoranthene	ND	10	1	
Pentachlorophenol	ND	10	1		Benzo (a) Pyrene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Anthracene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Fluoranthene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Pyrene	ND	10	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	64	7-121		Phenol-d6	35	1-127	
Nitrobenzene-d5	115	50-146		2-Fluorobiphenyl	129	42-138	
2,4,6-Tribromophenol	114	41-137		p-Terphenyl-d14	166	47-173	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	02/27/08
2795 2nd Street, Suite 300		Work Order No:	08-02-1943
Davis, CA 95616-6593		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-13-1	**08-02-1943-10-A**	**02/25/08 14:15**	**Solid**	**GC/MS MM**	**02/27/08**	**02/28/08 16:16**	**080227L07**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	0.50	1		Benzo (a) Anthracene	ND	0.50	1	
Acenaphthylene	ND	0.50	1		Chrysene	ND	0.50	1	
Acenaphthene	ND	0.50	1		Benzo (k) Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1		Benzo (b) Fluoranthene	ND	0.50	1	
Pentachlorophenol	ND	2.5	1		Benzo (a) Pyrene	ND	0.50	1	
Phenanthrene	ND	0.50	1		Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Anthracene	ND	0.50	1		Dibenz (a,h) Anthracene	ND	0.50	1	
Fluoranthene	ND	0.50	1		Benzo (g,h,i) Perylene	ND	0.50	1	
Pyrene	ND	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	102	42-120		Phenol-d6	106	46-118	
Nitrobenzene-d5	100	42-150		2-Fluorobiphenyl	111	38-134	
2,4,6-Tribromophenol	108	36-132		p-Terphenyl-d14	207	35-167	2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-549-298**	**N/A**	**Solid**		**02/27/08**	**02/28/08 11:40**	**080227L07**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	0.50	1		Benzo (a) Anthracene	ND	0.50	1	
Acenaphthylene	ND	0.50	1		Chrysene	ND	0.50	1	
Acenaphthene	ND	0.50	1		Benzo (k) Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1		Benzo (b) Fluoranthene	ND	0.50	1	
Pentachlorophenol	ND	2.5	1		Benzo (a) Pyrene	ND	0.50	1	
Phenanthrene	ND	0.50	1		Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Anthracene	ND	0.50	1		Dibenz (a,h) Anthracene	ND	0.50	1	
Fluoranthene	ND	0.50	1		Benzo (g,h,i) Perylene	ND	0.50	1	
Pyrene	ND	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	106	42-120		Phenol-d6	103	46-118	
Nitrobenzene-d5	102	42-150		2-Fluorobiphenyl	122	38-134	
2,4,6-Tribromophenol	101	36-132		p-Terphenyl-d14	151	35-167	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/27/08
Work Order No: 08-02-1943
Preparation: EPA 3545
Method: EPA 8270C

Project Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
GP-13-1	**Solid**	**GC/MS MM**	**02/27/08**	**02/28/08**	**080227S07**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Phenol	102	102	57-123	0	0-16	
2-Chlorophenol	106	105	57-111	1	0-17	
1,4-Dichlorobenzene	122	121	49-127	1	0-20	
N-Nitroso-di-n-propylamine	88	85	54-144	3	0-17	
1,2,4-Trichlorobenzene	122	128	42-132	5	0-20	
4-Chloro-3-Methylphenol	111	115	50-128	3	0-17	
Acenaphthene	132	131	49-133	0	0-18	
4-Nitrophenol	88	89	30-144	2	0-21	
2,4-Dinitrotoluene	96	95	50-128	1	0-18	
Pentachlorophenol	72	72	29-113	1	0-22	
Pyrene	194	200	47-149	3	0-20	3

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/27/08
Work Order No: 08-02-1943
Preparation: EPA 3545
Method: EPA 8310

Project Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
GP-13-1	**Solid**	**HPLC 5**	**03/03/08**	**03/03/08**	**080303S07**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Naphthalene	90	85	40-160	6	0-20	
Acenaphthylene	84	85	40-160	0	0-20	
Acenaphthene	85	86	40-160	1	0-20	
Fluorene	85	85	40-160	0	0-20	
Phenanthrene	85	85	40-160	0	0-20	
Anthracene	75	75	40-160	0	0-20	
Fluoranthene	86	87	40-160	0	0-20	
Pyrene	88	89	40-160	0	0-20	
Benzo (a) Anthracene	86	86	40-160	1	0-20	
Chrysene	93	93	40-160	0	0-20	
Benzo (b) Fluoranthene	90	90	40-160	0	0-20	
Benzo (k) Fluoranthene	88	88	40-160	0	0-20	
Benzo (a) Pyrene	92	92	40-160	0	0-20	
Dibenz (a,h) Anthracene	85	85	40-160	0	0-20	
Benzo (g,h,i) Perylene	87	87	40-160	0	0-20	
Indeno (1,2,3-c,d) Pyrene	86	86	40-160	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/27/08
Work Order No: 08-02-1943
Preparation: EPA 3050B
Method: EPA 6020

Project Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-02-2194-1	**Solid**	**ICP/MS A**	**02/29/08**	**02/29/08**	**080229S03**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	101	102	72-132	1	0-13	
Barium	90	84	50-152	2	0-41	
Copper	87	87	25-157	0	0-22	
Nickel	101	100	46-154	1	0-15	
Vanadium	105	100	28-178	3	0-28	
Zinc	78	37	23-173	12	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - PDS / PDSD

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical		Date Received	02/27/08
2795 2nd Street, Suite 300		Work Order No:	08-02-1943
Davis, CA 95616-6593		Preparation:	EPA 3050B
		Method:	EPA 6020

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
08-02-2194-1	**Solid**	**ICP/MS A**	**02/29/08**	**02/29/08**	**080229S03**

Parameter	PDS %REC	PDSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	110	111	75-125	1	0-13	
Barium	98	111	75-125	3	0-41	
Copper	107	109	75-125	1	0-22	
Nickel	108	111	75-125	2	0-15	
Vanadium	104	112	75-125	5	0-28	
Zinc	106	114	75-125	2	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-02-1943
Preparation: EPA 3510B
Method: EPA 8270C

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-003-2,352	**Aqueous**	**GC/MS P**	**02/27/08**	**02/28/08**	**080227L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Phenol	33	34	4-142	4	0-24	
2-Chlorophenol	102	104	53-113	3	0-17	
1,4-Dichlorobenzene	109	110	50-122	1	0-19	
N-Nitroso-di-n-propylamine	106	107	56-146	1	0-22	
4-Chloro-3-Methylphenol	107	107	55-121	0	0-18	
Acenaphthene	128	131	55-139	2	0-17	
4-Nitrophenol	29	29	1-145	2	0-29	
2,4-Dinitrotoluene	106	107	41-161	2	0-22	
Pentachlorophenol	82	83	34-130	2	0-23	
Pyrene	153	155	38-170	1	0-27	
1,2,4-Trichlorobenzene	118	120	49-121	2	0-19	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-02-1943
Preparation: EPA 3545
Method: EPA 8270C

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-549-298	**Solid**	**GC/MS MM**	**02/27/08**	**02/28/08**	**080227L07**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
2-Chlorophenol	107	92	60-114	15	0-15	
1,4-Dichlorobenzene	103	101	61-121	1	0-21	
N-Nitroso-di-n-propylamine	78	81	64-136	4	0-15	
1,2,4-Trichlorobenzene	108	106	58-118	2	0-18	
4-Chloro-3-Methylphenol	101	98	61-121	3	0-14	
Acenaphthene	107	112	59-125	5	0-15	
4-Nitrophenol	76	79	38-152	3	0-31	
2,4-Dinitrotoluene	78	83	51-141	7	0-16	
Pentachlorophenol	48	53	38-116	10	0-20	
Pyrene	118	107	51-141	10	0-14	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-02-1943
Preparation: EPA 3510C
Method: EPA 8310

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-003-1,086	**Aqueous**	**HPLC 5**	**03/03/08**	**03/03/08**	**080303L09**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Naphthalene	108	102	40-160	5	0-20	
Acenaphthylene	95	94	40-160	2	0-20	
Acenaphthene	100	97	40-160	3	0-20	
Fluorene	100	97	40-160	3	0-20	
Phenanthrene	100	97	40-160	4	0-20	
Anthracene	90	87	40-160	4	0-20	
Fluoranthene	98	94	40-160	4	0-20	
Pyrene	103	99	40-160	4	0-20	
Benzo (a) Anthracene	102	98	40-160	4	0-20	
Chrysene	106	102	40-160	4	0-20	
Benzo (b) Fluoranthene	105	102	40-160	4	0-20	
Benzo (k) Fluoranthene	106	102	40-160	4	0-20	
Benzo (a) Pyrene	99	95	40-160	4	0-20	
Dibenz (a,h) Anthracene	99	95	40-160	4	0-20	
Benzo (g,h,i) Perylene	106	102	40-160	4	0-20	
Indeno (1,2,3-c,d) Pyrene	100	96	40-160	4	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-02-1943
Preparation: EPA 3545
Method: EPA 8310

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-002-1,003	**Solid**	**HPLC 5**	**03/03/08**	**03/03/08**	**080303L07**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Naphthalene	101	105	40-160	5	0-20	
Acenaphthylene	95	99	40-160	4	0-20	
Acenaphthene	97	101	40-160	3	0-20	
Fluorene	98	101	40-160	3	0-20	
Phenanthrene	99	101	40-160	2	0-20	
Anthracene	90	91	40-160	1	0-20	
Fluoranthene	99	99	40-160	0	0-20	
Pyrene	103	103	40-160	0	0-20	
Benzo (a) Anthracene	104	103	40-160	2	0-20	
Chrysene	109	107	40-160	2	0-20	
Benzo (b) Fluoranthene	108	105	40-160	2	0-20	
Benzo (k) Fluoranthene	111	109	40-160	2	0-20	
Benzo (a) Pyrene	102	100	40-160	2	0-20	
Dibenz (a,h) Anthracene	105	103	40-160	2	0-20	
Benzo (g,h,i) Perylene	107	105	40-160	2	0-20	
Indeno (1,2,3-c,d) Pyrene	102	100	40-160	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-02-1943
Preparation: EPA 3050B
Method: EPA 6020

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
096-10-002-1,049	**Solid**	**ICP/MS A**	**02/29/08**	**02/29/08**	**080229L03**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	99	98	80-120	1	0-20	
Barium	98	96	80-120	2	0-20	
Copper	106	103	80-120	3	0-20	
Nickel	100	103	80-120	3	0-20	
Vanadium	95	95	80-120	0	0-20	
Zinc	112	114	80-120	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 08-02-1943

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

KIFF Analytical LLC
2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove. CA 92841
714-895-5494

Lab No. 1943

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

EDF Deliverable to (Email Address):

Phone No.: 530-297-4800 | FAX No.: 530-297-4808

Project Number: 77OT.43877.00 | P.O. No.: 61241

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Analysis Request

Date due: March 3, 2008

For Lab Use Only

Sample Designation	Sampling Date	Sampling Time	Container: Glass	Poly	Sleeve	Amber	Tedlar	Preservative: HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	Matrix: WATER	SOIL	Air	PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD						
GP-12-1	02/25/08	10:10	1									X		X		X	X							X
GP-12-6	02/25/08	10:30	1									X		X				X						
GP-12WS	02/25/08	11:40				2				2			X			X								X
GP-12-10	02/25/08	10:30	1									X		X				X						
GP-12-15	02/25/08	11:30	1									X		X				X						
GP-12-20	02/25/08	12:15	1									X		X				X						
GP-12-25	02/25/08	12:30	1									X		X				X						
GP-12-30	02/25/08	12:45	1									X		X				X						
GP-12WD	02/25/08	12:45				2				2			X					X						

Relinquished by:	Date	Time	Received by:
DTwRe — Kiff Analytical	022608	1900	
Relinquished by:	Date	Time	Received by:
Relinquished by: COB102013213 14	Date 22708	Time 0745	Received by Laboratory: W Bath CET

Remarks: *As, Ni, Ba, V, Cu, Zn

Bill to: Accounts Payable

KIFF Analytical LLC

2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. 1943

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

EDF Deliverable to (Email Address):

Phone No.: 530-297-4800 | FAX No.: 530-297-4808

Project Number: 77OT.43877.00 | P.O. No.: 61241

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling: Date	Sampling: Time	Container: Glass	Container: Poly	Container: Sleeve	Container: Amber	Container: Tedlar	Preservative: HNO_3	Preservative: H_2SO_4	Preservative: $Na_2S_2O_3$	Preservative: $ZnAc_2$ & NaOH	Preservative: None	Matrix: WATER	Matrix: SOIL	Matrix: Air	Analysis Request: PAH's (EPA 8310)	Analysis Request: METALS (EPA 6020)*	Analysis Request: HOLD	Date due: March 3, 2008	For Lab Use Only
GP-13-1	02/25/08	14:00	1									1		X		X	X		X	
GP-13-6	02/25/08	14:20	1									1		X				X		
GP-13WS	02/25/08	15:00				2				2			X			X			X	
GP-13-10	02/25/08	14:30	1									1		X				X		
GP-13-15	02/25/08	14:40	1									1		X				X		
GP-13-20	02/25/08	15:40	1									1		X				X		
GP-13-25	02/25/08	15:45	1									1		X				X		
GP-13-30	02/25/08	15:50	1									1		X				X		

	Date	Time	
Relinquished by: Kiff Analytical	022608	1900	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by: COB1020132134	2-27-08	0745	Received by Laboratory:

Remarks: *As, Ni, Ba, V, Cu, Zn

Bill to: Accounts Payable

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 08 - 02 - 1943

Cooler 1 of 1

SAMPLE RECEIPT FORM

CLIENT: KIFF ANALYTICAL **DATE:** 2-27-08

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.
_____ °C Temperature blank.

LABORATORY (Other than Calscience Courier):

2.8 °C Temperature blank.
_____ °C IR thermometer.
_____ Ambient temperature.

Initial: WB

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: ✓ No (Not Intact) : _____ Not Present: _____

Initial: WB

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sampler's name indicated on COC		✓	
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers and volume for analyses requested	✓		
Proper preservation noted on sample label(s)	✓		
VOA vial(s) free of headspace.			✓
Tedlar bag(s) free of condensation			✓

Initial: WB

COMMENTS:

KIFF Analytical LLC

2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. _____ Page 1 of 2

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

Phone No.: 530-297-4800 FAX No.: 530-297-4808

EDF Deliverable to (Email Address):

Project Number: 77OT.43877.00 P.O. No.: 61241

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Analysis Request

Date due: March 4, 2008

For Lab Use Only

Sample Designation	Sampling Date	Sampling Time	Container: Glass	Poly	Sleeve	Amber	Tedlar	Preservative: HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	Matrix: WATER	SOIL	Air	PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD	PAHs & PCP (EPA 8270C)						For Lab Use Only
GP-12-1	02/25/08	10:10	1									X		X		X	X								X	
GP-12-6	02/25/08	10:30	1									X		X				X								
GP-12WS	02/25/08	11:40				2				2			X			X									X	
GP-12-10	02/25/08	10:30	1									X		X				X								
GP-12-15	02/25/08	11:30	1									X		X				X								
GP-12-20	02/25/08	12:15	1									X		X				X								
GP-12-25	02/25/08	12:30	1									X		X				X								
GP-12-30	02/25/08	12:45	1									X		X				X								
GP-12WD	02/25/08	12:45				2				2			X			X									X	

Relinquished by: Troy A Turpen	Date 3/4/08	Time 12:40	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:

Remarks: This is a revised COC for Work Order No. 08-02-1943, taking sample GP-12WD off hold, and requesting PAHs & PCP by EPA 8270C for samples GP-13-1 and GP-13WS. Please provide an XLS of the results as well as a PDF. *As, Ni, Ba, V, Cu, Zn

Bill to: Accounts Payable

KIFF Analytical LLC
2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. _____ Page 2 of 2

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Chain-of-Custody Record and Analysis Request

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

EDF Deliverable to (Email Address):

Phone No.: 530-297-4800 FAX No.: 530-297-4808

Project Number: 77OT.43877.00 P.O. No.: 61241

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling		Container					Preservative					Matrix			Analysis Request								Date due:	For Lab Use Only
	Date	Time	Glass	Poly	Sleeve	Amber	Tedlar	HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	WATER	SOIL	Air	PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD	PAHs & PCP (EPA 8270C)					March 4, 2008	
GP-13-1	02/25/08	14:00	1									1		X			X		X					X	
GP-13-6	02/25/08	14:20	1									1		X				X							
GP-13WS	02/25/08	15:00				2				2			X						X					X	
GP-13-10	02/25/08	14:30	1									1		X				X							
GP-13-15	02/25/08	14:40	1									1		X				X							
GP-13-20	02/25/08	15:40	1									1		X				X							
GP-13-25	02/25/08	15:45	1									1		X				X							
GP-13-30	02/25/08	15:50	1									1		X				X							

Relinquished by: Troy M. Turpen	Date 3/4/08	Time 12:40	Received by:	
Relinquished by:	Date	Time	Received by:	
Relinquished by:	Date	Time	Received by Laboratory:	

Remarks: This is a revised COC for Work Order No. 08-02-1943, taking sample GP-12WD off hold, and requesting PAHs & PCP by EPA 8270C for samples GP-13-1 and GP-13WS. Please provide an XLS of the results as well as a PDF. *As, Ni, Ba, V, Cu, Zn

Bill to: Accounts Payable

Calscience Environmental Laboratories, Inc.

Supplemental Report 2

March 14, 2008

Additional requested analyses are reported as a stand-alone report.

Joel Kiff
Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Subject: **Calscience Work Order No.: 08-02-1943**
Client Reference: Tesoro Pittsburg Terminal Phase II

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 2/27/2008 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Amanda Porter

Calscience Environmental
Laboratories, Inc.
Amanda Porter
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received:	02/27/08
Work Order No:	08-02-1943
Preparation:	EPA 3050B
Method:	EPA 6020
Units:	mg/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-12-6	**08-02-1943-2-A**	**02/25/08 10:30**	**Solid**	**ICP/MS A**	**03/10/08**	**03/10/08 18:42**	**080310L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	22.3	0.200	1		Vanadium	37.7	0.100	1	B
Copper	163	0.100	1		Zinc	2010	1.00	1	

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-13-6	**08-02-1943-11-A**	**02/25/08 14:20**	**Solid**	**ICP/MS A**	**03/10/08**	**03/10/08 18:18**	**080310L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	3.31	0.200	1		Vanadium	27.2	0.100	1	B

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**096-10-002-1,052**	**N/A**	**Solid**	**ICP/MS A**	**03/10/08**	**03/10/08 16:02**	**080310L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	ND	0.200	1		Vanadium	0.206	0.100	1	
Copper	ND	0.100	1		Zinc	ND	1.00	1	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical		Date Received:	02/27/08
2795 2nd Street, Suite 300		Work Order No:	08-02-1943
Davis, CA 95616-6593		Preparation:	EPA 3545
		Method:	EPA 8310
		Units:	ug/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-12-6	**08-02-1943-2-A**	**02/25/08 10:30**	**Solid**	**HPLC 5**	**03/10/08**	**03/13/08 13:15**	**080310L10**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	75	5		Benzo (a) Anthracene	ND	50	5	
Acenaphthylene	ND	150	5		Chrysene	50	50	5	
Acenaphthene	ND	75	5		Benzo (b) Fluoranthene	2600	50	5	
Fluorene	ND	50	5		Benzo (k) Fluoranthene	ND	50	5	
Phenanthrene	ND	50	5		Benzo (a) Pyrene	ND	50	5	
Anthracene	ND	50	5		Dibenz (a,h) Anthracene	ND	50	5	
Fluoranthene	77	50	5		Benzo (g,h,i) Perylene	ND	50	5	
Pyrene	72	50	5		Indeno (1,2,3-c,d) Pyrene	ND	50	5	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	56	40-160	

Method Blank	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-07-002-1,006**	**N/A**	**Solid**	**HPLC 5**	**03/10/08**	**03/11/08 18:46**	**080310L10**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	15	1		Benzo (a) Anthracene	ND	10	1	
Acenaphthylene	ND	30	1		Chrysene	ND	10	1	
Acenaphthene	ND	15	1		Benzo (b) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
Anthracene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Fluoranthene	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Pyrene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	75	40-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/27/08
Work Order No: 08-02-1943
Preparation: EPA 3050B
Method: EPA 6020

Project Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-03-0265-1	**Solid**	**ICP/MS A**	**03/10/08**	**03/10/08**	**080310S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	94	92	72-132	1	0-13	
Barium	4X	4X	50-152	4X	0-41	Q
Copper	102	88	25-157	6	0-22	
Nickel	4X	4X	46-154	4X	0-15	Q
Vanadium	99	109	28-178	3	0-28	
Zinc	108	82	23-173	7	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - PDS / PDSD

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical		Date Received	02/27/08
2795 2nd Street, Suite 300		Work Order No:	08-02-1943
Davis, CA 95616-6593		Preparation:	EPA 3050B
		Method:	EPA 6020

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
08-03-0265-1	**Solid**	**ICP/MS A**	**03/10/08**	**03/10/08**	**080310S01**

Parameter	PDS %REC	PDSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	106	105	75-125	1	0-13	
Barium	4X	4X	75-125	4X	0-41	Q
Copper	97	96	75-125	0	0-22	
Nickel	4X	4X	75-125	4X	0-15	Q
Vanadium	112	113	75-125	0	0-28	
Zinc	103	103	75-125	0	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/27/08
Work Order No: 08-02-1943
Preparation: EPA 3545
Method: EPA 8310

Project Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
GP-12-6	**Solid**	**HPLC 5**	**03/10/08**	**03/13/08**	**080310S10**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Naphthalene	116	111	40-160	4	0-20	
Acenaphthylene	58	56	40-160	3	0-20	
Acenaphthene	51	44	40-160	16	0-20	
Fluorene	40	39	40-160	4	0-20	3
Phenanthrene	49	47	40-160	4	0-20	
Anthracene	42	40	40-160	4	0-20	
Fluoranthene	0	0	40-160	1	0-20	3
Pyrene	0	0	40-160	1	0-20	3
Benzo (a) Anthracene	58	51	40-160	11	0-20	
Chrysene	20	18	40-160	4	0-20	3
Benzo (b) Fluoranthene	2370	2334	40-160	1	0-20	3
Benzo (k) Fluoranthene	56	56	40-160	0	0-20	
Benzo (a) Pyrene	70	69	40-160	1	0-20	
Dibenz (a,h) Anthracene	50	63	40-160	22	0-20	4
Benzo (g,h,i) Perylene	43	39	40-160	10	0-20	3
Indeno (1,2,3-c,d) Pyrene	38	38	40-160	3	0-20	3

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical		Date Received:	N/A
2795 2nd Street, Suite 300		Work Order No:	08-02-1943
Davis, CA 95616-6593		Preparation:	EPA 3050B
		Method:	EPA 6020

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
096-10-002-1,052	**Solid**	**ICP/MS A**	**03/10/08**	**03/10/08**	**080310L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	92	91	80-120	1	0-20	
Copper	96	96	80-120	1	0-20	
Vanadium	95	93	80-120	3	0-20	
Zinc	96	94	80-120	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-02-1943
Preparation: EPA 3545
Method: EPA 8310

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-002-1,006	**Solid**	**HPLC 5**	**03/10/08**	**03/11/08**	**080310L10**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Naphthalene	84	89	40-160	6	0-20	
Acenaphthylene	87	95	40-160	9	0-20	
Acenaphthene	91	97	40-160	7	0-20	
Fluorene	90	98	40-160	8	0-20	
Phenanthrene	91	98	40-160	8	0-20	
Anthracene	80	86	40-160	7	0-20	
Fluoranthene	88	96	40-160	8	0-20	
Pyrene	96	103	40-160	7	0-20	
Benzo (a) Anthracene	90	98	40-160	8	0-20	
Chrysene	94	103	40-160	8	0-20	
Benzo (b) Fluoranthene	92	101	40-160	9	0-20	
Benzo (k) Fluoranthene	95	105	40-160	10	0-20	
Benzo (a) Pyrene	82	89	40-160	8	0-20	
Dibenz (a,h) Anthracene	89	100	40-160	11	0-20	
Benzo (g,h,i) Perylene	94	101	40-160	7	0-20	
Indeno (1,2,3-c,d) Pyrene	89	97	40-160	8	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 08-02-1943

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

KIFF Analytical LLC
2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove. CA 92841
714-895-5494

Lab No. 1943

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

Phone No.: 530-297-4800 | FAX No.: 530-297-4808

EDF Deliverable to (Email Address):

Project Number: 77OT.43877.00 | P.O. No.: 61241

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Analysis Request

Date due: March 3, 2008

For Lab Use Only

Sample Designation	Sampling Date	Sampling Time	Container: Glass	Poly	Sleeve	Amber	Tedlar	Preservative: HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	Matrix: WATER	SOIL	Air	PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD						
GP-12-1	02/25/08	10:10	1									X		X		X	X							X
GP-12-6	02/25/08	10:30	1									X		X				X						
GP-12WS	02/25/08	11:40				2				2			X			X								X
GP-12-10	02/25/08	10:30	1									X		X				X						
GP-12-15	02/25/08	11:30	1									X		X				X						
GP-12-20	02/25/08	12:15	1									X		X				X						
GP-12-25	02/25/08	12:30	1									X		X				X						
GP-12-30	02/25/08	12:45	1									X		X				X						
GP-12WD	02/25/08	12:45				2				2			X					X						

Relinquished by:	Date	Time	Received by:
DTwRe — Kiff Analytical	022608	1900	
Relinquished by:	Date	Time	Received by:
Relinquished by: COB1020132314	Date 22708	Time 0745	Received by Laboratory: W Bath CET

Remarks: *As, Ni, Ba, V, Cu, Zn

Bill to: Accounts Payable

KIFF Analytical LLC

2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. 1943

Page 2 of 2

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Chain-of-Custody Record and Analysis Request

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

EDF Deliverable to (Email Address):

Phone No.: 530-297-4800 | FAX No.: 530-297-4808

Project Number: 77OT.43877.00 | P.O. No.: 61241

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling		Container					Preservative					Matrix			Analysis Request								Date due:	For Lab Use Only
	Date	Time	Glass	Poly	Sleeve	Amber	Tedlar	HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	WATER	SOIL	Air	PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD						March 3, 2008	
GP-13-1	02/25/08	14:00	1									1		X		X	X							X	
GP-13-6	02/25/08	14:20	1									1		X				X							
GP-13WS	02/25/08	15:00				2				2			X			X								X	
GP-13-10	02/25/08	14:30	1									1		X				X							
GP-13-15	02/25/08	14:40	1									1		X				X							
GP-13-20	02/25/08	15:40	1									1		X				X							
GP-13-25	02/25/08	15:45	1									1		X				X							
GP-13-30	02/25/08	15:50	1									1		X				X							

	Date	Time	
Relinquished by: Tim R — kiff Analytical	022608	1900	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by: COB1020132134	2-27-08	0745	Received by Laboratory: W Schalm CET

Remarks: *As, Ni, Ba, V, Cu, Zn

Bill to: Accounts Payable

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 08 - 02 - 1943

Cooler 1 of 1

SAMPLE RECEIPT FORM

CLIENT: KIFF ANALYTICAL **DATE:** 2-27-08

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.
_____ °C Temperature blank.

LABORATORY (Other than Calscience Courier):

2.8 °C Temperature blank.
_____ °C IR thermometer.
_____ Ambient temperature.

Initial: WB

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: ✓ No (Not Intact) : _____ Not Present: _____

Initial: WB

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sampler's name indicated on COC		✓	
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers and volume for analyses requested	✓		
Proper preservation noted on sample label(s)	✓		
VOA vial(s) free of headspace.			✓
Tedlar bag(s) free of condensation			✓

Initial: WB

COMMENTS:

KIFF Analytical LLC
2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. _____ Page 1 of 2

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

EDF Deliverable to (Email Address):

Phone No.: 530-297-4800 FAX No.: 530-297-4808

Project Number: 77OT.43877.00 P.O. No.: 61241

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Analysis Request

Date due: March 4, 2008

For Lab Use Only

Sample Designation	Sampling Date	Sampling Time	Container: Glass	Poly	Sleeve	Amber	Tedlar	Preservative: HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	Matrix: WATER	SOIL	Air	PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD	PAHs & PCP (EPA 8270C)						For Lab Use Only
GP-12-1	02/25/08	10:10	1									X		X		X	X								X	
GP-12-6	02/25/08	10:30	1									X		X				X								
GP-12WS	02/25/08	11:40				2				2			X			X									X	
GP-12-10	02/25/08	10:30	1									X		X				X								
GP-12-15	02/25/08	11:30	1									X		X				X								
GP-12-20	02/25/08	12:15	1									X		X				X								
GP-12-25	02/25/08	12:30	1									X		X				X								
GP-12-30	02/25/08	12:45	1									X		X				X								
GP-12WD	02/25/08	12:45				2				2			X			X									X	

Relinquished by: Troy A. Turpen	Date 3/4/08	Time 12:40	Received by:	Remarks: This is a revised COC for Work Order No. 08-02-1943, taking sample GP-12WD off hold, and requesting PAHs & PCP by EPA 8270C for samples GP-13-1 and GP-13WS. Please provide an XLS of the results as well as a PDF. *As, Ni, Ba, V, Cu, Zn
Relinquished by:	Date	Time	Received by:	
Relinquished by:	Date	Time	Received by Laboratory:	Bill to: Accounts Payable

KIFF Analytical LLC
2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. _____ Page 2 of 2

Project Contact (Hardcopy or PDF to):
Troy Turpen

EDF Report? __Yes _X_No

Chain-of-Custody Record and Analysis Request

Company/Address:
Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

EDF Deliverable to (Email Address):

Phone No.: 530-297-4800 FAX No.: 530-297-4808

Project Number: 77OT.43877.00 P.O. No.: 61241

Project Name:
Tesoro Pittsburg Terminal Phase II

E-mail address:
inbox@kiffanalytical.com

Project Address:

Analysis Request

Date due: March 4, 2008

For Lab Use Only

Sample Designation	Sampling: Date	Sampling: Time	Container: Glass	Container: Poly	Container: Sleeve	Container: Amber	Container: Tedlar	Preservative: HNO_3	Preservative: H_2SO_4	Preservative: $Na_2S_2O_3$	Preservative: $ZnAc_2$ & NaOH	Preservative: None	Matrix: WATER	Matrix: SOIL	Matrix: Air	PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD	PAHs & PCP (EPA 8270C)					
GP-13-1	02/25/08	14:00	1									1		X			X		X					X
GP-13-6	02/25/08	14:20	1									1		X				X						
GP-13WS	02/25/08	15:00				2				2			X						X					X
GP-13-10	02/25/08	14:30	1									1		X				X						
GP-13-15	02/25/08	14:40	1									1		X				X						
GP-13-20	02/25/08	15:40	1									1		X				X						
GP-13-25	02/25/08	15:45	1									1		X				X						
GP-13-30	02/25/08	15:50	1									1		X				X						

Relinquished by:	Date	Time	Received by:
Troy M. Turpen	3/4/08	12:40	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:

Remarks: This is a revised COC for Work Order No. 08-02-1943, taking sample GP-12WD off hold, and requesting PAHs & PCP by EPA 8270C for samples GP-13-1 and GP-13WS. Please provide an XLS of the results as well as a PDF. *As, Ni, Ba, V, Cu, Zn

Bill to: Accounts Payable

From:	Troy Turpen
To:	Amanda Porter;
CC:	cs; Wendy Hsiao;
Subject:	Work Order Nos. 08-02-1943, 08-02-2080 and 08-02-2227 (Kiff PO#s 61241, 61268 and 61290): samples off hold to be analyzed
Date:	Friday, March 07, 2008 5:03:45 PM
Attachments:	KiffLogo2005_179x74.jpg

Good afternoon!

I will send you revised COCs on Monday, but in the interim please take the following samples off hold and run as indicated, on a Standard TAT:

08-02-1943-2 (GP-12-6): PAHs by EPA 8310, As, Cu, V and Zn;
08-02-1943-11 (GP-13-6): As and V;

08-02-2080-2 (GP-11-10): PAHs by EPA 8310, As and V;
08-02-2080-7 (GP-9-6): As and V;
08-02-2080-13 (GP-8-6): As, Cu and V;
08-02-2080-14 (GP-7-6): As, Cu, V and Zn;

08-02-2227-4 (GP-15-6): As and V;
08-02-2227-14 (GP-16B-0): PAHs & PCP by EPA 8270, As, Ba, Cu, Ni, V and Zn; and
08-02-2227-22 (GP-17-6): As and V.

If you have any questions, please let me know.

Thank you!

=Troy
Troy Turpen
Account Manager
Kiff Analytical, LLC
Office: 530.297.4800 ext.111

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

March 06, 2008

CLS Work Order #: CRC0054
COC #: 61241

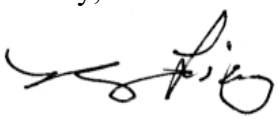
Troy Turpen
KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project Name: Tesoro Pittsburg Terminal Phase II

Enclosed are the results of analyses for samples received by the laboratory on 03/03/08 16:59. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,



James Liang, Ph.D.
Laboratory Director

CA DOHS ELAP Accreditation/Registration number 1233

CALIFORNIA LABORATORY SERVICES

 03/06/08 14:17

KIFF Analytical	Project: Tesoro Pittsburg Terminal Phase II	
2795 Second St. Suite 300	Project Number: 77OT.43877.00	**CLS Work Order #: CRC0054**
Davis, CA 95616	Project Manager: Troy Turpen	COC #: 61241

CHANGE OF STATUS

CRC0054

C.L.S. Lab Job No.: CRB0876

Project Name: Tesoro Pitts burg

Date Sample(s) Were Received: 2/26/08 **Original Date Due:** 3/3/08

Troy Turpin (Client Contacted) of Kiff (Company) called

on 3/3/08 (Date) at 4:50 (Time)

. . . and requested the following

Sample 12WD to be taken off hold and analyzed for As, Ni, Ba, V, Cu, Zn

Turnaround time requested for additional work: 3day

(Signature) 3/3/08 (Date)

Updated lab job database and file folder by: _____

cc: _____

H:\Alyssam\samprecchangeofstat.DOC

KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project: Tesoro Pittsburg Terminal Phase II
Project Number: 77OT.43877.00
Project Manager: Troy Turpen

CLS Work Order #: CRC0054
COC #: 61241

Metals by EPA 6000/7000 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
12WD (CRC0054-02) Water	**Sampled: 02/25/08 12:45**	**Received: 03/03/08 16:59**							
Arsenic	**7.8**	5.0	µg/L	1	CR01851	03/05/08	03/05/08	EPA 6020/7000	
Barium	**85**	10	"	"	"	"	"	"	
Copper	**8.2**	2.0	"	"	"	"	"	"	
Nickel	**11**	2.0	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	

KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project: Tesoro Pittsburg Terminal Phase II
Project Number: 77OT.43877.00 **CLS Work Order #: CRC0054**
Project Manager: Troy Turpen COC #: 61241

Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CR01851 - EPA 3020A										
Blank (CR01851-BLK1)				Prepared & Analyzed: 03/05/08						
Arsenic	ND	5.0	µg/L							
Barium	ND	10	"							
Copper	ND	2.0	"							
Nickel	ND	2.0	"							
Vanadium	ND	20	"							
Zinc	ND	20	"							
LCS (CR01851-BS1)				Prepared & Analyzed: 03/05/08						
Arsenic	103	5.0	µg/L	100		103	80-120			
Barium	105	10	"	100		105	80-120			
Copper	106	2.0	"	100		106	80-120			
Nickel	104	2.0	"	100		104	80-120			
Vanadium	110	20	"	100		110	80-120			
Zinc	107	20	"	100		107	80-120			
LCS Dup (CR01851-BSD1)				Prepared & Analyzed: 03/05/08						
Arsenic	106	5.0	µg/L	100		106	80-120	2.24	20	
Barium	105	10	"	100		105	80-120	0.258	20	
Copper	106	2.0	"	100		106	80-120	0.123	20	
Nickel	104	2.0	"	100		104	80-120	0.145	20	
Vanadium	110	20	"	100		110	80-120	0.155	20	
Zinc	107	20	"	100		107	80-120	0.215	20	
Matrix Spike (CR01851-MS1)	**Source: CRC0077-01**			Prepared & Analyzed: 03/05/08						
Arsenic	112	5.0	µg/L	100	4.80	107	75-125			
Barium	256	10	"	100	149	108	75-125			
Copper	95.7	2.0	"	100	0.870	94.8	75-125			
Nickel	94.8	2.0	"	100	0.390	94.4	75-125			
Vanadium	125	20	"	100	22.2	103	75-125			
Zinc	103	20	"	100	7.90	94.7	75-125			

KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project: Tesoro Pittsburg Terminal Phase II
Project Number: 77OT.43877.00
Project Manager: Troy Turpen

CLS Work Order #: CRC0054
COC #: 61241

Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CR01851 - EPA 3020A										
Matrix Spike Dup (CR01851-MSD1)		**Source: CRC0077-01**		Prepared & Analyzed: 03/05/08						
Arsenic	106	5.0	µg/L	100	4.80	101	75-125	5.02	25	
Barium	253	10	"	100	149	105	75-125	1.10	25	
Copper	92.7	2.0	"	100	0.870	91.8	75-125	3.24	25	
Nickel	91.6	2.0	"	100	0.390	91.2	75-125	3.43	25	
Vanadium	124	20	"	100	22.2	101	75-125	1.08	25	
Zinc	99.6	20	"	100	7.90	91.7	75-125	2.98	25	

KIFF Analytical	Project: Tesoro Pittsburg Terminal Phase II	
2795 Second St. Suite 300	Project Number: 77OT.43877.00	**CLS Work Order #: CRC0054**
Davis, CA 95616	Project Manager: Troy Turpen	COC #: 61241

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

61241

SECOR Rancho Cordova Office
3017 Kilgore Road
Rancho Cordova, CA
TEL: (916) 861-0400 FAX: (916) 861-0430

SECOR International, Inc.

CHAIN OF CUSTODY RECORD

SECOR Company Contact(s):
Todd Brown, SECOR Project Manager
email - tbrown@secor.com, brorie@secor.com
chamilton@secor.com

SECOR Project: 77OT.43877.00

Tesoro Billing Info
Company: 5200
AFE: 023139641-T
WBS: 97618.0042.925
G/L : 767490

DATE: 2/25/08

PAGE: 1 OF 2

Project Name: Tesoro Pittsburg Terminal Phase II

Address: 595 East Third Street, Pittsburg, CA

Sampler(s): Printed Name: Bryan Rorie

SAMPLER(S): (SIGNATURE)

Lab: KIFF ANALYTICAL

LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS)
☐ 10 DAYS ☒ 5 DAYS ☐ 72 HR ☐ 48 HR ☐ 24 HR ☐ <24 HR

SPECIAL INSTRUCTIONS OR NOTES: TEMPERATURE ON RECEIPT (C)

Direct Bill Jeff Baker of Tesoro Petroleum
All VOA's preserve hcl
All 1ambers preserve $Na_2S_2O_3$
All poly's unpreserved

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	PRE-SERVE	TPHd-carbon chain distinction (8015M)	TPHg-carbon chain distinction (8260B)	PAHs (8310)	PAHs (8270)	VOCs (8260B)	6 metals = As, Ni, Ba, V, Cu, Zn (6020)	7 metals = As, Ni, Ba, V, Cu, Zn, Pb (6020)						HOLD SAMPLE		Other:	Laboratory Notes
	GP-12-1	2/25/08	1010	S	1	N/A	X	X	X			X			Time Collected	Initial/Date	Temp °C	SAMPLE RECEIPT				01
	GP-12-6		1030	S	1	N/A	X	X	X			X							X			02
	GP-12-DS		1040	W	9	Notes	X	X	X			X										03
	GP-12-10		1030	S	1	N/A	X	X	X			X							X			04
	GP-12-15		1130	S	1	N/A	X	X	X			X							X			05
	GP-12-20		1215	S	1	N/A	X	X	X			X							X			06
	GP-12-25		1230	S	1	N/A	X	X	X			X							X			07
	GP-12-30		1245	S	1	N/A	X	X	X			X							X			08
	~~GP-~~12-DUP		1245	W	9	Notes	X	X	X			X							X			09
	~~GP-~~																					

Relinquished by: (Signature)	Received by: (Signature)	Date: 12/25/08	Time: 1645
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Kiff Analytical	Date: 022508	Time: 1645

61241

SECOR Rancho Cordova Office
3017 Kilgore Road
Rancho Cordova, CA
TEL: (916) 861-0400 FAX: (916) 861-0430

SECOR International, Inc.

CHAIN OF CUSTODY RECORD

SECOR Company Contact(s):
Todd Brown, SECOR Project Manager
email - tbrown@secor.com, brorie@secor.com
chamilton@secor.com

SECOR Project: 77OT.43877.00
Tesoro Billing Info
Company: 5200
AFE: 023139641-T
WBS: 97618.0042.925
G/L : 767490

DATE: 2/25/08
PAGE: 2 OF 2

Project Name: Tesoro Pittsburg Terminal Phase II
Address: 595 East Third Street, Pittsburg, CA

Sampler(s): Printed Name: Bryan Rorie
SAMPLER(S): (SIGNATURE)
Lab: KIFF ANALYTICAL
LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS)
☐ 10 DAYS ☒ 5 DAYS ☐ 72 HR ☐ 48 HR ☐ 24 HR ☐ <24 HR

SPECIAL INSTRUCTIONS OR NOTES: TEMPERATURE ON RECEIPT (C)
Direct Bill Jeff Baker of Tesoro Petroleum
All voa's preserved hcl
All 1 liter Ambers preserved $Na_2S_2O_3$
All Poly's unpreserved

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	PRE-SERVE	TPHd-carbon chain distinction (8015M)	TPHg-carbon chain distinction (8260B)	PAHs (8310)	PAHs (8270)	VOCs (8260B)	6 metals = As, Ni, Ba, V, Cu, Zn (6020)	7 metals = As, Ni, Ba, V, Cu, Zn, Pb (6020)	HOLD SAMPLE	Other:	Laboratory Notes
	GP-13-1	2/25/08	1400	S	1	N/A	X	X		X		X				10
	GP-13-6		1420	S	1	N/A	X	X		X		X		X		11
	GP-13WS		1500	W	9	N/A	X	X		X		X				12
	GP-13-10		1430	S	1	N/A	X	X		X		X		X		13
	GP-13-15		1440	S	1	N/A	X	X		X		X		X		14
	GP-13-20		1540	S	1	N/A	X	X		X		X		X		15
	GP-13-25		1545	S	1	N/A	X	X		X		X		X		16
	GP-13-30		1550	S	1	N/A	X	X		X		X		X		17
	GP-13WD		1555	W	9	N/A	X	X		X		X		X		18
	GP-															

Relinquished by: (Signature)	Received by: (Signature)	Date: 2/25/08	Time: 1690
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Kiff Analytical	Date: 022508	Time: 1645

Troy Turpen

From: Caron Stofleth [cstofleth@secor.com]
Sent: Thursday, February 28, 2008 11:49 AM
To: Troy Turpen
Subject: Tesoro Pittsburg water samples
Importance: High

Troy,

Please do not hold any of the water samples for the Tesoro Pittsburg project. **All** water samples are to be run. Sorry for the confusion.

Thanks,

Caron Stofleth
Project Scientist
SECOR International, now Stantec
Ph: (916) 384-0749
Fx: (916) 861-0430
caron.stofleth@stantec.com
stantec.com

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Please consider the environment before printing this email.

Troy Turpen

From: Caron Stofleth [cstofleth@secor.com]
Sent: Tuesday, March 04, 2008 4:44 PM
To: Troy Turpen
Cc: Gary Haeck; Todd Brown; Bryan Rorie
Subject: Pittsburg Terminal, samples off-hold
Attachments: kiff_20080304182438.pdf

Troy,

I have attached the COCs which indicate the following:

For GP-12-6 (soil), please analyze only for TPHd (& motor oil) carbon chain distinction, PAHs (8310), Arsenic, Vanadium, Copper, and Zinc.

Make sure GP-12WD has been taken off hold.

For GP-13-6 (soil), please analyze only for Arsenic and Vanadium.

Let me know if you have any questions.

Thanks,

Caron Stofleth
Project Scientist
SECOR International, now Stantec
Ph: (916) 384-0749
Fx: (916) 861-0430
caron.stofleth@stantec.com
stantec.com

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61241

SECOR Rancho Cordova Office
3017 Kilgore Road
Rancho Cordova, CA
TEL: (916) 861-0400 FAX: (916) 861-0430

SECOR International, Inc.

CHAIN OF CUSTODY RECORD

SECOR Company Contact(s):
Todd Brown, SECOR Project Manager
email - tbrown@secor.com, brorie@secor.com
chamilton@secor.com

SECOR Project: 77OT.43877.00

Tesoro Billing Info
Company: 5200
AFE: 023139641-T
WBS: 97618.0042.925
G/L : 767490

DATE: 2/25/08

PAGE: 1 OF 2

Project Name: Tesoro Pittsburg Terminal Phase II

Address: 595 East Third Street, Pittsburg, CA

Sampler(s): Printed Name: Bryan Rorie

SAMPLER(S): (SIGNATURE)

Lab: KIFF ANALYTICAL

LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS)
☐ 10 DAYS ☒ 5 DAYS ☐ 72 HR ☐ 48 HR ☐ 24 HR ☐ <24 HR

SPECIAL INSTRUCTIONS OR NOTES: TEMPERATURE ON RECEIPT (C)

Direct Bill Jeff Baker of Tesoro Petroleum
All VOA's preserve hcl
All Amber preserve $Na_2S_2O_3$
All poly's unpreserved

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	PRE-SERVE	TPHd-carbon chain distinction (8015M) + motor oil	TPHg-carbon chain distinction (8260B)	PAHs (8310)	PAHs (8270)	VOCs (8260B)	6 metals = As, ~~Ni, Ba~~, V, Cu, Zn (6020)	7 metals = As, Ni, Ba, V, Cu, Zn, Pb (6020)					HOLD SAMPLE		Other:	Laboratory Notes
	GP-12-1	2/25/08	1010	S	1	N/A	X	X	X			X			Time collected: 1010	Initial/Date/Time: MW 022508 1645	Temp °C: 2.8	SAMPLE RECEIPT			01
	GP-12-6 Take off hold		1030	S	1	N/A	X	X	X			X							X		02
	GP-12-05		1040	W	9	Notes	X	X	X			X									03
	GP-12-10		1030	S	1	N/A	X	X	X			X							X		04
	GP-12-15		1130	S	1	N/A	X	X	X			X							X		05
	GP-12-20		1215	S	1	N/A	X	X	X			X							X		06
	GP-12-25		1230	S	1	N/A	X	X	X			X							X		07
	GP-12-30		1245	S	1	N/A	X	X	X			X							X		08
	~~GP-12~~ 2 ~~EWD~~ Take off hold		1245	W	9	Notes	X	X	X			X							X		09
	~~GP~~ 3																				

Relinquished by: (Signature)	Received by: (Signature)	Date: 2/25/08	Time: 1645
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Via Fedex Kiff Analytical	Date: 022508	Time: 1645

61241

SECOR Rancho Cordova Office
3017 Kilgore Road
Rancho Cordova, CA
TEL: (916) 861-0400 FAX: (916) 861-0430

SECOR International, Inc.

CHAIN OF CUSTODY RECORD

SECOR Company Contact(s):
Todd Brown, SECOR Project Manager
email - tbrown@secor.com, brorie@secor.com
chamilton@secor.com

SECOR Project: 77OT.43877.00

Tesoro Billing Info
Company: 5200
AFE: 023139641-T
WBS: 97618.0042.925
G/L : 767490

DATE: 2/25/08
PAGE: 2 OF 3

Project Name: Tesoro Pittsburg Terminal Phase II
Address: 595 East Third Street, Pittsburg, CA

Sampler(s): Printed Name: Bryan Rorie
SAMPLER(S): (SIGNATURE)

Lab: KIFF ANALYTICAL
LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS)
☐ 10 DAYS ☒ 5 DAYS ☐ 72 HR ☐ 48 HR ☐ 24 HR ☐ <24 HR

SPECIAL INSTRUCTIONS OR NOTES: TEMPERATURE ON RECEIPT (C)
Direct Bill Jeff Baker of Tesoro Petroleum
All voa's preserved hcl
All 1 liter Ambers preserved $Na_2S_2O_3$
All Poly's unpreserved

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	PRE-SERVE	TPHd-carbon chain distinction (8015M)	TPHg-carbon chain distinction (8260B)	PAHs (8310)	PAHs (8270)	VOCs (8260B)	6 metals = As, Ni, Ba, V, Cu, Zn (6020)	7 metals = As, Ni, Ba, V, Cu, Zn, Pb (6020)	arsenic	vanadium				HOLD SAMPLE		Other:	Laboratory Notes
	GP-13-1	2/25/08	1400	S	1	N/A	X	X		X		X										10
	GP-13-6 take off hold		1420	S	1	N/A	X	X		X		X		X	X				X			11
	GP-13WS		1500	W	9	NONE	X	X		X		X										12
	GP-13-10		1430	S	1	N/A	X	X		X		X							X			13
	GP-13-15		1440	S	1	N/A	X	X		X		X							X			14
	GP-13-20		1540	S	1	N/A	X	X		X		X							X			15
	GP-13-25		1545	S	1	N/A	X	X		X		X							X			16
	GP-13-30		1550	S	1	N/A	X	X		X		X							X			17
	GP-13WD		1555	W	9	NONE	X	X		X		X							X			18
	GP-																					

Relinquished by: (Signature)	Received by: (Signature)	Date: 2/25/08	Time: 1690
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Kiff Analytical	Date: 022508	Time: 1645

Hydrocarbon Ranges Report*

Project Name: Tesoro Pittsburg Terminal Phase II

Lab Number:	61241-01	61241-03	61241-10	61241-12	61241-09
Sample:	GP-12-1	GP-12 WS	GP-13-1	GP-13WS	12WD
Sample Date:	2/25/2008	2/25/2008	2/25/2008	2/25/2008	2/25/2008
Matrix:	Soil	Water	Soil	Water	Water
Units	mg/Kg	ug/L	mg/Kg	ug/L	ug/L
Hydrocarbon Range					
C8 to C9 Fraction	nd	5	nd	6	6
C10 to C11 Fraction	nd	8	nd	4	5
C12 to C13 Fraction	0.17	17	nd	5	7
C14 to C15 Fraction	3.2	55	0.08	7	14
C16 to C17 Fraction	8.1	104	0.16	4	42
C18 to C19 Fraction	18	171	0.34	5	69
C20 to C21 Fraction	33	294	0.64	6	69
C22 to C23 Fraction	47	375	1.0	6	80
C24 to C25 Fraction	53	405	1.4	7	81
C26 to C27 Fraction	66	596	1.8	4	94
C28 to C29 Fraction	83	594	2.5	3	109
C30 to C31 Fraction	189	801	5.4	11	164
C32 to C33 Fraction	178	698	4.6	7	137
C34 to C35 Fraction	186	585	5.2	7	128
C36 to C37 Fraction	222	574	4.1	5	115
C38 to C39 Fraction	170	479	4.1	4	112
C40 Fraction	99	492	2.0	nd	53
Reporting Limit:	0.04	2	0.04	2	2

***Hydrocarbon concentrations should be considered estimates**

"nd" is non-detect at the specified Reporting Limit

Hydrocarbon Ranges Report*

Project Name: Tesoro Pittsburg Terminal Phase II

Lab Number:	**61241-02**
Sample:	**GP-12-6**
Sample Date:	**2/25/2008**
Matrix:	**Soil**
Units	**mg/Kg**

Hydrocarbon Range

C10 to C11 Fraction	**nd**
C12 to C13 Fraction	**0.08**
C14 to C15 Fraction	**0.53**
C16 to C17 Fraction	**0.78**
C18 to C19 Fraction	**1.7**
C20 to C21 Fraction	**2.3**
C22 to C23 Fraction	**2.6**
C24 to C25 Fraction	**3.8**
C26 to C27 Fraction	**4.1**
C28 to C29 Fraction	**4.2**
C30 to C31 Fraction	**7.0**
C32 to C33 Fraction	**11**
C34 to C35 Fraction	**6.9**
C36 to C37 Fraction	**7.4**
C38 to C39 Fraction	**5.9**
C40 Fraction	**2.1**

Reporting Limit:	**0.04**

***Hydrocarbon concentrations should be considered estimates**

"nd" is non-detect at the specified Reporting Limit

KIFF Analytical LLC

Report Number : 61268
Date : 03/17/2008

Todd Brown
SECOR International, Inc.
3017 Kilgore Road, Suite 100
Rancho Cordova, CA 95670

Subject : 7 Soil Samples and 5 Water Samples
Project Name : Tesoro Pittsburg Terminal Phase II
Project Number : 77OT.43877.00

Dear Mr. Brown,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,



Joel Kiff

KIFF Analytical LLC

Report Number : 61268
Date : 03/17/2008

Subject : 7 Soil Samples and 5 Water Samples
Project Name : Tesoro Pittsburg Terminal Phase II
Project Number : 77OT.43877.00

Case Narrative

Matrix Spike/Matrix Spike Duplicate Results associated with samples GP-7-1, GP-8-1, GP-11-1 and GP-9-1 for the analyte TPH as Diesel were affected by the analyte concentrations already present in the un-spiked sample.

Matrix Spike/Matrix Spike Duplicate Results associated with samples GP-11WS, GP-9WS, GP-7WS and GP-7WD for the analyte Benzene were affected by the analyte concentrations already present in the un-spiked sample.

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61268
Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**
Project Number : **77OT.43877.00**

Sample : **GP-11-1** Matrix : Soil Lab Number : 61268-01
Sample Date :02/26/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	03/03/2008
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	03/03/2008
4-Bromofluorobenzene (Surr)	104		% Recovery	EPA 8260B	03/03/2008
TPH as Diesel	**230**	10	mg/Kg	M EPA 8015	02/29/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**1600**	80	mg/Kg	M EPA 8015	02/29/2008
1-Chlorooctadecane (Diesel Surrogate)	Diluted Out		% Recovery	M EPA 8015	02/29/2008

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61268
Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**
Project Number : **77OT.43877.00**

Sample : **GP-11-10** Matrix : Soil Lab Number : 61268-02
Sample Date :02/26/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**48**	2.0	mg/Kg	M EPA 8015	03/13/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**180**	20	mg/Kg	M EPA 8015	03/13/2008
1-Chlorooctadecane (Diesel Surrogate)	77.2		% Recovery	M EPA 8015	03/13/2008

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61268
Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**
Project Number : **77OT.43877.00**

Sample : **GP-11WS** Matrix : Water Lab Number : 61268-05
Sample Date :02/26/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	03/03/2008
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	03/03/2008
4-Bromofluorobenzene (Surr)	105		% Recovery	EPA 8260B	03/03/2008
TPH as Diesel	**70**	50	ug/L	M EPA 8015	02/29/2008
TPH as Motor Oil	**< 100**	100	ug/L	M EPA 8015	02/29/2008
Octacosane (Diesel Surrogate)	93.5		% Recovery	M EPA 8015	02/29/2008

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61268
Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**
Project Number : **77OT.43877.00**

Sample : **GP-7-1** Matrix : Soil Lab Number : 61268-06
Sample Date :02/26/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	03/03/2008
Toluene - d8 (Surr)	99.4		% Recovery	EPA 8260B	03/03/2008
4-Bromofluorobenzene (Surr)	104		% Recovery	EPA 8260B	03/03/2008
TPH as Diesel	**120**	10	mg/Kg	M EPA 8015	02/29/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**490**	80	mg/Kg	M EPA 8015	02/29/2008
1-Chlorooctadecane (Diesel Surrogate)	Diluted Out		% Recovery	M EPA 8015	02/29/2008

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61268
Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**
Project Number : **77OT.43877.00**

Sample : **GP-9-1** Matrix : Soil Lab Number : 61268-07
Sample Date :02/26/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	03/03/2008
Toluene - d8 (Surr)	99.6		% Recovery	EPA 8260B	03/03/2008
4-Bromofluorobenzene (Surr)	105		% Recovery	EPA 8260B	03/03/2008
TPH as Diesel	**46**	2.0	mg/Kg	M EPA 8015	02/29/2008
TPH as Motor Oil	**350**	20	mg/Kg	M EPA 8015	02/29/2008
1-Chlorooctadecane (Diesel Surrogate)	84.4		% Recovery	M EPA 8015	02/29/2008

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61268
Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**
Project Number : **77OT.43877.00**

Sample : **GP-9WS** Matrix : Water Lab Number : 61268-11
Sample Date :02/26/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	03/03/2008
Toluene - d8 (Surr)	99.6		% Recovery	EPA 8260B	03/03/2008
4-Bromofluorobenzene (Surr)	105		% Recovery	EPA 8260B	03/03/2008
TPH as Diesel	**2800**	500	ug/L	M EPA 8015	03/04/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**13000**	500	ug/L	M EPA 8015	03/04/2008
Octacosane (Diesel Surrogate)	Diluted Out		% Recovery	M EPA 8015	03/04/2008

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61268
Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**
Project Number : **77OT.43877.00**

Sample : **GP-8-1** Matrix : Soil Lab Number : 61268-12
Sample Date :02/26/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	03/03/2008
Toluene - d8 (Surr)	99.4		% Recovery	EPA 8260B	03/03/2008
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	03/03/2008
TPH as Diesel	**210**	20	mg/Kg	M EPA 8015	02/29/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**2000**	200	mg/Kg	M EPA 8015	02/29/2008
1-Chlorooctadecane (Diesel Surrogate)	Diluted Out		% Recovery	M EPA 8015	02/29/2008

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61268
Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**
Project Number : **77OT.43877.00**

Sample : **GP-8-6** Matrix : Soil Lab Number : 61268-13
Sample Date :02/26/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**1.8**	1.0	mg/Kg	M EPA 8015	03/08/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**< 10**	10	mg/Kg	M EPA 8015	03/08/2008
1-Chlorooctadecane (Diesel Surrogate)	77.0		% Recovery	M EPA 8015	03/08/2008

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61268
Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**
Project Number : **77OT.43877.00**

Sample : **GP-7-6** Matrix : Soil Lab Number : 61268-14
Sample Date :02/26/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**2.8**	1.0	mg/Kg	M EPA 8015	03/08/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**< 10**	10	mg/Kg	M EPA 8015	03/08/2008
1-Chlorooctadecane (Diesel Surrogate)	75.6		% Recovery	M EPA 8015	03/08/2008

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61268
Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**
Project Number : **77OT.43877.00**

Sample : **GP-7WS** Matrix : Water Lab Number : 61268-18
Sample Date :02/26/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	03/03/2008
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	03/03/2008
4-Bromofluorobenzene (Surr)	106		% Recovery	EPA 8260B	03/03/2008
TPH as Diesel	**100**	50	ug/L	M EPA 8015	02/29/2008
TPH as Motor Oil	**< 100**	100	ug/L	M EPA 8015	02/29/2008
Octacosane (Diesel Surrogate)	101		% Recovery	M EPA 8015	02/29/2008

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61268
Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**
Project Number : **77OT.43877.00**

Sample : **GP-13WD** Matrix : Water Lab Number : 61268-20
Sample Date :02/26/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	03/03/2008
Toluene - d8 (Surr)	99.9		% Recovery	EPA 8260B	03/03/2008
4-Bromofluorobenzene (Surr)	105		% Recovery	EPA 8260B	03/03/2008
TPH as Diesel	**750**	50	ug/L	M EPA 8015	03/04/2008
(Note: Discrete peaks, higher boiling hydrocarbons present, atypical for Diesel Fuel.)					
TPH as Motor Oil	**700**	100	ug/L	M EPA 8015	03/04/2008
(Note: Discrete peaks in Motor Oil range, atypical for Motor Oil.)					
Octacosane (Diesel Surrogate)	128		% Recovery	M EPA 8015	03/04/2008

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61268
Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**
Project Number : **77OT.43877.00**

Sample : **GP-7WD** Matrix : Water Lab Number : 61268-22
Sample Date :02/26/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	03/03/2008
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	03/03/2008
4-Bromofluorobenzene (Surr)	104		% Recovery	EPA 8260B	03/03/2008
TPH as Diesel	**140**	50	ug/L	M EPA 8015	03/04/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**120**	100	ug/L	M EPA 8015	03/04/2008
Octacosane (Diesel Surrogate)	99.8		% Recovery	M EPA 8015	03/04/2008

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61268

Date : 03/17/2008

QC Report : Method Blank Data

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	02/28/2008
TPH as Motor Oil	< 10	10	mg/Kg	M EPA 8015	02/28/2008
1-Chlorooctadecane (Diesel Surrogate)	84.0		%	M EPA 8015	02/28/2008
TPH as Diesel	< 50	50	ug/L	M EPA 8015	02/29/2008
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	02/29/2008
Octacosane (Diesel Surrogate)	97.1		%	M EPA 8015	02/29/2008
TPH as Diesel	< 50	50	ug/L	M EPA 8015	03/04/2008
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	03/04/2008
Octacosane (Diesel Surrogate)	105		%	M EPA 8015	03/04/2008
TPH as Diesel	< 50	50	ug/L	M EPA 8015	03/03/2008
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	03/03/2008
Octacosane (Diesel Surrogate)	77.1		%	M EPA 8015	03/03/2008
TPH as Diesel	< 50	50	ug/L	M EPA 8015	03/04/2008
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	03/04/2008
Octacosane (Diesel Surrogate)	102		%	M EPA 8015	03/04/2008
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	03/08/2008
TPH as Motor Oil	< 10	10	mg/Kg	M EPA 8015	03/08/2008
1-Chlorooctadecane (Diesel Surrogate)	70.8		%	M EPA 8015	03/08/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	03/03/2008
Toluene - d8 (Surr)	100		%	EPA 8260B	03/03/2008
4-Bromofluorobenzene (Surr)	101		%	EPA 8260B	03/03/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	03/03/2008
Toluene - d8 (Surr)	101		%	EPA 8260B	03/03/2008
4-Bromofluorobenzene (Surr)	103		%	EPA 8260B	03/03/2008

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61268

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
TPH as Diesel	61306-10	63	20.0	20.0	72.7	143	mg/Kg	M EPA 8015	2/29/08	87.3	172	65.3	60-140	25
TPH as Diesel	Blank	<50	1000	1000	933	912	ug/L	M EPA 8015	2/29/08	93.3	91.2	2.24	70-130	25
TPH as Diesel	Blank	<50	1000	1000	912	944	ug/L	M EPA 8015	3/4/08	91.2	94.4	3.40	70-130	25
TPH as Diesel	Blank	<50	1000	1000	881	1010	ug/L	M EPA 8015	3/3/08	88.1	101	13.3	70-130	25
TPH as Diesel	Blank	<50	1000	1000	942	902	ug/L	M EPA 8015	3/4/08	94.2	90.2	4.40	70-130	25
TPH as Diesel	61426-05	<1.0	20.0	20.0	21.6	22.1	mg/Kg	M EPA 8015	3/8/08	108	111	2.42	60-140	25
Benzene	61268-06	<0.0050	0.0399	0.0393	0.0352	0.0350	mg/Kg	EPA 8260B	3/3/08	88.2	89.1	0.953	70-130	25
Toluene	61268-06	<0.0050	0.0399	0.0393	0.0332	0.0329	mg/Kg	EPA 8260B	3/3/08	83.2	83.8	0.757	70-130	25
Methyl-t-Butyl Ether	61268-06	<0.0050	0.0399	0.0393	0.0370	0.0383	mg/Kg	EPA 8260B	3/3/08	92.7	97.6	5.12	70-130	25
Benzene	61281-09	220	39.8	39.9	249	240	ug/L	EPA 8260B	3/3/08	71.7	51.3	33.2	70-130	25
Toluene	61281-09	19	39.8	39.9	58.8	57.2	ug/L	EPA 8260B	3/3/08	100	95.9	4.20	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61268

QC Report : Laboratory Control Sample (LCS)

Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
TPH as Diesel	20.0	mg/Kg	M EPA 8015	2/28/08	75.8	70-130
TPH as Diesel	20.0	mg/Kg	M EPA 8015	3/8/08	88.3	70-130
Benzene	0.0396	mg/Kg	EPA 8260B	3/3/08	91.6	70-130
Toluene	0.0396	mg/Kg	EPA 8260B	3/3/08	91.2	70-130
Methyl-t-Butyl Ether	0.0396	mg/Kg	EPA 8260B	3/3/08	85.5	70-130
Benzene	40.0	ug/L	EPA 8260B	3/3/08	103	70-130
Toluene	40.0	ug/L	EPA 8260B	3/3/08	102	70-130

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

March 19, 2008

CLS Work Order #: CRB0931
COC #: 61268

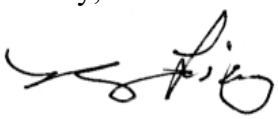
Troy Turpen
KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project Name: Tesoro Pittsburg Terminal Phase II

Enclosed are the results of analyses for samples received by the laboratory on 02/27/08 10:33. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,



James Liang, Ph.D.
Laboratory Director

CA DOHS ELAP Accreditation/Registration number 1233

CALIFORNIA LABORATORY SERVICES

KIFF Analytical	Project: Tesoro Pittsburg Terminal Phase II	
2795 Second St. Suite 300	Project Number: 77OT.43877.00	**CLS Work Order #: CRB0931**
Davis, CA 95616	Project Manager: Troy Turpen	COC #: 61268

CRB0931

KIFF Analytical LLC

2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

California Lab Services
3249 Fitzgerald Rd.
Rancho Cordova, CA 95742
tel: (916) 638-7301 COC# 61268 Page 1 of 1

Project Contact (Hardcopy or PDF to): Troy Turpen
Company/Address: Kiff Analytical, LLC
Phone No.: FAX No.:
Project Number: 77OT.43877.00 P.O. No.: 61268
Project Name: Tesoro Pittsburg Terminal Phase II
Project Address:

EDF Report? __ Yes _X_ No

Recommended but not mandatory to complete this section:
Sampling Company Log Code:
Global ID:
EDF Deliverable to (Email Address):
E-mail address: inbox@kiffanalytical.com

Chain-of-Custody Record and Analysis Request

Sample Designation	Sampling Date	Sampling Time	Container: VOA	Container: Poly	Container: Sleeve	Container: Amber	Container: Glass Jar	Preservative: HNO_3	Preservative: H_2SO_4	Preservative: $Na_2S_2O_3$	Preservative: ZnAc & NaOH	Preservative: NONE	Matrix: WATER	Matrix: SOIL	Matrix: Air	Analysis Request: Dissolved Metals (EPA 6020) **	Analysis Request: Hold *	Date due:	For Lab Use Only
GP 11WS	02/26/08	1145		1								X	X			X		March 4, 2008	
GP-9WS	02/26/08	1345		1								X	X			X		X	
GP-7WS	02/26/08	1440		1								X	X			X		X	
GP-13WD	02/26/08	N/A		1								X	X				X		
GP-7WD	02/26/08	1620		1								X	X				X		

Relinquished by: Kiff Analytical	Date: 02/28/08	Time: 1033	Received by:	Remarks: *Please lab filter & preserve all samples. **Metals include As, Ni, Ba, V, Cu, Zn.
Relinquished by:	Date	Time	Received by:	
Relinquished by:	Date: 2/28	Time: 1033	Received by Laboratory: 3°	Bill to: Accounts Payable

CALIFORNIA LABORATORY SERVICES

KIFF Analytical	Project: Tesoro Pittsburg Terminal Phase II	
2795 Second St. Suite 300	Project Number: 77OT.43877.00	**CLS Work Order #: CRB0931**
Davis, CA 95616	Project Manager: Troy Turpen	COC #: 61268

CHANGE OF STATUS

Revision

C.L.S. Lab Job No.: CRB0931

Project Name: Tesoro Pittsburg Terminal Phase II

Date Sample(s) Were Received: 2/27/08 **Original Date Due:** 3/4/08

Troy Turpin (Client Contacted) **of** Kiff (Company) **called**

on 3/6/08 (Date) **at** 8:00 (Time)

. . . and requested the following

Samples: GP-13WD CRB0931-4
GP-7WD CRB0931-5
to be taken off hold and analyzed for As, Ni, Ba, V, Cu, Zn dissolved

Turnaround time requested for additional work: 1 day

Scott W Rutten (Signature) 3/6/08 (Date)

Updated lab job database and file folder by: _____

cc: _____

H:\Alyssam\samprecchangeofstat.DOC

KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project: Tesoro Pittsburg Terminal Phase II
Project Number: 77OT.43877.00
Project Manager: Troy Turpen

CLS Work Order #: CRB0931
COC #: 61268

Metals by EPA 6000/7000 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
GP-11WS (CRB0931-01) Water Sampled: 02/26/08 11:45 Received: 02/27/08 10:33									
Arsenic	**15**	5.0	µg/L	1	CR01691	02/28/08	02/28/08	EPA 6020/7000	
Barium	**1100**	10	"	"	"	"	"	"	A-COM
Copper	**20**	2.0	"	"	"	"	"	"	
Nickel	ND	2.0	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	
GP-9WS (CRB0931-02) Water Sampled: 02/26/08 13:45 Received: 02/27/08 10:33									
Arsenic	**9.0**	5.0	µg/L	1	CR01691	02/28/08	02/28/08	EPA 6020/7000	
Barium	**82**	10	"	"	"	"	"	"	
Copper	**11**	2.0	"	"	"	"	"	"	
Nickel	**19**	2.0	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	
GP-7WS (CRB0931-03) Water Sampled: 02/26/08 14:40 Received: 02/27/08 10:33									
Arsenic	**7.1**	5.0	µg/L	1	CR01691	02/28/08	02/28/08	EPA 6020/7000	
Barium	**30**	10	"	"	"	"	"	"	
Copper	**11**	2.0	"	"	"	"	"	"	
Nickel	**6.0**	2.0	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	
GP-13 WD (CRB0931-04) Water Sampled: 02/26/08 00:00 Received: 02/27/08 10:33									
Arsenic	ND	5.0	µg/L	1	CR01898	03/06/08	03/06/08	EPA 6020/7000	
Barium	**43**	10	"	"	"	"	"	"	
Copper	**6.9**	2.0	"	"	"	"	"	"	
Nickel	**17**	2.0	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	

KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project: Tesoro Pittsburg Terminal Phase II
Project Number: 77OT.43877.00
Project Manager: Troy Turpen

CLS Work Order #: CRB0931
COC #: 61268

Metals by EPA 6000/7000 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
GP-7WD (CRB0931-05) Water	**Sampled: 02/26/08 16:20**	**Received: 02/27/08 10:33**							
Arsenic	ND	5.0	µg/L	1	CR01898	03/06/08	03/06/08	EPA 6020/7000	
Barium	**46**	10	"	"	"	"	"	"	
Copper	**7.7**	2.0	"	"	"	"	"	"	
Nickel	**16**	2.0	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	**25**	20	"	"	"	"	"	"	

KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project: Tesoro Pittsburg Terminal Phase II
Project Number: 77OT.43877.00
Project Manager: Troy Turpen

CLS Work Order #: CRB0931
COC #: 61268

Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CR01691 - EPA 3020A										
Blank (CR01691-BLK1)				Prepared & Analyzed: 02/28/08						
Arsenic	ND	5.0	µg/L							
Barium	ND	10	"							
Copper	ND	2.0	"							
Nickel	ND	2.0	"							
Vanadium	ND	20	"							
Zinc	ND	20	"							
LCS (CR01691-BS1)				Prepared & Analyzed: 02/28/08						
Arsenic	101	5.0	µg/L	100		101	80-120			
Barium	104	10	"	100		104	80-120			
Copper	107	2.0	"	100		107	80-120			
Nickel	102	2.0	"	100		102	80-120			
Vanadium	108	20	"	100		108	80-120			
Zinc	101	20	"	100		101	80-120			
LCS Dup (CR01691-BSD1)				Prepared & Analyzed: 02/28/08						
Arsenic	105	5.0	µg/L	100		105	80-120	3.85	20	
Barium	106	10	"	100		106	80-120	1.81	20	
Copper	106	2.0	"	100		106	80-120	0.782	20	
Nickel	103	2.0	"	100		103	80-120	0.137	20	
Vanadium	108	20	"	100		108	80-120	0.750	20	
Zinc	104	20	"	100		104	80-120	2.91	20	
Matrix Spike (CR01691-MS1)	**Source: CRB0952-01**			Prepared & Analyzed: 02/28/08						
Arsenic	111	5.0	µg/L	100	4.50	107	75-125			
Barium	138	10	"	100	31.6	106	75-125			
Copper	148	2.0	"	100	48.3	99.4	75-125			
Nickel	100	2.0	"	100	4.46	95.5	75-125			
Vanadium	299	20	"	100	182	117	75-125			
Zinc	157	20	"	100	62.5	95.0	75-125			

KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project: Tesoro Pittsburg Terminal Phase II
Project Number: 77OT.43877.00
Project Manager: Troy Turpen

CLS Work Order #: CRB0931
COC #: 61268

Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CR01691 - EPA 3020A										
Matrix Spike Dup (CR01691-MSD1)		**Source: CRB0952-01**		Prepared & Analyzed: 02/28/08						
Arsenic	112	5.0	µg/L	100	4.50	107	75-125	0.134	25	
Barium	136	10	"	100	31.6	105	75-125	1.23	25	
Copper	143	2.0	"	100	48.3	94.5	75-125	3.39	25	
Nickel	97.0	2.0	"	100	4.46	92.5	75-125	3.01	25	
Vanadium	285	20	"	100	182	103	75-125	4.80	25	
Zinc	156	20	"	100	62.5	93.4	75-125	0.996	25	
Batch CR01898 - EPA 3020A										
Blank (CR01898-BLK1)				Prepared & Analyzed: 03/06/08						
Arsenic	ND	5.0	µg/L							
Barium	ND	10	"							
Copper	ND	2.0	"							
Lead	ND	5.0	"							
Nickel	ND	2.0	"							
Selenium	ND	5.0	"							
Vanadium	ND	20	"							
Zinc	ND	20	"							
LCS (CR01898-BS1)				Prepared & Analyzed: 03/06/08						
Arsenic	102	5.0	µg/L	100		102	80-120			
Barium	104	10	"	100		104	80-120			
Copper	106	2.0	"	100		106	80-120			
Lead	106	5.0	"	100		106	80-120			
Nickel	104	2.0	"	100		104	80-120			
Selenium	98.1	5.0	"	100		98.1	80-120			
Vanadium	110	20	"	100		110	80-120			
Zinc	103	20	"	100		103	80-120			

KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project: Tesoro Pittsburg Terminal Phase II
Project Number: 77OT.43877.00
Project Manager: Troy Turpen

CLS Work Order #: CRB0931
COC #: 61268

Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CR01898 - EPA 3020A										
LCS Dup (CR01898-BSD1)				Prepared & Analyzed: 03/06/08						
Arsenic	105	5.0	µg/L	100		105	80-120	3.07	20	
Barium	106	10	"	100		106	80-120	1.99	20	
Copper	106	2.0	"	100		106	80-120	0.254	20	
Lead	106	5.0	"	100		106	80-120	0.0755	20	
Nickel	104	2.0	"	100		104	80-120	0.769	20	
Selenium	103	5.0	"	100		103	80-120	4.75	20	
Vanadium	111	20	"	100		111	80-120	0.616	20	
Zinc	104	20	"	100		104	80-120	0.222	20	
Matrix Spike (CR01898-MS1)		**Source: CRC0175-02**		Prepared & Analyzed: 03/06/08						
Arsenic	112	5.0	µg/L	100	6.31	106	75-125			
Barium	135	10	"	100	27.6	108	75-125			
Copper	101	2.0	"	100	1.58	99.6	75-125			
Lead	109	5.0	"	100	ND	109	75-125			
Nickel	104	2.0	"	100	5.03	99.5	75-125			
Selenium	106	5.0	"	100	2.08	104	75-125			
Vanadium	123	20	"	100	14.1	109	75-125			
Zinc	102	20	"	100	3.67	98.3	75-125			
Matrix Spike Dup (CR01898-MSD1)		**Source: CRC0175-02**		Prepared & Analyzed: 03/06/08						
Arsenic	107	5.0	µg/L	100	6.31	101	75-125	4.72	25	
Barium	130	10	"	100	27.6	102	75-125	4.22	25	
Copper	98.1	2.0	"	100	1.58	96.5	75-125	3.04	25	
Lead	106	5.0	"	100	ND	106	75-125	3.29	25	
Nickel	102	2.0	"	100	5.03	96.9	75-125	2.44	25	
Selenium	101	5.0	"	100	2.08	98.9	75-125	4.58	25	
Vanadium	120	20	"	100	14.1	106	75-125	2.47	25	
Zinc	98.6	20	"	100	3.67	94.9	75-125	3.37	25	

CALIFORNIA LABORATORY SERVICES

KIFF Analytical	Project: Tesoro Pittsburg Terminal Phase II	
2795 Second St. Suite 300	Project Number: 77OT.43877.00	**CLS Work Order #: CRB0931**
Davis, CA 95616	Project Manager: Troy Turpen	COC #: 61268

Notes and Definitions

A-COM	Run by ICP (EPA6010) due to Ba above ICP-MS calibrtion
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Calscience
Environmental
Laboratories, Inc.

March 04, 2008

Joel Kiff
Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Subject: **Calscience Work Order No.: 08-02-2080**
Client Reference: Tesoro Pittsburg Terminal Phase II

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 2/28/2008 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Amanda Porter

Calscience Environmental
Laboratories, Inc.
Amanda Porter
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	02/28/08
2795 2nd Street, Suite 300		Work Order No:	08-02-2080
Davis, CA 95616-6593		Preparation:	EPA 3050B
		Method:	EPA 6020
		Units:	mg/kg
Project: Tesoro Pittsburg Terminal Phase II			Page 1 of 1

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-11-1	**08-02-2080-1-A**	**02/26/08 09:00**	**Solid**	**ICP/MS A**	**02/29/08**	**02/29/08 13:07**	**080229L03**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	5.36	0.200	1		Nickel	41.4	0.100	1	
Barium	123	0.100	1		Vanadium	45.7	0.100	1	
Copper	94.6	0.100	1		Zinc	104	1.00	1	

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-7-1	**08-02-2080-6-A**	**02/26/08 10:30**	**Solid**	**ICP/MS A**	**02/29/08**	**02/29/08 13:11**	**080229L03**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	10.2	0.200	1		Nickel	37.2	0.100	1	
Barium	202	0.100	1		Vanadium	45.3	0.100	1	
Copper	376	0.100	1		Zinc	618	1.00	1	

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-9-1	**08-02-2080-7-A**	**02/26/08 12:30**	**Solid**	**ICP/MS A**	**02/29/08**	**02/29/08 13:14**	**080229L03**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	4.43	0.200	1		Nickel	18.1	0.100	1	
Barium	107	0.100	1		Vanadium	31.3	0.100	1	
Copper	40.1	0.100	1		Zinc	102	1.00	1	

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-8-1	**08-02-2080-12-A**	**02/26/08 14:00**	**Solid**	**ICP/MS A**	**02/29/08**	**02/29/08 13:17**	**080229L03**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	3.11	0.200	1		Nickel	20.8	0.100	1	
Barium	89.2	0.100	1		Vanadium	37.4	0.100	1	
Copper	631	0.100	1		Zinc	174	1.00	1	

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**096-10-002-1,049**	**N/A**	**Solid**	**ICP/MS A**	**02/29/08**	**02/29/08 12:12**	**080229L03**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	ND	0.200	1		Nickel	ND	0.100	1	
Barium	ND	0.100	1		Vanadium	ND	0.100	1	
Copper	ND	0.100	1		Zinc	ND	1.00	1	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	02/28/08
2795 2nd Street, Suite 300		Work Order No:	08-02-2080
Davis, CA 95616-6593		Preparation:	EPA 3510C
		Method:	EPA 8310
		Units:	ug/L

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-11WS	**08-02-2080-5-A**	**02/26/08 11:45**	**Aqueous**	**HPLC 5**	**02/28/08**	**03/01/08 08:09**	**080228L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	1.0	1		Benzo (a) Anthracene	ND	1.0	1	
Acenaphthylene	ND	1.0	1		Chrysene	ND	1.0	1	
Acenaphthene	ND	1.0	1		Benzo (b) Fluoranthene	ND	1.0	1	
Fluorene	ND	1.0	1		Benzo (k) Fluoranthene	ND	1.0	1	
Phenanthrene	ND	1.0	1		Benzo (a) Pyrene	ND	0.20	1	
Anthracene	ND	1.0	1		Dibenz (a,h) Anthracene	ND	1.0	1	
Fluoranthene	ND	1.0	1		Benzo (g,h,i) Perylene	ND	1.0	1	
Pyrene	ND	1.0	1		Indeno (1,2,3-c,d) Pyrene	ND	1.0	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	41	40-160	

GP-9WS	**08-02-2080-11-A**	**02/26/08 13:45**	**Aqueous**	**HPLC 5**	**02/28/08**	**03/03/08 14:20**	**080228L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	1.1	1.1		Benzo (a) Anthracene	ND	1.1	1.1	
Acenaphthylene	ND	1.1	1.1		Chrysene	ND	1.1	1.1	
Acenaphthene	ND	1.1	1.1		Benzo (b) Fluoranthene	ND	1.1	1.1	
Fluorene	ND	1.1	1.1		Benzo (k) Fluoranthene	ND	1.1	1.1	
Phenanthrene	ND	1.1	1.1		Benzo (a) Pyrene	ND	0.22	1.1	
Anthracene	ND	1.1	1.1		Dibenz (a,h) Anthracene	ND	1.1	1.1	
Fluoranthene	ND	1.1	1.1		Benzo (g,h,i) Perylene	ND	1.1	1.1	
Pyrene	ND	1.1	1.1		Indeno (1,2,3-c,d) Pyrene	ND	1.1	1.1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	91	40-160	

GP-7WS	**08-02-2080-18-A**	**02/26/08 14:40**	**Aqueous**	**HPLC 5**	**02/28/08**	**03/03/08 14:52**	**080228L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	1.0	1		Benzo (a) Anthracene	ND	1.0	1	
Acenaphthylene	ND	1.0	1		Chrysene	ND	1.0	1	
Acenaphthene	ND	1.0	1		Benzo (b) Fluoranthene	ND	1.0	1	
Fluorene	ND	1.0	1		Benzo (k) Fluoranthene	ND	1.0	1	
Phenanthrene	ND	1.0	1		Benzo (a) Pyrene	ND	0.20	1	
Anthracene	ND	1.0	1		Dibenz (a,h) Anthracene	ND	1.0	1	
Fluoranthene	ND	1.0	1		Benzo (g,h,i) Perylene	ND	1.0	1	
Pyrene	ND	1.0	1		Indeno (1,2,3-c,d) Pyrene	ND	1.0	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	97	40-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	02/28/08
2795 2nd Street, Suite 300		Work Order No:	08-02-2080
Davis, CA 95616-6593		Preparation:	EPA 3510C
		Method:	EPA 8310
		Units:	ug/L

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-07-003-1,082**	**N/A**	**Aqueous**	**HPLC 5**	**02/28/08**	**03/01/08 06:31**	**080228L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	1.0	1		Benzo (a) Anthracene	ND	1.0	1	
Acenaphthylene	ND	1.0	1		Chrysene	ND	1.0	1	
Acenaphthene	ND	1.0	1		Benzo (b) Fluoranthene	ND	1.0	1	
Fluorene	ND	1.0	1		Benzo (k) Fluoranthene	ND	1.0	1	
Phenanthrene	ND	1.0	1		Benzo (a) Pyrene	ND	0.20	1	
Anthracene	ND	1.0	1		Dibenz (a,h) Anthracene	ND	1.0	1	
Fluoranthene	ND	1.0	1		Benzo (g,h,i) Perylene	ND	1.0	1	
Pyrene	ND	1.0	1		Indeno (1,2,3-c,d) Pyrene	ND	1.0	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	66	40-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	02/28/08
2795 2nd Street, Suite 300		Work Order No:	08-02-2080
Davis, CA 95616-6593		Preparation:	EPA 3545
		Method:	EPA 8310
		Units:	ug/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-11-1	**08-02-2080-1-A**	**02/26/08 09:00**	**Solid**	**HPLC 5**	**02/28/08**	**02/29/08 19:39**	**080228L09**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	270	15	1		Benzo (a) Anthracene	97	10	1	
Acenaphthylene	44	30	1		Chrysene	150	10	1	
Acenaphthene	37	15	1		Benzo (b) Fluoranthene	88	10	1	
Fluorene	12	10	1		Benzo (k) Fluoranthene	40	10	1	
Phenanthrene	110	10	1		Benzo (a) Pyrene	79	10	1	
Anthracene	21	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Fluoranthene	270	10	1		Benzo (g,h,i) Perylene	48	10	1	
Pyrene	130	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Surrogates:	REC (%)	Control Limits		Qual					
Decafluorobiphenyl	54	40-160							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-7-1	**08-02-2080-6-A**	**02/26/08 10:30**	**Solid**	**HPLC 5**	**02/28/08**	**02/29/08 20:12**	**080228L09**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	67	15	1		Benzo (a) Anthracene	21	10	1	
Acenaphthylene	54	30	1		Chrysene	47	10	1	
Acenaphthene	23	15	1		Benzo (b) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Phenanthrene	31	10	1		Benzo (a) Pyrene	31	10	1	
Anthracene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Fluoranthene	36	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Pyrene	30	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Surrogates:	REC (%)	Control Limits		Qual					
Decafluorobiphenyl	78	40-160							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-9-1	**08-02-2080-7-A**	**02/26/08 12:30**	**Solid**	**HPLC 5**	**02/28/08**	**02/29/08 20:44**	**080228L09**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	15	1		Benzo (a) Anthracene	ND	10	1	
Acenaphthylene	ND	30	1		Chrysene	34	10	1	
Acenaphthene	ND	15	1		Benzo (b) Fluoranthene	12	10	1	
Fluorene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (a) Pyrene	23	10	1	
Anthracene	ND	10	1		Dibenz (a,h) Anthracene	15	10	1	
Fluoranthene	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Pyrene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Surrogates:	REC (%)	Control Limits		Qual					
Decafluorobiphenyl	66	40-160							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	02/28/08
2795 2nd Street, Suite 300		Work Order No:	08-02-2080
Davis, CA 95616-6593		Preparation:	EPA 3545
		Method:	EPA 8310
		Units:	ug/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-8-1	**08-02-2080-12-A**	**02/26/08 14:00**	**Solid**	**HPLC 5**	**02/28/08**	**03/03/08 12:42**	**080228L09**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	15	1		Benzo (a) Anthracene	ND	10	1	
Acenaphthylene	ND	30	1		Chrysene	ND	10	1	
Acenaphthene	31	15	1		Benzo (b) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
Anthracene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Fluoranthene	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Pyrene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	81	40-160	

Method Blank	**099-07-002-1,002**	**N/A**	**Solid**	**HPLC 5**	**02/28/08**	**02/29/08 15:13**	**080228L09**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	15	1		Benzo (a) Anthracene	ND	10	1	
Acenaphthylene	ND	30	1		Chrysene	ND	10	1	
Acenaphthene	ND	15	1		Benzo (b) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
Anthracene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Fluoranthene	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Pyrene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	89	40-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/28/08
Work Order No: 08-02-2080
Preparation: EPA 3050B
Method: EPA 6020

Project Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-02-2194-1	**Solid**	**ICP/MS A**	**02/29/08**	**02/29/08**	**080229S03**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	101	102	72-132	1	0-13	
Barium	90	84	50-152	2	0-41	
Copper	87	87	25-157	0	0-22	
Nickel	101	100	46-154	1	0-15	
Vanadium	105	100	28-178	3	0-28	
Zinc	78	37	23-173	12	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - PDS / PDSD

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Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received 02/28/08
Work Order No: 08-02-2080
Preparation: EPA 3050B
Method: EPA 6020

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
08-02-2194-1	**Solid**	**ICP/MS A**	**02/29/08**	**02/29/08**	**080229S03**

Parameter	PDS %REC	PDSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	110	111	75-125	1	0-13	
Barium	98	111	75-125	3	0-41	
Copper	107	109	75-125	1	0-22	
Nickel	108	111	75-125	2	0-15	
Vanadium	104	112	75-125	5	0-28	
Zinc	106	114	75-125	2	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/28/08
Work Order No: 08-02-2080
Preparation: EPA 3545
Method: EPA 8310

Project Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-02-2055-6	**Solid**	**HPLC 5**	**02/28/08**	**02/29/08**	**080228S09**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Naphthalene	100	94	40-160	6	0-20	
Acenaphthylene	79	79	40-160	0	0-20	
Acenaphthene	85	88	40-160	4	0-20	
Fluorene	80	80	40-160	0	0-20	
Phenanthrene	77	77	40-160	1	0-20	
Anthracene	71	70	40-160	1	0-20	
Fluoranthene	77	76	40-160	1	0-20	
Pyrene	81	81	40-160	1	0-20	
Benzo (a) Anthracene	84	84	40-160	1	0-20	
Chrysene	85	84	40-160	1	0-20	
Benzo (b) Fluoranthene	71	70	40-160	1	0-20	
Benzo (k) Fluoranthene	88	87	40-160	1	0-20	
Benzo (a) Pyrene	69	68	40-160	1	0-20	
Dibenz (a,h) Anthracene	86	86	40-160	0	0-20	
Benzo (g,h,i) Perylene	88	87	40-160	1	0-20	
Indeno (1,2,3-c,d) Pyrene	85	85	40-160	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-02-2080
Preparation: EPA 3050B
Method: EPA 6020

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
096-10-002-1,049	**Solid**	**ICP/MS A**	**02/29/08**	**02/29/08**	**080229L03**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	99	98	80-120	1	0-20	
Barium	98	96	80-120	2	0-20	
Copper	106	103	80-120	3	0-20	
Nickel	100	103	80-120	3	0-20	
Vanadium	95	95	80-120	0	0-20	
Zinc	112	114	80-120	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-02-2080
Preparation: EPA 3510C
Method: EPA 8310

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-003-1,082	**Aqueous**	**HPLC 5**	**02/28/08**	**03/01/08**	**080228L04**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Naphthalene	73	76	40-160	3	0-20	
Acenaphthylene	63	63	40-160	0	0-20	
Acenaphthene	69	69	40-160	1	0-20	
Fluorene	67	67	40-160	0	0-20	
Phenanthrene	75	75	40-160	0	0-20	
Anthracene	73	73	40-160	0	0-20	
Fluoranthene	80	80	40-160	0	0-20	
Pyrene	84	85	40-160	0	0-20	
Benzo (a) Anthracene	87	87	40-160	0	0-20	
Chrysene	91	92	40-160	0	0-20	
Benzo (b) Fluoranthene	87	87	40-160	0	0-20	
Benzo (k) Fluoranthene	90	90	40-160	0	0-20	
Benzo (a) Pyrene	77	77	40-160	0	0-20	
Dibenz (a,h) Anthracene	90	90	40-160	0	0-20	
Benzo (g,h,i) Perylene	89	89	40-160	0	0-20	
Indeno (1,2,3-c,d) Pyrene	84	84	40-160	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-02-2080
Preparation: EPA 3545
Method: EPA 8310

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-002-1,002	**Solid**	**HPLC 5**	**02/28/08**	**02/29/08**	**080228L09**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Naphthalene	105	106	40-160	0	0-20	
Acenaphthylene	91	91	40-160	1	0-20	
Acenaphthene	99	99	40-160	1	0-20	
Fluorene	95	94	40-160	0	0-20	
Phenanthrene	94	94	40-160	1	0-20	
Anthracene	85	84	40-160	1	0-20	
Fluoranthene	95	91	40-160	4	0-20	
Pyrene	100	96	40-160	4	0-20	
Benzo (a) Anthracene	106	99	40-160	8	0-20	
Chrysene	112	104	40-160	7	0-20	
Benzo (b) Fluoranthene	110	102	40-160	7	0-20	
Benzo (k) Fluoranthene	113	104	40-160	8	0-20	
Benzo (a) Pyrene	96	90	40-160	6	0-20	
Dibenz (a,h) Anthracene	113	109	40-160	4	0-20	
Benzo (g,h,i) Perylene	112	104	40-160	7	0-20	
Indeno (1,2,3-c,d) Pyrene	106	100	40-160	6	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 08-02-2080

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

KIFF Analytical LLC

2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. 2080

Chain-of-Custody Record and Analysis Request

EDF Report? __Yes _X_No

Recommended but not mandatory to complete this section:

Project Contact (Hardcopy or PDF to):	Troy Turpen
Company/Address:	Kiff Analytical
Phone No.:	530-297-4800
FAX No.:	530-297-4808
Project Number:	77OT.43877.00
P.O. No.:	61268
Project Name:	Tesoro Pittsburg Terminal Phase II
Project Address:	
Sampling Company Log Code:	
Global ID:	
EDF Deliverable to (Email Address):	
E-mail address:	inbox@kiffanalytical.com

Analysis Request

Sample Designation	Sampling Date	Sampling Time	Container: Glass	Container: Poly	Container: Sleeve	Container: Amber	Container: Tedlar	Preservative: HNO_3	Preservative: H_2SO_4	Preservative: $Na_2S_2O_3$	Preservative: $ZnAc_2$ & NaOH	Preservative: None	Matrix: WATER	Matrix: SOIL	Matrix: Air	PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD	Date due: March 4, 2008	For Lab Use Only
GP-11-1	02/26/08	0900	1									X		X		X	X		X	
GP-11-10	02/26/08	1110	1									X		X				X		
GP-11-15	02/26/08	1110	1									X		X				X		
GP-11-20	02/26/08	1125	1									X		X				X		
GP-11WS	02/26/08	1145				2				2		X	X			X			X	
GP-7-1	02/26/08	1030	1									X		X		X	X		X	
GP-9-1	02/26/08	1230	1									X		X		X	X		X	
GP-9-6	02/26/08	1320	1									X		X				X		
GP-9-10	02/26/08	1320	1									X		X				X		
GP-9-15	02/26/08	1325	1									X		X				X		

	Date	Time	
Relinquished by:	022708	1900	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by: B1020132/1323	2-28-08	0800	Received by Laboratory:

Remarks: *As, Ni, Ba, V, Cu, Zn

Bill to: Accounts Payable

KIFF Analytical LLC
2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. 2080

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_ No

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

Phone No.: 530-297-4800 FAX No.: 530-297-4808

Project Number: 77OT.43877.00 P.O. No.: 61268

EDF Deliverable to (Email Address):

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling Date	Sampling Time	Container: Glass	Poly	Sleeve	Amber	Tedlar	Preservative: HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	Matrix: WATER	SOIL	Air	PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD	Date due: March 4, 2008	For Lab Use Only
GP-9WS	02/26/08	1345				2				2			X			X			X	
GP-8-1	02/26/08	1400	1									1		X		X	X		X	
GP-8-6	02/26/08	1410	1									1		X				X		
GP-7-6	02/26/08	1420	1									1		X				X		
GP-7-10	02/26/08	1425	1									1		X				X		
GP-7-15	02/26/08	1430	1									1		X				X		
GP-7-20	02/26/08	1435	1									1		X				X		
GP-7WS	02/26/08	1440				2				2			X			X			X	
GP-7-25	02/26/08	1610	1									1		X				X		
GP-13WD	02/26/08	N/A				2				2			X					X		

	Date	Time	Received by:
Relinquished by:	022708	1900	
Relinquished by:			
Relinquished by: 0B102013213 23	2-28-08	0800	Received by Laboratory: Wobatu CET

Remarks: *As, Ni, Ba, V, Cu, Zn

Bill to: Accounts Payable

KIFF Analytical LLC

2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove. CA 92841
714-895-5494

Lab No. 2080

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

EDF Deliverable to (Email Address):

Phone No.: 530-297-4800 FAX No.: 530-297-4808

Project Number: 77OT.43877.00 P.O. No.: 61268

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling Date	Sampling Time	Container: Glass	Poly	Sleeve	Amber	Tedlar	Preservative: HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	Matrix: WATER	SOIL	Air	Analysis Request: PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD						Date due: March 4, 2008	For Lab Use Only
GP-7-30	02/26/08	1615	1									X		X				X							
GP-7WD	02/26/08	1620				2				2			X					X							

Relinquished by:	Date	Time	Received by:
	022708	1900	
Relinquished by:	Date	Time	Received by:
Relinquished by: 0013102013213 23	Date 2.28.08	Time 0800	Received by Laboratory:

Remarks: *As, Ni, Ba, V, Cu, Zn

Bill to: Accounts Payable

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 08 - 02 - 2080

Cooler 1 of 1

SAMPLE RECEIPT FORM

CLIENT: Huff Anal DATE: 2-28-08

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.
_____ °C Temperature blank.

LABORATORY (Other than Calscience Courier):

2.7 °C Temperature blank.
_____ °C IR thermometer.
_____ Ambient temperature.

Initial: WB

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: ✓ No (Not Intact) : _____ Not Present: _____

Initial: WB

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sampler's name indicated on COC		✓	
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers and volume for analyses requested	✓		
Proper preservation noted on sample label(s)	✓		
VOA vial(s) free of headspace.			✓
Tedlar bag(s) free of condensation			✓

Initial: WB

COMMENTS:

Calscience Environmental Laboratories, Inc.

Supplemental Report 1

March 17, 2008

Additional requested analyses are reported as a stand-alone report.

Joel Kiff
Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Subject: **Calscience Work Order No.:** **08-02-2080**
Client Reference: **Tesoro Pittsburg Terminal Phase II**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 2/28/2008 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Amanda Porter

Calscience Environmental
Laboratories, Inc.
Amanda Porter
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/28/08
Work Order No: 08-02-2080
Preparation: EPA 3050B
Method: EPA 6020
Units: mg/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-11-10	**08-02-2080-2-A**	**02/26/08 11:10**	**Solid**	**ICP/MS A**	**03/10/08**	**03/10/08 18:46**	**080310L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	4.56	0.200	1		Vanadium	36.6	0.100	1	B

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-9-6	**08-02-2080-8-A**	**02/26/08 13:20**	**Solid**	**ICP/MS A**	**03/10/08**	**03/10/08 18:35**	**080310L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	2.25	0.200	1		Vanadium	49.2	0.100	1	B

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-8-6	**08-02-2080-13-A**	**02/26/08 14:10**	**Solid**	**ICP/MS A**	**03/10/08**	**03/10/08 18:39**	**080310L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	3.39	0.200	1		Vanadium	38.9	0.100	1	B
Copper	21.9	0.100	1						

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-7-6	**08-02-2080-14-A**	**02/26/08 14:20**	**Solid**	**ICP/MS A**	**03/10/08**	**03/10/08 18:32**	**080310L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	4.06	0.200	1		Vanadium	36.7	0.100	1	B
Copper	16.8	0.100	1		Zinc	49.5	1.00	1	

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**096-10-002-1,052**	**N/A**	**Solid**	**ICP/MS A**	**03/10/08**	**03/10/08 16:02**	**080310L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	ND	0.200	1		Vanadium	0.206	0.100	1	
Copper	ND	0.100	1		Zinc	ND	1.00	1	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	02/28/08
2795 2nd Street, Suite 300		Work Order No:	08-02-2080
Davis, CA 95616-6593		Preparation:	EPA 3545
		Method:	EPA 8310
		Units:	ug/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-11-10	**08-02-2080-2-A**	**02/26/08 11:10**	**Solid**	**HPLC 5**	**03/10/08**	**03/11/08 22:34**	**080310L10**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	15	1		Benzo (a) Anthracene	130	10	1	
Acenaphthylene	ND	30	1		Chrysene	200	10	1	
Acenaphthene	ND	15	1		Benzo (b) Fluoranthene	120	10	1	
Fluorene	ND	10	1		Benzo (k) Fluoranthene	50	10	1	
Phenanthrene	25	10	1		Benzo (a) Pyrene	110	10	1	
Anthracene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Fluoranthene	200	10	1		Benzo (g,h,i) Perylene	45	10	1	
Pyrene	120	10	1		Indeno (1,2,3-c,d) Pyrene	31	10	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	41	40-160	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-07-002-1,006**	**N/A**	**Solid**	**HPLC 5**	**03/10/08**	**03/11/08 18:46**	**080310L10**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	15	1		Benzo (a) Anthracene	ND	10	1	
Acenaphthylene	ND	30	1		Chrysene	ND	10	1	
Acenaphthene	ND	15	1		Benzo (b) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
Anthracene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Fluoranthene	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Pyrene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	75	40-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/28/08
Work Order No: 08-02-2080
Preparation: EPA 3050B
Method: EPA 6020

Project Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-03-0265-1	**Solid**	**ICP/MS A**	**03/10/08**	**03/10/08**	**080310S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	94	92	72-132	1	0-13	
Barium	4X	4X	50-152	4X	0-41	Q
Copper	102	88	25-157	6	0-22	
Nickel	4X	4X	46-154	4X	0-15	Q
Vanadium	99	109	28-178	3	0-28	
Zinc	108	82	23-173	7	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - PDS / PDSD

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received 02/28/08
Work Order No: 08-02-2080
Preparation: EPA 3050B
Method: EPA 6020

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
08-03-0265-1	**Solid**	**ICP/MS A**	**03/10/08**	**03/10/08**	**080310S01**

Parameter	PDS %REC	PDSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	106	105	75-125	1	0-13	
Barium	4X	4X	75-125	4X	0-41	Q
Copper	97	96	75-125	0	0-22	
Nickel	4X	4X	75-125	4X	0-15	Q
Vanadium	112	113	75-125	0	0-28	
Zinc	103	103	75-125	0	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/28/08
Work Order No: 08-02-2080
Preparation: EPA 3545
Method: EPA 8310

Project Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-02-1943-2	**Solid**	**HPLC 5**	**03/10/08**	**03/13/08**	**080310S10**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Naphthalene	116	111	40-160	4	0-20	
Acenaphthylene	58	56	40-160	3	0-20	
Acenaphthene	51	44	40-160	16	0-20	
Fluorene	40	39	40-160	4	0-20	3
Phenanthrene	49	47	40-160	4	0-20	
Anthracene	42	40	40-160	4	0-20	
Fluoranthene	0	0	40-160	1	0-20	3
Pyrene	0	0	40-160	1	0-20	3
Benzo (a) Anthracene	58	51	40-160	11	0-20	
Chrysene	20	18	40-160	4	0-20	3
Benzo (b) Fluoranthene	2370	2334	40-160	1	0-20	3
Benzo (k) Fluoranthene	56	56	40-160	0	0-20	
Benzo (a) Pyrene	70	69	40-160	1	0-20	
Dibenz (a,h) Anthracene	50	63	40-160	22	0-20	4
Benzo (g,h,i) Perylene	43	39	40-160	10	0-20	3
Indeno (1,2,3-c,d) Pyrene	38	38	40-160	3	0-20	3

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical		Date Received:	N/A
2795 2nd Street, Suite 300		Work Order No:	08-02-2080
Davis, CA 95616-6593		Preparation:	EPA 3050B
		Method:	EPA 6020

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
096-10-002-1,052	**Solid**	**ICP/MS A**	**03/10/08**	**03/10/08**	**080310L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	92	91	80-120	1	0-20	
Copper	96	96	80-120	1	0-20	
Vanadium	95	93	80-120	3	0-20	
Zinc	96	94	80-120	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-02-2080
Preparation: EPA 3545
Method: EPA 8310

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-002-1,006	**Solid**	**HPLC 5**	**03/10/08**	**03/11/08**	**080310L10**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Naphthalene	84	89	40-160	6	0-20	
Acenaphthylene	87	95	40-160	9	0-20	
Acenaphthene	91	97	40-160	7	0-20	
Fluorene	90	98	40-160	8	0-20	
Phenanthrene	91	98	40-160	8	0-20	
Anthracene	80	86	40-160	7	0-20	
Fluoranthene	88	96	40-160	8	0-20	
Pyrene	96	103	40-160	7	0-20	
Benzo (a) Anthracene	90	98	40-160	8	0-20	
Chrysene	94	103	40-160	8	0-20	
Benzo (b) Fluoranthene	92	101	40-160	9	0-20	
Benzo (k) Fluoranthene	95	105	40-160	10	0-20	
Benzo (a) Pyrene	82	89	40-160	8	0-20	
Dibenz (a,h) Anthracene	89	100	40-160	11	0-20	
Benzo (g,h,i) Perylene	94	101	40-160	7	0-20	
Indeno (1,2,3-c,d) Pyrene	89	97	40-160	8	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 08-02-2080

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

KIFF Analytical LLC

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Fax: 530.297.4808

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7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. 2080

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen	EDF Report? __Yes _X_No
Company/Address: Kiff Analytical	Recommended but not mandatory to complete this section:
Phone No.: 530-297-4800 / FAX No.: 530-297-4808	Sampling Company Log Code:
Project Number: 77OT.43877.00 / P.O. No.: 61268	Global ID:
Project Name: Tesoro Pittsburg Terminal Phase II	EDF Deliverable to (Email Address):
Project Address:	E-mail address: inbox@kiffanalytical.com

Sample Designation	Sampling Date	Sampling Time	Container: Glass	Poly	Sleeve	Amber	Tedlar	Preservative: HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	Matrix: WATER	SOIL	Air	PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD	Date due: March 4, 2008	For Lab Use Only
GP-11-1	02/26/08	0900	1									X		X		X	X		X	
GP-11-10	02/26/08	1110	1									X		X				X		
GP-11-15	02/26/08	1110	1									X		X				X		
GP-11-20	02/26/08	1125	1									X		X				X		
GP-11WS	02/26/08	1145				2				2		X	X			X			X	
GP-7-1	02/26/08	1030	1									X		X		X	X		X	
GP-9-1	02/26/08	1230	1									X		X		X	X		X	
GP-9-6	02/26/08	1320	1									X		X				X		
GP-9-10	02/26/08	1320	1									X		X				X		
GP-9-15	02/26/08	1325	1									X		X				X		

	Date	Time	
Relinquished by:	022708	1900	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by: B1020132/1323	2-28-08	0800	Received by Laboratory:

Remarks: *As, Ni, Ba, V, Cu, Zn

Bill to: Accounts Payable

KIFF Analytical LLC
2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. 2080

Chain-of-Custody Record and Analysis Request

EDF Report? __Yes _X_No

Project Contact (Hardcopy or PDF to): Troy Turpen

Company/Address: Kiff Analytical

Phone No.: 530-297-4800 FAX No.: 530-297-4808

Project Number: 77OT.43877.00 P.O. No.: 61268

Project Name: Tesoro Pittsburg Terminal Phase II

Project Address:

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

EDF Deliverable to (Email Address):

E-mail address: inbox@kiffanalytical.com

Analysis Request

Date due: March 4, 2008

For Lab Use Only

Sample Designation	Sampling Date	Sampling Time	Container: Glass	Poly	Sleeve	Amber	Tedlar	Preservative: HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	Matrix: WATER	SOIL	Air	PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD	For Lab Use Only
GP-9WS	02/26/08	1345				2				2			X			X			X
GP-8-1	02/26/08	1400	1									1		X		X	X		X
GP-8-6	02/26/08	1410	1									1		X				X	
GP-7-6	02/26/08	1420	1									1		X				X	
GP-7-10	02/26/08	1425	1									1		X				X	
GP-7-15	02/26/08	1430	1									1		X				X	
GP-7-20	02/26/08	1435	1									1		X				X	
GP-7WS	02/26/08	1440				2				2			X			X			X
GP-7-25	02/26/08	1610	1									1		X				X	
GP-13WD	02/26/08	N/A				2				2			X					X	

	Date	Time	Received by:
Relinquished by:	022708	1900	
Relinquished by:			
Relinquished by: 1Z B10Z01321323	2-28-08	0800	Received by Laboratory: Wobatu CET

Remarks: *As, Ni, Ba, V, Cu, Zn

Bill to: Accounts Payable

KIFF Analytical LLC

2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove. CA 92841
714-895-5494

Lab No. 2080

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

EDF Deliverable to (Email Address):

Phone No.: 530-297-4800 FAX No.: 530-297-4808

Project Number: 77OT.43877.00 P.O. No.: 61268

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling Date	Sampling Time	Container: Glass	Poly	Sleeve	Amber	Tedlar	Preservative: HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	Matrix: WATER	SOIL	Air	Analysis Request: PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD							Date due:	For Lab Use Only
																									March 4, 2008	
GP-7-30	02/26/08	1615	1									X		X				X								
GP-7WD	02/26/08	1620				2				2			X					X								

Relinquished by:	Date	Time	Received by:
	022708	1900	
Relinquished by:	Date	Time	Received by:
Relinquished by: 00B1020132132	Date 2-28-08	Time 0800	Received by Laboratory:

Remarks: *As, Ni, Ba, V, Cu, Zn

Bill to: Accounts Payable

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 08 - 02 - 2080

Cooler 1 of 1

SAMPLE RECEIPT FORM

CLIENT: Kiff Anal **DATE:** 2-28-08

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.
_____ °C Temperature blank.

LABORATORY (Other than Calscience Courier):

2.7 °C Temperature blank.
_____ °C IR thermometer.
_____ Ambient temperature.

Initial: WB

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: ✓ No (Not Intact) : _____ Not Present: _____

Initial: WB

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sampler's name indicated on COC		✓	
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers and volume for analyses requested	✓		
Proper preservation noted on sample label(s)	✓		
VOA vial(s) free of headspace.			✓
Tedlar bag(s) free of condensation			✓

Initial: WB

COMMENTS:

From:	Troy Turpen
To:	Amanda Porter;
CC:	cs; Wendy Hsiao;
Subject:	Work Order Nos. 08-02-1943, 08-02-2080 and 08-02-2227 (Kiff PO#s 61241, 61268 and 61290): samples off hold to be analyzed
Date:	Friday, March 07, 2008 5:03:45 PM
Attachments:	KiffLogo2005_179x74.jpg

Good afternoon!

I will send you revised COCs on Monday, but in the interim please take the following samples off hold and run as indicated, on a Standard TAT:

08-02-1943-2 (GP-12-6): PAHs by EPA 8310, As, Cu, V and Zn;
08-02-1943-11 (GP-13-6): As and V;

08-02-2080-2 (GP-11-10): PAHs by EPA 8310, As and V;
08-02-2080-7 (GP-9-6): As and V;
08-02-2080-13 (GP-8-6): As, Cu and V;
08-02-2080-14 (GP-7-6): As, Cu, V and Zn;

08-02-2227-4 (GP-15-6): As and V;
08-02-2227-14 (GP-16B-0): PAHs & PCP by EPA 8270, As, Ba, Cu, Ni, V and Zn; and
08-02-2227-22 (GP-17-6): As and V.

If you have any questions, please let me know.

Thank you!

=Troy
Troy Turpen
Account Manager
Kiff Analytical, LLC
Office: 530.297.4800 ext.111

KIFF Analytical LLC
2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. _____ Page 1 of 3

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen
Company/Address: Kiff Analytical
Phone No.: 530-297-4800 FAX No.: 530-297-4808
Project Number: 77OT.43877.00 P.O. No.: 61268
Project Name: Tesoro Pittsburg Terminal Phase II
Project Address:

EDF Report? __Yes _X_No

Recommended but not mandatory to complete this section:

Sampling Company Log Code:
Global ID:
EDF Deliverable to (Email Address):
E-mail address: inbox@kiffanalytical.com

Sample Designation	Sampling: Date	Sampling: Time	Container: Glass	Container: Poly	Container: Sleeve	Container: Amber	Container: Tedlar	Preservative: HNO_3	Preservative: H_2SO_4	Preservative: $Na_2S_2O_3$	Preservative: $ZnAc_2$ & NaOH	Preservative: None	Matrix: WATER	Matrix: SOIL	Matrix: Air	Analysis Request: PAH's (EPA 8310)	Analysis Request: METALS (EPA 6020)*	Analysis Request: HOLD	Analysis Request: PAHs & PCP (EPA 8270C)	Analysis Request: As, V (EPA 6020)	Analysis Request: As, Cu, V (EPA 6020)	Analysis Request: As, Cu, V, Zn (EPA 6020)	Date due: March 4, 2008	Date due: March 7, 2008	Date due: March 17, 2008	For Lab Use Only
GP-11-1	02/26/08	0900	1									X		X		X	X						X			
GP-11-10	02/26/08	1110	1									X		X				X								
GP-11-15	02/26/08	1110	1									X		X				X								
GP-11-20	02/26/08	1125	1									X		X				X								
GP-11WS	02/26/08	1145				2				2		X	X			X							X			
GP-7-1	02/26/08	1030	1									X		X		X	X						X			
GP-9-1	02/26/08	1230	1									X		X		X	X						X			
GP-9-6	02/26/08	1320	1									X		X						X					X	
GP-9-10	02/26/08	1320	1									X		X				X								
GP-9-15	02/26/08	1325	1									X		X				X								

Relinquished by: Troy A. Turpen	Date 3/14/08	Time 16:15	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:

Remarks: This is a revised COC for Work Order No. 08-02-2080, taking sample GP-9-6, GP-8-6, and GP-7-6 (-8, -13 and -14) off hold to be run as marked. Please provide an XLS of the results as well as a PDF. *As, Ni, Ba, V, Cu, Zn

Bill to: Accounts Payable

KIFF Analytical LLC
2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. _____ Page 2 of 3

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Chain-of-Custody Record and Analysis Request

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

EDF Deliverable to (Email Address):

Phone No.: 530-297-4800 FAX No.: 530-297-4808

Project Number: 77OT.43877.00 P.O. No.: 61268

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling		Container					Preservative					Matrix			Analysis Request							Date due:	Date due:	Date due:	For Lab Use Only
	Date	Time	Glass	Poly	Sleeve	Amber	Tedlar	HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	WATER	SOIL	Air	PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD	PAHs & PCP (EPA 8270C)	As, V (EPA 6020)	As, Cu, V (EPA 6020)	As, Cu, V, Zn (EPA 6020)	March 4, 2008	March 7, 2008	March 17, 2008	
GP-9WS	02/26/08	1345				2				2			X			X							X			
GP-8-1	02/26/08	1400	1									1		X		X	X						X			
GP-8-6	02/26/08	1410	1									1		X							X				X	
GP-7-6	02/26/08	1420	1									1		X								X			X	
GP-7-10	02/26/08	1425	1									1		X				X								
GP-7-15	02/26/08	1430	1									1		X				X								
GP-7-20	02/26/08	1435	1									1		X				X								
GP-7WS	02/26/08	1440				2				2			X			X							X			
GP-7-25	02/26/08	1610	1									1		X				X								
GP-13WD	02/26/08	N/A				2				2			X						X					X		

Relinquished by: Troy M. Turpen	Date 3/14/08	Time 16:15	Received by:	
Relinquished by:	Date	Time	Received by:	
Relinquished by:	Date	Time	Received by Laboratory:	

Remarks: This is a revised COC for Work Order No. 08-02-2080, taking sample GP-9-6, GP-8-6, and GP-7-6 (-8, -13 and -14) off hold to be run as marked. Please provide an XLS of the results as well as a PDF. *As, Ni, Ba, V, Cu, Zn

Bill to: Accounts Payable

KIFF Analytical LLC
2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. _____ Page 3 of 3

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

Phone No.: 530-297-4800 FAX No.: 530-297-4808

EDF Deliverable to (Email Address):

Project Number: 77OT.43877.00 P.O. No.: 61268

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling Date	Sampling Time	Container: Glass	Poly	Sleeve	Amber	Tedlar	Preservative: HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	Matrix: WATER	SOIL	Air	Analysis Request: PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD	PAHs & PCP (EPA 8270C)	As, V (EPA 6020)	As, Cu, V (EPA 6020)	As, Cu, V, Zn (EPA 6020)	Date due: March 4, 2008	Date due: March 7, 2008	Date due: March 17, 2008	For Lab Use Only
GP-7-30	02/26/08	1615	1									X		X				X								
GP-7WD	02/26/08	1620				2				2			X			X								X		

Relinquished by: Troy A. Turpen	Date 3/14/08	Time 16:15	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:

Remarks: This is a revised COC for Work Order No. 08-02-2080, taking sample GP-9-6, GP-8-6, and GP-7-6 (-8, -13 and -14) off hold to be run as marked. Please provide an XLS of the results as well as a PDF. *As, Ni, Ba, V, Cu, Zn

Bill to: Accounts Payable

Calscience Environmental Laboratories, Inc.

Supplemental Report 2

March 21, 2008

Additional requested analyses are reported as a stand-alone report.

Joel Kiff
Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Subject: **Calscience Work Order No.: 08-02-2080**
Client Reference: Tesoro Pittsburg Terminal Phase II

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 2/28/2008 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Amanda Porter

Calscience Environmental
Laboratories, Inc.
Amanda Porter
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/28/08
Work Order No: 08-02-2080
Preparation: EPA 3510B
Method: EPA 8270C
Units: ug/L

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-13WD	**08-02-2080-20-B**	**02/26/08 00:00**	**Aqueous**	**GC/MS P**	**03/19/08**	**03/20/08 12:45**	**080319L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	10	1		Benzo (a) Anthracene	ND	10	1	
Acenaphthylene	ND	10	1		Chrysene	ND	10	1	
Acenaphthene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (b) Fluoranthene	ND	10	1	
Pentachlorophenol	ND	10	1		Benzo (a) Pyrene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Anthracene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Fluoranthene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Pyrene	ND	10	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	44	7-121		Phenol-d6	32	1-127	
Nitrobenzene-d5	64	50-146		2-Fluorobiphenyl	54	42-138	
2,4,6-Tribromophenol	66	41-137		p-Terphenyl-d14	58	47-173	

Method Blank	**095-01-003-2,367**	**N/A**	**Aqueous**	**GC/MS P**	**03/19/08**	**03/20/08 11:07**	**080319L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	10	1		Benzo (a) Anthracene	ND	10	1	
Acenaphthylene	ND	10	1		Chrysene	ND	10	1	
Acenaphthene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (b) Fluoranthene	ND	10	1	
Pentachlorophenol	ND	10	1		Benzo (a) Pyrene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Anthracene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Fluoranthene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Pyrene	ND	10	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	45	7-121		Phenol-d6	36	1-127	
Nitrobenzene-d5	84	50-146		2-Fluorobiphenyl	81	42-138	
2,4,6-Tribromophenol	79	41-137		p-Terphenyl-d14	78	47-173	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	02/28/08
2795 2nd Street, Suite 300		Work Order No:	08-02-2080
Davis, CA 95616-6593		Preparation:	EPA 3510C
		Method:	EPA 8310
		Units:	ug/L

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-7WD	**08-02-2080-22-A**	**02/26/08 16:20**	**Aqueous**	**HPLC 5**	**03/19/08**	**03/20/08 15:46**	**080319L05**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	1.0	1		Benzo (a) Anthracene	ND	1.0	1	
Acenaphthylene	ND	1.0	1		Chrysene	ND	1.0	1	
Acenaphthene	ND	1.0	1		Benzo (b) Fluoranthene	ND	1.0	1	
Fluorene	ND	1.0	1		Benzo (k) Fluoranthene	ND	1.0	1	
Phenanthrene	ND	1.0	1		Benzo (a) Pyrene	ND	0.20	1	
Anthracene	ND	1.0	1		Dibenz (a,h) Anthracene	ND	1.0	1	
Fluoranthene	ND	1.0	1		Benzo (g,h,i) Perylene	ND	1.0	1	
Pyrene	ND	1.0	1		Indeno (1,2,3-c,d) Pyrene	ND	1.0	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	52	40-160	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-07-003-1,097**	**N/A**	**Aqueous**	**HPLC 5**	**03/19/08**	**03/20/08 14:08**	**080319L05**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	1.0	1		Benzo (a) Anthracene	ND	1.0	1	
Acenaphthylene	ND	1.0	1		Chrysene	ND	1.0	1	
Acenaphthene	ND	1.0	1		Benzo (b) Fluoranthene	ND	1.0	1	
Fluorene	ND	1.0	1		Benzo (k) Fluoranthene	ND	1.0	1	
Phenanthrene	ND	1.0	1		Benzo (a) Pyrene	ND	0.20	1	
Anthracene	ND	1.0	1		Dibenz (a,h) Anthracene	ND	1.0	1	
Fluoranthene	ND	1.0	1		Benzo (g,h,i) Perylene	ND	1.0	1	
Pyrene	ND	1.0	1		Indeno (1,2,3-c,d) Pyrene	ND	1.0	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	68	40-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-02-2080
Preparation: EPA 3510B
Method: EPA 8270C

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-003-2,367	**Aqueous**	**GC/MS P**	**03/19/08**	**03/20/08**	**080319L04**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Phenol	44	44	4-142	0	0-24	
2-Chlorophenol	79	79	53-113	0	0-17	
1,4-Dichlorobenzene	82	82	50-122	1	0-19	
N-Nitroso-di-n-propylamine	91	90	56-146	0	0-22	
4-Chloro-3-Methylphenol	80	83	55-121	3	0-18	
Acenaphthene	85	85	55-139	0	0-17	
4-Nitrophenol	39	41	1-145	4	0-29	
2,4-Dinitrotoluene	90	92	41-161	2	0-22	
Pentachlorophenol	81	84	34-130	4	0-23	
Pyrene	77	78	38-170	2	0-27	
1,2,4-Trichlorobenzene	86	87	49-121	1	0-19	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-02-2080
Preparation: EPA 3510C
Method: EPA 8310

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-003-1,097	**Aqueous**	**HPLC 5**	**03/19/08**	**03/20/08**	**080319L05**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Naphthalene	92	75	40-160	20	0-20	
Acenaphthylene	91	81	40-160	12	0-20	
Acenaphthene	96	83	40-160	15	0-20	
Fluorene	96	85	40-160	12	0-20	
Phenanthrene	96	86	40-160	11	0-20	
Anthracene	83	74	40-160	11	0-20	
Fluoranthene	93	85	40-160	9	0-20	
Pyrene	98	89	40-160	9	0-20	
Benzo (a) Anthracene	95	93	40-160	2	0-20	
Chrysene	99	98	40-160	1	0-20	
Benzo (b) Fluoranthene	100	98	40-160	2	0-20	
Benzo (k) Fluoranthene	100	99	40-160	1	0-20	
Benzo (a) Pyrene	95	93	40-160	3	0-20	
Dibenz (a,h) Anthracene	96	96	40-160	1	0-20	
Benzo (g,h,i) Perylene	98	97	40-160	1	0-20	
Indeno (1,2,3-c,d) Pyrene	94	92	40-160	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 08-02-2080

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

KIFF Analytical LLC

2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. 2080

Chain-of-Custody Record and Analysis Request

EDF Report? __Yes _X_No

Recommended but not mandatory to complete this section:

Project Contact (Hardcopy or PDF to):	Troy Turpen
Company/Address:	Kiff Analytical
Phone No.:	530-297-4800
FAX No.:	530-297-4808
Project Number:	77OT.43877.00
P.O. No.:	61268
Project Name:	Tesoro Pittsburg Terminal Phase II
Project Address:	
Sampling Company Log Code:	
Global ID:	
EDF Deliverable to (Email Address):	
E-mail address:	inbox@kiffanalytical.com

Analysis Request

Sample Designation	Sampling Date	Sampling Time	Container: Glass	Container: Poly	Container: Sleeve	Container: Amber	Container: Tedlar	Preservative: HNO_3	Preservative: H_2SO_4	Preservative: $Na_2S_2O_3$	Preservative: $ZnAc_2$ & NaOH	Preservative: None	Matrix: WATER	Matrix: SOIL	Matrix: Air	PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD	Date due: March 4, 2008	For Lab Use Only
GP-11-1	02/26/08	0900	1									X		X		X	X		X	
GP-11-10	02/26/08	1110	1									X		X				X		
GP-11-15	02/26/08	1110	1									X		X				X		
GP-11-20	02/26/08	1125	1									X		X				X		
GP-11WS	02/26/08	1145				2				2		X	X			X			X	
GP-7-1	02/26/08	1030	1									X		X		X	X		X	
GP-9-1	02/26/08	1230	1									X		X		X	X		X	
GP-9-6	02/26/08	1320	1									X		X				X		
GP-9-10	02/26/08	1320	1									X		X				X		
GP-9-15	02/26/08	1325	1									X		X				X		

	Date	Time	
Relinquished by:	022708	1900	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by: B1020132/1323	2-28-08	0800	Received by Laboratory:

Remarks: *As, Ni, Ba, V, Cu, Zn

Bill to: Accounts Payable

KIFF Analytical LLC
2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. 2080

Chain-of-Custody Record and Analysis Request

EDF Report? __Yes _X_No

Project Contact (Hardcopy or PDF to): Troy Turpen

Company/Address: Kiff Analytical

Phone No.: 530-297-4800 FAX No.: 530-297-4808

Project Number: 77OT.43877.00 P.O. No.: 61268

Project Name: Tesoro Pittsburg Terminal Phase II

Project Address:

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

EDF Deliverable to (Email Address):

E-mail address: inbox@kiffanalytical.com

Analysis Request

Date due: March 4, 2008

For Lab Use Only

Sample Designation	Sampling Date	Sampling Time	Container: Glass	Poly	Sleeve	Amber	Tedlar	Preservative: HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	Matrix: WATER	SOIL	Air	PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD	For Lab Use Only
GP-9WS	02/26/08	1345				2				2			X			X			X
GP-8-1	02/26/08	1400	1									1		X		X	X		X
GP-8-6	02/26/08	1410	1									1		X				X	
GP-7-6	02/26/08	1420	1									1		X				X	
GP-7-10	02/26/08	1425	1									1		X				X	
GP-7-15	02/26/08	1430	1									1		X				X	
GP-7-20	02/26/08	1435	1									1		X				X	
GP-7WS	02/26/08	1440				2				2			X			X			X
GP-7-25	02/26/08	1610	1									1		X				X	
GP-13WD	02/26/08	N/A				2				2			X					X	

	Date	Time	Received by:
Relinquished by:	022708	1900	
Relinquished by:			
Relinquished by: 0B102013213 23	2-28-08	0800	Received by Laboratory: Wabatha CE

Remarks: *As, Ni, Ba, V, Cu, Zn

Bill to: Accounts Payable

KIFF Analytical LLC

2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove. CA 92841
714-895-5494

Lab No. 2080

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

EDF Deliverable to (Email Address):

Phone No.: 530-297-4800 FAX No.: 530-297-4808

Project Number: 77OT.43877.00 P.O. No.: 61268

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling Date	Sampling Time	Container: Glass	Poly	Sleeve	Amber	Tedlar	Preservative: HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	Matrix: WATER	SOIL	Air	Analysis Request: PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD						Date due:	For Lab Use Only
																								March 4, 2008	
GP-7-30	02/26/08	1615	1									X		X				X							
GP-7WD	02/26/08	1620				2				2			X					X							

	Date	Time		
Relinquished by:	022708	1900	Received by:	
Relinquished by:	Date	Time	Received by:	
Relinquished by: 0013020132132 3	2.28.08	0800	Received by Laboratory:	

Remarks: *As, Ni, Ba, V, Cu, Zn

Bill to: Accounts Payable

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 08 - 02 - 2080

Cooler 1 of 1

SAMPLE RECEIPT FORM

CLIENT: Kiff Anal **DATE:** 2-28-08

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.
_____ °C Temperature blank.

LABORATORY (Other than Calscience Courier):

2.7 °C Temperature blank.
_____ °C IR thermometer.
_____ Ambient temperature.

Initial: WB

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: ✓ No (Not Intact) : _____ Not Present: _____

Initial: WB

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sampler's name indicated on COC		✓	
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers and volume for analyses requested	✓		
Proper preservation noted on sample label(s)	✓		
VOA vial(s) free of headspace.			✓
Tedlar bag(s) free of condensation			✓

Initial: WB

COMMENTS:

KIFF Analytical LLC
2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. _____ Page 1 of 3

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

Phone No.: 530-297-4800 FAX No.: 530-297-4808

EDF Deliverable to (Email Address):

Project Number: 77OT.43877.00 P.O. No.: 61268

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling		Container					Preservative					Matrix			Analysis Request							Date due: March 4, 2008	Date due: March 7, 2008	Date due: March 17, 2008	For Lab Use Only
	Date	Time	Glass	Poly	Sleeve	Amber	Tedlar	HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	WATER	SOIL	Air	PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD	PAHs & PCP (EPA 8270C)	As, V (EPA 6020)	As, Cu, V (EPA 6020)	As, Cu, V, Zn (EPA 6020)				
GP-11-1	02/26/08	0900	1									X		X		X	X						X			
GP-11-10	02/26/08	1110	1									X		X				X								
GP-11-15	02/26/08	1110	1									X		X				X								
GP-11-20	02/26/08	1125	1									X		X				X								
GP-11WS	02/26/08	1145				2				2		X	X			X							X			
GP-7-1	02/26/08	1030	1									X		X		X	X						X			
GP-9-1	02/26/08	1230	1									X		X		X	X						X			
GP-9-6	02/26/08	1320	1									X		X						X					X	
GP-9-10	02/26/08	1320	1									X		X				X								
GP-9-15	02/26/08	1325	1									X		X				X								

Relinquished by: Troy A. Turpen	Date 3/14/08	Time 16:15	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:

Remarks: This is a revised COC for Work Order No. 08-02-2080, taking sample GP-9-6, GP-8-6, and GP-7-6 (-8, -13 and -14) off hold to be run as marked. Please provide an XLS of the results as well as a PDF. *As, Ni, Ba, V, Cu, Zn

Bill to: Accounts Payable

KIFF Analytical LLC
2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. _____ Page 2 of 3

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Chain-of-Custody Record and Analysis Request

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

EDF Deliverable to (Email Address):

Phone No.: 530-297-4800 FAX No.: 530-297-4808

Project Number: 77OT.43877.00 P.O. No.: 61268

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling		Container					Preservative					Matrix			Analysis Request							Date due:	Date due:	Date due:	For Lab Use Only
	Date	Time	Glass	Poly	Sleeve	Amber	Tedlar	HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	WATER	SOIL	Air	PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD	PAHs & PCP (EPA 8270C)	As, V (EPA 6020)	As, Cu, V (EPA 6020)	As, Cu, V, Zn (EPA 6020)	March 4, 2008	March 7, 2008	March 17, 2008	
GP-9WS	02/26/08	1345				2				2			X			X							X			
GP-8-1	02/26/08	1400	1									1		X		X	X						X			
GP-8-6	02/26/08	1410	1									1		X							X				X	
GP-7-6	02/26/08	1420	1									1		X								X			X	
GP-7-10	02/26/08	1425	1									1		X				X								
GP-7-15	02/26/08	1430	1									1		X				X								
GP-7-20	02/26/08	1435	1									1		X				X								
GP-7WS	02/26/08	1440				2				2			X			X							X			
GP-7-25	02/26/08	1610	1									1		X				X								
GP-13WD	02/26/08	N/A				2				2			X						X					X		

Relinquished by: Troy M. Turpen	Date 3/14/08	Time 16:15	Received by:	
Relinquished by:	Date	Time	Received by:	
Relinquished by:	Date	Time	Received by Laboratory:	

Remarks: This is a revised COC for Work Order No. 08-02-2080, taking sample GP-9-6, GP-8-6, and GP-7-6 (-8, -13 and -14) off hold to be run as marked. Please provide an XLS of the results as well as a PDF. *As, Ni, Ba, V, Cu, Zn

Bill to: Accounts Payable

KIFF Analytical LLC

2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. _____ Page 3 of 3

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

Phone No.: 530-297-4800 FAX No.: 530-297-4808

EDF Deliverable to (Email Address):

Project Number: 77OT.43877.00 P.O. No.: 61268

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling Date	Sampling Time	Container: Glass	Poly	Sleeve	Amber	Tedlar	Preservative: HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	Matrix: WATER	SOIL	Air	Analysis Request: PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD	PAHs & PCP (EPA 8270C)	As, V (EPA 6020)	As, Cu, V (EPA 6020)	As, Cu, V, Zn (EPA 6020)	Date due: March 4, 2008	Date due: March 7, 2008	Date due: March 17, 2008	For Lab Use Only
GP-7-30	02/26/08	1615	1									X		X				X								
GP-7WD	02/26/08	1620				2				2			X			X								X		

Relinquished by: Troy A. Turpen Date 3/14/08 Time 16:15 Received by:

Relinquished by: Date Time Received by:

Relinquished by: Date Time Received by Laboratory:

Remarks: This is a revised COC for Work Order No. 08-02-2080, taking sample GP-9-6, GP-8-6, and GP-7-6 (-8, -13 and -14) off hold to be run as marked. Please provide an XLS of the results as well as a PDF. *As, Ni, Ba, V, Cu, Zn

Bill to: Accounts Payable

~~61628~~ 61268 JJT

SECOR Rancho Cordova Office

3017 Kilgore Road

Rancho Cordova, CA

TEL: (916) 861-0400 FAX: (916) 861-0430

SECOR International, Inc.

CHAIN OF CUSTODY RECORD

SECOR Company Contact(s):

Todd Brown, SECOR Project Manager

email - tbrown@secor.com, brorie@secor.com

chamilton@secor.com

SECOR Project: 77OT.43877.00

Tesoro Billing Info
Company: 5200
AFE: 023139641-T
WBS: 97618.0042.925
G/L : 767490

DATE: 2/26/08

PAGE: 1 OF 2

Project Name: Tesoro Pittsburg Terminal Phase II

Address: 595 East Third Street, Pittsburg, CA

Sampler(s): Printed Name: Bryan Rorie

SAMPLER(S): (SIGNATURE)

Lab: KIFF ANALYTICAL

LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS)

☐ 10 DAYS ☒ 5 DAYS ☐ 72 HR ☐ 48 HR ☐ 24 HR ☐ <24 HR

SPECIAL INSTRUCTIONS OR NOTES: **TEMPERATURE ON RECEIPT (C)**

Direct Bill Jeff Baker of Tesoro Petroleum

All voa's preserved hcl

All Ambers preserved $Na_2S_2O_3$

All Poly's unpreserved

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	PRE-SERVE	TPHd-carbon chain distinction (8015M)	TPHg-carbon chain distinction (8260B)	PAHs (8310)	PAHs (8270)	VOCs (8260B)	6 metals = As, Ni, Ba, V, Cu, Zn (6020)	7 metals = As, Ni, Ba, V, Cu, Zn, Pb (6020)			Time 1422 Coolant present (Y) N	Initials JJT	Temp °C 5.1 Therm. ID# 22-1	SAMPLE RECEIPT		Other:	Laboratory Notes
	GP-11-1	2/26/08	0900	S	1	NA	X	X	X			X										01
	GP-11-10		1110	S	1	NA	X	X	X			X							X			02
	GP-11-15		1110	S	1	NA	X	X	X			X							X			03
	GP-11-20		1125	S	1	NA	X	X	X			X							X			04
	GP-11WS		1145	W	9	NONE	X	X	X			X										05
	GP-7-1		1030	S	1	N/A	X	X	X			X										06
	GP-9-1		1230	S	1	N/A	X	X	X			X										07
	GP-9-6		1320	S	1	N/A	X	X	X			X							X			08
	GP-9-10		1320	S	1	N/A	X	X	X			X							X			09
	GP-9-15		1325	S	1	N/A	X	X	X			X							X			10

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Kiff Analytical	Date: 022608	Time: 1615

~~6/1628~~ 6/1628 JJ

SECOR Rancho Cordova Office

3017 Kilgore Road

Rancho Cordova, CA

TEL: (916) 861-0400 FAX: (916) 861-0430

SECOR International, Inc.

CHAIN OF CUSTODY RECORD

SECOR Company Contact(s):

Todd Brown, SECOR Project Manager

email - tbrown@secor.com, brorie@secor.com

chamilton@secor.com

SECOR Project: 77OT.43877.00

Tesoro Billing Info
Company: 5200
AFE: 023139641-T
WBS: 97618.0042.925
G/L : 767490

DATE: 2/26/08

PAGE: 1 OF 2

Project Name: Tesoro Pittsburg Terminal Phase II

Address: 595 East Third Street, Pittsburg, CA

Sampler(s): Printed Name: Bryan Rorie

SAMPLER(S) (SIGNATURE):

Lab: KIFF ANALYTICAL

LAB USE ONLY: ☐☐-☐☐☐☐

TURNAROUND TIME (BUSINESS DAYS)

☐ 10 DAYS ☒ 5 DAYS ☐ 72 HR ☐ 48 HR ☐ 24 HR ☐ <24 HR

REQUESTED ANALYSIS

SPECIAL INSTRUCTIONS OR NOTES: **TEMPERATURE ON RECEIPT (C)**

Direct Bill Jeff Baker of Tesoro Petroleum
All Voa's preserved with hcl
All Ambers preserved with $Na_2S_2O_3$
All Poly's unpreserved with ~~HCl~~

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	PRE-SERVE	TPHd-carbon chain distinction (8015M)	TPHg-carbon chain distinction (8260B)	PAHs (8310)	PAHs (8270) SPLP	VOCs (8260B)	6 metals = As, Ni, Ba, V, Cu, Zn (6020)	7 metals = As, Ni, Ba, V, Cu, Zn, Pb (6020)					HOLD SAMPLE		Other:	Laboratory Notes
	GP- 9WS	2/26/08	1345	W	9	Notes	X	X	X			X									11
	GP- 8-6	2/26/08	1400	S	1	N/A	X	X	X			X									12
	GP- 8-6	2/	1410	S	1	N/A	X	X	X			X						X			13
	GP- 7-6		1420	S	1	N/A	X	X	X			X						X			14
	GP- 7-10		1425	S	1	N/A	X	X	X			X						X			15
	GP- 7-15		1430	S	1	N/A	X	X	X			X						X			16
	GP- 7-20		1435	S	1	N/A	X	X	X			X						X			17
	GP- 7WS		1440	W	9	Notes	X	X	X			X									18
	GP- 7-25		1610 1555	S	1	N/A	X	X	X			X						X			19
	GP- 13WD	2/26/08	8	W	9	Notes	X	X		X		X						X			20

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Kiff Analytical	Date: 02/26/08	Time: 1615

E1268

SECOR Rancho Cordova Office

3017 Kilgore Road

Rancho Cordova, CA

TEL: (916) 861-0400 FAX: (916) 861-0430

SECOR International, Inc.

CHAIN OF CUSTODY RECORD

SECOR Company Contact(s):

Todd Brown, SECOR Project Manager

email - tbrown@secor.com, brorie@secor.com

chamilton@secor.com

SECOR Project: 77OT.43877.00

Tesoro Billing Info
Company: 5200
AFE: 023139641-T
WBS: 97618.0042.925
G/L : 767490

DATE: 2/26/08

PAGE: 3 OF 3

Project Name: Tesoro Pittsburg Terminal Phase II

Address: 595 East Third Street, Pittsburg, CA

Sampler(s): Printed Name: Bryan Boyle

SAMPLER(S): (SIGNATURE)

Lab: KIFF ANALYTICAL

LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS)

☐ 10 DAYS ☒ 5 DAYS ☐ 72 HR ☐ 48 HR ☐ 24 HR ☐ <24 HR

SPECIAL INSTRUCTIONS OR NOTES: **TEMPERATURE ON RECEIPT (C)**

Direct Bill Jeff Baker of Tesoro Petroleum

All voa's preserved hcl

All ambers preserved $Na_2S_2O_3$

All poly's un preserved

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	PRE-SERVE	TPHd-carbon chain distinction (8015M)	TPHg-carbon chain distinction (8260B)	PAHs (8310)	PAHs (8270)	VOCs (8260B)	6 metals = As, Ni, Ba, V, Cu, Zn (6020)	7 metals = As, Ni, Ba, V, Cu, Zn, Pb (6020)					HOLD SAMPLE		Other:	Laboratory Notes
	GP-~~7WD~~	~~2/26/08~~	~~1615~~	~~W~~	~~9~~																
	GP-7-30	2/26/08	1615	S	1	N/A	X	X	X			X						X			21
	GP-7WD	2/26/08	1620	W	9	Notes	X	X	X			X						X			22
	GP-																				
	GP-																				
	GP-																				
	GP-																				
	GP-																				
	GP-																				
	GP-																				

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date: 02-26-08	Time: ~~1630~~ 1615

JJ1

Troy Turpen

From: Caron Stofleth [cstofleth@secor.com]
Sent: Thursday, February 28, 2008 11:49 AM
To: Troy Turpen
Subject: Tesoro Pittsburg water samples
Importance: High

Troy,

Please do not hold any of the water samples for the Tesoro Pittsburg project. **All** water samples are to be run. Sorry for the confusion.

Thanks,

Caron Stofleth
Project Scientist
SECOR International, now Stantec
Ph: (916) 384-0749
Fx: (916) 861-0430
caron.stofleth@stantec.com
stantec.com

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Please consider the environment before printing this email.

Troy Turpen

From: Caron Stofleth [cstofleth@secor.com]
Sent: Wednesday, March 05, 2008 4:14 PM
To: Troy Turpen
Cc: Todd Brown; Gary Haeck
Subject: FW: Pittsburg Terminal, samples off-hold
Attachments: kiff2_20080305175910.pdf

Troy,

I have attached the COCs which indicate the following:

For GP-7-6 (soil), please analyze only for TPHd (& motor oil) carbon chain distinction, arsenic, copper, vanadium, and zinc.

For GP-8-6 (soil), please analyze only for TPHd (& motor oil) carbon chain distinction, arsenic, copper, and vanadium.

For GP-9-6 (soil), please analyze only for arsenic and vanadium

For GP-11-10 (soil), please analyze only for TPHd (& motor oil) carbon chain distinction, arsenic, vanadium, and PAHs (8310).

Let me know if you have questions,

Thanks,

Caron R. Stofleth
Project Scientist
SECOR International, now Stantec
Ph: (916) 384-0749
Fx: (916) 861-0430
caron.stofleth@stantec.com
stantec.com

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~~61028~~ 61268

SECOR International, Inc.

CHAIN OF CUSTODY RECORD

SECOR Rancho Cordova Office
3017 Kilgore Road
Rancho Cordova, CA
TEL: (916) 861-0400 FAX: (916) 861-0430

SECOR Company Contact(s):
Todd Brown, SECOR Project Manager
email - tbrown@secor.com, brorie@secor.com
chamilton@secor.com

SECOR Project: 77OT.43877.00

Tesoro Billing Info
Company: 5200
AFE: 023139641-T
WBS: 97618.0042.925
G/L : 767490

DATE: 2/26/08

PAGE: 1 OF 2

Project Name: Tesoro Pittsburg Terminal Phase II

Address: 595 East Third Street, Pittsburg, CA

Sampler(s): Printed Name: Bryan Rorie

SAMPLER(S): (SIGNATURE)

Lab: KIFF ANALYTICAL

LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS)
☐ 10 DAYS ☒ 5 DAYS ☐ 72 HR ☐ 48 HR ☐ 24 HR ☐ <24 HR

SPECIAL INSTRUCTIONS OR NOTES: TEMPERATURE ON RECEIPT (C)

Direct Bill Jeff Baker of Tesoro Petroleum
All voa's preserved hcl
All ambers preserved $Na_2S_2O_3$
All Poly's unpreserved

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	PRE-SERVE	TPHd-carbon chain distinction (8015M) + motor oil	TPHg-carbon chain distinction (8260B)	PAHs (8310)	PAHs (8270)	VOCs (8260B)	6 metals = As, Ni, Ba, V, Cu, Zn (6020)	7 metals = As, Ni, Ba, V, Cu, Zn, Pb (6020)	AS and V		Time Coolant present (Y/N)	Initials	Temp °C Therm. ID# Date	SAMPLE RECEIPT		Other:	Laboratory Notes
	GP-11-1	2/26/08	0900	S	1	NA	X	X	X			X										01
	GP-11-10 take off hold		1110	S	1	NA	(X)	X	(X)			X		(X)								02
	GP-11-15		1110	S	1	NA	X	X	X			X							X			03
	GP-11-20		1125	S	1	NA	X	X	X			X							X			04
	GP-11WS		1145	W	9	NaOH	X	X	X			X										05
	GP-7-1		1030	S	1	N/A	X	X	X			X										06
	GP-9-1		1230	S	1	N/A	X	X	X			X										07
	GP-9-6 take off hold		1300	S	1	N/A	X	X	X			X		(X)					X			08
	GP-9-10		1320	S	1	N/A	X	X	X			X							X			09
	GP-9-15		1325	S	1	N/A	X	X	X			X							X			10

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Kiff Analytical	Date: 022608	Time: 1615

6/1628 6/1268

SECOR International, Inc.

CHAIN OF CUSTODY RECORD

SECOR Rancho Cordova Office
3017 Kilgore Road
Rancho Cordova, CA
TEL: (916) 861-0400 FAX: (916) 861-0430

SECOR Company Contact(s):
Todd Brown, SECOR Project Manager
email - tbrown@secor.com, brorie@secor.com
chamilton@secor.com

SECOR Project: 77OT.43877.00

Tesoro Billing Info
Company: 5200
AFE: 023139641-T
WBS: 97618.0042.925
G/L : 767490

DATE: 2/26/08

PAGE: 2 OF 2

Project Name: Tesoro Pittsburg Terminal Phase II

Address: 595 East Third Street, Pittsburg, CA

Sampler(s): Printed Name: Bryan Rorie

SAMPLER(S)(SIGNATURE)

Lab: KIFF ANALYTICAL

LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS)
☐ 10 DAYS ☒ 5 DAYS ☐ 72 HR ☐ 48 HR ☐ 24 HR ☐ <24 HR

SPECIAL INSTRUCTIONS OR NOTES: TEMPERATURE ON RECEIPT (C)

Direct Bill Jeff Baker of Tesoro Petroleum
All Voa's preserved with hcl
All Ambers preserved with $Na_2S_2O_3$
All Poly's unpreserved ~~with~~

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	PRE-SERVE	TPHd-carbon chain distinction (8015M) + motor oil	TPHg-carbon chain distinction (8260B)	PAHs (8310)	PAHs (8270) SIM PAH	VOCs (8260B)	6 metals = As, Ni, Ba, V, Cu, Zn (6020)	7 metals = As, Ni, Ba, V, Cu, Zn, Pb (6020)	as, cu, v	zinc				HOLD SAMPLE		Other:	Laboratory Notes
	GP-9WS	2/26/08	1345	W	9	Notes	X	X	X			X										11
	GP-8-6	2/26/08	1400	S	1	N/A	X	X	X			X										12
	GP-8-6 take off hold	2/	1410	S	1	N/A	X	X	X			X		X					X			13
	GP-7-6 take off hold		1420	S	1	N/A	X	X	X			X		X	X				X			14
	GP-7-10		1425	S	1	N/A	X	X	X			X							X			15
	GP-7-15		1430	S	1	N/A	X	X	X			X							X			16
	GP-7-20		1435	S	1	N/A	X	X	X			X							X			17
	GP-7WS		1440	W	9	Notes	X	X	X			X										18
	GP-7-25		1610 1535	S	1	N/A	X	X	X			X							X			19
	GP-13WD	2/26/08	8	W	1	Notes	X	X		X		X							X			20

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Kiff Analytical	Date: 02 26 08	Time: 1615

Hydrocarbon Ranges Report*

Project Name: Tesoro Pittsburg Terminal Phase II

Lab Number:	61268-01	61268-05	61268-06	61268-07	61268-11
Sample:	GP-11-1	GP-11WS	GP-7-1	GP-9-1	GP-9WS
Sample Date:	2/26/2008	2/26/2008	2/26/2008	2/26/2008	2/26/2008
Matrix:	Soil	Water	Soil	Soil	Water
Units	mg/Kg	ug/L	mg/Kg	mg/Kg	ug/L
Hydrocarbon Range					
C8 to C9 Fraction	nd	7	nd	nd	6
C10 to C11 Fraction	nd	nd	nd	nd	nd
C12 to C13 Fraction	0.26	2	0.12	0.41	24
C14 to C15 Fraction	0.48	7	1.5	2.5	194
C16 to C17 Fraction	0.92	7	3.1	0.60	69
C18 to C19 Fraction	14	8	5.5	1.1	31
C20 to C21 Fraction	21	8	10	1.6	41
C22 to C23 Fraction	27	8	17	2.9	130
C24 to C25 Fraction	37	10	21	5.0	304
C26 to C27 Fraction	57	9	31	10	761
C28 to C29 Fraction	82	10	40	24	1462
C30 to C31 Fraction	218	5	89	49	2195
C32 to C33 Fraction	246	4	83	53	2202
C34 to C35 Fraction	282	4	86	60	2515
C36 to C37 Fraction	301	3	95	70	2793
C38 to C39 Fraction	374	nd	83	81	2453
C40 Fraction	212	nd	54	35	1597
Reporting Limit:	0.04	2	0.04	0.04	2

***Hydrocarbon concentrations should be considered estimates**

"nd" is non-detect at the specified Reporting Limit

Hydrocarbon Ranges Report*

Project Name: Tesoro Pittsburg Terminal Phase II

Lab Number:	61268-12	61268-18	61268-20	61268-22	61268-02
Sample:	GP-8-1	GP-7WS	GP-13WD	GP-7WD	GP-11-10
Sample Date:	2/26/2008	2/26/2008	2/26/2008	2/26/2008	2/26/2008
Matrix:	Soil	Water	Water	Water	Soil
Units	mg/Kg	ug/L	ug/L	ug/L	mg/Kg
Hydrocarbon Range					
C8 to C9 Fraction	nd	7	11	5	-
C10 to C11 Fraction	nd	3	8	nd	nd
C12 to C13 Fraction	0.22	3	32	2	nd
C14 to C15 Fraction	2.3	7	57	7	0.42
C16 to C17 Fraction	3.6	12	46	11	1.1
C18 to C19 Fraction	5.8	13	64	16	2.7
C20 to C21 Fraction	9.6	13	55	11	4.5
C22 to C23 Fraction	20	13	80	14	6.8
C24 to C25 Fraction	23	14	95	15	8.7
C26 to C27 Fraction	52	12	220	13	8.7
C28 to C29 Fraction	108	11	98	52	16
C30 to C31 Fraction	255	6	66	6	29
C32 to C33 Fraction	264	6	48	5	30
C34 to C35 Fraction	352	4	64	5	36
C36 to C37 Fraction	436	4	36	5	33
C38 to C39 Fraction	394	4	46	4	35
C40 Fraction	244	nd	26	2	13
Reporting Limit:	0.04	2	2	2	0.04

*Hydrocarbon concentrations should be considered estimates

"nd" is non-detect at the specified Reporting Limit

Hydrocarbon Ranges Report*

Project Name: Tesoro Pittsburg Terminal Phase II

Lab Number:	**61268-13**	**61268-14**
Sample:	**GP-8-6**	**GP-7-6**
Sample Date:	**2/26/2008**	**2/26/2008**
Matrix:	**Soil**	**Soil**
Units	**mg/Kg**	**mg/Kg**
Hydrocarbon Range		
C8 to C9 Fraction	**-**	**-**
C10 to C11 Fraction	**nd**	**nd**
C12 to C13 Fraction	**0.10**	**nd**
C14 to C15 Fraction	**0.09**	**0.41**
C16 to C17 Fraction	**0.16**	**0.19**
C18 to C19 Fraction	**0.22**	**0.26**
C20 to C21 Fraction	**0.24**	**0.30**
C22 to C23 Fraction	**0.26**	**0.38**
C24 to C25 Fraction	**0.19**	**0.37**
C26 to C27 Fraction	**0.21**	**0.38**
C28 to C29 Fraction	**0.34**	**0.45**
C30 to C31 Fraction	**0.63**	**0.74**
C32 to C33 Fraction	**0.45**	**0.83**
C34 to C35 Fraction	**0.44**	**0.85**
C36 to C37 Fraction	**0.16**	**0.39**
C38 to C39 Fraction	**0.29**	**0.34**
C40 Fraction	**0.08**	**0.11**
Reporting Limit:	**0.04**	**0.04**

***Hydrocarbon concentrations should be considered estimates**

"nd" is non-detect at the specified Reporting Limit

KIFF Analytical LLC

Report Number : 61290
Date : 03/17/2008

Todd Brown
SECOR International, Inc.
3017 Kilgore Road, Suite 100
Rancho Cordova, CA 95670

Subject : 6 Soil Samples and 6 Water Samples
Project Name : Tesoro Pittsburg Terminal Phase II
Project Number : 77OT.43877.00

Dear Mr. Brown,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,



Joel Kiff

KIFF Analytical LLC

Report Number : 61290
Date : 03/17/2008

Subject : 6 Soil Samples and 6 Water Samples
Project Name : Tesoro Pittsburg Terminal Phase II
Project Number : 77OT.43877.00

Case Narrative

Sample GP-15WD was analyzed by EPA Method 8260B using bottles that contained headspace bubbles greater than 1/4 inch in diameter.

Approved By: Joel Kiff

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

KIFF Analytical LLC

Report Number : 61290
Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**
Project Number : **77OT.43877.00**

Sample : **GP-15-1** Matrix : Soil Lab Number : 61290-03
Sample Date :02/27/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**82**	5.0	mg/Kg	M EPA 8015	03/03/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**310**	40	mg/Kg	M EPA 8015	03/03/2008
1-Chlorooctadecane (Diesel Surrogate)	87.2		% Recovery	M EPA 8015	03/03/2008

Sample : **GP-15-6** Matrix : Soil Lab Number : 61290-04
Sample Date :02/27/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**6.2**	1.0	mg/Kg	M EPA 8015	03/08/2008
TPH as Motor Oil	**< 10**	10	mg/Kg	M EPA 8015	03/08/2008
1-Chlorooctadecane (Diesel Surrogate)	81.3		% Recovery	M EPA 8015	03/08/2008

Sample : **GP-15-WS** Matrix : Water Lab Number : 61290-05
Sample Date :02/27/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**140**	50	ug/L	M EPA 8015	03/04/2008
TPH as Motor Oil	**< 100**	100	ug/L	M EPA 8015	03/04/2008
Octacosane (Diesel Surrogate)	108		% Recovery	M EPA 8015	03/04/2008

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61290
Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**
Project Number : **77OT.43877.00**

Sample : **Grab-1** Matrix : Water Lab Number : 61290-11
Sample Date :02/27/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**70**	50	ug/L	M EPA 8015	02/29/2008
TPH as Motor Oil	**< 100**	100	ug/L	M EPA 8015	02/29/2008
Octacosane (Diesel Surrogate)	100		% Recovery	M EPA 8015	02/29/2008

Sample : **GP-15WD** Matrix : Water Lab Number : 61290-13
Sample Date :02/27/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**260**	50	ug/L	M EPA 8015	03/05/2008
TPH as Motor Oil	**< 100**	100	ug/L	M EPA 8015	03/05/2008
Octacosane (Diesel Surrogate)	107		% Recovery	M EPA 8015	03/05/2008

Sample : **GP-16B-0** Matrix : Soil Lab Number : 61290-14
Sample Date :02/27/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**50**	2.0	mg/Kg	M EPA 8015	03/03/2008
TPH as Motor Oil	**100**	20	mg/Kg	M EPA 8015	03/03/2008
1-Chlorooctadecane (Diesel Surrogate)	81.9		% Recovery	M EPA 8015	03/03/2008

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61290
Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**
Project Number : **77OT.43877.00**

Sample : **GP-16-6** Matrix : Soil Lab Number : 61290-15
Sample Date :02/27/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**22**	2.0	mg/Kg	M EPA 8015	03/12/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**51**	20	mg/Kg	M EPA 8015	03/12/2008
1-Chlorooctadecane (Diesel Surrogate)	80.1		% Recovery	M EPA 8015	03/12/2008

Sample : **GP-16WS** Matrix : Water Lab Number : 61290-20
Sample Date :02/27/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**380**	50	ug/L	M EPA 8015	02/29/2008
TPH as Motor Oil	**< 100**	100	ug/L	M EPA 8015	02/29/2008
Octacosane (Diesel Surrogate)	100		% Recovery	M EPA 8015	02/29/2008

Sample : **GP-17-1** Matrix : Soil Lab Number : 61290-21
Sample Date :02/27/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**5.1**	1.0	mg/Kg	M EPA 8015	02/29/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**< 10**	10	mg/Kg	M EPA 8015	02/29/2008
1-Chlorooctadecane (Diesel Surrogate)	91.4		% Recovery	M EPA 8015	02/29/2008

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61290
Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**
Project Number : **77OT.43877.00**

Sample : **GP-17WS** Matrix : Water Lab Number : 61290-25
Sample Date :02/27/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**140**	50	ug/L	M EPA 8015	03/05/2008
TPH as Motor Oil	**< 100**	100	ug/L	M EPA 8015	03/05/2008
Octacosane (Diesel Surrogate)	96.9		% Recovery	M EPA 8015	03/05/2008

Sample : **GP-19-1** Matrix : Soil Lab Number : 61290-26
Sample Date :02/27/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**410**	50	mg/Kg	M EPA 8015	02/29/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**1100**	400	mg/Kg	M EPA 8015	02/29/2008
1-Chlorooctadecane (Diesel Surrogate)	Diluted Out		% Recovery	M EPA 8015	02/29/2008

Sample : **GP-8WS** Matrix : Water Lab Number : 61290-27
Sample Date :02/27/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**130**	50	ug/L	M EPA 8015	02/29/2008
TPH as Motor Oil	**< 100**	100	ug/L	M EPA 8015	02/29/2008
Octacosane (Diesel Surrogate)	97.3		% Recovery	M EPA 8015	02/29/2008

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61290

Date : 03/17/2008

Sample : **GP-15-1**

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00** Lab Number : 61290-03 Date Analyzed : 03/05/08

Matrix : Soil Sample Date :02/27/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	< 1.0	1.0	mg/Kg
Toluene - d8 (Surr)	100		% Recovery
4-Bromofluorobenzene (Surr)	101		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

Approved By:

Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61290

Date : 03/17/2008

Sample : **GP-15-WS**

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00** Lab Number : 61290-05 Date Analyzed : 03/04/08

Matrix : Water Sample Date : 02/27/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	< 50	50	ug/L
Toluene - d8 (Surr)	99.7		% Recovery
4-Bromofluorobenzene (Surr)	105		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

Approved By:

Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61290

Date : 03/17/2008

Sample : **Grab-1**

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00** Lab Number : 61290-11 Date Analyzed : 03/04/08

Matrix : Water Sample Date : 02/27/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	< 50	50	ug/L
Toluene - d8 (Surr)	99.2		% Recovery
4-Bromofluorobenzene (Surr)	105		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

Approved By:

Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61290

Date : 03/17/2008

Sample : **GP-15WD**

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00** Lab Number : 61290-13 Date Analyzed : 03/04/08

Matrix : Water Sample Date : 02/27/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	< 50	50	ug/L
Toluene - d8 (Surr)	100		% Recovery
4-Bromofluorobenzene (Surr)	106		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

Approved By:

Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61290

Date : 03/17/2008

Sample : **GP-16B-0**

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00** Lab Number : 61290-14 Date Analyzed : 02/28/08

Matrix : Soil Sample Date : 02/27/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	< 1.0	1.0	mg/Kg
Toluene - d8 (Surr)	100		% Recovery
4-Bromofluorobenzene (Surr)	102		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

Approved By:

Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61290

Date : 03/17/2008

Sample : **GP-16WS**

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00** Lab Number : 61290-20 Date Analyzed : 03/04/08, 02/29/08

Matrix : Water Sample Date :02/27/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	**640**	50	ug/L
Dichlorodifluoromethane	< 0.50	0.50	ug/L
Chloromethane	< 0.50	0.50	ug/L
Vinyl Chloride	< 0.50	0.50	ug/L
Bromomethane	< 20	20	ug/L
Chloroethane	< 0.50	0.50	ug/L
Trichlorofluoromethane	< 0.50	0.50	ug/L
1,1-Dichloroethene	< 0.50	0.50	ug/L
Methylene Chloride	< 5.0	5.0	ug/L
trans-1,2-Dichloroethene	< 0.50	0.50	ug/L
1,1-Dichloroethane	< 0.50	0.50	ug/L
2,2-Dichloropropane	< 0.50	0.50	ug/L
cis-1,2-Dichloroethene	< 0.50	0.50	ug/L
Chloroform	< 0.50	0.50	ug/L
Bromochloromethane	< 0.50	0.50	ug/L
1,1,1-Trichloroethane	< 0.50	0.50	ug/L
1,1-Dichloropropene	< 0.50	0.50	ug/L
1,2-Dichloroethane	< 0.50	0.50	ug/L
Carbon Tetrachloride	< 0.50	0.50	ug/L
Benzene	< 0.50	0.50	ug/L
Trichloroethene	< 0.50	0.50	ug/L
1,2-Dichloropropane	< 0.50	0.50	ug/L
Bromodichloromethane	< 0.50	0.50	ug/L
Dibromomethane	< 0.50	0.50	ug/L
cis-1,3-Dichloropropene	< 0.50	0.50	ug/L
Toluene	< 0.50	0.50	ug/L
trans-1,3-Dichloropropene	< 0.50	0.50	ug/L
1,1,2-Trichloroethane	< 0.50	0.50	ug/L
1,3-Dichloropropane	< 0.50	0.50	ug/L
Tetrachloroethene	< 0.50	0.50	ug/L
Dibromochloromethane	< 0.50	0.50	ug/L
1,2-Dibromoethane	< 0.50	0.50	ug/L
Chlorobenzene	< 0.50	0.50	ug/L
1,1,1,2-Tetrachloroethane	< 0.50	0.50	ug/L
Ethylbenzene	< 0.50	0.50	ug/L
P,M-Xylene	< 1.0	1.0	ug/L
O-Xylene	< 0.50	0.50	ug/L
Styrene	< 0.50	0.50	ug/L

Parameter	Measured Value	MRL [1]	Units
Isopropyl benzene	< 0.50	0.50	ug/L
Bromoform	< 0.50	0.50	ug/L
1,1,2,2-Tetrachloroethane	< 0.50	0.50	ug/L
1,2,3-Trichloropropane	< 0.50	0.50	ug/L
n-Propylbenzene	< 0.50	0.50	ug/L
Bromobenzene	< 0.50	0.50	ug/L
1,3,5-Trimethylbenzene	< 0.50	0.50	ug/L
2+4-Chlorotoluene	< 1.0	1.0	ug/L
tert-Butylbenzene	< 0.50	0.50	ug/L
1,2,4-Trimethylbenzene	< 0.50	0.50	ug/L
sec-Butylbenzene	< 0.50	0.50	ug/L
p-Isopropyltoluene	< 0.50	0.50	ug/L
1,3-Dichlorobenzene	< 0.50	0.50	ug/L
1,4-Dichlorobenzene	< 0.50	0.50	ug/L
n-Butylbenzene	< 0.50	0.50	ug/L
1,2-Dichlorobenzene	< 0.50	0.50	ug/L
1,2-Dibromo-3-chloropropane	< 0.50	0.50	ug/L
1,2,4-Trichlorobenzene	< 0.50	0.50	ug/L
Hexachlorobutadiene	< 0.50	0.50	ug/L
Naphthalene	< 0.50	0.50	ug/L
1,2,3-Trichlorobenzene	< 0.50	0.50	ug/L
1,2-Dichloroethane-d4 (Surr)	100		% Recovery
Toluene-d8 (Surr)	97.2		% Recovery
4-Bromofluorobenzene (Surr)	102		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

Approved By:

Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61290

Date : 03/17/2008

Sample : **GP-17-1**

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00** Lab Number : 61290-21 Date Analyzed : 02/28/08

Matrix : Soil Sample Date : 02/27/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	< 1.0	1.0	mg/Kg
Toluene - d8 (Surr)	101		% Recovery
4-Bromofluorobenzene (Surr)	103		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

Approved By:

Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61290

Date : 03/17/2008

Sample : **GP-17WS**

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00** Lab Number : 61290-25 Date Analyzed : 03/04/08

Matrix : Water Sample Date : 02/27/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	**180**	50	ug/L
Toluene - d8 (Surr)	99.9		% Recovery
4-Bromofluorobenzene (Surr)	104		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

Approved By:

Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61290
Date : 03/17/2008

Sample : **GP-19-1**

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00** Lab Number : 61290-26 Date Analyzed : 02/28/08

Matrix : Soil Sample Date : 02/27/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	< 1.0	1.0	mg/Kg
Toluene - d8 (Surr)	101		% Recovery
4-Bromofluorobenzene (Surr)	102		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

Approved By:

Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61290
Date : 03/17/2008

Sample : **GP-8WS**

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00** Lab Number : 61290-27 Date Analyzed : 03/04/08

Matrix : Water Sample Date : 02/27/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	**60**	50	ug/L
Toluene - d8 (Surr)	101		% Recovery
4-Bromofluorobenzene (Surr)	106		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

Approved By:

Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61290

Date : 03/17/2008

QC Report : Method Blank Data

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	< 50	50	ug/L	M EPA 8015	02/29/2008
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	02/29/2008
Octacosane (Diesel Surrogate)	99.1		%	M EPA 8015	02/29/2008
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	02/29/2008
TPH as Motor Oil	< 10	10	mg/Kg	M EPA 8015	02/29/2008
1-Chlorooctadecane (Diesel Surrogate)	81.9		%	M EPA 8015	02/29/2008
TPH as Diesel	< 50	50	ug/L	M EPA 8015	03/01/2008
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	03/01/2008
Octacosane (Diesel Surrogate)	95.5		%	M EPA 8015	03/01/2008
TPH as Diesel	< 50	50	ug/L	M EPA 8015	03/05/2008
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	03/05/2008
Octacosane (Diesel Surrogate)	94.1		%	M EPA 8015	03/05/2008
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	03/08/2008
TPH as Motor Oil	< 10	10	mg/Kg	M EPA 8015	03/08/2008
1-Chlorooctadecane (Diesel Surrogate)	70.8		%	M EPA 8015	03/08/2008
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	03/12/2008
TPH as Motor Oil	< 10	10	mg/Kg	M EPA 8015	03/12/2008
1-Chlorooctadecane (Diesel Surrogate)	78.0		%	M EPA 8015	03/12/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	02/28/2008
Toluene - d8 (Surr)	101		%	EPA 8260B	02/28/2008
4-Bromofluorobenzene (Surr)	101		%	EPA 8260B	02/28/2008
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	03/04/2008
Toluene - d8 (Surr)	101		%	EPA 8260B	03/04/2008
4-Bromofluorobenzene (Surr)	105		%	EPA 8260B	03/04/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	03/04/2008
Toluene - d8 (Surr)	99.3		%	EPA 8260B	03/04/2008
4-Bromofluorobenzene (Surr)	95.8		%	EPA 8260B	03/04/2008
Dichlorodifluoromethane	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
Chloromethane	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
Vinyl Chloride	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
Bromomethane	< 20	20	ug/L	EPA 8260B	02/29/2008
Chloroethane	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
Trichlorofluoromethane	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
1,1-Dichloroethene	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
Methylene Chloride	< 5.0	5.0	ug/L	EPA 8260B	02/29/2008
trans-1,2-Dichloroethene	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
1,1-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
2,2-Dichloropropane	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
cis-1,2-Dichloroethene	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
Chloroform	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
Bromochloromethane	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
1,1,1-Trichloroethane	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
1,1-Dichloropropene	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
Carbon Tetrachloride	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
Benzene	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
Trichloroethene	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
1,2-Dichloropropane	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
Bromodichloromethane	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
Dibromomethane	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61290

Date : 03/17/2008

QC Report : Method Blank Data

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
cis-1,3-Dichloropropene	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
trans-1,3-Dichloropropene	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
1,1,2-Trichloroethane	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
1,3-Dichloropropane	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
Tetrachloroethene	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
Dibromochloromethane	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
Chlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
1,1,1,2-Tetrachloroethane	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
P,M-Xylene	< 1.0	1.0	ug/L	EPA 8260B	02/29/2008
O-Xylene	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
Styrene	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
Isopropyl benzene	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
Bromoform	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
1,1,2,2-Tetrachloroethane	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
1,2,3-Trichloropropane	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
n-Propylbenzene	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
Bromobenzene	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
1,3,5-Trimethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
2+4-Chlorotoluene	< 1.0	1.0	ug/L	EPA 8260B	02/29/2008
tert-Butylbenzene	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
1,2,4-Trimethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
sec-Butylbenzene	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
p-Isopropyltoluene	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
1,3-Dichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
1,4-Dichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
n-Butylbenzene	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
1,2-Dichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
1,2-Dibromo-3-chloropropane	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
1,2,4-Trichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
Hexachlorobutadiene	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008
1,2,3-Trichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	02/29/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
1,2-Dichloroethane-d4 (Surr)	99.9		%	EPA 8260B	02/29/2008
4-Bromofluorobenzene (Surr)	102		%	EPA 8260B	02/29/2008
Toluene - d8 (Surr)	98.6		%	EPA 8260B	02/29/2008

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61290

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
TPH as Diesel	Blank	<50	1000	1000	951	902	ug/L	M EPA 8015	2/29/08	95.1	90.2	5.38	70-130	25
TPH as Diesel	61290-21	5.1	20.0	20.0	16.2	17.8	mg/Kg	M EPA 8015	2/29/08	64.5	71.0	9.64	60-140	25
TPH as Diesel	Blank	<50	1000	1000	935	898	ug/L	M EPA 8015	3/1/08	93.5	89.8	3.96	70-130	25
TPH as Diesel	Blank	<50	1000	1000	916	861	ug/L	M EPA 8015	3/5/08	91.6	86.1	6.22	70-130	25
TPH as Diesel	61426-05	<1.0	20.0	20.0	21.6	22.1	mg/Kg	M EPA 8015	3/8/08	108	111	2.42	60-140	25
TPH as Diesel	61426-07	260	20.0	20.0	251	255	mg/Kg	M EPA 8015	3/12/08	88.0	89.3	1.45	60-140	25
Benzene	61290-03	<0.0050	0.0398	0.0390	0.0335	0.0310	mg/Kg	EPA 8260B	2/28/08	84.2	79.5	5.79	70-130	25
Toluene	61290-03	<0.0050	0.0398	0.0390	0.0321	0.0301	mg/Kg	EPA 8260B	2/28/08	80.8	77.3	4.44	70-130	25
Benzene	61347-12	<0.0050	0.0399	0.0399	0.0404	0.0406	mg/Kg	EPA 8260B	3/4/08	101	102	0.559	70-130	25
Toluene	61347-12	<0.0050	0.0399	0.0399	0.0408	0.0408	mg/Kg	EPA 8260B	3/4/08	102	102	0.0401	70-130	25
Benzene	61290-05	<0.50	40.0	40.0	41.5	40.5	ug/L	EPA 8260B	3/4/08	104	101	2.56	70-130	25
Toluene	61290-05	<0.50	40.0	40.0	41.6	41.2	ug/L	EPA 8260B	3/4/08	104	103	0.956	70-130	25
1,1-Dichloroethane	61290-05	<0.50	40.0	40.0	42.1	40.8	ug/L	EPA 8260B	3/4/08	105	102	3.25	70-130	25
1,2-Dichloroethane	61290-05	<0.50	40.0	40.0	44.6	43.7	ug/L	EPA 8260B	3/4/08	112	109	2.12	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61290

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Chlorobenzene	61290-05	<0.50	40.0	40.0	41.9	41.3	ug/L	EPA 8260B	3/4/08	105	103	1.32	70-130	25
Tert-Butanol	61290-05	6.5	200	200	209	206	ug/L	EPA 8260B	3/4/08	101	99.6	1.88	70-130	25
1,1-Dichloroethane	61310-02	<0.50	40.0	40.0	41.5	41.0	ug/L	EPA 8260B	2/29/08	104	102	1.28	70-130	25
Benzene	61310-02	<0.50	40.0	40.0	42.0	41.4	ug/L	EPA 8260B	2/29/08	105	104	1.43	70-130	25
1,2-Dichloroethane	61310-02	1.6	40.0	40.0	42.4	42.0	ug/L	EPA 8260B	2/29/08	102	101	1.02	70-130	25
Toluene	61310-02	<0.50	40.0	40.0	41.8	40.8	ug/L	EPA 8260B	2/29/08	104	102	2.19	70-130	25
Chlorobenzene	61310-02	<0.50	40.0	40.0	43.8	43.6	ug/L	EPA 8260B	2/29/08	110	109	0.484	70-130	25
Tert-Butanol	61310-02	<5.0	200	200	201	199	ug/L	EPA 8260B	2/29/08	100	99.4	0.935	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61290

QC Report : Laboratory Control Sample (LCS)

Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
TPH as Diesel	20.0	mg/Kg	M EPA 8015	2/29/08	73.5	70-130
TPH as Diesel	20.0	mg/Kg	M EPA 8015	3/8/08	88.3	70-130
TPH as Diesel	20.0	mg/Kg	M EPA 8015	3/12/08	84.0	70-130
Benzene	0.0394	mg/Kg	EPA 8260B	2/28/08	94.6	70-130
Toluene	0.0394	mg/Kg	EPA 8260B	2/28/08	93.3	70-130
Methyl-t-Butyl Ether	0.0394	mg/Kg	EPA 8260B	2/28/08	91.3	70-130
Benzene	0.0400	mg/Kg	EPA 8260B	3/4/08	101	70-130
Toluene	0.0400	mg/Kg	EPA 8260B	3/4/08	101	70-130
Methyl-t-Butyl Ether	0.0400	mg/Kg	EPA 8260B	3/4/08	98.9	70-130
Benzene	40.0	ug/L	EPA 8260B	3/4/08	104	70-130
Toluene	40.0	ug/L	EPA 8260B	3/4/08	103	70-130
1,1-Dichloroethane	40.0	ug/L	EPA 8260B	3/4/08	98.4	70-130
1,2-Dichloroethane	40.0	ug/L	EPA 8260B	3/4/08	88.6	70-130
Chlorobenzene	40.0	ug/L	EPA 8260B	3/4/08	101	70-130
Tert-Butanol	200	ug/L	EPA 8260B	3/4/08	98.4	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	3/4/08	82.4	70-130

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61290

QC Report : Laboratory Control Sample (LCS)

Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
1,1-Dichloroethane	40.0	ug/L	EPA 8260B	2/29/08	98.9	70-130
Benzene	40.0	ug/L	EPA 8260B	2/29/08	102	70-130
1,2-Dichloroethane	40.0	ug/L	EPA 8260B	2/29/08	100	70-130
Toluene	40.0	ug/L	EPA 8260B	2/29/08	104	70-130
Chlorobenzene	40.0	ug/L	EPA 8260B	2/29/08	104	70-130
Tert-Butanol	200	ug/L	EPA 8260B	2/29/08	99.1	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	2/29/08	99.0	70-130

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Calscience Environmental Laboratories, Inc.

Supplemental Report 4

March 21, 2008

Additional requested analyses have been added to the original report.

Joel Kiff
Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Subject: **Calscience Work Order No.:** **08-02-2227**
Client Reference: **Tesoro Pittsburg Terminal Phase II**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 2/29/2008 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Amanda Porter

Calscience Environmental
Laboratories, Inc.
Amanda Porter
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/29/08
Work Order No: 08-02-2227
Preparation: EPA 3050B
Method: EPA 6020
Units: mg/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-15-1	**08-02-2227-3-A**	**02/27/08 09:15**	**Solid**	**ICP/MS A**	**02/29/08**	**02/29/08 19:06**	**080229L03**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	2.84	0.200	1		Nickel	15.5	0.100	1	
Barium	146	0.100	1		Vanadium	21.5	0.100	1	
Copper	46.3	0.100	1		Zinc	152	1.00	1	

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-15-6	**08-02-2227-4-A**	**02/27/08 09:25**	**Solid**	**ICP/MS A**	**03/10/08**	**03/10/08 18:11**	**080310L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	2.97	0.200	1		Vanadium	22.3	0.100	1	B

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-16B-0	**08-02-2227-14-A**	**02/27/08 13:40**	**Solid**	**ICP/MS A**	**02/29/08**	**02/29/08 19:10**	**080229L03**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	0.787	0.200	1		Nickel	175	0.100	1	
Barium	88.4	0.100	1		Vanadium	223	0.100	1	
Copper	1520	0.100	1		Zinc	66.8	1.00	1	

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-16-6	**08-02-2227-15-A**	**02/27/08 13:50**	**Solid**	**ICP/MS A**	**03/20/08**	**03/20/08 14:24**	**080320L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	1.49	0.200	1		Nickel	142	0.100	1	
Barium	11.3	0.100	1		Vanadium	633	0.100	1	
Copper	4770	0.100	1		Zinc	32.8	1.00	1	

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-17-1	**08-02-2227-21-A**	**02/27/08 14:50**	**Solid**	**ICP/MS A**	**02/29/08**	**02/29/08 19:14**	**080229L03**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	1.98	0.200	1		Nickel	21.3	0.100	1	
Barium	174	0.100	1		Vanadium	20.4	0.100	1	
Copper	12.5	0.100	1		Zinc	63.5	1.00	1	

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-17-6	**08-02-2227-22-A**	**02/27/08 15:30**	**Solid**	**ICP/MS A**	**03/10/08**	**03/10/08 18:14**	**080310L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	2.60	0.200	1		Vanadium	26.4	0.100	1	B

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/29/08
Work Order No: 08-02-2227
Preparation: EPA 3050B
Method: EPA 6020
Units: mg/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-19-1	**08-02-2227-26-A**	**02/27/08 15:00**	**Solid**	**ICP/MS A**	**02/29/08**	**02/29/08 19:31**	**080229L03**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	4.28	0.200	1		Nickel	21.7	0.100	1	
Barium	170	0.100	1		Vanadium	35.2	0.100	1	
Copper	254	0.100	1		Zinc	291	1.00	1	

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**096-10-002-1,049**	**N/A**	**Solid**	**ICP/MS A**	**02/29/08**	**02/29/08 12:12**	**080229L03**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	ND	0.200	1		Nickel	ND	0.100	1	
Barium	ND	0.100	1		Vanadium	ND	0.100	1	
Copper	ND	0.100	1		Zinc	ND	1.00	1	

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**096-10-002-1,052**	**N/A**	**Solid**	**ICP/MS A**	**03/10/08**	**03/10/08 16:02**	**080310L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	ND	0.200	1		Nickel	ND	0.100	1	
Barium	ND	0.100	1		Vanadium	0.206	0.100	1	
Copper	ND	0.100	1		Zinc	ND	1.00	1	

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**096-10-002-1,053**	**N/A**	**Solid**	**ICP/MS A**	**03/20/08**	**03/20/08 13:10**	**080320L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	ND	0.200	1		Nickel	ND	0.100	1	
Barium	ND	0.100	1		Vanadium	ND	0.100	1	
Copper	ND	0.100	1		Zinc	ND	1.00	1	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	02/29/08
2795 2nd Street, Suite 300		Work Order No:	08-02-2227
Davis, CA 95616-6593		Preparation:	EPA 3510B
		Method:	EPA 8270C
		Units:	ug/L

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-15WS	**08-02-2227-5-A**	**02/27/08 10:15**	**Aqueous**	**GC/MS P**	**02/29/08**	**03/04/08 22:50**	**080229L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	10	1		Benzo (a) Anthracene	ND	10	1	
Acenaphthylene	ND	10	1		Chrysene	ND	10	1	
Acenaphthene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (b) Fluoranthene	ND	10	1	
Pentachlorophenol	ND	10	1		Benzo (a) Pyrene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Anthracene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Fluoranthene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Pyrene	ND	10	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	56	7-121		Phenol-d6	33	1-127	
Nitrobenzene-d5	97	50-146		2-Fluorobiphenyl	98	42-138	
2,4,6-Tribromophenol	97	41-137		p-Terphenyl-d14	140	47-173	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Grab-1	**08-02-2227-11-A**	**02/27/08 09:15**	**Aqueous**	**GC/MS P**	**02/29/08**	**03/04/08 23:24**	**080229L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	10	1		Benzo (a) Anthracene	ND	10	1	
Acenaphthylene	ND	10	1		Chrysene	ND	10	1	
Acenaphthene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (b) Fluoranthene	ND	10	1	
Pentachlorophenol	ND	10	1		Benzo (a) Pyrene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Anthracene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Fluoranthene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Pyrene	ND	10	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	51	7-121		Phenol-d6	29	1-127	
Nitrobenzene-d5	94	50-146		2-Fluorobiphenyl	88	42-138	
2,4,6-Tribromophenol	97	41-137		p-Terphenyl-d14	137	47-173	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical		Date Received:	02/29/08
2795 2nd Street, Suite 300		Work Order No:	08-02-2227
Davis, CA 95616-6593		Preparation:	EPA 3510B
		Method:	EPA 8270C
		Units:	ug/L

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-15WD	**08-02-2227-13-A**	**02/27/08 11:30**	**Aqueous**	**GC/MS P**	**02/29/08**	**03/04/08 23:58**	**080229L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	10	1		Benzo (a) Anthracene	ND	10	1	
Acenaphthylene	ND	10	1		Chrysene	ND	10	1	
Acenaphthene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (b) Fluoranthene	ND	10	1	
Pentachlorophenol	ND	10	1		Benzo (a) Pyrene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Anthracene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Fluoranthene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Pyrene	ND	10	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	85	7-121		Phenol-d6	51	1-127	
Nitrobenzene-d5	119	50-146		2-Fluorobiphenyl	135	42-138	
2,4,6-Tribromophenol	128	41-137		p-Terphenyl-d14	172	47-173	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-16WS	**08-02-2227-20-A**	**02/27/08 14:40**	**Aqueous**	**GC/MS P**	**02/29/08**	**03/05/08 00:32**	**080229L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	10	1		Benzo (a) Anthracene	ND	10	1	
Acenaphthylene	ND	10	1		Chrysene	ND	10	1	
Acenaphthene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (b) Fluoranthene	ND	10	1	
Pentachlorophenol	91	10	1		Benzo (a) Pyrene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Anthracene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Fluoranthene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Pyrene	ND	10	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	53	7-121		Phenol-d6	31	1-127	
Nitrobenzene-d5	94	50-146		2-Fluorobiphenyl	101	42-138	
2,4,6-Tribromophenol	95	41-137		p-Terphenyl-d14	136	47-173	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	02/29/08
2795 2nd Street, Suite 300		Work Order No:	08-02-2227
Davis, CA 95616-6593		Preparation:	EPA 3510B
		Method:	EPA 8270C
		Units:	ug/L

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-17WS	**08-02-2227-25-A**	**02/27/08 15:55**	**Aqueous**	**GC/MS P**	**02/29/08**	**03/05/08 01:07**	**080229L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	10	1		Benzo (a) Anthracene	ND	10	1	
Acenaphthylene	ND	10	1		Chrysene	ND	10	1	
Acenaphthene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (b) Fluoranthene	ND	10	1	
Pentachlorophenol	26	10	1		Benzo (a) Pyrene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Anthracene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Fluoranthene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Pyrene	ND	10	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	47	7-121		Phenol-d6	26	1-127	
Nitrobenzene-d5	89	50-146		2-Fluorobiphenyl	94	42-138	
2,4,6-Tribromophenol	94	41-137		p-Terphenyl-d14	128	47-173	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-003-2,353**	**N/A**	**Aqueous**	**GC/MS P**	**02/29/08**	**03/04/08 12:37**	**080229L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	10	1		Benzo (a) Anthracene	ND	10	1	
Acenaphthylene	ND	10	1		Chrysene	ND	10	1	
Acenaphthene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (b) Fluoranthene	ND	10	1	
Pentachlorophenol	ND	10	1		Benzo (a) Pyrene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Anthracene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Fluoranthene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Pyrene	ND	10	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	48	7-121		Phenol-d6	28	1-127	
Nitrobenzene-d5	93	50-146		2-Fluorobiphenyl	107	42-138	
2,4,6-Tribromophenol	91	41-137		p-Terphenyl-d14	136	47-173	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	02/29/08
2795 2nd Street, Suite 300		Work Order No:	08-02-2227
Davis, CA 95616-6593		Preparation:	EPA 3510C
		Method:	EPA 8310
		Units:	ug/L

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-8WS	**08-02-2227-27-A**	**02/27/08 08:10**	**Aqueous**	**HPLC 5**	**02/29/08**	**03/03/08 17:35**	**080229L12**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	1.2	1.25		Benzo (a) Anthracene	ND	1.2	1.25	
Acenaphthylene	ND	1.2	1.25		Chrysene	ND	1.2	1.25	
Acenaphthene	ND	1.2	1.25		Benzo (b) Fluoranthene	ND	1.2	1.25	
Fluorene	ND	1.2	1.25		Benzo (k) Fluoranthene	ND	1.2	1.25	
Phenanthrene	ND	1.2	1.25		Benzo (a) Pyrene	ND	0.25	1.25	
Anthracene	ND	1.2	1.25		Dibenz (a,h) Anthracene	ND	1.2	1.25	
Fluoranthene	ND	1.2	1.25		Benzo (g,h,i) Perylene	ND	1.2	1.25	
Pyrene	ND	1.2	1.25		Indeno (1,2,3-c,d) Pyrene	ND	1.2	1.25	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	77	40-160	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-07-003-1,084**	**N/A**	**Aqueous**	**HPLC 5**	**02/29/08**	**03/03/08 15:57**	**080229L12**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	1.0	1		Benzo (a) Anthracene	ND	1.0	1	
Acenaphthylene	ND	1.0	1		Chrysene	ND	1.0	1	
Acenaphthene	ND	1.0	1		Benzo (b) Fluoranthene	ND	1.0	1	
Fluorene	ND	1.0	1		Benzo (k) Fluoranthene	ND	1.0	1	
Phenanthrene	ND	1.0	1		Benzo (a) Pyrene	ND	0.20	1	
Anthracene	ND	1.0	1		Dibenz (a,h) Anthracene	ND	1.0	1	
Fluoranthene	ND	1.0	1		Benzo (g,h,i) Perylene	ND	1.0	1	
Pyrene	ND	1.0	1		Indeno (1,2,3-c,d) Pyrene	ND	1.0	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	82	40-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	02/29/08
2795 2nd Street, Suite 300		Work Order No:	08-02-2227
Davis, CA 95616-6593		Preparation:	EPA 3545
		Method:	EPA 8310
		Units:	ug/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-16-6	**08-02-2227-15-A**	**02/27/08 13:50**	**Solid**	**HPLC 5**	**03/17/08**	**03/19/08 16:27**	**080317L12**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	15	1		Benzo (a) Anthracene	40	10	1	
Acenaphthylene	48	30	1		Chrysene	13	10	1	
Acenaphthene	60	15	1		Benzo (b) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
Anthracene	ND	10	1		Dibenz (a,h) Anthracene	150	10	1	
Fluoranthene	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Pyrene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	49	40-160	

Method Blank	**099-07-002-1,011**	**N/A**	**Solid**	**HPLC 5**	**03/17/08**	**03/18/08 20:20**	**080317L12**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	15	1		Benzo (a) Anthracene	ND	10	1	
Acenaphthylene	ND	30	1		Chrysene	ND	10	1	
Acenaphthene	ND	15	1		Benzo (b) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
Anthracene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Fluoranthene	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Pyrene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	69	40-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	02/29/08
2795 2nd Street, Suite 300		Work Order No:	08-02-2227
Davis, CA 95616-6593		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-15-1	**08-02-2227-3-A**	**02/27/08 09:15**	**Solid**	**GC/MS MM**	**02/29/08**	**03/05/08 03:57**	**080229L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	0.50	1		Benzo (a) Anthracene	ND	0.50	1	
Acenaphthylene	ND	0.50	1		Chrysene	ND	0.50	1	
Acenaphthene	ND	0.50	1		Benzo (k) Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1		Benzo (b) Fluoranthene	ND	0.50	1	
Pentachlorophenol	ND	2.5	1		Benzo (a) Pyrene	ND	0.50	1	
Phenanthrene	ND	0.50	1		Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Anthracene	ND	0.50	1		Dibenz (a,h) Anthracene	ND	0.50	1	
Fluoranthene	ND	0.50	1		Benzo (g,h,i) Perylene	ND	0.50	1	
Pyrene	ND	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	100	42-120		Phenol-d6	97	46-118	
Nitrobenzene-d5	89	42-150		2-Fluorobiphenyl	90	38-134	
2,4,6-Tribromophenol	90	36-132		p-Terphenyl-d14	131	35-167	

GP-16B-0	08-02-2227-14-A	02/27/08 13:40	Solid	GC/MS MM	02/29/08	03/04/08 04:44	080229L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	0.50	1		Benzo (a) Anthracene	ND	0.50	1	
Acenaphthylene	ND	0.50	1		Chrysene	ND	0.50	1	
Acenaphthene	ND	0.50	1		Benzo (k) Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1		Benzo (b) Fluoranthene	ND	0.50	1	
Pentachlorophenol	ND	2.5	1		Benzo (a) Pyrene	ND	0.50	1	
Phenanthrene	ND	0.50	1		Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Anthracene	ND	0.50	1		Dibenz (a,h) Anthracene	ND	0.50	1	
Fluoranthene	ND	0.50	1		Benzo (g,h,i) Perylene	ND	0.50	1	
Pyrene	ND	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	87	42-120		Phenol-d6	85	46-118	
Nitrobenzene-d5	85	42-150		2-Fluorobiphenyl	88	38-134	
2,4,6-Tribromophenol	83	36-132		p-Terphenyl-d14	110	35-167	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	02/29/08
2795 2nd Street, Suite 300		Work Order No:	08-02-2227
Davis, CA 95616-6593		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-17-1	**08-02-2227-21-A**	**02/27/08 14:50**	**Solid**	**GC/MS MM**	**02/29/08**	**03/05/08 01:41**	**080229L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	0.50	1		Benzo (a) Anthracene	ND	0.50	1	
Acenaphthylene	ND	0.50	1		Chrysene	ND	0.50	1	
Acenaphthene	ND	0.50	1		Benzo (k) Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1		Benzo (b) Fluoranthene	ND	0.50	1	
Pentachlorophenol	ND	2.5	1		Benzo (a) Pyrene	ND	0.50	1	
Phenanthrene	ND	0.50	1		Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Anthracene	ND	0.50	1		Dibenz (a,h) Anthracene	ND	0.50	1	
Fluoranthene	ND	0.50	1		Benzo (g,h,i) Perylene	ND	0.50	1	
Pyrene	ND	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	102	42-120		Phenol-d6	97	46-118	
Nitrobenzene-d5	93	42-150		2-Fluorobiphenyl	106	38-134	
2,4,6-Tribromophenol	91	36-132		p-Terphenyl-d14	135	35-167	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-19-1	**08-02-2227-26-A**	**02/27/08 15:00**	**Solid**	**GC/MS MM**	**02/29/08**	**03/04/08 04:08**	**080229L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	0.50	1		Benzo (a) Anthracene	ND	0.50	1	
Acenaphthylene	ND	0.50	1		Chrysene	ND	0.50	1	
Acenaphthene	ND	0.50	1		Benzo (k) Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1		Benzo (b) Fluoranthene	ND	0.50	1	
Pentachlorophenol	ND	2.5	1		Benzo (a) Pyrene	ND	0.50	1	
Phenanthrene	ND	0.50	1		Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Anthracene	ND	0.50	1		Dibenz (a,h) Anthracene	ND	0.50	1	
Fluoranthene	ND	0.50	1		Benzo (g,h,i) Perylene	ND	0.50	1	
Pyrene	ND	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	88	42-120		Phenol-d6	85	46-118	
Nitrobenzene-d5	81	42-150		2-Fluorobiphenyl	82	38-134	
2,4,6-Tribromophenol	85	36-132		p-Terphenyl-d14	123	35-167	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical		Date Received:	02/29/08
2795 2nd Street, Suite 300		Work Order No:	08-02-2227
Davis, CA 95616-6593		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-549-300**	**N/A**	**Solid**	**GC/MS MM**	**02/29/08**	**02/29/08 12:07**	**080229L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	0.50	1		Benzo (a) Anthracene	ND	0.50	1	
Acenaphthylene	ND	0.50	1		Chrysene	ND	0.50	1	
Acenaphthene	ND	0.50	1		Benzo (k) Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1		Benzo (b) Fluoranthene	ND	0.50	1	
Pentachlorophenol	ND	2.5	1		Benzo (a) Pyrene	ND	0.50	1	
Phenanthrene	ND	0.50	1		Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Anthracene	ND	0.50	1		Dibenz (a,h) Anthracene	ND	0.50	1	
Fluoranthene	ND	0.50	1		Benzo (g,h,i) Perylene	ND	0.50	1	
Pyrene	ND	0.50	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
2-Fluorophenol	117	42-120			Phenol-d6	95	46-118		
Nitrobenzene-d5	93	42-150			2-Fluorobiphenyl	117	38-134		
2,4,6-Tribromophenol	97	36-132			p-Terphenyl-d14	140	35-167		

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/29/08
Work Order No: 08-02-2227
Preparation: EPA 3050B
Method: EPA 6020

Project Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-02-2194-1	**Solid**	**ICP/MS A**	**02/29/08**	**02/29/08**	**080229S03**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	101	102	72-132	1	0-13	
Barium	90	84	50-152	2	0-41	
Copper	87	87	25-157	0	0-22	
Nickel	101	100	46-154	1	0-15	
Vanadium	105	100	28-178	3	0-28	
Zinc	78	37	23-173	12	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - PDS / PDSD

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical		Date Received	02/29/08
2795 2nd Street, Suite 300		Work Order No:	08-02-2227
Davis, CA 95616-6593		Preparation:	EPA 3050B
		Method:	EPA 6020

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
08-02-2194-1	**Solid**	**ICP/MS A**	**02/29/08**	**02/29/08**	**080229S03**

Parameter	PDS %REC	PDSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	110	111	75-125	1	0-13	
Barium	98	111	75-125	3	0-41	
Copper	107	109	75-125	1	0-22	
Nickel	108	111	75-125	2	0-15	
Vanadium	104	112	75-125	5	0-28	
Zinc	106	114	75-125	2	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/29/08
Work Order No: 08-02-2227
Preparation: EPA 3050B
Method: EPA 6020

Project Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-03-0265-1	**Solid**	**ICP/MS A**	**03/10/08**	**03/10/08**	**080310S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	94	92	72-132	1	0-13	
Barium	4X	4X	50-152	4X	0-41	Q
Copper	102	88	25-157	6	0-22	
Nickel	4X	4X	46-154	4X	0-15	Q
Vanadium	99	109	28-178	3	0-28	
Zinc	108	82	23-173	7	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - PDS / PDSD

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical		Date Received	02/29/08
2795 2nd Street, Suite 300		Work Order No:	08-02-2227
Davis, CA 95616-6593		Preparation:	EPA 3050B
		Method:	EPA 6020

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
08-03-0265-1	**Solid**	**ICP/MS A**	**03/10/08**	**03/10/08**	**080310S01**

Parameter	PDS %REC	PDSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	106	105	75-125	1	0-13	
Barium	4X	4X	75-125	4X	0-41	Q
Copper	97	96	75-125	0	0-22	
Nickel	4X	4X	75-125	4X	0-15	Q
Vanadium	112	113	75-125	0	0-28	
Zinc	103	103	75-125	0	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/29/08
Work Order No: 08-02-2227
Preparation: EPA 3050B
Method: EPA 6020

Project Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-03-0021-1	**Solid**	**ICP/MS A**	**03/20/08**	**03/20/08**	**080320S04**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	107	107	72-132	1	0-13	
Barium	853	105	50-152	103	0-41	3,4
Copper	92	96	25-157	2	0-22	
Nickel	103	109	46-154	3	0-15	
Vanadium	95	96	28-178	0	0-28	
Zinc	121	115	23-173	2	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - PDS / PDSD

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical		Date Received	02/29/08
2795 2nd Street, Suite 300		Work Order No:	08-02-2227
Davis, CA 95616-6593		Preparation:	EPA 3050B
		Method:	EPA 6020

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
08-03-0021-1	**Solid**	**ICP/MS A**	**03/20/08**	**03/20/08**	**080320S04**

Parameter	PDS %REC	PDSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	106	112	75-125	4	0-13	
Barium	96	105	75-125	3	0-41	
Copper	99	101	75-125	1	0-22	
Nickel	106	109	75-125	2	0-15	
Vanadium	103	103	75-125	0	0-28	
Zinc	102	110	75-125	3	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/29/08
Work Order No: 08-02-2227
Preparation: EPA 3545
Method: EPA 8310

Project Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-03-0368-9	**Solid**	**HPLC 5**	**03/17/08**	**03/18/08**	**080317S12**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Naphthalene	64	64	40-160	0	0-20	
Acenaphthylene	63	61	40-160	2	0-20	
Acenaphthene	64	62	40-160	2	0-20	
Fluorene	73	72	40-160	1	0-20	
Phenanthrene	68	68	40-160	1	0-20	
Anthracene	66	66	40-160	1	0-20	
Fluoranthene	72	71	40-160	1	0-20	
Pyrene	70	69	40-160	2	0-20	
Benzo (a) Anthracene	69	68	40-160	2	0-20	
Chrysene	66	64	40-160	2	0-20	
Benzo (b) Fluoranthene	68	67	40-160	2	0-20	
Benzo (k) Fluoranthene	69	68	40-160	1	0-20	
Benzo (a) Pyrene	70	69	40-160	2	0-20	
Dibenz (a,h) Anthracene	79	71	40-160	10	0-20	
Benzo (g,h,i) Perylene	69	67	40-160	3	0-20	
Indeno (1,2,3-c,d) Pyrene	60	60	40-160	1	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/29/08
Work Order No: 08-02-2227
Preparation: EPA 3545
Method: EPA 8270C

Project Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-02-2194-1	**Solid**	**GC/MS MM**	**02/29/08**	**02/29/08**	**080229S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Phenol	109	111	57-123	2	0-16	
2-Chlorophenol	107	111	57-111	3	0-17	
1,4-Dichlorobenzene	106	108	49-127	2	0-20	
N-Nitroso-di-n-propylamine	86	88	54-144	2	0-17	
1,2,4-Trichlorobenzene	118	121	42-132	3	0-20	
4-Chloro-3-Methylphenol	111	115	50-128	3	0-17	
Acenaphthene	129	145	49-133	11	0-18	3
4-Nitrophenol	93	103	30-144	11	0-21	
2,4-Dinitrotoluene	83	81	50-128	2	0-18	
Pentachlorophenol	66	68	29-113	4	0-22	
Pyrene	229	291	47-149	24	0-20	3,4

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical		Date Received:	N/A
2795 2nd Street, Suite 300		Work Order No:	08-02-2227
Davis, CA 95616-6593		Preparation:	EPA 3050B
		Method:	EPA 6020

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
096-10-002-1,049	**Solid**	**ICP/MS A**	**02/29/08**	**02/29/08**	**080229L03**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	99	98	80-120	1	0-20	
Barium	98	96	80-120	2	0-20	
Copper	106	103	80-120	3	0-20	
Nickel	100	103	80-120	3	0-20	
Vanadium	95	95	80-120	0	0-20	
Zinc	112	114	80-120	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-02-2227
Preparation: EPA 3050B
Method: EPA 6020

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
096-10-002-1,052	**Solid**	**ICP/MS A**	**03/10/08**	**03/10/08**	**080310L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	92	91	80-120	1	0-20	
Barium	90	87	80-120	3	0-20	
Copper	96	96	80-120	1	0-20	
Nickel	94	91	80-120	3	0-20	
Vanadium	95	93	80-120	3	0-20	
Zinc	96	94	80-120	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-02-2227
Preparation: EPA 3050B
Method: EPA 6020

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
096-10-002-1,053	**Solid**	**ICP/MS A**	**03/20/08**	**03/20/08**	**080320L04**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	100	103	80-120	3	0-20	
Barium	97	103	80-120	5	0-20	
Copper	105	106	80-120	1	0-20	
Nickel	103	107	80-120	4	0-20	
Vanadium	105	108	80-120	2	0-20	
Zinc	101	104	80-120	4	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-02-2227
Preparation: EPA 3510B
Method: EPA 8270C

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-003-2,353	**Aqueous**	**GC/MS P**	**02/29/08**	**03/04/08**	**080229L04**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Phenol	25	25	4-142	2	0-24	
2-Chlorophenol	79	80	53-113	1	0-17	
1,4-Dichlorobenzene	92	92	50-122	0	0-19	
N-Nitroso-di-n-propylamine	86	87	56-146	1	0-22	
4-Chloro-3-Methylphenol	87	86	55-121	1	0-18	
Acenaphthene	97	102	55-139	5	0-17	
4-Nitrophenol	22	22	1-145	2	0-29	
2,4-Dinitrotoluene	84	86	41-161	3	0-22	
Pentachlorophenol	56	57	34-130	2	0-23	
Pyrene	125	122	38-170	2	0-27	
1,2,4-Trichlorobenzene	97	97	49-121	0	0-19	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-02-2227
Preparation: EPA 3510C
Method: EPA 8310

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-003-1,084	**Aqueous**	**HPLC 5**	**02/29/08**	**03/03/08**	**080229L12**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Naphthalene	98	99	40-160	2	0-20	
Acenaphthylene	97	93	40-160	4	0-20	
Acenaphthene	103	98	40-160	4	0-20	
Fluorene	103	99	40-160	4	0-20	
Phenanthrene	102	99	40-160	4	0-20	
Anthracene	92	89	40-160	4	0-20	
Fluoranthene	101	98	40-160	3	0-20	
Pyrene	106	102	40-160	3	0-20	
Benzo (a) Anthracene	107	103	40-160	4	0-20	
Chrysene	112	108	40-160	4	0-20	
Benzo (b) Fluoranthene	112	106	40-160	5	0-20	
Benzo (k) Fluoranthene	113	108	40-160	5	0-20	
Benzo (a) Pyrene	104	100	40-160	4	0-20	
Dibenz (a,h) Anthracene	108	105	40-160	3	0-20	
Benzo (g,h,i) Perylene	110	106	40-160	4	0-20	
Indeno (1,2,3-c,d) Pyrene	105	101	40-160	4	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical	Date Received:	N/A
2795 2nd Street, Suite 300	Work Order No:	08-02-2227
Davis, CA 95616-6593	Preparation:	EPA 3545
	Method:	EPA 8310

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-002-1,011	**Solid**	**HPLC 5**	**03/17/08**	**03/18/08**	**080317L12**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Naphthalene	92	95	40-160	4	0-20	
Acenaphthylene	85	89	40-160	6	0-20	
Acenaphthene	83	82	40-160	0	0-20	
Fluorene	83	81	40-160	2	0-20	
Phenanthrene	81	81	40-160	0	0-20	
Anthracene	80	80	40-160	0	0-20	
Fluoranthene	79	79	40-160	0	0-20	
Pyrene	83	84	40-160	1	0-20	
Benzo (a) Anthracene	83	83	40-160	0	0-20	
Chrysene	86	86	40-160	0	0-20	
Benzo (b) Fluoranthene	84	84	40-160	0	0-20	
Benzo (k) Fluoranthene	86	86	40-160	0	0-20	
Benzo (a) Pyrene	81	81	40-160	0	0-20	
Dibenz (a,h) Anthracene	87	86	40-160	1	0-20	
Benzo (g,h,i) Perylene	85	85	40-160	0	0-20	
Indeno (1,2,3-c,d) Pyrene	81	81	40-160	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-02-2227
Preparation: EPA 3545
Method: EPA 8270C

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-549-300	**Solid**	**GC/MS MM**	**02/29/08**	**02/29/08**	**080229L02**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Phenol	83	85	59-125	3	0-15	
2-Chlorophenol	86	87	60-114	1	0-15	
1,4-Dichlorobenzene	88	88	61-121	0	0-21	
N-Nitroso-di-n-propylamine	71	72	64-136	2	0-15	
1,2,4-Trichlorobenzene	89	91	58-118	3	0-18	
4-Chloro-3-Methylphenol	81	82	61-121	2	0-14	
Acenaphthene	102	103	59-125	2	0-15	
4-Nitrophenol	76	77	38-152	2	0-31	
2,4-Dinitrotoluene	74	73	51-141	1	0-16	
Pentachlorophenol	59	61	38-116	4	0-20	
Pyrene	105	105	51-141	1	0-14	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 08-02-2227

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

KIFF Analytical LLC

2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove. CA 92841
714-895-5494

Lab No. 2227

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

Phone No.: 530-297-4800 FAX No.: 530-297-4808

Project Number: 77OT.43877.00 P.O. No.: 61290

EDF Deliverable to (Email Address):

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Analysis Request

Date due: March 5, 2008

For Lab Use Only

Sample Designation	Sampling Date	Sampling Time	Container: Glass	Poly	Sleeve	Amber	Tedlar	Preservative: HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	Matrix: WATER	SOIL	Air	PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD	PAH's, PCP (EPA 8270)					Date due:	For Lab Use Only
GP-8-10	02/27/08	740	1									X		X				X							
GP-8-15	02/27/08	750	1									X		X				X							
GP-15-1	02/27/08	915	1									X		X			X		X					X	
GP-15-6	02/27/08	925	1									X		X				X							
GP-15WS	02/27/08	1015				2				2		X	X						X					X	
GP-15-10	02/27/08	930	1									X		X				X							
GP-15-15	02/27/08	940	1									X		X				X							
GP-15-20	02/27/08	1040	1									X		X				X							
GP-15-25	02/27/08	1045	1									X		X				X							
GP-15-30	02/27/08	1100	1									X		X				X							

	Date	Time	
Relinquished by:	022808	1900	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by: B10201321350	2-29-08	0800	Received by Laboratory:

Remarks: *As, Ni, Ba, V, Cu, Zn.
DUE DATE IS FIRM!

Bill to: Accounts Payable

B10201321341

KIFF Analytical LLC
2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

2227 2227

Lab No. _____

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Recommended but not mandatory to complete this section:

Company/Address: Kiff Analytical

Sampling Company Log Code:

Global ID:

Phone No.: 530-297-4800 | FAX No.: 530-297-4808

Project Number: 77OT.43877.00 | P.O. No.: 61290

EDF Deliverable to (Email Address):

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling Date	Sampling Time	Container: Glass	Poly	Sleeve	Amber	Tedlar	Preservative: HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	Matrix: WATER	SOIL	Air	Analysis Request: PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD	PAH's, PCP (EPA 8270)					Date due: March 5, 2008	For Lab Use Only
Grab-1	02/27/08	915				2				2			X						X					X	
GP-15-35	02/27/08	1125	1									1		X				X							
GP-15WD	02/27/08	1130				2				2			X						X					X	
GP-16B-0	02/27/08	1340	1									1		X			X		X					X	
GP-16-6	02/27/08	1350	1									1		X				X							
GP-16-7	02/27/08	1355	1									1		X				X							
GP-16-10	02/27/08	1400	1									1		X				X							
GP-16-15	02/27/08	1415	1									1		X				X							
GP-16-20	02/27/08	1420	1									1		X				X							
GP-16WS	02/27/08	1440				2				2			X						X					X	

	Date	Time	
Relinquished by:	022808	1900	Received by:
Relinquished by:			Received by:
Relinquished by: COB1020132135O	2-29-08	0800	Received by Laboratory:

Remarks: *As, Ni, Ba, V, Cu, Zn.
DUE DATE IS FIRM!

Bill to: Accounts Payable

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Lab No. 2227

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_ No

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

Phone No.: 530-297-4800 | FAX No.: 530-297-4808

Project Number: 77OT.43877.00 | P.O. No.: 61290

EDF Deliverable to (Email Address):

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Analysis Request

Date due: March 5, 2008

For Lab Use Only

Sample Designation	Sampling Date	Sampling Time	Container: Glass	Poly	Sleeve	Amber	Tedlar	Preservative: HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	Matrix: WATER	SOIL	Air	PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD	PAH's, PCP (EPA 8270)					Date due: March 5, 2008	For Lab Use Only
GP-17-1	02/27/08	1450	1									X		X			X		X					X	
GP-17-6	02/27/08	1530	1											X				X							
GP-17-10	02/27/08	1535	1											X				X							
GP-17-15	02/27/08	1540	1											X				X							
GP-17WS	02/27/08	1555				2				2			X						X					X	
GP-19-1	02/27/08	1500	1											X			X		X					X	
GP-8WS	02/27/08	810				2				2			X			X								X	

	Date	Time		
Relinquished by:	022808	1900	Received by:	
Relinquished by:			Received by:	
Relinquished by: CO3102013213 50			Received by Laboratory:	

Remarks: *As, Ni, Ba, V, Cu, Zn .
DUE DATE IS FIRM!

Bill to: Accounts Payable

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 08 - 02 - 2227

Cooler 1 of 1

SAMPLE RECEIPT FORM

CLIENT: KIFF ANALYTICAL DATE: 2-29-08

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.

_____ °C Temperature blank.

LABORATORY (Other than Calscience Courier):

2.7 °C Temperature blank.
_____ °C IR thermometer.
_____ Ambient temperature.

Initial: WB

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: ✓ No (Not Intact) : _____ Not Present: _____

Initial: WB

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sampler's name indicated on COC		✓	
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers and volume for analyses requested	✓		
Proper preservation noted on sample label(s)	✓		
VOA vial(s) free of headspace.			✓
Tedlar bag(s) free of condensation			✓

Initial: WB

COMMENTS:

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 08 - 02 - 2227

Cooler 2 of 2

SAMPLE RECEIPT FORM

CLIENT: KFF ANALYTICAL DATE: 2-29-08

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.
_____ °C Temperature blank.

LABORATORY (Other than Calscience Courier):

2.8 °C Temperature blank.
_____ °C IR thermometer.
_____ Ambient temperature.

Initial: WB

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: ✓ No (Not Intact) : _____ Not Present: _____

Initial: WB

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sampler's name indicated on COC		✓	
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers and volume for analyses requested	✓		
Proper preservation noted on sample label(s)	✓		
VOA vial(s) free of headspace.			✓
Tedlar bag(s) free of condensation			✓

Initial: WB

COMMENTS:

KIFF Analytical LLC
2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. _____ Page 1 of 3

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

Phone No.: 530-297-4800 FAX No.: 530-297-4808

EDF Deliverable to (Email Address):

Project Number: 77OT.43877.00 P.O. No.: 61290

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling		Container					Preservative					Matrix			Analysis Request						Date due: March 5, 2008	Date due: March 17, 2008	Date due: March 21, 2008	For Lab Use Only
	Date	Time	Glass	Poly	Sleeve	Amber	Tedlar	HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	WATER	SOIL	Air	PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD	PAH's, PCP (EPA 8270)	As, V (EPA 6020)					
GP-8-10	02/27/08	740	1									X		X				X							
GP-8-15	02/27/08	750	1									X		X				X							
GP-15-1	02/27/08	915	1									X		X			X		X			X			
GP-15-6	02/27/08	925	1									X		X						X			X		
GP-15WS	02/27/08	1015				2				2		X	X						X			X			
GP-15-10	02/27/08	930	1									X		X				X							
GP-15-15	02/27/08	940	1									X		X				X							
GP-15-20	02/27/08	1040	1									X		X				X							
GP-15-25	02/27/08	1045	1									X		X				X							
GP-15-30	02/27/08	1100	1									X		X				X							

Relinquished by: Troy A. Turpen	Date 3/14/08	Time 16:10	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:

Remarks: This is a revised COC for Work Order No. 08-02-2227, now with samples -4, -15 and -22 off hold for additional analyses as marked. Please provide an XLS of the results as well as a PDF. *As, Ni, Ba, V, Cu, Zn

Bill to: Accounts Payable

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Cal Science Environmental
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714-895-5494

Lab No. _____ Page 2 of 3

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

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Phone No.: 530-297-4800 FAX No.: 530-297-4808

Project Number: 77OT.43877.00 P.O. No.: 61290

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling		Container					Preservative					Matrix			Analysis Request						Date due: March 5, 2008	Date due: March 17, 2008	Date due: March 21, 2008	For Lab Use Only
	Date	Time	Glass	Poly	Sleeve	Amber	Tedlar	HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	WATER	SOIL	Air	PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD	PAH's, PCP (EPA 8270)	As, V (EPA 6020)						
Grab-1	02/27/08	915				2				2			X						X			X				
GP-15-35	02/27/08	1125	1									1		X				X								
GP-15WD	02/27/08	1130				2				2			X						X			X				
GP-16B-0	02/27/08	1340	1									1		X			X		X			X				
GP-16-6	02/27/08	1350	1									1		X			X		X					X		
GP-16-7	02/27/08	1355	1									1		X				X								
GP-16-10	02/27/08	1400	1									1		X				X								
GP-16-15	02/27/08	1415	1									1		X				X								
GP-16-20	02/27/08	1420	1									1		X				X								
GP-16WS	02/27/08	1440				2				2			X						X			X				

Relinquished by: Troy A. Turpen	Date 3/14/08	Time 16:10	Received by:	Remarks: This is a revised COC for Work Order No. 08-02-2227, now with samples -4, -15 and -22 off hold for additional analyses as marked. Please provide an XLS of the results as well as a PDF. *As, Ni, Ba, V, Cu, Zn
Relinquished by:	Date	Time	Received by:	
Relinquished by:	Date	Time	Received by Laboratory:	Bill to: Accounts Payable

KIFF Analytical LLC
2795 Second Street, Suite 300
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7440 Lincoln Way
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Lab No. _____ Page 3 of 3

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

Phone No.: 530-297-4800 FAX No.: 530-297-4808

EDF Deliverable to (Email Address):

Project Number: 77OT.43877.00 P.O. No.: 61290

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling		Container					Preservative					Matrix			Analysis Request						Date due: March 5, 2008	Date due: March 17, 2008	Date due: March 21, 2008	For Lab Use Only
	Date	Time	Glass	Poly	Sleeve	Amber	Tedlar	HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	WATER	SOIL	Air	PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD	PAH's, PCP (EPA 8270)	As, V (EPA 6020)					
GP-17-1	02/27/08	1450	1									X		X			X		X			X			
GP-17-6	02/27/08	1530	1											X						X			X		
GP-17-10	02/27/08	1535	1											X				X							
GP-17-15	02/27/08	1540	1											X				X							
GP-17WS	02/27/08	1555				2				2			X						X			X			
GP-19-1	02/27/08	1500	1											X			X		X			X			
GP-8WS	02/27/08	810				2				2			X			X						X			

Relinquished by: Troy A. Turpen	Date 3/14/08	Time 16:10	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:

Remarks: This is a revised COC for Work Order No. 08-02-2227, now with samples -4, -15 and -22 off hold for additional analyses as marked. Please provide an XLS of the results as well as a PDF. *As, Ni, Ba, V, Cu, Zn

Bill to: Accounts Payable

Calscience
Environmental
Laboratories, Inc.

Supplemental Report 5

March 25, 2008

Additional requested analyses are reported as a stand-alone report.

Joel Kiff
Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Subject: **Calscience Work Order No.:** **08-02-2227**
Client Reference: **Tesoro Pittsburg Terminal Phase II**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 2/29/2008 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Amanda Porter

Calscience Environmental
Laboratories, Inc.
Amanda Porter
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical		Date Received:	02/29/08
2795 2nd Street, Suite 300		Work Order No:	08-02-2227
Davis, CA 95616-6593		Preparation:	EPA 3510B
		Method:	EPA 8270C
		Units:	ug/L

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-15WS	**08-02-2227-5-A**	**02/27/08 10:15**	**Aqueous**	**GC/MS P**	**02/29/08**	**03/04/08 22:50**	**080229L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
N-Nitrosodimethylamine	ND	10	1		4-Nitrophenol	ND	10	1	
Aniline	ND	10	1		Dibenzofuran	ND	10	1	
Phenol	ND	10	1		2,4-Dinitrotoluene	ND	10	1	
Bis(2-Chloroethyl) Ether	ND	25	1		2,6-Dinitrotoluene	ND	10	1	
2-Chlorophenol	ND	10	1		Diethyl Phthalate	ND	10	1	
1,3-Dichlorobenzene	ND	10	1		4-Chlorophenyl-Phenyl Ether	ND	10	1	
1,4-Dichlorobenzene	ND	10	1		Fluorene	ND	10	1	
Benzyl Alcohol	ND	10	1		4-Nitroaniline	ND	10	1	
1,2-Dichlorobenzene	ND	10	1		Azobenzene	ND	10	1	
2-Methylphenol	ND	10	1		4,6-Dinitro-2-Methylphenol	ND	50	1	
Bis(2-Chloroisopropyl) Ether	ND	10	1		N-Nitrosodiphenylamine	ND	10	1	
3/4-Methylphenol	ND	10	1		4-Bromophenyl-Phenyl Ether	ND	10	1	
N-Nitroso-di-n-propylamine	ND	10	1		Hexachlorobenzene	ND	10	1	
Hexachloroethane	ND	10	1		Pentachlorophenol	ND	10	1	
Nitrobenzene	ND	25	1		Phenanthrene	ND	10	1	
Isophorone	ND	10	1		Anthracene	ND	10	1	
2-Nitrophenol	ND	10	1		Di-n-Butyl Phthalate	ND	10	1	
2,4-Dimethylphenol	ND	10	1		Fluoranthene	ND	10	1	
Benzoic Acid	ND	50	1		Benzidine	ND	50	1	
Bis(2-Chloroethoxy) Methane	ND	10	1		Pyrene	ND	10	1	
2,4-Dichlorophenol	ND	10	1		Pyridine	ND	10	1	
Naphthalene	ND	10	1		Butyl Benzyl Phthalate	ND	10	1	
4-Chloroaniline	ND	10	1		3,3'-Dichlorobenzidine	ND	25	1	
Hexachloro-1,3-Butadiene	ND	10	1		Benzo (a) Anthracene	ND	10	1	
4-Chloro-3-Methylphenol	ND	10	1		Bis(2-Ethylhexyl) Phthalate	ND	10	1	
2-Methylnaphthalene	ND	10	1		Chrysene	ND	10	1	
Hexachlorocyclopentadiene	ND	25	1		Di-n-Octyl Phthalate	ND	10	1	
2,4,6-Trichlorophenol	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
2,4,5-Trichlorophenol	ND	10	1		Benzo (b) Fluoranthene	ND	10	1	
2-Chloronaphthalene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
2-Nitroaniline	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Dimethyl Phthalate	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Acenaphthylene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
3-Nitroaniline	ND	10	1		1-Methylnaphthalene	ND	10	1	
Acenaphthene	ND	10	1		1,2,4-Trichlorobenzene	ND	10	1	
2,4-Dinitrophenol	ND	50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	56	7-121		Phenol-d6	33	1-127	
Nitrobenzene-d5	97	50-146		2-Fluorobiphenyl	98	42-138	
2,4,6-Tribromophenol	97	41-137		p-Terphenyl-d14	140	47-173	

Additional Parameter	**Result**	**RL**	**DF**	**Qual**
Creosote*	ND	10	1	

*Combination of Naphthalene, Acenaphthylene, Fluorene, Phenanthrene, Anthracene ,Fluoranthene, Pyrene, 1-Methylnaphthalene, 2-Methylnaphthalene

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	02/29/08
2795 2nd Street, Suite 300		Work Order No:	08-02-2227
Davis, CA 95616-6593		Preparation:	EPA 3510B
		Method:	EPA 8270C
		Units:	ug/L

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Grab-1	**08-02-2227-11-A**	**02/27/08 09:15**	**Aqueous**	**GC/MS P**	**02/29/08**	**03/04/08 23:24**	**080229L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
N-Nitrosodimethylamine	ND	10	1		4-Nitrophenol	ND	10	1	
Aniline	ND	10	1		Dibenzofuran	ND	10	1	
Phenol	ND	10	1		2,4-Dinitrotoluene	ND	10	1	
Bis(2-Chloroethyl) Ether	ND	25	1		2,6-Dinitrotoluene	ND	10	1	
2-Chlorophenol	ND	10	1		Diethyl Phthalate	ND	10	1	
1,3-Dichlorobenzene	ND	10	1		4-Chlorophenyl-Phenyl Ether	ND	10	1	
1,4-Dichlorobenzene	ND	10	1		Fluorene	ND	10	1	
Benzyl Alcohol	ND	10	1		4-Nitroaniline	ND	10	1	
1,2-Dichlorobenzene	ND	10	1		Azobenzene	ND	10	1	
2-Methylphenol	ND	10	1		4,6-Dinitro-2-Methylphenol	ND	50	1	
Bis(2-Chloroisopropyl) Ether	ND	10	1		N-Nitrosodiphenylamine	ND	10	1	
3/4-Methylphenol	ND	10	1		4-Bromophenyl-Phenyl Ether	ND	10	1	
N-Nitroso-di-n-propylamine	ND	10	1		Hexachlorobenzene	ND	10	1	
Hexachloroethane	ND	10	1		Pentachlorophenol	ND	10	1	
Nitrobenzene	ND	25	1		Phenanthrene	ND	10	1	
Isophorone	ND	10	1		Anthracene	ND	10	1	
2-Nitrophenol	ND	10	1		Di-n-Butyl Phthalate	ND	10	1	
2,4-Dimethylphenol	ND	10	1		Fluoranthene	ND	10	1	
Benzoic Acid	ND	50	1		Benzidine	ND	50	1	
Bis(2-Chloroethoxy) Methane	ND	10	1		Pyrene	ND	10	1	
2,4-Dichlorophenol	ND	10	1		Pyridine	ND	10	1	
Naphthalene	ND	10	1		Butyl Benzyl Phthalate	ND	10	1	
4-Chloroaniline	ND	10	1		3,3'-Dichlorobenzidine	ND	25	1	
Hexachloro-1,3-Butadiene	ND	10	1		Benzo (a) Anthracene	ND	10	1	
4-Chloro-3-Methylphenol	ND	10	1		Bis(2-Ethylhexyl) Phthalate	ND	10	1	
2-Methylnaphthalene	ND	10	1		Chrysene	ND	10	1	
Hexachlorocyclopentadiene	ND	25	1		Di-n-Octyl Phthalate	ND	10	1	
2,4,6-Trichlorophenol	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
2,4,5-Trichlorophenol	ND	10	1		Benzo (b) Fluoranthene	ND	10	1	
2-Chloronaphthalene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
2-Nitroaniline	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Dimethyl Phthalate	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Acenaphthylene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
3-Nitroaniline	ND	10	1		1-Methylnaphthalene	ND	10	1	
Acenaphthene	ND	10	1		1,2,4-Trichlorobenzene	ND	10	1	
2,4-Dinitrophenol	ND	50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	51	7-121		Phenol-d6	29	1-127	
Nitrobenzene-d5	94	50-146		2-Fluorobiphenyl	88	42-138	
2,4,6-Tribromophenol	97	41-137		p-Terphenyl-d14	137	47-173	

Additional Parameter	**Result**	**RL**	**DF**	**Qual**
Creosote*	ND	10	1	

*Combination of Naphthalene, Acenaphthylene, Fluorene, Phenanthrene, Anthracene ,Fluoranthene, Pyrene, 1-Methylnaphthalene, 2-Methylnaphthalene

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	02/29/08
2795 2nd Street, Suite 300		Work Order No:	08-02-2227
Davis, CA 95616-6593		Preparation:	EPA 3510B
		Method:	EPA 8270C
		Units:	ug/L

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-15WD	**08-02-2227-13-A**	**02/27/08 11:30**	**Aqueous**	**GC/MS P**	**02/29/08**	**03/04/08 23:58**	**080229L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
N-Nitrosodimethylamine	ND	10	1		4-Nitrophenol	ND	10	1	
Aniline	ND	10	1		Dibenzofuran	ND	10	1	
Phenol	ND	10	1		2,4-Dinitrotoluene	ND	10	1	
Bis(2-Chloroethyl) Ether	ND	25	1		2,6-Dinitrotoluene	ND	10	1	
2-Chlorophenol	ND	10	1		Diethyl Phthalate	ND	10	1	
1,3-Dichlorobenzene	ND	10	1		4-Chlorophenyl-Phenyl Ether	ND	10	1	
1,4-Dichlorobenzene	ND	10	1		Fluorene	ND	10	1	
Benzyl Alcohol	ND	10	1		4-Nitroaniline	ND	10	1	
1,2-Dichlorobenzene	ND	10	1		Azobenzene	ND	10	1	
2-Methylphenol	ND	10	1		4,6-Dinitro-2-Methylphenol	ND	50	1	
Bis(2-Chloroisopropyl) Ether	ND	10	1		N-Nitrosodiphenylamine	ND	10	1	
3/4-Methylphenol	ND	10	1		4-Bromophenyl-Phenyl Ether	ND	10	1	
N-Nitroso-di-n-propylamine	ND	10	1		Hexachlorobenzene	ND	10	1	
Hexachloroethane	ND	10	1		Pentachlorophenol	ND	10	1	
Nitrobenzene	ND	25	1		Phenanthrene	ND	10	1	
Isophorone	ND	10	1		Anthracene	ND	10	1	
2-Nitrophenol	ND	10	1		Di-n-Butyl Phthalate	ND	10	1	
2,4-Dimethylphenol	ND	10	1		Fluoranthene	ND	10	1	
Benzoic Acid	ND	50	1		Benzidine	ND	50	1	
Bis(2-Chloroethoxy) Methane	ND	10	1		Pyrene	ND	10	1	
2,4-Dichlorophenol	ND	10	1		Pyridine	ND	10	1	
Naphthalene	ND	10	1		Butyl Benzyl Phthalate	ND	10	1	
4-Chloroaniline	ND	10	1		3,3'-Dichlorobenzidine	ND	25	1	
Hexachloro-1,3-Butadiene	ND	10	1		Benzo (a) Anthracene	ND	10	1	
4-Chloro-3-Methylphenol	ND	10	1		Bis(2-Ethylhexyl) Phthalate	ND	10	1	
2-Methylnaphthalene	ND	10	1		Chrysene	ND	10	1	
Hexachlorocyclopentadiene	ND	25	1		Di-n-Octyl Phthalate	ND	10	1	
2,4,6-Trichlorophenol	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
2,4,5-Trichlorophenol	ND	10	1		Benzo (b) Fluoranthene	ND	10	1	
2-Chloronaphthalene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
2-Nitroaniline	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Dimethyl Phthalate	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Acenaphthylene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
3-Nitroaniline	ND	10	1		1-Methylnaphthalene	ND	10	1	
Acenaphthene	ND	10	1		1,2,4-Trichlorobenzene	ND	10	1	
2,4-Dinitrophenol	ND	50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	85	7-121		Phenol-d6	51	1-127	
Nitrobenzene-d5	119	50-146		2-Fluorobiphenyl	135	42-138	
2,4,6-Tribromophenol	128	41-137		p-Terphenyl-d14	172	47-173	

Additional Parameter	**Result**	**RL**	**DF**	**Qual**
Creosote*	ND	10	1	

*Combination of Naphthalene, Acenaphthylene, Fluorene, Phenanthrene, Anthracene ,Fluoranthene, Pyrene, 1-Methylnaphthalene, 2-Methylnaphthalene

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	02/29/08
2795 2nd Street, Suite 300		Work Order No:	08-02-2227
Davis, CA 95616-6593		Preparation:	EPA 3510B
		Method:	EPA 8270C
		Units:	ug/L

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-16WS	**08-02-2227-20-A**	**02/27/08 14:40**	**Aqueous**	**GC/MS P**	**02/29/08**	**03/05/08 00:32**	**080229L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
N-Nitrosodimethylamine	ND	10	1		4-Nitrophenol	ND	10	1	
Aniline	ND	10	1		Dibenzofuran	ND	10	1	
Phenol	ND	10	1		2,4-Dinitrotoluene	ND	10	1	
Bis(2-Chloroethyl) Ether	ND	25	1		2,6-Dinitrotoluene	ND	10	1	
2-Chlorophenol	ND	10	1		Diethyl Phthalate	ND	10	1	
1,3-Dichlorobenzene	ND	10	1		4-Chlorophenyl-Phenyl Ether	ND	10	1	
1,4-Dichlorobenzene	ND	10	1		Fluorene	ND	10	1	
Benzyl Alcohol	ND	10	1		4-Nitroaniline	ND	10	1	
1,2-Dichlorobenzene	ND	10	1		Azobenzene	ND	10	1	
2-Methylphenol	ND	10	1		4,6-Dinitro-2-Methylphenol	ND	50	1	
Bis(2-Chloroisopropyl) Ether	ND	10	1		N-Nitrosodiphenylamine	ND	10	1	
3/4-Methylphenol	ND	10	1		4-Bromophenyl-Phenyl Ether	ND	10	1	
N-Nitroso-di-n-propylamine	ND	10	1		Hexachlorobenzene	ND	10	1	
Hexachloroethane	ND	10	1		Pentachlorophenol	91	10	1	
Nitrobenzene	ND	25	1		Phenanthrene	ND	10	1	
Isophorone	ND	10	1		Anthracene	ND	10	1	
2-Nitrophenol	ND	10	1		Di-n-Butyl Phthalate	ND	10	1	
2,4-Dimethylphenol	ND	10	1		Fluoranthene	ND	10	1	
Benzoic Acid	ND	50	1		Benzidine	ND	50	1	
Bis(2-Chloroethoxy) Methane	ND	10	1		Pyrene	ND	10	1	
2,4-Dichlorophenol	ND	10	1		Pyridine	ND	10	1	
Naphthalene	ND	10	1		Butyl Benzyl Phthalate	ND	10	1	
4-Chloroaniline	ND	10	1		3,3'-Dichlorobenzidine	ND	25	1	
Hexachloro-1,3-Butadiene	ND	10	1		Benzo (a) Anthracene	ND	10	1	
4-Chloro-3-Methylphenol	ND	10	1		Bis(2-Ethylhexyl) Phthalate	ND	10	1	
2-Methylnaphthalene	ND	10	1		Chrysene	ND	10	1	
Hexachlorocyclopentadiene	ND	25	1		Di-n-Octyl Phthalate	ND	10	1	
2,4,6-Trichlorophenol	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
2,4,5-Trichlorophenol	ND	10	1		Benzo (b) Fluoranthene	ND	10	1	
2-Chloronaphthalene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
2-Nitroaniline	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Dimethyl Phthalate	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Acenaphthylene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
3-Nitroaniline	ND	10	1		1-Methylnaphthalene	ND	10	1	
Acenaphthene	ND	10	1		1,2,4-Trichlorobenzene	ND	10	1	
2,4-Dinitrophenol	ND	50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	53	7-121		Phenol-d6	31	1-127	
Nitrobenzene-d5	94	50-146		2-Fluorobiphenyl	101	42-138	
2,4,6-Tribromophenol	95	41-137		p-Terphenyl-d14	136	47-173	

Additional Parameter	**Result**	**RL**	**DF**	**Qual**
Creosote*	ND	10	1	

*Combination of Naphthalene, Acenaphthylene, Fluorene, Phenanthrene, Anthracene ,Fluoranthene, Pyrene, 1-Methylnaphthalene, 2-Methylnaphthalene

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	02/29/08
2795 2nd Street, Suite 300		Work Order No:	08-02-2227
Davis, CA 95616-6593		Preparation:	EPA 3510B
		Method:	EPA 8270C
		Units:	ug/L

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-17WS	**08-02-2227-25-A**	**02/27/08 15:55**	**Aqueous**	**GC/MS P**	**02/29/08**	**03/05/08 01:07**	**080229L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
N-Nitrosodimethylamine	ND	10	1		4-Nitrophenol	ND	10	1	
Aniline	ND	10	1		Dibenzofuran	ND	10	1	
Phenol	ND	10	1		2,4-Dinitrotoluene	ND	10	1	
Bis(2-Chloroethyl) Ether	ND	25	1		2,6-Dinitrotoluene	ND	10	1	
2-Chlorophenol	ND	10	1		Diethyl Phthalate	ND	10	1	
1,3-Dichlorobenzene	ND	10	1		4-Chlorophenyl-Phenyl Ether	ND	10	1	
1,4-Dichlorobenzene	ND	10	1		Fluorene	ND	10	1	
Benzyl Alcohol	ND	10	1		4-Nitroaniline	ND	10	1	
1,2-Dichlorobenzene	ND	10	1		Azobenzene	ND	10	1	
2-Methylphenol	ND	10	1		4,6-Dinitro-2-Methylphenol	ND	50	1	
Bis(2-Chloroisopropyl) Ether	ND	10	1		N-Nitrosodiphenylamine	ND	10	1	
3/4-Methylphenol	ND	10	1		4-Bromophenyl-Phenyl Ether	ND	10	1	
N-Nitroso-di-n-propylamine	ND	10	1		Hexachlorobenzene	ND	10	1	
Hexachloroethane	ND	10	1		Pentachlorophenol	26	10	1	
Nitrobenzene	ND	25	1		Phenanthrene	ND	10	1	
Isophorone	ND	10	1		Anthracene	ND	10	1	
2-Nitrophenol	ND	10	1		Di-n-Butyl Phthalate	ND	10	1	
2,4-Dimethylphenol	ND	10	1		Fluoranthene	ND	10	1	
Benzoic Acid	ND	50	1		Benzidine	ND	50	1	
Bis(2-Chloroethoxy) Methane	ND	10	1		Pyrene	ND	10	1	
2,4-Dichlorophenol	ND	10	1		Pyridine	ND	10	1	
Naphthalene	ND	10	1		Butyl Benzyl Phthalate	ND	10	1	
4-Chloroaniline	ND	10	1		3,3'-Dichlorobenzidine	ND	25	1	
Hexachloro-1,3-Butadiene	ND	10	1		Benzo (a) Anthracene	ND	10	1	
4-Chloro-3-Methylphenol	ND	10	1		Bis(2-Ethylhexyl) Phthalate	ND	10	1	
2-Methylnaphthalene	ND	10	1		Chrysene	ND	10	1	
Hexachlorocyclopentadiene	ND	25	1		Di-n-Octyl Phthalate	ND	10	1	
2,4,6-Trichlorophenol	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
2,4,5-Trichlorophenol	ND	10	1		Benzo (b) Fluoranthene	ND	10	1	
2-Chloronaphthalene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
2-Nitroaniline	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Dimethyl Phthalate	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Acenaphthylene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
3-Nitroaniline	ND	10	1		1-Methylnaphthalene	ND	10	1	
Acenaphthene	ND	10	1		1,2,4-Trichlorobenzene	ND	10	1	
2,4-Dinitrophenol	ND	50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	47	7-121		Phenol-d6	26	1-127	
Nitrobenzene-d5	89	50-146		2-Fluorobiphenyl	94	42-138	
2,4,6-Tribromophenol	94	41-137		p-Terphenyl-d14	128	47-173	

Additional Parameter	**Result**	**RL**	**DF**	**Qual**
Creosote*	ND	10	1	

*Combination of Naphthalene, Acenaphthylene, Fluorene, Phenanthrene, Anthracene ,Fluoranthene, Pyrene, 1-Methylnaphthalene, 2-Methylnaphthalene

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical		Date Received:	02/29/08
2795 2nd Street, Suite 300		Work Order No:	08-02-2227
Davis, CA 95616-6593		Preparation:	EPA 3510B
		Method:	EPA 8270C
		Units:	ug/L

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-003-2,353**	**N/A**	**Aqueous**	**GC/MS P**	**02/29/08**	**03/04/08 12:37**	**080229L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
N-Nitrosodimethylamine	ND	10	1		4-Nitrophenol	ND	10	1	
Aniline	ND	10	1		Dibenzofuran	ND	10	1	
Phenol	ND	10	1		2,4-Dinitrotoluene	ND	10	1	
Bis(2-Chloroethyl) Ether	ND	25	1		2,6-Dinitrotoluene	ND	10	1	
2-Chlorophenol	ND	10	1		Diethyl Phthalate	ND	10	1	
1,3-Dichlorobenzene	ND	10	1		4-Chlorophenyl-Phenyl Ether	ND	10	1	
1,4-Dichlorobenzene	ND	10	1		Fluorene	ND	10	1	
Benzyl Alcohol	ND	10	1		4-Nitroaniline	ND	10	1	
1,2-Dichlorobenzene	ND	10	1		Azobenzene	ND	10	1	
2-Methylphenol	ND	10	1		4,6-Dinitro-2-Methylphenol	ND	50	1	
Bis(2-Chloroisopropyl) Ether	ND	10	1		N-Nitrosodiphenylamine	ND	10	1	
3/4-Methylphenol	ND	10	1		4-Bromophenyl-Phenyl Ether	ND	10	1	
N-Nitroso-di-n-propylamine	ND	10	1		Hexachlorobenzene	ND	10	1	
Hexachloroethane	ND	10	1		Pentachlorophenol	ND	10	1	
Nitrobenzene	ND	25	1		Phenanthrene	ND	10	1	
Isophorone	ND	10	1		Anthracene	ND	10	1	
2-Nitrophenol	ND	10	1		Di-n-Butyl Phthalate	ND	10	1	
2,4-Dimethylphenol	ND	10	1		Fluoranthene	ND	10	1	
Benzoic Acid	ND	50	1		Benzidine	ND	50	1	
Bis(2-Chloroethoxy) Methane	ND	10	1		Pyrene	ND	10	1	
2,4-Dichlorophenol	ND	10	1		Pyridine	ND	10	1	
Naphthalene	ND	10	1		Butyl Benzyl Phthalate	ND	10	1	
4-Chloroaniline	ND	10	1		3,3'-Dichlorobenzidine	ND	25	1	
Hexachloro-1,3-Butadiene	ND	10	1		Benzo (a) Anthracene	ND	10	1	
4-Chloro-3-Methylphenol	ND	10	1		Bis(2-Ethylhexyl) Phthalate	ND	10	1	
2-Methylnaphthalene	ND	10	1		Chrysene	ND	10	1	
Hexachlorocyclopentadiene	ND	25	1		Di-n-Octyl Phthalate	ND	10	1	
2,4,6-Trichlorophenol	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
2,4,5-Trichlorophenol	ND	10	1		Benzo (b) Fluoranthene	ND	10	1	
2-Chloronaphthalene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
2-Nitroaniline	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Dimethyl Phthalate	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Acenaphthylene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
3-Nitroaniline	ND	10	1		1-Methylnaphthalene	ND	10	1	
Acenaphthene	ND	10	1		1,2,4-Trichlorobenzene	ND	10	1	
2,4-Dinitrophenol	ND	50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	48	7-121		Phenol-d6	28	1-127	
Nitrobenzene-d5	93	50-146		2-Fluorobiphenyl	107	42-138	
2,4,6-Tribromophenol	91	41-137		p-Terphenyl-d14	136	47-173	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/29/08
Work Order No: 08-02-2227
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-15-1	**08-02-2227-3-A**	**02/27/08 09:15**	**Solid**	**GC/MS MM**	**02/29/08**	**03/05/08 03:57**	**080229L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
N-Nitrosodimethylamine	ND	0.50	1		2,4-Dinitrophenol	ND	2.5	1	
Aniline	ND	0.50	1		4-Nitrophenol	ND	0.50	1	
Phenol	ND	0.50	1		Dibenzofuran	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1		2,4-Dinitrotoluene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1		2,6-Dinitrotoluene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1		Diethyl Phthalate	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1		4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Benzyl Alcohol	ND	0.50	1		Fluorene	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1		4-Nitroaniline	ND	0.50	1	
2-Methylphenol	ND	0.50	1		Azobenzene	ND	0.50	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1		4,6-Dinitro-2-Methylphenol	ND	2.5	1	
3/4-Methylphenol	ND	0.50	1		N-Nitrosodiphenylamine	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1		2,4,6-Trichlorophenol	ND	0.50	1	
Hexachloroethane	ND	0.50	1		4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Nitrobenzene	ND	2.5	1		Hexachlorobenzene	ND	0.50	1	
Isophorone	ND	0.50	1		Pentachlorophenol	ND	2.5	1	
2-Nitrophenol	ND	0.50	1		Phenanthrene	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1		Anthracene	ND	0.50	1	
Benzoic Acid	ND	2.5	1		Di-n-Butyl Phthalate	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1		Fluoranthene	ND	0.50	1	
2,4-Dichlorophenol	ND	0.50	1		Benzidine	ND	10	1	
1,2,4-Trichlorobenzene	ND	0.50	1		Pyrene	ND	0.50	1	
Naphthalene	ND	0.50	1		Pyridine	ND	0.50	1	
4-Chloroaniline	ND	0.50	1		Butyl Benzyl Phthalate	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1		3,3'-Dichlorobenzidine	ND	10	1	
4-Chloro-3-Methylphenol	ND	0.50	1		Benzo (a) Anthracene	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1		Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1		Chrysene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1		Di-n-Octyl Phthalate	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1		Benzo (k) Fluoranthene	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1		Benzo (b) Fluoranthene	ND	0.50	1	
2-Nitroaniline	ND	0.50	1		Benzo (a) Pyrene	ND	0.50	1	
Dimethyl Phthalate	ND	0.50	1		Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Acenaphthylene	ND	0.50	1		Dibenz (a,h) Anthracene	ND	0.50	1	
3-Nitroaniline	ND	0.50	1		Benzo (g,h,i) Perylene	ND	0.50	1	
Acenaphthene	ND	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	100	42-120		Phenol-d6	97	46-118	
Nitrobenzene-d5	89	42-150		2-Fluorobiphenyl	90	38-134	
2,4,6-Tribromophenol	90	36-132		p-Terphenyl-d14	131	35-167	

Additional Parameter	Result	RL	DF	Qual
Creosote*	ND	0.50	1	

*Combination of Naphthalene, Acenaphthylene, Fluorene, Phenanthrene, Anthracene ,Fluoranthene, Pyrene, 1-Methylnaphthalene, 2-Methylnaphthalene

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	02/29/08
2795 2nd Street, Suite 300		Work Order No:	08-02-2227
Davis, CA 95616-6593		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-16B-0	**08-02-2227-14-A**	**02/27/08 13:40**	**Solid**	**GC/MS MM**	**02/29/08**	**03/04/08 04:44**	**080229L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
N-Nitrosodimethylamine	ND	0.50	1		2,4-Dinitrophenol	ND	2.5	1	
Aniline	ND	0.50	1		4-Nitrophenol	ND	0.50	1	
Phenol	ND	0.50	1		Dibenzofuran	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1		2,4-Dinitrotoluene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1		2,6-Dinitrotoluene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1		Diethyl Phthalate	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1		4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Benzyl Alcohol	ND	0.50	1		Fluorene	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1		4-Nitroaniline	ND	0.50	1	
2-Methylphenol	ND	0.50	1		Azobenzene	ND	0.50	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1		4,6-Dinitro-2-Methylphenol	ND	2.5	1	
3/4-Methylphenol	ND	0.50	1		N-Nitrosodiphenylamine	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1		2,4,6-Trichlorophenol	ND	0.50	1	
Hexachloroethane	ND	0.50	1		4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Nitrobenzene	ND	2.5	1		Hexachlorobenzene	ND	0.50	1	
Isophorone	ND	0.50	1		Pentachlorophenol	ND	2.5	1	
2-Nitrophenol	ND	0.50	1		Phenanthrene	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1		Anthracene	ND	0.50	1	
Benzoic Acid	ND	2.5	1		Di-n-Butyl Phthalate	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1		Fluoranthene	ND	0.50	1	
2,4-Dichlorophenol	ND	0.50	1		Benzidine	ND	10	1	
1,2,4-Trichlorobenzene	ND	0.50	1		Pyrene	ND	0.50	1	
Naphthalene	ND	0.50	1		Pyridine	ND	0.50	1	
4-Chloroaniline	ND	0.50	1		Butyl Benzyl Phthalate	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1		3,3'-Dichlorobenzidine	ND	10	1	
4-Chloro-3-Methylphenol	ND	0.50	1		Benzo (a) Anthracene	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1		Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1		Chrysene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1		Di-n-Octyl Phthalate	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1		Benzo (k) Fluoranthene	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1		Benzo (b) Fluoranthene	ND	0.50	1	
2-Nitroaniline	ND	0.50	1		Benzo (a) Pyrene	ND	0.50	1	
Dimethyl Phthalate	ND	0.50	1		Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Acenaphthylene	ND	0.50	1		Dibenz (a,h) Anthracene	ND	0.50	1	
3-Nitroaniline	ND	0.50	1		Benzo (g,h,i) Perylene	ND	0.50	1	
Acenaphthene	ND	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	87	42-120		Phenol-d6	85	46-118	
Nitrobenzene-d5	85	42-150		2-Fluorobiphenyl	88	38-134	
2,4,6-Tribromophenol	83	36-132		p-Terphenyl-d14	110	35-167	

Additional Parameter	**Result**	**RL**	**DF**	**Qual**
Creosote*	ND	0.50	1	

*Combination of Naphthalene, Acenaphthylene, Fluorene, Phenanthrene, Anthracene ,Fluoranthene, Pyrene, 1-Methylnaphthalene, 2-Methylnaphthalene

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	02/29/08
2795 2nd Street, Suite 300		Work Order No:	08-02-2227
Davis, CA 95616-6593		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: Tesoro Pittsburg Terminal Phase II			Page 3 of 7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-16-6	**08-02-2227-15-A**	**02/27/08 13:50**	**Solid**	**GC/MS MM**	**03/24/08**	**03/24/08 14:35**	**080324L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
N-Nitrosodimethylamine	ND	0.50	1		2,4-Dinitrophenol	ND	2.5	1	
Aniline	ND	0.50	1		4-Nitrophenol	ND	0.50	1	
Phenol	ND	0.50	1		Dibenzofuran	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1		2,4-Dinitrotoluene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1		2,6-Dinitrotoluene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1		Diethyl Phthalate	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1		4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Benzyl Alcohol	ND	0.50	1		Fluorene	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1		4-Nitroaniline	ND	0.50	1	
2-Methylphenol	ND	0.50	1		Azobenzene	ND	0.50	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1		4,6-Dinitro-2-Methylphenol	ND	2.5	1	
3/4-Methylphenol	ND	0.50	1		N-Nitrosodiphenylamine	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1		2,4,6-Trichlorophenol	ND	0.50	1	
Hexachloroethane	ND	0.50	1		4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Nitrobenzene	ND	2.5	1		Hexachlorobenzene	ND	0.50	1	
Isophorone	ND	0.50	1		Pentachlorophenol	3.0	2.5	1	
2-Nitrophenol	ND	0.50	1		Phenanthrene	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1		Anthracene	ND	0.50	1	
Benzoic Acid	ND	2.5	1		Di-n-Butyl Phthalate	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1		Fluoranthene	ND	0.50	1	
2,4-Dichlorophenol	ND	0.50	1		Benzidine	ND	10	1	
1,2,4-Trichlorobenzene	ND	0.50	1		Pyrene	ND	0.50	1	
Naphthalene	ND	0.50	1		Pyridine	ND	0.50	1	
4-Chloroaniline	ND	0.50	1		Butyl Benzyl Phthalate	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1		3,3'-Dichlorobenzidine	ND	10	1	
4-Chloro-3-Methylphenol	ND	0.50	1		Benzo (a) Anthracene	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1		Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1		Chrysene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1		Di-n-Octyl Phthalate	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1		Benzo (k) Fluoranthene	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1		Benzo (b) Fluoranthene	ND	0.50	1	
2-Nitroaniline	ND	0.50	1		Benzo (a) Pyrene	ND	0.50	1	
Dimethyl Phthalate	ND	0.50	1		Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Acenaphthylene	ND	0.50	1		Dibenz (a,h) Anthracene	ND	0.50	1	
3-Nitroaniline	ND	0.50	1		Benzo (g,h,i) Perylene	ND	0.50	1	
Acenaphthene	ND	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	76	42-120		Phenol-d6	83	46-118	
Nitrobenzene-d5	77	42-150		2-Fluorobiphenyl	94	38-134	
2,4,6-Tribromophenol	104	36-132		p-Terphenyl-d14	116	35-167	

Additional Parameter	Result	RL	DF	Qual
Creosote*	ND	0.50	1	

*Combination of Naphthalene, Acenaphthylene, Fluorene, Phenanthrene, Anthracene ,Fluoranthene, Pyrene, 1-Methylnaphthalene, 2-Methylnaphthalene

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	02/29/08
2795 2nd Street, Suite 300		Work Order No:	08-02-2227
Davis, CA 95616-6593		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-17-1	**08-02-2227-21-A**	**02/27/08 14:50**	**Solid**	**GC/MS MM**	**02/29/08**	**03/05/08 01:41**	**080229L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
N-Nitrosodimethylamine	ND	0.50	1		2,4-Dinitrophenol	ND	2.5	1	
Aniline	ND	0.50	1		4-Nitrophenol	ND	0.50	1	
Phenol	ND	0.50	1		Dibenzofuran	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1		2,4-Dinitrotoluene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1		2,6-Dinitrotoluene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1		Diethyl Phthalate	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1		4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Benzyl Alcohol	ND	0.50	1		Fluorene	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1		4-Nitroaniline	ND	0.50	1	
2-Methylphenol	ND	0.50	1		Azobenzene	ND	0.50	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1		4,6-Dinitro-2-Methylphenol	ND	2.5	1	
3/4-Methylphenol	ND	0.50	1		N-Nitrosodiphenylamine	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1		2,4,6-Trichlorophenol	ND	0.50	1	
Hexachloroethane	ND	0.50	1		4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Nitrobenzene	ND	2.5	1		Hexachlorobenzene	ND	0.50	1	
Isophorone	ND	0.50	1		Pentachlorophenol	ND	2.5	1	
2-Nitrophenol	ND	0.50	1		Phenanthrene	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1		Anthracene	ND	0.50	1	
Benzoic Acid	ND	2.5	1		Di-n-Butyl Phthalate	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1		Fluoranthene	ND	0.50	1	
2,4-Dichlorophenol	ND	0.50	1		Benzidine	ND	10	1	
1,2,4-Trichlorobenzene	ND	0.50	1		Pyrene	ND	0.50	1	
Naphthalene	ND	0.50	1		Pyridine	ND	0.50	1	
4-Chloroaniline	ND	0.50	1		Butyl Benzyl Phthalate	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1		3,3'-Dichlorobenzidine	ND	10	1	
4-Chloro-3-Methylphenol	ND	0.50	1		Benzo (a) Anthracene	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1		Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1		Chrysene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1		Di-n-Octyl Phthalate	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1		Benzo (k) Fluoranthene	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1		Benzo (b) Fluoranthene	ND	0.50	1	
2-Nitroaniline	ND	0.50	1		Benzo (a) Pyrene	ND	0.50	1	
Dimethyl Phthalate	ND	0.50	1		Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Acenaphthylene	ND	0.50	1		Dibenz (a,h) Anthracene	ND	0.50	1	
3-Nitroaniline	ND	0.50	1		Benzo (g,h,i) Perylene	ND	0.50	1	
Acenaphthene	ND	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	102	42-120		Phenol-d6	97	46-118	
Nitrobenzene-d5	93	42-150		2-Fluorobiphenyl	106	38-134	
2,4,6-Tribromophenol	91	36-132		p-Terphenyl-d14	135	35-167	

Additional Parameter	**Result**	**RL**	**DF**	**Qual**
Creosote*	ND	0.50	1	

*Combination of Naphthalene, Acenaphthylene, Fluorene, Phenanthrene, Anthracene ,Fluoranthene, Pyrene, 1-Methylnaphthalene, 2-Methylnaphthalene

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	02/29/08
2795 2nd Street, Suite 300		Work Order No:	08-02-2227
Davis, CA 95616-6593		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-19-1	**08-02-2227-26-A**	**02/27/08 15:00**	**Solid**	**GC/MS MM**	**02/29/08**	**03/04/08 04:08**	**080229L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
N-Nitrosodimethylamine	ND	0.50	1		2,4-Dinitrophenol	ND	2.5	1	
Aniline	ND	0.50	1		4-Nitrophenol	ND	0.50	1	
Phenol	ND	0.50	1		Dibenzofuran	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1		2,4-Dinitrotoluene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1		2,6-Dinitrotoluene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1		Diethyl Phthalate	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1		4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Benzyl Alcohol	ND	0.50	1		Fluorene	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1		4-Nitroaniline	ND	0.50	1	
2-Methylphenol	ND	0.50	1		Azobenzene	ND	0.50	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1		4,6-Dinitro-2-Methylphenol	ND	2.5	1	
3/4-Methylphenol	ND	0.50	1		N-Nitrosodiphenylamine	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1		2,4,6-Trichlorophenol	ND	0.50	1	
Hexachloroethane	ND	0.50	1		4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Nitrobenzene	ND	2.5	1		Hexachlorobenzene	ND	0.50	1	
Isophorone	ND	0.50	1		Pentachlorophenol	ND	2.5	1	
2-Nitrophenol	ND	0.50	1		Phenanthrene	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1		Anthracene	ND	0.50	1	
Benzoic Acid	ND	2.5	1		Di-n-Butyl Phthalate	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1		Fluoranthene	ND	0.50	1	
2,4-Dichlorophenol	ND	0.50	1		Benzidine	ND	10	1	
1,2,4-Trichlorobenzene	ND	0.50	1		Pyrene	ND	0.50	1	
Naphthalene	ND	0.50	1		Pyridine	ND	0.50	1	
4-Chloroaniline	ND	0.50	1		Butyl Benzyl Phthalate	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1		3,3'-Dichlorobenzidine	ND	10	1	
4-Chloro-3-Methylphenol	ND	0.50	1		Benzo (a) Anthracene	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1		Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1		Chrysene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1		Di-n-Octyl Phthalate	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1		Benzo (k) Fluoranthene	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1		Benzo (b) Fluoranthene	ND	0.50	1	
2-Nitroaniline	ND	0.50	1		Benzo (a) Pyrene	ND	0.50	1	
Dimethyl Phthalate	ND	0.50	1		Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Acenaphthylene	ND	0.50	1		Dibenz (a,h) Anthracene	ND	0.50	1	
3-Nitroaniline	ND	0.50	1		Benzo (g,h,i) Perylene	ND	0.50	1	
Acenaphthene	ND	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	88	42-120		Phenol-d6	85	46-118	
Nitrobenzene-d5	81	42-150		2-Fluorobiphenyl	82	38-134	
2,4,6-Tribromophenol	85	36-132		p-Terphenyl-d14	123	35-167	

Additional Parameter	**Result**	**RL**	**DF**	**Qual**
Creosote*	ND	0.50	1	

*Combination of Naphthalene, Acenaphthylene, Fluorene, Phenanthrene, Anthracene ,Fluoranthene, Pyrene, 1-Methylnaphthalene, 2-Methylnaphthalene

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	02/29/08
2795 2nd Street, Suite 300		Work Order No:	08-02-2227
Davis, CA 95616-6593		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-549-300**	**N/A**	**Solid**	**GC/MS MM**	**02/29/08**	**02/29/08 12:07**	**080229L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
N-Nitrosodimethylamine	ND	0.50	1		2,4-Dinitrophenol	ND	2.5	1	
Aniline	ND	0.50	1		4-Nitrophenol	ND	0.50	1	
Phenol	ND	0.50	1		Dibenzofuran	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1		2,4-Dinitrotoluene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1		2,6-Dinitrotoluene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1		Diethyl Phthalate	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1		4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Benzyl Alcohol	ND	0.50	1		Fluorene	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1		4-Nitroaniline	ND	0.50	1	
2-Methylphenol	ND	0.50	1		Azobenzene	ND	0.50	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1		4,6-Dinitro-2-Methylphenol	ND	2.5	1	
3/4-Methylphenol	ND	0.50	1		N-Nitrosodiphenylamine	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1		2,4,6-Trichlorophenol	ND	0.50	1	
Hexachloroethane	ND	0.50	1		4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Nitrobenzene	ND	2.5	1		Hexachlorobenzene	ND	0.50	1	
Isophorone	ND	0.50	1		Pentachlorophenol	ND	2.5	1	
2-Nitrophenol	ND	0.50	1		Phenanthrene	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1		Anthracene	ND	0.50	1	
Benzoic Acid	ND	2.5	1		Di-n-Butyl Phthalate	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1		Fluoranthene	ND	0.50	1	
2,4-Dichlorophenol	ND	0.50	1		Benzidine	ND	10	1	
1,2,4-Trichlorobenzene	ND	0.50	1		Pyrene	ND	0.50	1	
Naphthalene	ND	0.50	1		Pyridine	ND	0.50	1	
4-Chloroaniline	ND	0.50	1		Butyl Benzyl Phthalate	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1		3,3'-Dichlorobenzidine	ND	10	1	
4-Chloro-3-Methylphenol	ND	0.50	1		Benzo (a) Anthracene	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1		Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1		Chrysene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1		Di-n-Octyl Phthalate	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1		Benzo (k) Fluoranthene	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1		Benzo (b) Fluoranthene	ND	0.50	1	
2-Nitroaniline	ND	0.50	1		Benzo (a) Pyrene	ND	0.50	1	
Dimethyl Phthalate	ND	0.50	1		Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Acenaphthylene	ND	0.50	1		Dibenz (a,h) Anthracene	ND	0.50	1	
3-Nitroaniline	ND	0.50	1		Benzo (g,h,i) Perylene	ND	0.50	1	
Acenaphthene	ND	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	117	42-120		Phenol-d6	95	46-118	
Nitrobenzene-d5	93	42-150		2-Fluorobiphenyl	117	38-134	
2,4,6-Tribromophenol	97	36-132		p-Terphenyl-d14	140	35-167	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	02/29/08
2795 2nd Street, Suite 300		Work Order No:	08-02-2227
Davis, CA 95616-6593		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-549-320**	**N/A**	**Solid**	**GC/MS MM**	**03/24/08**	**03/24/08 11:42**	**080324L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
N-Nitrosodimethylamine	ND	0.50	1		2,4-Dinitrophenol	ND	2.5	1	
Aniline	ND	0.50	1		4-Nitrophenol	ND	0.50	1	
Phenol	ND	0.50	1		Dibenzofuran	ND	0.50	1	
Bis(2-Chloroethyl) Ether	ND	2.5	1		2,4-Dinitrotoluene	ND	0.50	1	
2-Chlorophenol	ND	0.50	1		2,6-Dinitrotoluene	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1		Diethyl Phthalate	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1		4-Chlorophenyl-Phenyl Ether	ND	0.50	1	
Benzyl Alcohol	ND	0.50	1		Fluorene	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1		4-Nitroaniline	ND	0.50	1	
2-Methylphenol	ND	0.50	1		Azobenzene	ND	0.50	1	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1		4,6-Dinitro-2-Methylphenol	ND	2.5	1	
3/4-Methylphenol	ND	0.50	1		N-Nitrosodiphenylamine	ND	0.50	1	
N-Nitroso-di-n-propylamine	ND	0.50	1		2,4,6-Trichlorophenol	ND	0.50	1	
Hexachloroethane	ND	0.50	1		4-Bromophenyl-Phenyl Ether	ND	0.50	1	
Nitrobenzene	ND	2.5	1		Hexachlorobenzene	ND	0.50	1	
Isophorone	ND	0.50	1		Pentachlorophenol	ND	2.5	1	
2-Nitrophenol	ND	0.50	1		Phenanthrene	ND	0.50	1	
2,4-Dimethylphenol	ND	0.50	1		Anthracene	ND	0.50	1	
Benzoic Acid	ND	2.5	1		Di-n-Butyl Phthalate	ND	0.50	1	
Bis(2-Chloroethoxy) Methane	ND	0.50	1		Fluoranthene	ND	0.50	1	
2,4-Dichlorophenol	ND	0.50	1		Benzidine	ND	10	1	
1,2,4-Trichlorobenzene	ND	0.50	1		Pyrene	ND	0.50	1	
Naphthalene	ND	0.50	1		Pyridine	ND	0.50	1	
4-Chloroaniline	ND	0.50	1		Butyl Benzyl Phthalate	ND	0.50	1	
Hexachloro-1,3-Butadiene	ND	0.50	1		3,3'-Dichlorobenzidine	ND	10	1	
4-Chloro-3-Methylphenol	ND	0.50	1		Benzo (a) Anthracene	ND	0.50	1	
2-Methylnaphthalene	ND	0.50	1		Bis(2-Ethylhexyl) Phthalate	ND	0.50	1	
1-Methylnaphthalene	ND	0.50	1		Chrysene	ND	0.50	1	
Hexachlorocyclopentadiene	ND	2.5	1		Di-n-Octyl Phthalate	ND	0.50	1	
2,4,5-Trichlorophenol	ND	0.50	1		Benzo (k) Fluoranthene	ND	0.50	1	
2-Chloronaphthalene	ND	0.50	1		Benzo (b) Fluoranthene	ND	0.50	1	
2-Nitroaniline	ND	0.50	1		Benzo (a) Pyrene	ND	0.50	1	
Dimethyl Phthalate	ND	0.50	1		Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Acenaphthylene	ND	0.50	1		Dibenz (a,h) Anthracene	ND	0.50	1	
3-Nitroaniline	ND	0.50	1		Benzo (g,h,i) Perylene	ND	0.50	1	
Acenaphthene	ND	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	82	42-120		Phenol-d6	90	46-118	
Nitrobenzene-d5	82	42-150		2-Fluorobiphenyl	101	38-134	
2,4,6-Tribromophenol	103	36-132		p-Terphenyl-d14	105	35-167	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/29/08
Work Order No: 08-02-2227
Preparation: EPA 3545
Method: EPA 8270C

Project Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-02-2194-1	**Solid**	**GC/MS MM**	**02/29/08**	**02/29/08**	**080229S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Phenol	109	111	57-123	2	0-16	
2-Chlorophenol	107	111	57-111	3	0-17	
1,4-Dichlorobenzene	106	108	49-127	2	0-20	
N-Nitroso-di-n-propylamine	86	88	54-144	2	0-17	
1,2,4-Trichlorobenzene	118	121	42-132	3	0-20	
4-Chloro-3-Methylphenol	111	115	50-128	3	0-17	
Acenaphthene	129	145	49-133	11	0-18	3
4-Nitrophenol	93	103	30-144	11	0-21	
2,4-Dinitrotoluene	83	81	50-128	2	0-18	
Pentachlorophenol	66	68	29-113	4	0-22	
Pyrene	229	291	47-149	24	0-20	3,4

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/29/08
Work Order No: 08-02-2227
Preparation: EPA 3545
Method: EPA 8270C

Project Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
GP-16-6	**Solid**	**GC/MS MM**	**03/24/08**	**03/24/08**	**080324S04**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Phenol	88	88	57-123	0	0-16	
2-Chlorophenol	90	91	57-111	1	0-17	
1,4-Dichlorobenzene	94	93	49-127	2	0-20	
N-Nitroso-di-n-propylamine	80	82	54-144	2	0-17	
1,2,4-Trichlorobenzene	98	99	42-132	1	0-20	
4-Chloro-3-Methylphenol	97	97	50-128	0	0-17	
Acenaphthene	94	93	49-133	0	0-18	
4-Nitrophenol	87	87	30-144	1	0-21	
2,4-Dinitrotoluene	72	72	50-128	0	0-18	
Pentachlorophenol	138	136	29-113	1	0-22	3
Pyrene	97	96	47-149	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-02-2227
Preparation: EPA 3510B
Method: EPA 8270C

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-003-2,353	**Aqueous**	**GC/MS P**	**02/29/08**	**03/04/08**	**080229L04**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Phenol	25	25	4-142	2	0-24	
2-Chlorophenol	79	80	53-113	1	0-17	
1,4-Dichlorobenzene	92	92	50-122	0	0-19	
N-Nitroso-di-n-propylamine	86	87	56-146	1	0-22	
4-Chloro-3-Methylphenol	87	86	55-121	1	0-18	
Acenaphthene	97	102	55-139	5	0-17	
4-Nitrophenol	22	22	1-145	2	0-29	
2,4-Dinitrotoluene	84	86	41-161	3	0-22	
Pentachlorophenol	56	57	34-130	2	0-23	
Pyrene	125	122	38-170	2	0-27	
1,2,4-Trichlorobenzene	97	97	49-121	0	0-19	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-02-2227
Preparation: EPA 3545
Method: EPA 8270C

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-549-300	**Solid**	**GC/MS MM**	**02/29/08**	**02/29/08**	**080229L02**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Phenol	83	85	59-125	3	0-15	
2-Chlorophenol	86	87	60-114	1	0-15	
1,4-Dichlorobenzene	88	88	61-121	0	0-21	
N-Nitroso-di-n-propylamine	71	72	64-136	2	0-15	
1,2,4-Trichlorobenzene	89	91	58-118	3	0-18	
4-Chloro-3-Methylphenol	81	82	61-121	2	0-14	
Acenaphthene	102	103	59-125	2	0-15	
4-Nitrophenol	76	77	38-152	2	0-31	
2,4-Dinitrotoluene	74	73	51-141	1	0-16	
Pentachlorophenol	59	61	38-116	4	0-20	
Pyrene	105	105	51-141	1	0-14	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-02-2227
Preparation: EPA 3545
Method: EPA 8270C

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-549-320	**Solid**	**GC/MS MM**	**03/24/08**	**03/24/08**	**080324L04**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Phenol	92	93	59-125	1	0-15	
2-Chlorophenol	92	93	60-114	2	0-15	
1,4-Dichlorobenzene	96	96	61-121	0	0-21	
N-Nitroso-di-n-propylamine	67	67	64-136	0	0-15	
1,2,4-Trichlorobenzene	91	91	58-118	1	0-18	
4-Chloro-3-Methylphenol	94	94	61-121	0	0-14	
Acenaphthene	87	86	59-125	1	0-15	
4-Nitrophenol	75	77	38-152	3	0-31	
2,4-Dinitrotoluene	64	66	51-141	2	0-16	
Pentachlorophenol	82	84	38-116	3	0-20	
Pyrene	85	82	51-141	4	0-14	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 08-02-2227

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

KIFF Analytical LLC

2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove. CA 92841
714-895-5494

Lab No. 2227

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

Phone No.: 530-297-4800 FAX No.: 530-297-4808

Project Number: 77OT.43877.00 P.O. No.: 61290

EDF Deliverable to (Email Address):

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Analysis Request

Date due: March 5, 2008

For Lab Use Only

Sample Designation	Sampling Date	Sampling Time	Container: Glass	Poly	Sleeve	Amber	Tedlar	Preservative: HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	Matrix: WATER	SOIL	Air	PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD	PAH's, PCP (EPA 8270)					Date due:	For Lab Use Only
GP-8-10	02/27/08	740	1									X		X				X							
GP-8-15	02/27/08	750	1									X		X				X							
GP-15-1	02/27/08	915	1									X		X			X		X					X	
GP-15-6	02/27/08	925	1									X		X				X							
GP-15WS	02/27/08	1015				2				2		X	X						X					X	
GP-15-10	02/27/08	930	1									X		X				X							
GP-15-15	02/27/08	940	1									X		X				X							
GP-15-20	02/27/08	1040	1									X		X				X							
GP-15-25	02/27/08	1045	1									X		X				X							
GP-15-30	02/27/08	1100	1									X		X				X							

	Date	Time		
Relinquished by:	022808	1900	Received by:	
Relinquished by:			Received by:	
Relinquished by: B10201321350	2-29-08	0800	Received by Laboratory:	

Remarks: *As, Ni, Ba, V, Cu, Zn.
DUE DATE IS FIRM!

Bill to: Accounts Payable

B10201321341

KIFF Analytical LLC

2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. 2227 2227

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Recommended but not mandatory to complete this section:

Company/Address: Kiff Analytical

Sampling Company Log Code:

Global ID:

Phone No.: 530-297-4800 | FAX No.: 530-297-4808

Project Number: 77OT.43877.00 | P.O. No.: 61290

EDF Deliverable to (Email Address):

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling Date	Sampling Time	Container: Glass	Poly	Sleeve	Amber	Tedlar	Preservative: HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	Matrix: WATER	SOIL	Air	Analysis Request: PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD	PAH's, PCP (EPA 8270)					Date due: March 5, 2008	For Lab Use Only
Grab-1	02/27/08	915				2				2			X						X					X	
GP-15-35	02/27/08	1125	1									1		X				X							
GP-15WD	02/27/08	1130				2				2			X						X					X	
GP-16B-0	02/27/08	1340	1									1		X			X		X					X	
GP-16-6	02/27/08	1350	1									1		X				X							
GP-16-7	02/27/08	1355	1									1		X				X							
GP-16-10	02/27/08	1400	1									1		X				X							
GP-16-15	02/27/08	1415	1									1		X				X							
GP-16-20	02/27/08	1420	1									1		X				X							
GP-16WS	02/27/08	1440				2				2			X						X					X	

	Date	Time	
Relinquished by:	022808	1900	Received by:
Relinquished by:			Received by:
Relinquished by: COBU020132135O	2-29-08	0800	Received by Laboratory:

Remarks: *As, Ni, Ba, V, Cu, Zn.
DUE DATE IS FIRM!

Bill to: Accounts Payable

KIFF Analytical LLC

2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. 2227

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_ No

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

Phone No.: 530-297-4800 | FAX No.: 530-297-4808

EDF Deliverable to (Email Address):

Project Number: 77OT.43877.00 | P.O. No.: 61290

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Analysis Request

Date due: March 5, 2008

For Lab Use Only

Sample Designation	Sampling: Date	Sampling: Time	Container: Glass	Container: Poly	Container: Sleeve	Container: Amber	Container: Tedlar	Preservative: HNO_3	Preservative: H_2SO_4	Preservative: $Na_2S_2O_3$	Preservative: $ZnAc_2$ & NaOH	Preservative: None	Matrix: WATER	Matrix: SOIL	Matrix: Air	PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD	PAH's, PCP (EPA 8270)					Date due: March 5, 2008	For Lab Use Only
GP-17-1	02/27/08	1450	1									X		X			X		X					X	
GP-17-6	02/27/08	1530	1											X				X							
GP-17-10	02/27/08	1535	1											X				X							
GP-17-15	02/27/08	1540	1											X				X							
GP-17WS	02/27/08	1555				2				2			X						X					X	
GP-19-1	02/27/08	1500	1											X			X		X					X	
GP-8WS	02/27/08	810				2				2			X			X								X	

Relinquished by:	Date	Time	Received by:
	022808	1900	
Relinquished by:	Date	Time	Received by:
Relinquished by: 08/31020132135O	Date	Time	Received by Laboratory:

Remarks: *As, Ni, Ba, V, Cu, Zn .
DUE DATE IS FIRM!

Bill to: Accounts Payable

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 08 - 02 - 2227

Cooler 1 of 1

SAMPLE RECEIPT FORM

CLIENT: KIFF ANALYTICAL DATE: 2-29-08

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.

_____ °C Temperature blank.

LABORATORY (Other than Calscience Courier):

2.7 °C Temperature blank.
_____ °C IR thermometer.
_____ Ambient temperature.

Initial: WB

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: ✓ No (Not Intact) : _____ Not Present: _____

Initial: WB

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sampler's name indicated on COC		✓	
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers and volume for analyses requested	✓		
Proper preservation noted on sample label(s)	✓		
VOA vial(s) free of headspace.			✓
Tedlar bag(s) free of condensation			✓

Initial: WB

COMMENTS:

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 08 - 02 - 2227

Cooler 2 of 2

SAMPLE RECEIPT FORM

CLIENT: KFF ANALYTICAL **DATE:** 2-29-08

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.
_____ °C Temperature blank.

LABORATORY (Other than Calscience Courier):

2.8 °C Temperature blank.
_____ °C IR thermometer.
_____ Ambient temperature.

Initial: WB

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: ✓ No (Not Intact) : _____ Not Present: _____

Initial: WB

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sampler's name indicated on COC		✓	
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers and volume for analyses requested	✓		
Proper preservation noted on sample label(s)	✓		
VOA vial(s) free of headspace.			✓
Tedlar bag(s) free of condensation			✓

Initial: WB

COMMENTS:

KIFF Analytical LLC
2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. _____ Page 1 of 3

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

Phone No.: 530-297-4800 FAX No.: 530-297-4808

EDF Deliverable to (Email Address):

Project Number: 77OT.43877.00 P.O. No.: 61290

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling Date	Sampling Time	Container: Glass	Poly	Sleeve	Amber	Tedlar	Preservative: HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	Matrix: WATER	SOIL	Air	Analysis Request: PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD	PAH's, PCP (EPA 8270)	As, V (EPA 6020)		Date due: March 5, 2008	Date due: March 17, 2008	Date due: March 21, 2008	For Lab Use Only
GP-8-10	02/27/08	740	1									X		X				X							
GP-8-15	02/27/08	750	1									X		X				X							
GP-15-1	02/27/08	915	1									X		X			X		X			X			
GP-15-6	02/27/08	925	1									X		X						X			X		
GP-15WS	02/27/08	1015				2				2		X	X						X			X			
GP-15-10	02/27/08	930	1									X		X				X							
GP-15-15	02/27/08	940	1									X		X				X							
GP-15-20	02/27/08	1040	1									X		X				X							
GP-15-25	02/27/08	1045	1									X		X				X							
GP-15-30	02/27/08	1100	1									X		X				X							

Relinquished by: Troy A. Turpen	Date 3/14/08	Time 16:10	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:

Remarks: This is a revised COC for Work Order No. 08-02-2227, now with samples -4, -15 and -22 off hold for additional analyses as marked. Please provide an XLS of the results as well as a PDF. *As, Ni, Ba, V, Cu, Zn

Bill to: Accounts Payable

KIFF Analytical LLC
2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. _____ Page 2 of 3

Chain-of-Custody Record and Analysis Request

EDF Report? __Yes _X_No

Project Contact (Hardcopy or PDF to): Troy Turpen

Company/Address: Kiff Analytical

Phone No.: 530-297-4800 FAX No.: 530-297-4808

Project Number: 77OT.43877.00 P.O. No.: 61290

Project Name: Tesoro Pittsburg Terminal Phase II

Project Address:

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

EDF Deliverable to (Email Address):

E-mail address: inbox@kiffanalytical.com

Sample Designation	Sampling		Container					Preservative					Matrix			Analysis Request						Date due: March 5, 2008	Date due: March 17, 2008	Date due: March 21, 2008	For Lab Use Only
	Date	Time	Glass	Poly	Sleeve	Amber	Tedlar	HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	WATER	SOIL	Air	PAH's (EPA 8310)	METALS (EPA 6020)*	HOLD	PAH's, PCP (EPA 8270)	As, V (EPA 6020)						
Grab-1	02/27/08	915				2				2			X						X			X				
GP-15-35	02/27/08	1125	1									1		X				X								
GP-15WD	02/27/08	1130				2				2			X						X			X				
GP-16B-0	02/27/08	1340	1									1		X			X		X			X				
GP-16-6	02/27/08	1350	1									1		X			X		X					X		
GP-16-7	02/27/08	1355	1									1		X				X								
GP-16-10	02/27/08	1400	1									1		X				X								
GP-16-15	02/27/08	1415	1									1		X				X								
GP-16-20	02/27/08	1420	1									1		X				X								
GP-16WS	02/27/08	1440				2				2			X						X			X				

Relinquished by: Troy A. Turpen	Date 3/14/08	Time 16:10	Received by:	Remarks: This is a revised COC for Work Order No. 08-02-2227, now with samples -4, -15 and -22 off hold for additional analyses as marked. Please provide an XLS of the results as well as a PDF. *As, Ni, Ba, V, Cu, Zn
Relinquished by:	Date	Time	Received by:	
Relinquished by:	Date	Time	Received by Laboratory:	Bill to: Accounts Payable

KIFF Analytical LLC
2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
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Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. _____ Page 3 of 3

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen
Company/Address: Kiff Analytical
Phone No.: 530-297-4800 FAX No.: 530-297-4808
Project Number: 77OT.43877.00 P.O. No.: 61290
Project Name: Tesoro Pittsburg Terminal Phase II
Project Address:

EDF Report? __Yes _X_No

Recommended but not mandatory to complete this section:
Sampling Company Log Code:
Global ID:
EDF Deliverable to (Email Address):
E-mail address: inbox@kiffanalytical.com

Sample Designation	Sampling: Date	Sampling: Time	Container: Glass	Container: Poly	Container: Sleeve	Container: Amber	Container: Tedlar	Preservative: HNO_3	Preservative: H_2SO_4	Preservative: $Na_2S_2O_3$	Preservative: $ZnAc_2$ & NaOH	Preservative: None	Matrix: WATER	Matrix: SOIL	Matrix: Air	Analysis Request: PAH's (EPA 8310)	Analysis Request: METALS (EPA 6020)*	Analysis Request: HOLD	Analysis Request: PAH's, PCP (EPA 8270)	Analysis Request: As, V (EPA 6020)		Date due: March 5, 2008	Date due: March 17, 2008	Date due: March 21, 2008	For Lab Use Only
GP-17-1	02/27/08	1450	1									X		X			X		X			X			
GP-17-6	02/27/08	1530	1											X						X			X		
GP-17-10	02/27/08	1535	1											X				X							
GP-17-15	02/27/08	1540	1											X				X							
GP-17WS	02/27/08	1555				2				2			X						X			X			
GP-19-1	02/27/08	1500	1											X			X		X			X			
GP-8WS	02/27/08	810				2				2			X			X						X			

Relinquished by: Troy A. Turpen	Date 3/14/08	Time 16:10	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:

Remarks: This is a revised COC for Work Order No. 08-02-2227, now with samples -4, -15 and -22 off hold for additional analyses as marked. Please provide an XLS of the results as well as a PDF. *As, Ni, Ba, V, Cu, Zn

Bill to: Accounts Payable

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

March 19, 2008

CLS Work Order #: CRB0960
COC #: 61290

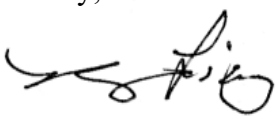
Troy Turpen
KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project Name: Tesoro Pittsburg Terminal Phase II

Enclosed are the results of analyses for samples received by the laboratory on 02/28/08 08:25. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,



James Liang, Ph.D.
Laboratory Director

CA DOHS ELAP Accreditation/Registration number 1233

CALIFORNIA LABORATORY SERVICES

KIFF Analytical	Project: Tesoro Pittsburg Terminal Phase II	
2795 Second St. Suite 300	Project Number: 77OT.43877.00	**CLS Work Order #: CRB0960**
Davis, CA 95616	Project Manager: Troy Turpen	COC #: 61290

CRB0960

KIFF Analytical LLC

2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

California Lab Services
3249 Fitzgerald Rd.
Rancho Cordova, CA 95742
tel: (916) 638-7301 COC# 61290 Page 1 of 1

Chain-of-Custody Record and Analysis Request

EDF Report? __ Yes X No

Recommended but not mandatory to complete this section:

Project Contact (Hardcopy or PDF to): Troy Turpen
Company/Address: Kiff Analytical, LLC
Phone No.: FAX No.:
Project Number: 77OT.43877.00 P.O. No. 61290
Project Name: Tesoro Pittsburg Terminal Phase II
Project Address:
Sampling Company Log Code:
Global ID:
EDF Deliverable to (Email Address):
E-mail address: inbox@kiffanalytical.com

Sample Designation	Sampling Date	Sampling Time	Container: VOA	Poly	Sleeve	Amber	Glass Jar	Preservative: HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	NONE	Matrix: WATER	SOIL	Air	Dissolved Metals (EPA 6020) * **	Hold *	Dissolved Metals (EPA 6020)***	Date due: March 5, 2008	For Lab Use Only
GP-15WS	02/27/08	1015		1								X	X			X			X	
Grab-1	02/27/08	915		1								X	X			X			X	
GP-15WD	02/27/08	1130		1								X	X				X		X	
GP-16WS	02/27/08	1440		1								X	X					X	X	
GP-17WS	02/27/08	1555		1								X	X			X			X	
GP-8WS	02/27/08	810		1								X	X			X			X	

Relinquished by: Kiff Analytical	Date 022808	Time 0825	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date 2/28/8	Time 0825	Received by Laboratory:

Remarks: *Please lab filter & preserve all samples
Metals include As, Ni, Ba, V, Cu, Zn.*Metals include As,Ni,Ba,V,Cu,Zn,Pb.

Bill to: Accounts Payable

CALIFORNIA LABORATORY SERVICES

KIFF Analytical	Project: Tesoro Pittsburg Terminal Phase II	
2795 Second St. Suite 300	Project Number: 77OT.43877.00	**CLS Work Order #: CRB0960**
Davis, CA 95616	Project Manager: Troy Turpen	COC #: 61290

CHANGE OF STATUS

Revision

C.L.S. Lab Job No.: CRB0960

Project Name: Tesoro Pittsburg Terminal Phase II

Date Sample(s) Were Received: 2/28/08 **Original Date Due:** 3/5/08

Troy Turpin (Client Contacted) **of** Kiff (Company) **called**

on 3/4/08 (Date) **at** 8:00 (Time)

. . . and requested the following

Sample #: GP-15WD (CRB0960-3)
to be taken off hold and analyzed
for As, Ni, Ba, V, Cu, Zn, Pb

Turnaround time requested for additional work: 1 day

Scott Peters (Signature) 3/6/08 (Date)

Updated lab job database and file folder by: _____

cc: _____

H:\Alyssam\samprecchangeofstat.DOC

KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project: Tesoro Pittsburg Terminal Phase II
Project Number: 77OT.43877.00 **CLS Work Order #: CRB0960**
Project Manager: Troy Turpen COC #: 61290

Metals by EPA 6000/7000 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
GP-15WS (CRB0960-01) Water Sampled: 02/27/08 10:15 Received: 02/28/08 08:25									
Arsenic	ND	5.0	µg/L	1	CR01720	02/29/08	02/29/08	EPA 6020/7000	
Barium	**25**	10	"	"	"	"	"	"	
Copper	**4.8**	2.0	"	"	"	"	"	"	
Nickel	**2.0**	2.0	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	
Grab-1 (CRB0960-02) Water Sampled: 02/27/08 09:15 Received: 02/28/08 08:25									
Arsenic	**200**	5.0	µg/L	1	CR01720	02/29/08	02/29/08	EPA 6020/7000	
Barium	**10**	10	"	"	"	"	"	"	
Copper	**230**	2.0	"	"	"	"	"	"	
Nickel	ND	2.0	"	"	"	"	"	"	
Vanadium	**26**	20	"	"	"	"	"	"	
Zinc	**90**	20	"	"	"	"	"	"	
GP-15WD (CRB0960-03) Water Sampled: 02/27/08 11:30 Received: 02/28/08 08:25									
Arsenic	ND	5.0	µg/L	1	CR01898	03/06/08	03/06/08	EPA 6020/7000	
Barium	**40**	10	"	"	"	"	"	"	
Copper	**3.8**	2.0	"	"	"	"	"	"	
Nickel	**5.4**	2.0	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	
GP-16WS (CRB0960-04) Water Sampled: 02/27/08 14:40 Received: 02/28/08 08:25									
Arsenic	**8.0**	5.0	µg/L	1	CR01720	02/29/08	02/29/08	EPA 6020/7000	
Barium	**37**	10	"	"	"	"	"	"	
Copper	**160**	2.0	"	"	"	"	"	"	
Nickel	**22**	2.0	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	

KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project: Tesoro Pittsburg Terminal Phase II
Project Number: 77OT.43877.00
Project Manager: Troy Turpen

CLS Work Order #: CRB0960
COC #: 61290

Metals by EPA 6000/7000 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
GP-17WS (CRB0960-05) Water Sampled: 02/27/08 15:55 Received: 02/28/08 08:25									
Arsenic	ND	5.0	µg/L	1	CR01720	02/29/08	02/29/08	EPA 6020/7000	
Barium	**23**	10	"	"	"	"	"	"	
Copper	**17**	2.0	"	"	"	"	"	"	
Nickel	**12**	2.0	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	
GP-8WS (CRB0960-06) Water Sampled: 02/27/08 08:10 Received: 02/28/08 08:25									
Arsenic	ND	5.0	µg/L	1	CR01720	02/29/08	02/29/08	EPA 6020/7000	
Barium	**39**	10	"	"	"	"	"	"	
Copper	**18**	2.0	"	"	"	"	"	"	
Nickel	**14**	2.0	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	

KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project: Tesoro Pittsburg Terminal Phase II
Project Number: 77OT.43877.00
Project Manager: Troy Turpen

CLS Work Order #: CRB0960
COC #: 61290

Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CR01720 - EPA 3020A										
Blank (CR01720-BLK1)				Prepared & Analyzed: 02/29/08						
Arsenic	ND	5.0	µg/L							
Barium	ND	10	"							
Copper	ND	2.0	"							
Nickel	ND	2.0	"							
Vanadium	ND	20	"							
Zinc	ND	20	"							
LCS (CR01720-BS1)				Prepared & Analyzed: 02/29/08						
Arsenic	103	5.0	µg/L	100		103	80-120			
Barium	103	10	"	100		103	80-120			
Copper	105	2.0	"	100		105	80-120			
Nickel	102	2.0	"	100		102	80-120			
Vanadium	108	20	"	100		108	80-120			
Zinc	101	20	"	100		101	80-120			
LCS Dup (CR01720-BSD1)				Prepared & Analyzed: 02/29/08						
Arsenic	105	5.0	µg/L	100		105	80-120	1.97	20	
Barium	104	10	"	100		104	80-120	1.22	20	
Copper	105	2.0	"	100		105	80-120	0.696	20	
Nickel	102	2.0	"	100		102	80-120	0.0294	20	
Vanadium	110	20	"	100		110	80-120	2.03	20	
Zinc	103	20	"	100		103	80-120	2.21	20	
Matrix Spike (CR01720-MS1)	**Source: CRB0970-06**			Prepared & Analyzed: 02/29/08						
Arsenic	108	5.0	µg/L	100	4.96	103	75-125			
Barium	162	10	"	100	58.6	103	75-125			
Copper	102	2.0	"	100	4.36	97.8	75-125			
Nickel	114	2.0	"	100	18.4	95.9	75-125			
Vanadium	113	20	"	100	6.00	107	75-125			
Zinc	105	20	"	100	11.7	93.6	75-125			

KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project: Tesoro Pittsburg Terminal Phase II
Project Number: 77OT.43877.00
Project Manager: Troy Turpen

CLS Work Order #: CRB0960
COC #: 61290

Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CR01720 - EPA 3020A										
Matrix Spike Dup (CR01720-MSD1)		**Source: CRB0970-06**		Prepared & Analyzed: 02/29/08						
Arsenic	108	5.0	µg/L	100	4.96	103	75-125	0.380	25	
Barium	163	10	"	100	58.6	105	75-125	1.09	25	
Copper	103	2.0	"	100	4.36	98.7	75-125	0.877	25	
Nickel	116	2.0	"	100	18.4	97.8	75-125	1.70	25	
Vanadium	113	20	"	100	6.00	107	75-125	0.169	25	
Zinc	106	20	"	100	11.7	94.6	75-125	0.945	25	
Batch CR01898 - EPA 3020A										
Blank (CR01898-BLK1)				Prepared & Analyzed: 03/06/08						
Arsenic	ND	5.0	µg/L							
Barium	ND	10	"							
Copper	ND	2.0	"							
Lead	ND	5.0	"							
Nickel	ND	2.0	"							
Selenium	ND	5.0	"							
Vanadium	ND	20	"							
Zinc	ND	20	"							
LCS (CR01898-BS1)				Prepared & Analyzed: 03/06/08						
Arsenic	102	5.0	µg/L	100		102	80-120			
Barium	104	10	"	100		104	80-120			
Copper	106	2.0	"	100		106	80-120			
Lead	106	5.0	"	100		106	80-120			
Nickel	104	2.0	"	100		104	80-120			
Selenium	98.1	5.0	"	100		98.1	80-120			
Vanadium	110	20	"	100		110	80-120			
Zinc	103	20	"	100		103	80-120			

KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project: Tesoro Pittsburg Terminal Phase II
Project Number: 77OT.43877.00
Project Manager: Troy Turpen

CLS Work Order #: CRB0960
COC #: 61290

Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CR01898 - EPA 3020A										
LCS Dup (CR01898-BSD1)				Prepared & Analyzed: 03/06/08						
Arsenic	105	5.0	µg/L	100		105	80-120	3.07	20	
Barium	106	10	"	100		106	80-120	1.99	20	
Copper	106	2.0	"	100		106	80-120	0.254	20	
Lead	106	5.0	"	100		106	80-120	0.0755	20	
Nickel	104	2.0	"	100		104	80-120	0.769	20	
Selenium	103	5.0	"	100		103	80-120	4.75	20	
Vanadium	111	20	"	100		111	80-120	0.616	20	
Zinc	104	20	"	100		104	80-120	0.222	20	
Matrix Spike (CR01898-MS1)		**Source: CRC0175-02**		Prepared & Analyzed: 03/06/08						
Arsenic	112	5.0	µg/L	100	6.31	106	75-125			
Barium	135	10	"	100	27.6	108	75-125			
Copper	101	2.0	"	100	1.58	99.6	75-125			
Lead	109	5.0	"	100	ND	109	75-125			
Nickel	104	2.0	"	100	5.03	99.5	75-125			
Selenium	106	5.0	"	100	2.08	104	75-125			
Vanadium	123	20	"	100	14.1	109	75-125			
Zinc	102	20	"	100	3.67	98.3	75-125			
Matrix Spike Dup (CR01898-MSD1)		**Source: CRC0175-02**		Prepared & Analyzed: 03/06/08						
Arsenic	107	5.0	µg/L	100	6.31	101	75-125	4.72	25	
Barium	130	10	"	100	27.6	102	75-125	4.22	25	
Copper	98.1	2.0	"	100	1.58	96.5	75-125	3.04	25	
Lead	106	5.0	"	100	ND	106	75-125	3.29	25	
Nickel	102	2.0	"	100	5.03	96.9	75-125	2.44	25	
Selenium	101	5.0	"	100	2.08	98.9	75-125	4.58	25	
Vanadium	120	20	"	100	14.1	106	75-125	2.47	25	
Zinc	98.6	20	"	100	3.67	94.9	75-125	3.37	25	

KIFF Analytical	Project: Tesoro Pittsburg Terminal Phase II	
2795 Second St. Suite 300	Project Number: 77OT.43877.00	**CLS Work Order #: CRB0960**
Davis, CA 95616	Project Manager: Troy Turpen	COC #: 61290

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

61290

SECOR Rancho Cordova Office
3017 Kilgore Road
Rancho Cordova, CA
TEL: (916) 861-0400 FAX: (916) 861-0430

SECOR International, Inc.

CHAIN OF CUSTODY RECORD

SECOR Company Contact(s):
Todd Brown, SECOR Project Manager
email - tbrown@secor.com, brorie@secor.com
chamilton@secor.com

SECOR Project: 77OT.43877.00

Tesoro Billing Info
Company: 5200
AFE: 023139641-T
WBS: 97618.0042.925
G/L : 767490

DATE: 2/27/08
PAGE: 1 OF 3

Project Name: Tesoro Pittsburg Terminal Phase II
Address: 595 East Third Street, Pittsburg, CA

Sampler(s): Printed Name: Bryan Rorie
SAMPLER(S): (SIGNATURE)

Lab: KIFF ANALYTICAL
LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS)
☐ 10 DAYS ☒ 5 DAYS ☐ 72 HR ☐ 48 HR ☐ 24 HR ☐ <24 HR

SPECIAL INSTRUCTIONS OR NOTES: TEMPERATURE ON RECEIPT (C)

Direct Bill Jeff Baker of Tesoro Petroleum
All voa's preserved hcl
All Ambers preserved $Na_2S_2O_3$
All Poly's unpreserved

REQUESTED ANALYSIS

SAMPLE RECEIPT
Temp °C 1.2 Therm. ID# IR-1
Initial TJB Date 022708
Time 1835 Coolant present: Yes / No

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	PRE-SERVE	TPHd-carbon chain distinction (8015M)	TPHg-carbon chain distinction (8260B)	PAHs (8310)	PAHs (8270) pcp	VOCs (8260B)	6 metals = As, Ni, Ba, V, Cu, Zn (6020)	7 metals = As, Ni, Ba, V, Cu, Zn, Pb (6020)						HOLD SAMPLE		Other:	Laboratory ID
	GP-8-10	2/27/08	7~~40~~	S	1	N/A	X	X	X	X		X							X			01
	GP-8-15		7~~50~~	S	1	N/A	X	X	X	X		X							X	X		02
	GP-~~15~~-1		915	S	1	N/A	X	X		X	X	X										03
	GP-~~15~~-6		925	S	1	N/A	X	X		X		X							X	~~X~~		04
	GP-~~15~~W5		1015	W	7	Note	X	X		X		X										05
	GP-15-10		730	S	1	N/A	X	X		X		X							X			06
	GP-15-15		940	S	1	N/A	X	X		X		X							X			07
	GP-15-20		1040	S	1	N/A	X	X		X		X							X			08
	GP-15-25		1045	S	1	N/A	X	X		X		X							X			09
	GP-15-30		1100	S	1	N/A	X	X		X		X							X			10

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Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
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61290

SECOR Rancho Cordova Office
3017 Kilgore Road
Rancho Cordova, CA
TEL: (916) 861-0400 FAX: (916) 861-0430

SECOR International, Inc.

CHAIN OF CUSTODY RECORD

SECOR Company Contact(s):
Todd Brown, SECOR Project Manager
email - tbrown@secor.com, brorie@secor.com
chamilton@secor.com

SECOR Project: 77OT.43877.00

Tesoro Billing Info
Company: 5200
AFE: 023139641-T
WBS: 97618.0042.925
G/L : 767490

DATE: 2/27/08

PAGE: 2 OF 3

Project Name: Tesoro Pittsburg Terminal Phase II

Address: 595 East Third Street, Pittsburg, CA

Sampler(s): Printed Name: Bryan Rorie

SAMPLER(S): (SIGNATURE)

Lab: KIFF ANALYTICAL

LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS)
☐ 10 DAYS ☒ 5 DAYS ☐ 72 HR ☐ 48 HR ☐ 24 HR ☐ <24 HR

SPECIAL INSTRUCTIONS OR NOTES: TEMPERATURE ON RECEIPT (C)

Direct Bill Jeff Baker of Tesoro Petroleum
All voa's ~~xxx~~ preserved hcl
All Ambers preserved $Na_2S_2O_3$
All Poly's unpreserved

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	PRE-SERVE	TPHd-carbon chain distinction (8015M)	TPHg-carbon chain distinction (8260B)	PAHs (8310)	PAHs (8270) PCP	VOCs (8260B)	6 metals = As, Ni, Ba, V, Cu, Zn (6020)	7 metals = As, Ni, Ba, V, Cu, Zn, Pb (6020)						HOLD SAMPLE		Other:	Laboratory Notes
	~~Grab~~ Grab-1	2/27/08	~~945~~	W	9	None	X	X		X		X										11
	GP-15-35	2/27/08	1125	S	1	N/A	X	X		X		X							X			12
	GP-15WD		1130	W	9	None	X	X		X		X							X			13
	GP-16B-0		1340	S	1	N/A	X	X		X		X										14
	GP-16-6		1350	S	1	N/A	X	X		X		X							X			15
	GP-16-7		1355	S	1	N/A	X	X		X		X							X			16
	GP-16-10		1400	S	1	N/A	X	X		X		X							X			17
	GP-16-15		1415	S	1	N/A	X	X		X		X							X			18
	GP-16-20		1420	S	1	N/A	X	X		X		X							X			19
	GP-16WS		1440	W	9	None	X	X		X	X		X									20

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SECOR Rancho Cordova Office
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Rancho Cordova, CA
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SECOR International, Inc.

CHAIN OF CUSTODY RECORD

SECOR Company Contact(s):
Todd Brown, SECOR Project Manager
email - tbrown@secor.com, brorie@secor.com
chamilton@secor.com

SECOR Project: 77OT.43877.00

Tesoro Billing Info
Company: 5200
AFE: 023139641-T
WBS: 97618.0042.925
G/L : 767490

DATE: 2/27/08

PAGE: 2 OF 3

Project Name: Tesoro Pittsburg Terminal Phase II

Address: 595 East Third Street, Pittsburg, CA

Sampler(s): Printed Name: Bryan Bonie

SAMPLER(S): (SIGNATURE)

Lab: KIFF ANALYTICAL

LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS)
☐ 10 DAYS ☒ 5 DAYS ☐ 72 HR ☐ 48 HR ☐ 24 HR ☐ <24 HR

All VOA

SPECIAL INSTRUCTIONS OR NOTES: TEMPERATURE ON RECEIPT (C)

Direct Bill Jeff Baker of Tesoro Petroleum
All voa's preserved hcl
All Amber's preserved $Na_2S_2O_3$
All poly's unpreserved

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	PRE-SERVE	TPHd-carbon chain distinction (8015M)	TPHg-carbon chain distinction (8260B)	PAHs (8310)	PAHs (8270) PCP	VOCs (8260B)	6 metals = As, Ni, Ba, V, Cu, Zn (6020)	7 metals = As, Ni, Ba, V, Cu, Zn, Pb (6020)	HOLD SAMPLE	Other:	Laboratory Notes
	GP-17-1	2/22/08	1450	S	1	N/A	X	X		X		X				21
	GP-17-6A		1530	S	1	N/A								X		22
	GP-17-10		1535	S	1	N/A								X		23
	GP-17-15		1540	S	1	N/A								X		24
	GP-17WS		1555	W	9	Note 1										25
	GP-19-1		1500	S	1	N/A				X						26
	GP-8WS		810	W	9	Note 1			X	X						27
	GP-															
	GP-															
	GP-															

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Troy Turpen

From: Caron Stofleth [cstofleth@secor.com]
Sent: Thursday, March 06, 2008 4:11 PM
To: Troy Turpen
Cc: Todd Brown; Gary Haeck
Subject: Pittsburg Terminal, samples off-hold
Attachments: kiff3_20080306175619.pdf

Troy,

I have attached the COC's which indicate the following:

For GP-15-6 (soil), please analyze only for TPHd (& motor oil) carbon chain distinction, arsenic, and vanadium\

For GP-16B-B (soil), please analyze for TPHd (& motor oil) and TPHg carbon chain distinction, 6 metals, and PAHs (and PCP) (8270).

For GP-17-6 (soil), please analyze for arsenic and vanadium

Also, sample GP-16WS should have been analyzed for lead.

Let me know if you have any questions. Thanks,

Caron R. Stofleth
Project Scientist
SECOR International, now Stantec
Ph: (916) 384-0749
Fx: (916) 861-0430
caron.stofleth@stantec.com
stantec.com

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Rancho Cordova, CA
TEL: (916) 861-0400 FAX: (916) 861-0430

SECOR International, Inc.

CHAIN OF CUSTODY RECORD

SECOR Company Contact(s):
Todd Brown, SECOR Project Manager
email - tbrown@secor.com, brorie@secor.com
chamilton@secor.com

SECOR Project: 77OT.43877.00

Tesoro Billing Info
Company: 5200
AFE: 023139641-T
WBS: 97618.0042.925
G/L : 767490

DATE: 2/27/08
PAGE: 1 OF 3

Project Name: Tesoro Pittsburg Terminal Phase II
Address: 595 East Third Street, Pittsburg, CA

Sampler(s): Printed Name: Bryan Rorie
SAMPLER(S): (SIGNATURE)
Lab: KIFF ANALYTICAL
LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS)
☐ 10 DAYS ☒ 5 DAYS ☐ 72 HR ☐ 48 HR ☐ 24 HR ☐ <24 HR

SPECIAL INSTRUCTIONS OR NOTES: TEMPERATURE ON RECEIPT (C)
Direct Bill Jeff Baker of Tesoro Petroleum
All voa's preserved hcl
All Ambers preserved $Na_2S_2O_3$
All Poly's unpreserved

REQUESTED ANALYSIS

SAMPLE RECEIPT
Temp °C 1.2 Therm. ID# IR-1
Initial TJB Date 022708
Time 1835 Coolant present: (Yes) No

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	PRE-SERVE	TPHd-carbon chain distinction (8015M) + motor oil	TPHg-carbon chain distinction (8260B)	PAHs (8310)	PAHs (8270) pcp	VOCs (8260B)	6 metals = As, Ni, Ba, V, Cu, Zn (6020)	7 metals = As, Ni, Ba, V, Cu, Zn, Pb (6020)	As and V	HOLD SAMPLE	Other:	Laboratory
	GP-8-10	2/27/08	740	S	1	N/A	X	X	X	X		X			X		01
	GP-8-15		750	S	1	N/A	X	X	X	X		X			X	X	02
	GP-18-1		915	S	1	N/A	X	X		X	X	X					03
	GP-18-6 take off hold		925	S	1	N/A	X	X		X		X		X	X	X	04
	GP-18WS		1015	W	7	Notes	X	X		X		X					05
	GP-15-10		930	S	1	N/A	X	X		X		X			X		06
	GP-15-15		940	S	1	N/A	X	X		X		X			X		07
	GP-15-20		1040	S	1	N/A	X	X		X		X			X		08
	GP-15-25		1045	S	1	N/A	X	X		X		X			X		09
	GP-15-30		1100	S	1	N/A	X	X		X		X			X		10

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G1290

SECOR Rancho Cordova Office
3017 Kilgore Road
Rancho Cordova, CA
TEL: (916) 861-0400 FAX: (916) 861-0430

SECOR International, Inc.

CHAIN OF CUSTODY RECORD

SECOR Company Contact(s):
Todd Brown, SECOR Project Manager
email - tbrown@secor.com, brorie@secor.com
chamilton@secor.com

SECOR Project: 77OT.43877.00

Tesoro Billing Info
Company: 5200
AFE: 023139641-T
WBS: 97618.0042.925
G/L : 767490

DATE: 2/27/08
PAGE: 2 OF 3

Project Name: Tesoro Pittsburg Terminal Phase II
Address: 595 East Third Street, Pittsburg, CA

Sampler(s): Printed Name: Bryan Brorie
SAMPLER(S): (SIGNATURE)

Lab: KIFF ANALYTICAL
LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS)
☐ 10 DAYS ☒ 5 DAYS ☐ 72 HR ☐ 48 HR ☐ 24 HR ☐ <24 HR

SPECIAL INSTRUCTIONS OR NOTES: TEMPERATURE ON RECEIPT (C)
Direct Bill Jeff Baker of Tesoro Petroleum
All voa's preserved hcl
All Ambers preserved $Na_2S_2O_3$
All Poly's unpreserved

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	PRE-SERVE	TPHd-carbon chain distinction (8015M)	TPHg-carbon chain distinction (8260B)	PAHs (8310)	PAHs (8270) + PCP	VOCs (8260B)	6 metals = As, Ni, Ba, V, Cu, Zn (6020)	7 metals = As, Ni, Ba, V, Cu, Zn, Pb (6020)					HOLD SAMPLE		Other:	Laboratory Notes
	~~Grab-1~~	2/27/08	~~945~~	W	9	None	X	X		X		X									11
	GP-~~15~~-35	2/27/08	1125	S	1	N/A	X	X		X		X						X			12
	GP-15WD		1130	W	9	None	X	X		X		X						X			13
	GP-16B-0		1340	S	1	N/A	X	X		X		X									14
	GP-16-6 take off hold		1350	S	1	N/A	X	X		X		X						X			15
	GP-16-7		1355	S	1	N/A	X	X		X		X						X			16
	GP-16-10		1400	S	1	N/A	X	X		X		X						X			17
	GP-16-15		1415	S	1	N/A	X	X		X		X						X			18
	GP-16-20		1420	S	1	N/A	X	X		X		X						X			19
	GP-16WS		1440	W	9	None	X	X		X	X		X								20

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Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Kiff Analytical	Date: 022708	Time: 1626

61290

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SECOR International, Inc.

CHAIN OF CUSTODY RECORD

SECOR Company Contact(s):
Todd Brown, SECOR Project Manager
email - tbrown@secor.com, brorie@secor.com
chamilton@secor.com

SECOR Project: 77OT.43877.00

Tesoro Billing Info
Company: 5200
AFE: 023139641-T
WBS: 97618.0042.925
G/L : 767490

DATE: 2/27/08

PAGE: 2 OF 3

Project Name: Tesoro Pittsburg Terminal Phase II

Address: 595 East Third Street, Pittsburg, CA

Sampler(s): Printed Name: Bryan Brorie

SAMPLER(S): (SIGNATURE)

Lab: KIFF ANALYTICAL

LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS)
☐ 10 DAYS ☒ 5 DAYS ☐ 72 HR ☐ 48 HR ☐ 24 HR ☐ <24 HR

All Voa

SPECIAL INSTRUCTIONS OR NOTES: TEMPERATURE ON RECEIPT (C)

Direct Bill Jeff Baker of Tesoro Petroleum
All voa's preserved hcl
All Ambers preserved $Na_2S_2O_3$
All poly's unpreserved

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	PRE-SERVE	TPHd-carbon chain distinction (8015M)	TPHg-carbon chain distinction (8260B)	PAHs (8310)	PAHs (8270) PCP	VOCs (8260B)	6 metals = As, Ni, Ba, V, Cu, Zn (6020)	7 metals = As, Ni, Ba, V, Cu, Zn, Pb (6020)	As + V	HOLD SAMPLE	Other:	Laboratory Notes
	GP-17-1	2/27/08	1450	S	1	N/A	X	X		X		X					21
	GP-17-6W Take off hold		1530	S	1	N/A								(X)	X		22
	GP-17-10		1535	S	1	N/A									X		23
	GP-17-15		1540	S	1	N/A									X		24
	GP-17WS		1555	W	9	Note											25
	GP-19-1		1500	S	1	N/A				X							26
	GP-8WS		810	W	9	Note			X	X							27
	GP-																
	GP-																
	GP-																

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Kiff Analytical	Date: 022708	Time: 1626

Hydrocarbon Ranges Report*

Project Name: Tesoro Pittsburg Terminal Phase II

Lab Number:	61290-03	61290-05	61290-11	61290-13	61290-14
Sample:	GP-15-1	GP-15-WS	Grab-1	GP-15WD	GP-16B-0
Sample Date:	2/27/2008	2/27/2008	2/27/2008	2/27/2008	2/27/2008
Matrix:	Soil	Water	Water	Water	Soil
Units	mg/Kg	ug/L	ug/L	ug/L	mg/Kg
Hydrocarbon Range					
C8 to C9 Fraction	nd	5	6	8	nd
C10 to C11 Fraction	nd	nd	nd	5	nd
C12 to C13 Fraction	0.11	nd	2	6	0.14
C14 to C15 Fraction	1.0	9	6	16	0.64
C16 to C17 Fraction	2.6	13	8	22	3.2
C18 to C19 Fraction	5.5	20	11	35	9.1
C20 to C21 Fraction	7.1	20	12	30	9.3
C22 to C23 Fraction	12	18	11	31	6.5
C24 to C25 Fraction	14	23	12	42	5.9
C26 to C27 Fraction	19	22	5	42	6.3
C28 to C29 Fraction	23	14	4	28	9.3
C30 to C31 Fraction	66	7	3	19	24
C32 to C33 Fraction	64	6	2	16	22
C34 to C35 Fraction	37	6	nd	15	15
C36 to C37 Fraction	54	5	nd	14	21
C38 to C39 Fraction	51	5	nd	12	15
C40 Fraction	33	2	nd	6	6.7
Reporting Limit:	0.04	2	2	2	0.04

*Hydrocarbon concentrations should be considered estimates

"nd" is non-detect at the specified Reporting Limit

Hydrocarbon Ranges Report*

Project Name: Tesoro Pittsburg Terminal Phase II

Lab Number:	61290-20	61290-21	61290-25	61290-26	61290-27
Sample:	GP-16WS	GP-17-1	GP-17WS	GP-19-1	GP-8WS
Sample Date:	2/27/2008	2/27/2008	2/27/2008	2/27/2008	2/27/2008
Matrix:	Water	Soil	Water	Soil	Water
Units	ug/L	mg/Kg	ug/L	mg/Kg	ug/L
Hydrocarbon Range					
C8 to C9 Fraction	5	nd	6	nd	7
C10 to C11 Fraction	4	nd	nd	nd	nd
C12 to C13 Fraction	20	nd	5	0.15	nd
C14 to C15 Fraction	65	0.04	13	2.0	nd
C16 to C17 Fraction	122	0.33	29	4.3	nd
C18 to C19 Fraction	47	0.46	28	9.2	nd
C20 to C21 Fraction	37	0.62	15	13	nd
C22 to C23 Fraction	32	0.74	16	15	nd
C24 to C25 Fraction	23	0.74	15	18	nd
C26 to C27 Fraction	24	0.87	12	24	nd
C28 to C29 Fraction	17	1.2	14	30	167
C30 to C31 Fraction	8	0.93	6	234	8
C32 to C33 Fraction	8	0.62	5	172	7
C34 to C35 Fraction	6	0.48	4	167	7
C36 to C37 Fraction	6	0.36	3	194	7
C38 to C39 Fraction	5	0.31	2	216	6
C40 Fraction	nd	0.11	nd	130	3
Reporting Limit:	2	0.04	2	0.04	2

***Hydrocarbon concentrations should be considered estimates**

"nd" is non-detect at the specified Reporting Limit

Hydrocarbon Ranges Report*

Project Name: Tesoro Pittsburg Terminal Phase II

Lab Number:	**61290-04**	**61290-15**
Sample:	**GP-15-6**	**GP-16-6**
Sample Date:	**2/27/2008**	**2/27/2008**
Matrix:	**Soil**	**Soil**
Units	**mg/Kg**	**mg/Kg**
Hydrocarbon Range		
C8 to C9 Fraction	**-**	**-**
C10 to C11 Fraction	**nd**	**nd**
C12 to C13 Fraction	**0.13**	**nd**
C14 to C15 Fraction	**0.47**	**0.47**
C16 to C17 Fraction	**1.0**	**3.5**
C18 to C19 Fraction	**1.3**	**1.8**
C20 to C21 Fraction	**0.95**	**2.2**
C22 to C23 Fraction	**0.80**	**2.6**
C24 to C25 Fraction	**0.53**	**2.4**
C26 to C27 Fraction	**0.57**	**3.6**
C28 to C29 Fraction	**0.41**	**5.5**
C30 to C31 Fraction	**0.69**	**8.9**
C32 to C33 Fraction	**0.50**	**7.7**
C34 to C35 Fraction	**0.57**	**9.6**
C36 to C37 Fraction	**0.43**	**10.2**
C38 to C39 Fraction	**0.41**	**9.5**
C40 Fraction	**0.18**	**4.9**
Reporting Limit:	**0.04**	**0.04**

***Hydrocarbon concentrations should be considered estimates**

"nd" is non-detect at the specified Reporting Limit

KIFF Analytical LLC

Report Number : 61313
Date : 03/17/2008

Todd Brown
SECOR International, Inc.
3017 Kilgore Road, Suite 100
Rancho Cordova, CA 95670

Subject : 7 Soil Samples and 6 Water Samples
Project Name : Tesoro Pittsburg Terminal Phase II
Project Number : 77OT.43877.00

Dear Mr. Brown,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,



Joel Kiff

KIFF Analytical LLC

Report Number : 61313
Date : 03/17/2008

Subject : 7 Soil Samples and 6 Water Samples
Project Name : Tesoro Pittsburg Terminal Phase II
Project Number : 77OT.43877.00

Case Narrative

The Method Reporting Limit for Chloromethane has been increased due to the presence of an interfering compound for sample GP-4WS.

Matrix Spike/Matrix Spike Duplicate Results associated with samples GP-14-1 and GP-4-1 for the analytes Toluene and Chlorobenzene were outside of control limits. This may indicate a bias for the sample that was spiked. Since the LCS recoveries were within control limits, no data are flagged.

Approved By: Joel Kiff

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

KIFF Analytical LLC

Report Number : 61313
Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**
Project Number : **77OT.43877.00**

Sample : **GP-4-1** Matrix : Soil Lab Number : 61313-04
Sample Date :02/28/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**7.9**	1.0	mg/Kg	M EPA 8015	03/03/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**14**	10	mg/Kg	M EPA 8015	03/03/2008
1-Chlorooctadecane (Diesel Surrogate)	78.1		% Recovery	M EPA 8015	03/03/2008

Sample : **GP-1WS** Matrix : Water Lab Number : 61313-07
Sample Date :02/28/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**110**	50	ug/L	M EPA 8015	03/04/2008
TPH as Motor Oil	**< 100**	100	ug/L	M EPA 8015	03/04/2008
Octacosane (Diesel Surrogate)	95.7		% Recovery	M EPA 8015	03/04/2008

Sample : **GP-4WS** Matrix : Water Lab Number : 61313-09
Sample Date :02/28/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**180**	50	ug/L	M EPA 8015	03/04/2008
TPH as Motor Oil	**< 100**	100	ug/L	M EPA 8015	03/04/2008
Octacosane (Diesel Surrogate)	104		% Recovery	M EPA 8015	03/04/2008

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61313
Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**
Project Number : **77OT.43877.00**

Sample : **GP-5-1** Matrix : Soil Lab Number : 61313-10
Sample Date :02/28/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**4.2**	1.0	mg/Kg	M EPA 8015	03/03/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**< 10**	10	mg/Kg	M EPA 8015	03/03/2008
1-Chlorooctadecane (Diesel Surrogate)	89.6		% Recovery	M EPA 8015	03/03/2008

Sample : **GP-19-6** Matrix : Soil Lab Number : 61313-11
Sample Date :02/28/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**2.0**	1.0	mg/Kg	M EPA 8015	03/12/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**< 10**	10	mg/Kg	M EPA 8015	03/12/2008
1-Chlorooctadecane (Diesel Surrogate)	81.3		% Recovery	M EPA 8015	03/12/2008

Sample : **GP-19WS** Matrix : Water Lab Number : 61313-14
Sample Date :02/28/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**110**	50	ug/L	M EPA 8015	03/01/2008
TPH as Motor Oil	**< 100**	100	ug/L	M EPA 8015	03/01/2008
Octacosane (Diesel Surrogate)	107		% Recovery	M EPA 8015	03/01/2008

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61313
Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**
Project Number : **77OT.43877.00**

Sample : **GP-14-1** Matrix : Soil Lab Number : 61313-15
Sample Date :02/28/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**770**	20	mg/Kg	M EPA 8015	03/04/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**1700**	200	mg/Kg	M EPA 8015	03/04/2008
1-Chlorooctadecane (Diesel Surrogate)	Diluted Out		% Recovery	M EPA 8015	03/04/2008

Sample : **GP-14-6** Matrix : Soil Lab Number : 61313-16
Sample Date :02/28/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**< 1.0**	1.0	mg/Kg	M EPA 8015	03/13/2008
TPH as Motor Oil	**< 10**	10	mg/Kg	M EPA 8015	03/13/2008
1-Chlorooctadecane (Diesel Surrogate)	79.8		% Recovery	M EPA 8015	03/13/2008

Sample : **GP-14WS** Matrix : Water Lab Number : 61313-19
Sample Date :02/28/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**110**	50	ug/L	M EPA 8015	03/04/2008
TPH as Motor Oil	**< 100**	100	ug/L	M EPA 8015	03/04/2008
Octacosane (Diesel Surrogate)	97.7		% Recovery	M EPA 8015	03/04/2008

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61313
Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**
Project Number : **77OT.43877.00**

Sample : **GP-1-1** Matrix : Soil Lab Number : 61313-20
Sample Date :02/28/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**5.2**	1.0	mg/Kg	M EPA 8015	03/03/2008
TPH as Motor Oil	**21**	10	mg/Kg	M EPA 8015	03/03/2008
1-Chlorooctadecane (Diesel Surrogate)	91.8		% Recovery	M EPA 8015	03/03/2008

Sample : **GP-5WS** Matrix : Water Lab Number : 61313-24
Sample Date :02/28/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**< 50**	50	ug/L	M EPA 8015	03/03/2008
TPH as Motor Oil	**< 100**	100	ug/L	M EPA 8015	03/03/2008
Octacosane (Diesel Surrogate)	94.8		% Recovery	M EPA 8015	03/03/2008

Sample : **GP-20-4** Matrix : Soil Lab Number : 61313-25
Sample Date :02/28/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**14**	1.0	mg/Kg	M EPA 8015	03/03/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**13**	10	mg/Kg	M EPA 8015	03/03/2008
1-Chlorooctadecane (Diesel Surrogate)	87.7		% Recovery	M EPA 8015	03/03/2008

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61313
Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**
Project Number : **77OT.43877.00**

Sample : **GP-20WS** Matrix : Water Lab Number : 61313-29
Sample Date :02/28/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**1800**	500	ug/L	M EPA 8015	03/04/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**4900**	500	ug/L	M EPA 8015	03/04/2008
Octacosane (Diesel Surrogate)	Diluted Out		% Recovery	M EPA 8015	03/04/2008

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61313

Date : 03/17/2008

Sample : **GP-4-1**

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00** Lab Number : 61313-04 Date Analyzed : 03/05/08, 02/29/08

Matrix : Soil Sample Date :02/28/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	< 1.0	1.0	mg/Kg
Dichlorodifluoromethane	< 0.0050	0.0050	mg/Kg
Chloromethane	< 0.0050	0.0050	mg/Kg
Vinyl Chloride	< 0.0050	0.0050	mg/Kg
Bromomethane	< 0.020	0.020	mg/Kg
Chloroethane	< 0.0050	0.0050	mg/Kg
Trichlorofluoromethane	< 0.0050	0.0050	mg/Kg
1,1-Dichloroethene	< 0.0050	0.0050	mg/Kg
Methylene Chloride	< 0.0050	0.0050	mg/Kg
trans-1,2-Dichloroethene	< 0.0050	0.0050	mg/Kg
1,1-Dichloroethane	< 0.0050	0.0050	mg/Kg
2,2-Dichloropropane	< 0.0050	0.0050	mg/Kg
cis-1,2-Dichloroethene	< 0.0050	0.0050	mg/Kg
Chloroform	< 0.0050	0.0050	mg/Kg
Bromochloromethane	< 0.0050	0.0050	mg/Kg
1,1,1-Trichloroethane	< 0.0050	0.0050	mg/Kg
1,1-Dichloropropene	< 0.0050	0.0050	mg/Kg
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg
Carbon Tetrachloride	< 0.0050	0.0050	mg/Kg
Benzene	< 0.0050	0.0050	mg/Kg
Trichloroethene	< 0.0050	0.0050	mg/Kg
1,2-Dichloropropane	< 0.0050	0.0050	mg/Kg
Bromodichloromethane	< 0.0050	0.0050	mg/Kg
Dibromomethane	< 0.0050	0.0050	mg/Kg
cis-1,3-Dichloropropene	< 0.0050	0.0050	mg/Kg
Toluene	< 0.0050	0.0050	mg/Kg
trans-1,3-Dichloropropene	< 0.0050	0.0050	mg/Kg
1,1,2-Trichloroethane	< 0.0050	0.0050	mg/Kg
1,3-Dichloropropane	< 0.0050	0.0050	mg/Kg
Tetrachloroethene	< 0.0050	0.0050	mg/Kg
Dibromochloromethane	< 0.0050	0.0050	mg/Kg
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg
Chlorobenzene	< 0.0050	0.0050	mg/Kg
1,1,1,2-Tetrachloroethane	< 0.0050	0.0050	mg/Kg
Ethylbenzene	< 0.0050	0.0050	mg/Kg
P,M-Xylene	< 0.0050	0.0050	mg/Kg
O-Xylene	< 0.0050	0.0050	mg/Kg
Styrene	< 0.0050	0.0050	mg/Kg

Parameter	Measured Value	MRL [1]	Units
Isopropyl benzene	< 0.0050	0.0050	mg/Kg
Bromoform	< 0.0050	0.0050	mg/Kg
1,1,2,2-Tetrachloroethane	< 0.0050	0.0050	mg/Kg
1,2,3-Trichloropropane	< 0.0050	0.0050	mg/Kg
n-Propylbenzene	< 0.0050	0.0050	mg/Kg
Bromobenzene	< 0.0050	0.0050	mg/Kg
1,3,5-Trimethylbenzene	< 0.0050	0.0050	mg/Kg
2+4-Chlorotoluene	< 0.0050	0.0050	mg/Kg
tert-Butylbenzene	< 0.0050	0.0050	mg/Kg
1,2,4-Trimethylbenzene	< 0.0050	0.0050	mg/Kg
sec-Butylbenzene	< 0.0050	0.0050	mg/Kg
p-Isopropyltoluene	< 0.0050	0.0050	mg/Kg
1,3-Dichlorobenzene	< 0.0050	0.0050	mg/Kg
1,4-Dichlorobenzene	< 0.0050	0.0050	mg/Kg
n-Butylbenzene	< 0.0050	0.0050	mg/Kg
1,2-Dichlorobenzene	< 0.0050	0.0050	mg/Kg
1,2-Dibromo-3-chloropropane	< 0.0050	0.0050	mg/Kg
1,2,4-Trichlorobenzene	< 0.0050	0.0050	mg/Kg
Hexachlorobutadiene	< 0.0050	0.0050	mg/Kg
Naphthalene	< 0.0050	0.0050	mg/Kg
1,2,3-Trichlorobenzene	< 0.0050	0.0050	mg/Kg
1,2-Dichloroethane-d4 (Surr)	100		% Recovery
Toluene-d8 (Surr)	101		% Recovery
4-Bromofluorobenzene (Surr)	102		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

Approved By:

Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61313
Date : 03/17/2008

Sample : **GP-1WS**

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00** Lab Number : 61313-07 Date Analyzed : 03/04/08

Matrix : Water Sample Date : 02/28/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	**53**	50	ug/L
(Note: Primarily compounds not found in typical Gasoline)			
Toluene - d8 (Surr)	99.7		% Recovery
4-Bromofluorobenzene (Surr)	104		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

Approved By:

Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61313

Date : 03/17/2008

Sample : **GP-4WS**

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00** Lab Number : 61313-09 Date Analyzed : 03/04/08

Matrix : Water Sample Date : 02/28/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	< 50	50	ug/L
Dichlorodifluoromethane	< 0.50	0.50	ug/L
Chloromethane	< 0.80	0.80 (2)	ug/L
Vinyl Chloride	< 0.50	0.50	ug/L
Bromomethane	< 20	20	ug/L
Chloroethane	< 0.50	0.50	ug/L
Trichlorofluoromethane	< 0.50	0.50	ug/L
1,1-Dichloroethene	< 0.50	0.50	ug/L
Methylene Chloride	< 5.0	5.0	ug/L
trans-1,2-Dichloroethene	< 0.50	0.50	ug/L
1,1-Dichloroethane	< 0.50	0.50	ug/L
2,2-Dichloropropane	< 0.50	0.50	ug/L
cis-1,2-Dichloroethene	**1.4**	0.50	ug/L
Chloroform	< 0.50	0.50	ug/L
Bromochloromethane	< 0.50	0.50	ug/L
1,1,1-Trichloroethane	< 0.50	0.50	ug/L
1,1-Dichloropropene	< 0.50	0.50	ug/L
1,2-Dichloroethane	< 0.50	0.50	ug/L
Carbon Tetrachloride	< 0.50	0.50	ug/L
Benzene	< 0.50	0.50	ug/L
Trichloroethene	**4.5**	0.50	ug/L
1,2-Dichloropropane	< 0.50	0.50	ug/L
Bromodichloromethane	< 0.50	0.50	ug/L
Dibromomethane	< 0.50	0.50	ug/L
cis-1,3-Dichloropropene	< 0.50	0.50	ug/L
Toluene	< 0.50	0.50	ug/L
trans-1,3-Dichloropropene	< 0.50	0.50	ug/L
1,1,2-Trichloroethane	< 0.50	0.50	ug/L
1,3-Dichloropropane	< 0.50	0.50	ug/L
Tetrachloroethene	< 0.50	0.50	ug/L
Dibromochloromethane	< 0.50	0.50	ug/L
1,2-Dibromoethane	< 0.50	0.50	ug/L
Chlorobenzene	< 0.50	0.50	ug/L
1,1,1,2-Tetrachloroethane	< 0.50	0.50	ug/L
Ethylbenzene	< 0.50	0.50	ug/L
P,M-Xylene	< 1.0	1.0	ug/L
O-Xylene	< 0.50	0.50	ug/L
Styrene	< 0.50	0.50	ug/L

Parameter	Measured Value	MRL [1]	Units
Isopropyl benzene	< 0.50	0.50	ug/L
Bromoform	< 0.50	0.50	ug/L
1,1,2,2-Tetrachloroethane	< 0.50	0.50	ug/L
1,2,3-Trichloropropane	< 0.50	0.50	ug/L
n-Propylbenzene	< 0.50	0.50	ug/L
Bromobenzene	< 0.50	0.50	ug/L
1,3,5-Trimethylbenzene	< 0.50	0.50	ug/L
2+4-Chlorotoluene	< 1.0	1.0	ug/L
tert-Butylbenzene	< 0.50	0.50	ug/L
1,2,4-Trimethylbenzene	< 0.50	0.50	ug/L
sec-Butylbenzene	< 0.50	0.50	ug/L
p-Isopropyltoluene	< 0.50	0.50	ug/L
1,3-Dichlorobenzene	< 0.50	0.50	ug/L
1,4-Dichlorobenzene	< 0.50	0.50	ug/L
n-Butylbenzene	< 0.50	0.50	ug/L
1,2-Dichlorobenzene	< 0.50	0.50	ug/L
1,2-Dibromo-3-chloropropane	< 0.50	0.50	ug/L
1,2,4-Trichlorobenzene	< 0.50	0.50	ug/L
Hexachlorobutadiene	< 0.50	0.50	ug/L
Naphthalene	< 0.50	0.50	ug/L
1,2,3-Trichlorobenzene	< 0.50	0.50	ug/L
1,2-Dichloroethane-d4 (Surr)	96.5		% Recovery
Toluene-d8 (Surr)	100		% Recovery
4-Bromofluorobenzene (Surr)	99.0		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

Approved By:

Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61313

Date : 03/17/2008

Sample : **GP-5-1**

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00** Lab Number : 61313-10 Date Analyzed : 03/05/08

Matrix : Soil Sample Date : 02/28/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	< 1.0	1.0	mg/Kg
Toluene - d8 (Surr)	100		% Recovery
4-Bromofluorobenzene (Surr)	102		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

Approved By:

Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61313

Date : 03/17/2008

Sample : **GP-19WS**

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00** Lab Number : 61313-14 Date Analyzed : 03/04/08

Matrix : Water Sample Date : 02/28/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	< 50	50	ug/L
Toluene - d8 (Surr)	99.1		% Recovery
4-Bromofluorobenzene (Surr)	104		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

Approved By:

Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61313

Date : 03/17/2008

Sample : **GP-14-1**

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00** Lab Number : 61313-15 Date Analyzed : 03/05/08, 02/29/08

Matrix : Soil Sample Date :02/28/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	< 1.0	1.0	mg/Kg
Dichlorodifluoromethane	< 0.0050	0.0050	mg/Kg
Chloromethane	< 0.0050	0.0050	mg/Kg
Vinyl Chloride	< 0.0050	0.0050	mg/Kg
Bromomethane	< 0.020	0.020	mg/Kg
Chloroethane	< 0.0050	0.0050	mg/Kg
Trichlorofluoromethane	< 0.0050	0.0050	mg/Kg
1,1-Dichloroethene	< 0.0050	0.0050	mg/Kg
Methylene Chloride	< 0.0050	0.0050	mg/Kg
trans-1,2-Dichloroethene	< 0.0050	0.0050	mg/Kg
1,1-Dichloroethane	< 0.0050	0.0050	mg/Kg
2,2-Dichloropropane	< 0.0050	0.0050	mg/Kg
cis-1,2-Dichloroethene	< 0.0050	0.0050	mg/Kg
Chloroform	< 0.0050	0.0050	mg/Kg
Bromochloromethane	< 0.0050	0.0050	mg/Kg
1,1,1-Trichloroethane	< 0.0050	0.0050	mg/Kg
1,1-Dichloropropene	< 0.0050	0.0050	mg/Kg
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg
Carbon Tetrachloride	< 0.0050	0.0050	mg/Kg
Benzene	< 0.0050	0.0050	mg/Kg
Trichloroethene	< 0.0050	0.0050	mg/Kg
1,2-Dichloropropane	< 0.0050	0.0050	mg/Kg
Bromodichloromethane	< 0.0050	0.0050	mg/Kg
Dibromomethane	< 0.0050	0.0050	mg/Kg
cis-1,3-Dichloropropene	< 0.0050	0.0050	mg/Kg
Toluene	< 0.0050	0.0050	mg/Kg
trans-1,3-Dichloropropene	< 0.0050	0.0050	mg/Kg
1,1,2-Trichloroethane	< 0.0050	0.0050	mg/Kg
1,3-Dichloropropane	< 0.0050	0.0050	mg/Kg
Tetrachloroethene	< 0.0050	0.0050	mg/Kg
Dibromochloromethane	< 0.0050	0.0050	mg/Kg
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg
Chlorobenzene	< 0.0050	0.0050	mg/Kg
1,1,1,2-Tetrachloroethane	< 0.0050	0.0050	mg/Kg
Ethylbenzene	< 0.0050	0.0050	mg/Kg
P,M-Xylene	< 0.0050	0.0050	mg/Kg
O-Xylene	< 0.0050	0.0050	mg/Kg
Styrene	< 0.0050	0.0050	mg/Kg

Parameter	Measured Value	MRL [1]	Units
Isopropyl benzene	< 0.0050	0.0050	mg/Kg
Bromoform	< 0.0050	0.0050	mg/Kg
1,1,2,2-Tetrachloroethane	< 0.0050	0.0050	mg/Kg
1,2,3-Trichloropropane	< 0.0050	0.0050	mg/Kg
n-Propylbenzene	< 0.0050	0.0050	mg/Kg
Bromobenzene	< 0.0050	0.0050	mg/Kg
1,3,5-Trimethylbenzene	< 0.0050	0.0050	mg/Kg
2+4-Chlorotoluene	< 0.0050	0.0050	mg/Kg
tert-Butylbenzene	< 0.0050	0.0050	mg/Kg
1,2,4-Trimethylbenzene	< 0.0050	0.0050	mg/Kg
sec-Butylbenzene	< 0.0050	0.0050	mg/Kg
p-Isopropyltoluene	< 0.0050	0.0050	mg/Kg
1,3-Dichlorobenzene	< 0.0050	0.0050	mg/Kg
1,4-Dichlorobenzene	< 0.0050	0.0050	mg/Kg
n-Butylbenzene	< 0.0050	0.0050	mg/Kg
1,2-Dichlorobenzene	< 0.0050	0.0050	mg/Kg
1,2-Dibromo-3-chloropropane	< 0.0050	0.0050	mg/Kg
1,2,4-Trichlorobenzene	< 0.0050	0.0050	mg/Kg
Hexachlorobutadiene	< 0.0050	0.0050	mg/Kg
Naphthalene	< 0.0050	0.0050	mg/Kg
1,2,3-Trichlorobenzene	< 0.0050	0.0050	mg/Kg
1,2-Dichloroethane-d4 (Surr)	101		% Recovery
Toluene-d8 (Surr)	101		% Recovery
4-Bromofluorobenzene (Surr)	99.6		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

Approved By:

Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61313
Date : 03/17/2008

Sample : **GP-14WS**

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00** Lab Number : 61313-19 Date Analyzed : 03/04/08, 03/03/08

Matrix : Water Sample Date : 02/28/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	< 50	50	ug/L
Dichlorodifluoromethane	< 0.50	0.50	ug/L
Chloromethane	< 0.50	0.50	ug/L
Vinyl Chloride	< 0.50	0.50	ug/L
Bromomethane	< 20	20	ug/L
Chloroethane	< 0.50	0.50	ug/L
Trichlorofluoromethane	< 0.50	0.50	ug/L
1,1-Dichloroethene	< 0.50	0.50	ug/L
Methylene Chloride	< 5.0	5.0	ug/L
trans-1,2-Dichloroethene	< 0.50	0.50	ug/L
1,1-Dichloroethane	< 0.50	0.50	ug/L
2,2-Dichloropropane	< 0.50	0.50	ug/L
cis-1,2-Dichloroethene	< 0.50	0.50	ug/L
Chloroform	< 0.50	0.50	ug/L
Bromochloromethane	< 0.50	0.50	ug/L
1,1,1-Trichloroethane	< 0.50	0.50	ug/L
1,1-Dichloropropene	< 0.50	0.50	ug/L
1,2-Dichloroethane	< 0.50	0.50	ug/L
Carbon Tetrachloride	< 0.50	0.50	ug/L
Benzene	< 0.50	0.50	ug/L
Trichloroethene	**0.90**	0.50	ug/L
1,2-Dichloropropane	< 0.50	0.50	ug/L
Bromodichloromethane	< 0.50	0.50	ug/L
Dibromomethane	< 0.50	0.50	ug/L
cis-1,3-Dichloropropene	< 0.50	0.50	ug/L
Toluene	< 0.50	0.50	ug/L
trans-1,3-Dichloropropene	< 0.50	0.50	ug/L
1,1,2-Trichloroethane	< 0.50	0.50	ug/L
1,3-Dichloropropane	< 0.50	0.50	ug/L
Tetrachloroethene	< 0.50	0.50	ug/L
Dibromochloromethane	< 0.50	0.50	ug/L
1,2-Dibromoethane	< 0.50	0.50	ug/L
Chlorobenzene	< 0.50	0.50	ug/L
1,1,1,2-Tetrachloroethane	< 0.50	0.50	ug/L
Ethylbenzene	< 0.50	0.50	ug/L
P,M-Xylene	< 1.0	1.0	ug/L
O-Xylene	< 0.50	0.50	ug/L
Styrene	< 0.50	0.50	ug/L

Parameter	Measured Value	MRL [1]	Units
Isopropyl benzene	< 0.50	0.50	ug/L
Bromoform	< 0.50	0.50	ug/L
1,1,2,2-Tetrachloroethane	< 0.50	0.50	ug/L
1,2,3-Trichloropropane	< 0.50	0.50	ug/L
n-Propylbenzene	< 0.50	0.50	ug/L
Bromobenzene	< 0.50	0.50	ug/L
1,3,5-Trimethylbenzene	< 0.50	0.50	ug/L
2+4-Chlorotoluene	< 1.0	1.0	ug/L
tert-Butylbenzene	< 0.50	0.50	ug/L
1,2,4-Trimethylbenzene	< 0.50	0.50	ug/L
sec-Butylbenzene	< 0.50	0.50	ug/L
p-Isopropyltoluene	< 0.50	0.50	ug/L
1,3-Dichlorobenzene	< 0.50	0.50	ug/L
1,4-Dichlorobenzene	< 0.50	0.50	ug/L
n-Butylbenzene	< 0.50	0.50	ug/L
1,2-Dichlorobenzene	< 0.50	0.50	ug/L
1,2-Dibromo-3-chloropropane	< 0.50	0.50	ug/L
1,2,4-Trichlorobenzene	**2.9**	0.50	ug/L
Hexachlorobutadiene	< 0.50	0.50	ug/L
Naphthalene	< 0.50	0.50	ug/L
1,2,3-Trichlorobenzene	**1.9**	0.50	ug/L
1,2-Dichloroethane-d4 (Surr)	99.0		% Recovery
Toluene-d8 (Surr)	100		% Recovery
4-Bromofluorobenzene (Surr)	98.8		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

Approved By:

Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61313

Date : 03/17/2008

Sample : **GP-1-1**

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00** Lab Number : 61313-20 Date Analyzed : 03/05/08

Matrix : Soil Sample Date : 02/28/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	< 1.0	1.0	mg/Kg
Toluene - d8 (Surr)	99.0		% Recovery
4-Bromofluorobenzene (Surr)	103		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

Approved By:

Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61313

Date : 03/17/2008

Sample : **GP-5WS**

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00** Lab Number : 61313-24 Date Analyzed : 03/04/08

Matrix : Water Sample Date : 02/28/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	< 50	50	ug/L
Toluene - d8 (Surr)	99.8		% Recovery
4-Bromofluorobenzene (Surr)	104		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

Approved By:

Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61313
Date : 03/17/2008

Sample : **GP-20-4**

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00** Lab Number : 61313-25 Date Analyzed : 03/05/08, 03/03/08

Matrix : Soil Sample Date : 02/28/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	< 1.0	1.0	mg/Kg
Dichlorodifluoromethane	< 0.0050	0.0050	mg/Kg
Chloromethane	< 0.0050	0.0050	mg/Kg
Vinyl Chloride	< 0.0050	0.0050	mg/Kg
Bromomethane	< 0.020	0.020	mg/Kg
Chloroethane	< 0.0050	0.0050	mg/Kg
Trichlorofluoromethane	< 0.0050	0.0050	mg/Kg
1,1-Dichloroethene	< 0.0050	0.0050	mg/Kg
Methylene Chloride	< 0.0050	0.0050	mg/Kg
trans-1,2-Dichloroethene	< 0.0050	0.0050	mg/Kg
1,1-Dichloroethane	< 0.0050	0.0050	mg/Kg
2,2-Dichloropropane	< 0.0050	0.0050	mg/Kg
cis-1,2-Dichloroethene	< 0.0050	0.0050	mg/Kg
Chloroform	< 0.0050	0.0050	mg/Kg
Bromochloromethane	< 0.0050	0.0050	mg/Kg
1,1,1-Trichloroethane	< 0.0050	0.0050	mg/Kg
1,1-Dichloropropene	< 0.0050	0.0050	mg/Kg
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg
Carbon Tetrachloride	< 0.0050	0.0050	mg/Kg
Benzene	< 0.0050	0.0050	mg/Kg
Trichloroethene	< 0.0050	0.0050	mg/Kg
1,2-Dichloropropane	< 0.0050	0.0050	mg/Kg
Bromodichloromethane	< 0.0050	0.0050	mg/Kg
Dibromomethane	< 0.0050	0.0050	mg/Kg
cis-1,3-Dichloropropene	< 0.0050	0.0050	mg/Kg
Toluene	< 0.0050	0.0050	mg/Kg
trans-1,3-Dichloropropene	< 0.0050	0.0050	mg/Kg
1,1,2-Trichloroethane	< 0.0050	0.0050	mg/Kg
1,3-Dichloropropane	< 0.0050	0.0050	mg/Kg
Tetrachloroethene	< 0.0050	0.0050	mg/Kg
Dibromochloromethane	< 0.0050	0.0050	mg/Kg
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg
Chlorobenzene	< 0.0050	0.0050	mg/Kg
1,1,1,2-Tetrachloroethane	< 0.0050	0.0050	mg/Kg
Ethylbenzene	< 0.0050	0.0050	mg/Kg
P,M-Xylene	< 0.0050	0.0050	mg/Kg
O-Xylene	< 0.0050	0.0050	mg/Kg
Styrene	< 0.0050	0.0050	mg/Kg

Parameter	Measured Value	MRL [1]	Units
Isopropyl benzene	< 0.0050	0.0050	mg/Kg
Bromoform	< 0.0050	0.0050	mg/Kg
1,1,2,2-Tetrachloroethane	< 0.0050	0.0050	mg/Kg
1,2,3-Trichloropropane	< 0.0050	0.0050	mg/Kg
n-Propylbenzene	< 0.0050	0.0050	mg/Kg
Bromobenzene	< 0.0050	0.0050	mg/Kg
1,3,5-Trimethylbenzene	< 0.0050	0.0050	mg/Kg
2+4-Chlorotoluene	< 0.0050	0.0050	mg/Kg
tert-Butylbenzene	< 0.0050	0.0050	mg/Kg
1,2,4-Trimethylbenzene	< 0.0050	0.0050	mg/Kg
sec-Butylbenzene	< 0.0050	0.0050	mg/Kg
p-Isopropyltoluene	< 0.0050	0.0050	mg/Kg
1,3-Dichlorobenzene	< 0.0050	0.0050	mg/Kg
1,4-Dichlorobenzene	< 0.0050	0.0050	mg/Kg
n-Butylbenzene	< 0.0050	0.0050	mg/Kg
1,2-Dichlorobenzene	< 0.0050	0.0050	mg/Kg
1,2-Dibromo-3-chloropropane	< 0.0050	0.0050	mg/Kg
1,2,4-Trichlorobenzene	< 0.0050	0.0050	mg/Kg
Hexachlorobutadiene	< 0.0050	0.0050	mg/Kg
Naphthalene	< 0.0050	0.0050	mg/Kg
1,2,3-Trichlorobenzene	< 0.0050	0.0050	mg/Kg
1,2-Dichloroethane-d4 (Surr)	103		% Recovery
Toluene-d8 (Surr)	101		% Recovery
4-Bromofluorobenzene (Surr)	99.7		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

Approved By:

Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61313
Date : 03/17/2008

Sample : **GP-20WS**

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00** Lab Number : 61313-29 Date Analyzed : 03/05/08, 03/04/08

Matrix : Water Sample Date : 02/28/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	< 50	50	ug/L
Dichlorodifluoromethane	< 0.50	0.50	ug/L
Chloromethane	< 0.50	0.50	ug/L
Vinyl Chloride	< 0.50	0.50	ug/L
Bromomethane	< 20	20	ug/L
Chloroethane	< 0.50	0.50	ug/L
Trichlorofluoromethane	< 0.50	0.50	ug/L
1,1-Dichloroethene	< 0.50	0.50	ug/L
Methylene Chloride	< 5.0	5.0	ug/L
trans-1,2-Dichloroethene	< 0.50	0.50	ug/L
1,1-Dichloroethane	< 0.50	0.50	ug/L
2,2-Dichloropropane	< 0.50	0.50	ug/L
cis-1,2-Dichloroethene	< 0.50	0.50	ug/L
Chloroform	< 0.50	0.50	ug/L
Bromochloromethane	< 0.50	0.50	ug/L
1,1,1-Trichloroethane	< 0.50	0.50	ug/L
1,1-Dichloropropene	< 0.50	0.50	ug/L
1,2-Dichloroethane	< 0.50	0.50	ug/L
Carbon Tetrachloride	< 0.50	0.50	ug/L
Benzene	< 0.50	0.50	ug/L
Trichloroethene	< 0.50	0.50	ug/L
1,2-Dichloropropane	< 0.50	0.50	ug/L
Bromodichloromethane	< 0.50	0.50	ug/L
Dibromomethane	< 0.50	0.50	ug/L
cis-1,3-Dichloropropene	< 0.50	0.50	ug/L
Toluene	< 0.50	0.50	ug/L
trans-1,3-Dichloropropene	< 0.50	0.50	ug/L
1,1,2-Trichloroethane	< 0.50	0.50	ug/L
1,3-Dichloropropane	< 0.50	0.50	ug/L
Tetrachloroethene	< 0.50	0.50	ug/L
Dibromochloromethane	< 0.50	0.50	ug/L
1,2-Dibromoethane	< 0.50	0.50	ug/L
Chlorobenzene	< 0.50	0.50	ug/L
1,1,1,2-Tetrachloroethane	< 0.50	0.50	ug/L
Ethylbenzene	< 0.50	0.50	ug/L
P,M-Xylene	< 1.0	1.0	ug/L
O-Xylene	< 0.50	0.50	ug/L
Styrene	< 0.50	0.50	ug/L

Parameter	Measured Value	MRL [1]	Units
Isopropyl benzene	< 0.50	0.50	ug/L
Bromoform	< 0.50	0.50	ug/L
1,1,2,2-Tetrachloroethane	< 0.50	0.50	ug/L
1,2,3-Trichloropropane	< 0.50	0.50	ug/L
n-Propylbenzene	< 0.50	0.50	ug/L
Bromobenzene	< 0.50	0.50	ug/L
1,3,5-Trimethylbenzene	< 0.50	0.50	ug/L
2+4-Chlorotoluene	< 1.0	1.0	ug/L
tert-Butylbenzene	< 0.50	0.50	ug/L
1,2,4-Trimethylbenzene	< 0.50	0.50	ug/L
sec-Butylbenzene	< 0.50	0.50	ug/L
p-Isopropyltoluene	< 0.50	0.50	ug/L
1,3-Dichlorobenzene	< 0.50	0.50	ug/L
1,4-Dichlorobenzene	< 0.50	0.50	ug/L
n-Butylbenzene	< 0.50	0.50	ug/L
1,2-Dichlorobenzene	< 0.50	0.50	ug/L
1,2-Dibromo-3-chloropropane	< 0.50	0.50	ug/L
1,2,4-Trichlorobenzene	< 0.50	0.50	ug/L
Hexachlorobutadiene	< 0.50	0.50	ug/L
Naphthalene	< 0.50	0.50	ug/L
1,2,3-Trichlorobenzene	< 0.50	0.50	ug/L
1,2-Dichloroethane-d4 (Surr)	98.6		% Recovery
Toluene-d8 (Surr)	99.6		% Recovery
4-Bromofluorobenzene (Surr)	96.2		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

Approved By:

Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61313

Date : 03/17/2008

QC Report : Method Blank Data

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	03/03/2008
TPH as Motor Oil	< 10	10	mg/Kg	M EPA 8015	03/03/2008
1-Chlorooctadecane (Diesel Surrogate)	79.9		%	M EPA 8015	03/03/2008
TPH as Diesel	< 50	50	ug/L	M EPA 8015	03/03/2008
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	03/03/2008
Octacosane (Diesel Surrogate)	110		%	M EPA 8015	03/03/2008
TPH as Diesel	< 50	50	ug/L	M EPA 8015	03/04/2008
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	03/04/2008
Octacosane (Diesel Surrogate)	105		%	M EPA 8015	03/04/2008
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	03/12/2008
TPH as Motor Oil	< 10	10	mg/Kg	M EPA 8015	03/12/2008
1-Chlorooctadecane (Diesel Surrogate)	78.0		%	M EPA 8015	03/12/2008
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	03/13/2008
TPH as Motor Oil	< 10	10	mg/Kg	M EPA 8015	03/13/2008
1-Chlorooctadecane (Diesel Surrogate)	85.9		%	M EPA 8015	03/13/2008
Dichlorodifluoromethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
Chloromethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
Vinyl Chloride	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
Bromomethane	< 0.020	0.020	mg/Kg	EPA 8260B	03/01/2008
Chloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
Trichlorofluoromethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
1,1-Dichloroethene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
Methylene Chloride	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
trans-1,2-Dichloroethene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
1,1-Dichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
2,2-Dichloropropane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
cis-1,2-Dichloroethene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
Chloroform	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
Bromochloromethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
1,1,1-Trichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
1,1-Dichloropropene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
Carbon Tetrachloride	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
Trichloroethene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
1,2-Dichloropropane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
Bromodichloromethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
Dibromomethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
cis-1,3-Dichloropropene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
trans-1,3-Dichloropropene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
1,1,2-Trichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
1,3-Dichloropropane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
Tetrachloroethene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
Dibromochloromethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
Chlorobenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
1,1,1,2-Tetrachloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
P,M-Xylene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
O-Xylene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
Styrene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
Isopropyl benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
Bromoform	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
1,1,2,2-Tetrachloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
1,2,3-Trichloropropane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
n-Propylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
Bromobenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
1,3,5-Trimethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
2+4-Chlorotoluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
tert-Butylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
1,2,4-Trimethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
sec-Butylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
p-Isopropyltoluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61313

Date : 03/17/2008

QC Report : Method Blank Data

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
1,3-Dichlorobenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
1,4-Dichlorobenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
n-Butylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
1,2-Dichlorobenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
1,2-Dibromo-3-chloropropane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
1,2,4-Trichlorobenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
Hexachlorobutadiene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
Naphthalene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
1,2,3-Trichlorobenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/01/2008
1,2-Dichloroethane-d4 (Surr)	98.2		%	EPA 8260B	03/01/2008
Toluene - d8 (Surr)	101		%	EPA 8260B	03/01/2008
4-Bromofluorobenzene (Surr)	101		%	EPA 8260B	03/01/2008
Dichlorodifluoromethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Chloromethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Vinyl Chloride	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Bromomethane	< 0.020	0.020	mg/Kg	EPA 8260B	03/03/2008
Chloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Trichlorofluoromethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,1-Dichloroethene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Methylene Chloride	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
trans-1,2-Dichloroethene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,1-Dichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
2,2-Dichloropropane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
cis-1,2-Dichloroethene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Chloroform	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Bromochloromethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,1,1-Trichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,1-Dichloropropene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Carbon Tetrachloride	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Trichloroethene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,2-Dichloropropane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Bromodichloromethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Dibromomethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
cis-1,3-Dichloropropene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
trans-1,3-Dichloropropene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,1,2-Trichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,3-Dichloropropane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Tetrachloroethene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Dibromochloromethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Chlorobenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,1,1,2-Tetrachloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
P,M-Xylene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
O-Xylene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Styrene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Isopropyl benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Bromoform	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,1,2,2-Tetrachloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,2,3-Trichloropropane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
n-Propylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Bromobenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,3,5-Trimethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
2+4-Chlorotoluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
tert-Butylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,2,4-Trimethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
sec-Butylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
p-Isopropyltoluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,3-Dichlorobenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,4-Dichlorobenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
n-Butylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,2-Dichlorobenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,2-Dibromo-3-chloropropane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,2,4-Trichlorobenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Hexachlorobutadiene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Naphthalene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61313

Date : 03/17/2008

QC Report : Method Blank Data

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
1,2,3-Trichlorobenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,2-Dichloroethane-d4 (Surr)	102		%	EPA 8260B	03/03/2008
Toluene - d8 (Surr)	100		%	EPA 8260B	03/03/2008
4-Bromofluorobenzene (Surr)	101		%	EPA 8260B	03/03/2008
Dichlorodifluoromethane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Chloromethane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Vinyl Chloride	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Bromomethane	< 20	20	ug/L	EPA 8260B	03/03/2008
Chloroethane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Trichlorofluoromethane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,1-Dichloroethene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Methylene Chloride	< 5.0	5.0	ug/L	EPA 8260B	03/03/2008
trans-1,2-Dichloroethene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,1-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
2,2-Dichloropropane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
cis-1,2-Dichloroethene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Chloroform	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Bromochloromethane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,1,1-Trichloroethane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,1-Dichloropropene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Carbon Tetrachloride	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Trichloroethene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,2-Dichloropropane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Bromodichloromethane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Dibromomethane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
cis-1,3-Dichloropropene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
trans-1,3-Dichloropropene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,1,2-Trichloroethane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,3-Dichloropropane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Tetrachloroethene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Dibromochloromethane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Chlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,1,1,2-Tetrachloroethane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
P,M-Xylene	< 1.0	1.0	ug/L	EPA 8260B	03/03/2008
O-Xylene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Styrene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Isopropyl benzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Bromoform	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,1,2,2-Tetrachloroethane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,2,3-Trichloropropane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
n-Propylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Bromobenzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,3,5-Trimethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
2+4-Chlorotoluene	< 1.0	1.0	ug/L	EPA 8260B	03/03/2008
tert-Butylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,2,4-Trimethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
sec-Butylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
p-Isopropyltoluene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,3-Dichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,4-Dichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
n-Butylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,2-Dichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,2-Dibromo-3-chloropropane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,2,4-Trichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Hexachlorobutadiene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,2,3-Trichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,2-Dichloroethane-d4 (Surr)	102		%	EPA 8260B	03/03/2008
Toluene - d8 (Surr)	101		%	EPA 8260B	03/03/2008
4-Bromofluorobenzene (Surr)	104		%	EPA 8260B	03/03/2008

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61313

Date : 03/17/2008

QC Report : Method Blank Data

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	03/04/2008
Toluene - d8 (Surr)	99.6		%	EPA 8260B	03/04/2008
4-Bromofluorobenzene (Surr)	96.4		%	EPA 8260B	03/04/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	03/04/2008
Toluene - d8 (Surr)	99.3		%	EPA 8260B	03/04/2008
4-Bromofluorobenzene (Surr)	95.8		%	EPA 8260B	03/04/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	03/05/2008
Dichlorodifluoromethane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Chloromethane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Vinyl Chloride	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Bromomethane	< 20	20	ug/L	EPA 8260B	03/03/2008
Chloroethane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Trichlorofluoromethane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,1-Dichloroethene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Methylene Chloride	< 5.0	5.0	ug/L	EPA 8260B	03/03/2008
trans-1,2-Dichloroethene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,1-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
2,2-Dichloropropane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
cis-1,2-Dichloroethene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Chloroform	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Bromochloromethane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,1,1-Trichloroethane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,1-Dichloropropene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Carbon Tetrachloride	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Trichloroethene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,2-Dichloropropane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Bromodichloromethane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Dibromomethane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
cis-1,3-Dichloropropene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
trans-1,3-Dichloropropene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,1,2-Trichloroethane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,3-Dichloropropane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Tetrachloroethene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Dibromochloromethane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Chlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,1,1,2-Tetrachloroethane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
P,M-Xylene	< 1.0	1.0	ug/L	EPA 8260B	03/03/2008
O-Xylene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Styrene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Isopropyl benzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Bromoform	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,1,2,2-Tetrachloroethane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,2,3-Trichloropropane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
n-Propylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Bromobenzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,3,5-Trimethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
2+4-Chlorotoluene	< 1.0	1.0	ug/L	EPA 8260B	03/03/2008
tert-Butylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,2,4-Trimethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
sec-Butylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
p-Isopropyltoluene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,3-Dichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,4-Dichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
n-Butylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,2-Dichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,2-Dibromo-3-chloropropane	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,2,4-Trichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Hexachlorobutadiene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,2,3-Trichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	03/03/2008
1,2-Dichloroethane-d4 (Surr)	98.5		%	EPA 8260B	03/03/2008
Toluene - d8 (Surr)	99.8		%	EPA 8260B	03/03/2008

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61313

Date : 03/17/2008

QC Report : Method Blank Data

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
4-Bromofluorobenzene (Surr)	99.8		%	EPA 8260B	03/03/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61313

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal**

Project Number : **77OT.43877.00**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
TPH as Diesel	61313-20	5.2	20.0	20.0	20.5	21.4	mg/Kg	M EPA 8015	3/3/08	81.4	85.2	4.55	60-140	25
TPH as Diesel	Blank	<50	1000	1000	1010	1000	ug/L	M EPA 8015	3/1/08	101	100	0.458	70-130	25
TPH as Diesel	Blank	<50	1000	1000	912	944	ug/L	M EPA 8015	3/4/08	91.2	94.4	3.40	70-130	25
TPH as Diesel	61426-07	260	20.0	20.0	251	255	mg/Kg	M EPA 8015	3/12/08	88.0	89.3	1.45	60-140	25
TPH as Diesel	61451-03	<1.0	20.0	20.0	19.9	19.9	mg/Kg	M EPA 8015	3/13/08	99.4	99.6	0.144	60-140	25
1,1-Dichloroethane	61241-01	<0.0050	0.0398	0.0398	0.0334	0.0354	mg/Kg	EPA 8260B	2/29/08	83.8	88.8	5.83	70-130	25
Benzene	61241-01	<0.0050	0.0398	0.0398	0.0320	0.0319	mg/Kg	EPA 8260B	2/29/08	80.3	80.1	0.222	70-130	25
1,2-Dichloroethane	61241-01	<0.0050	0.0398	0.0398	0.0313	0.0350	mg/Kg	EPA 8260B	2/29/08	78.5	88.0	11.4	70-130	25
Toluene	61241-01	<0.0050	0.0398	0.0398	0.0269	0.0259	mg/Kg	EPA 8260B	2/29/08	67.6	65.1	3.86	70-130	25
Chlorobenzene	61241-01	<0.0050	0.0398	0.0398	0.0220	0.0211	mg/Kg	EPA 8260B	2/29/08	55.2	52.9	4.28	70-130	25
Tert-Butanol	61241-01	<0.0050	0.199	0.199	0.163	0.163	mg/Kg	EPA 8260B	2/29/08	81.9	81.7	0.213	70-130	25
1,1-Dichloroethane	61268-06	<0.0050	0.0399	0.0393	0.0370	0.0364	mg/Kg	EPA 8260B	3/3/08	92.7	92.7	0.0562	70-130	25
Benzene	61268-06	<0.0050	0.0399	0.0393	0.0352	0.0350	mg/Kg	EPA 8260B	3/3/08	88.2	89.1	0.953	70-130	25
1,2-Dichloroethane	61268-06	<0.0050	0.0399	0.0393	0.0391	0.0389	mg/Kg	EPA 8260B	3/3/08	97.8	99.0	1.19	70-130	25
Toluene	61268-06	<0.0050	0.0399	0.0393	0.0332	0.0329	mg/Kg	EPA 8260B	3/3/08	83.2	83.8	0.757	70-130	25
Chlorobenzene	61268-06	<0.0050	0.0399	0.0393	0.0321	0.0308	mg/Kg	EPA 8260B	3/3/08	80.4	78.3	2.69	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61313

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal**

Project Number : **77OT.43877.00**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Tert-Butanol	61268-06	<0.0050	0.200	0.196	0.173	0.173	mg/Kg	EPA 8260B	3/3/08	86.8	88.2	1.62	70-130	25
Methyl-t-Butyl Ether	61268-06	<0.0050	0.0399	0.0393	0.0370	0.0383	mg/Kg	EPA 8260B	3/3/08	92.7	97.6	5.12	70-130	25
1,1-Dichloroethane	61340-01	<0.50	39.7	39.9	40.9	41.3	ug/L	EPA 8260B	3/3/08	103	103	0.278	70-130	25
Benzene	61340-01	<0.50	39.7	39.9	40.6	40.8	ug/L	EPA 8260B	3/3/08	102	102	0.00773	70-130	25
1,2-Dichloroethane	61340-01	<0.50	39.7	39.9	45.8	45.9	ug/L	EPA 8260B	3/3/08	115	115	0.517	70-130	25
Toluene	61340-01	<0.50	39.7	39.9	40.7	40.4	ug/L	EPA 8260B	3/3/08	102	101	1.46	70-130	25
Chlorobenzene	61340-01	<0.50	39.7	39.9	41.0	41.3	ug/L	EPA 8260B	3/3/08	103	103	0.235	70-130	25
Tert-Butanol	61340-01	5.8	198	200	201	203	ug/L	EPA 8260B	3/3/08	98.6	98.9	0.290	70-130	25
Benzene	61290-03	<0.0050	0.0392	0.0394	0.0396	0.0355	mg/Kg	EPA 8260B	3/4/08	101	90.1	11.4	70-130	25
Toluene	61290-03	<0.0050	0.0392	0.0394	0.0390	0.0347	mg/Kg	EPA 8260B	3/4/08	99.4	88.2	11.9	70-130	25
Methyl-t-Butyl Ether	61290-03	<0.0050	0.0392	0.0394	0.0329	0.0300	mg/Kg	EPA 8260B	3/4/08	83.9	76.1	9.72	70-130	25
1,1-Dichloroethane	61290-03	<0.0050	0.0392	0.0394	0.0376	0.0338	mg/Kg	EPA 8260B	3/4/08	96.0	85.7	11.3	70-130	25
1,2-Dichloroethane	61290-03	<0.0050	0.0392	0.0394	0.0360	0.0329	mg/Kg	EPA 8260B	3/4/08	91.8	83.5	9.53	70-130	25
Chlorobenzene	61290-03	<0.0050	0.0392	0.0394	0.0381	0.0349	mg/Kg	EPA 8260B	3/4/08	97.1	88.6	9.16	70-130	25
Tert-Butanol	61290-03	<0.0050	0.196	0.197	0.177	0.183	mg/Kg	EPA 8260B	3/4/08	90.3	92.8	2.73	70-130	25
Benzene	61290-05	<0.50	40.0	40.0	41.5	40.5	ug/L	EPA 8260B	3/4/08	104	101	2.56	70-130	25
Toluene	61290-05	<0.50	40.0	40.0	41.6	41.2	ug/L	EPA 8260B	3/4/08	104	103	0.956	70-130	25
1,1-Dichloroethane	61290-05	<0.50	40.0	40.0	42.1	40.8	ug/L	EPA 8260B	3/4/08	105	102	3.25	70-130	25
1,2-Dichloroethane	61290-05	<0.50	40.0	40.0	44.6	43.7	ug/L	EPA 8260B	3/4/08	112	109	2.12	70-130	25
Chlorobenzene	61290-05	<0.50	40.0	40.0	41.9	41.3	ug/L	EPA 8260B	3/4/08	105	103	1.32	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61313

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal**

Project Number : **77OT.43877.00**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Tert-Butanol	61290-05	6.5	200	200	209	206	ug/L	EPA 8260B	3/4/08	101	99.6	1.88	70-130	25
Methyl-t-Butyl Ether	61290-05	<0.50	40.0	40.0	40.4	40.4	ug/L	EPA 8260B	3/4/08	101	101	0.0714	70-130	25
1,1-Dichloroethane	61388-11	<0.50	39.6	39.9	38.3	38.9	ug/L	EPA 8260B	3/5/08	96.6	97.5	0.960	70-130	25
Benzene	61388-11	<0.50	39.6	39.9	40.5	41.1	ug/L	EPA 8260B	3/5/08	102	103	0.568	70-130	25
1,2-Dichloroethane	61388-11	<0.50	39.6	39.9	36.6	38.1	ug/L	EPA 8260B	3/5/08	92.5	95.4	3.10	70-130	25
Toluene	61388-11	2.2	39.6	39.9	40.6	41.1	ug/L	EPA 8260B	3/5/08	96.9	97.6	0.679	70-130	25
Chlorobenzene	61388-11	<0.50	39.6	39.9	41.7	42.1	ug/L	EPA 8260B	3/5/08	105	106	0.180	70-130	25
Tert-Butanol	61388-11	<5.0	198	200	196	194	ug/L	EPA 8260B	3/5/08	99.2	97.0	2.29	70-130	25
1,1-Dichloroethane	61349-04	<0.50	40.0	40.0	41.0	40.1	ug/L	EPA 8260B	3/3/08	102	100	2.17	70-130	25
Benzene	61349-04	2.8	40.0	40.0	44.0	42.9	ug/L	EPA 8260B	3/3/08	103	100	2.87	70-130	25
1,2-Dichloroethane	61349-04	<0.50	40.0	40.0	39.4	38.6	ug/L	EPA 8260B	3/3/08	98.6	96.4	2.25	70-130	25
Toluene	61349-04	<0.50	40.0	40.0	40.6	39.9	ug/L	EPA 8260B	3/3/08	102	99.7	1.88	70-130	25
Chlorobenzene	61349-04	3.4	40.0	40.0	44.7	44.3	ug/L	EPA 8260B	3/3/08	103	102	1.01	70-130	25
Tert-Butanol	61349-04	130	200	200	338	335	ug/L	EPA 8260B	3/3/08	103	102	1.62	70-130	25
Methyl-t-Butyl Ether	61349-04	10	40.0	40.0	49.2	48.7	ug/L	EPA 8260B	3/3/08	96.8	95.6	1.23	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61313

QC Report : Laboratory Control Sample (LCS)

Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal**

Project Number : **77OT.43877.00**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
TPH as Diesel	20.0	mg/Kg	M EPA 8015	3/3/08	85.5	70-130
TPH as Diesel	20.0	mg/Kg	M EPA 8015	3/12/08	84.0	70-130
TPH as Diesel	20.0	mg/Kg	M EPA 8015	3/13/08	87.2	70-130
1,1-Dichloroethane	0.0395	mg/Kg	EPA 8260B	2/29/08	100	70-130
Benzene	0.0395	mg/Kg	EPA 8260B	2/29/08	97.5	70-130
1,2-Dichloroethane	0.0395	mg/Kg	EPA 8260B	2/29/08	105	70-130
Toluene	0.0395	mg/Kg	EPA 8260B	2/29/08	95.7	70-130
Chlorobenzene	0.0395	mg/Kg	EPA 8260B	2/29/08	96.4	70-130
Tert-Butanol	0.198	mg/Kg	EPA 8260B	2/29/08	94.2	70-130
Methyl-t-Butyl Ether	0.0395	mg/Kg	EPA 8260B	2/29/08	93.1	70-130
1,1-Dichloroethane	0.0396	mg/Kg	EPA 8260B	3/3/08	85.7	70-130
Benzene	0.0396	mg/Kg	EPA 8260B	3/3/08	91.6	70-130
1,2-Dichloroethane	0.0396	mg/Kg	EPA 8260B	3/3/08	85.9	70-130
Toluene	0.0396	mg/Kg	EPA 8260B	3/3/08	91.2	70-130
Chlorobenzene	0.0396	mg/Kg	EPA 8260B	3/3/08	95.0	70-130
Tert-Butanol	0.198	mg/Kg	EPA 8260B	3/3/08	82.4	70-130
Methyl-t-Butyl Ether	0.0396	mg/Kg	EPA 8260B	3/3/08	85.5	70-130

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61313

QC Report : Laboratory Control Sample (LCS)

Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal**

Project Number : **77OT.43877.00**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
1,1-Dichloroethane	40.0	ug/L	EPA 8260B	3/3/08	104	70-130
Benzene	40.0	ug/L	EPA 8260B	3/3/08	103	70-130
1,2-Dichloroethane	40.0	ug/L	EPA 8260B	3/3/08	114	70-130
Toluene	40.0	ug/L	EPA 8260B	3/3/08	104	70-130
Chlorobenzene	40.0	ug/L	EPA 8260B	3/3/08	105	70-130
Tert-Butanol	200	ug/L	EPA 8260B	3/3/08	100	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	3/3/08	104	70-130
Benzene	0.0387	mg/Kg	EPA 8260B	3/4/08	96.0	70-130
Toluene	0.0387	mg/Kg	EPA 8260B	3/4/08	95.0	70-130
Methyl-t-Butyl Ether	0.0387	mg/Kg	EPA 8260B	3/4/08	76.7	70-130
1,1-Dichloroethane	0.0387	mg/Kg	EPA 8260B	3/4/08	91.2	70-130
1,2-Dichloroethane	0.0387	mg/Kg	EPA 8260B	3/4/08	85.4	70-130
Chlorobenzene	0.0387	mg/Kg	EPA 8260B	3/4/08	93.3	70-130
Tert-Butanol	0.193	mg/Kg	EPA 8260B	3/4/08	91.1	70-130
Benzene	40.0	ug/L	EPA 8260B	3/4/08	104	70-130
Toluene	40.0	ug/L	EPA 8260B	3/4/08	103	70-130
1,1-Dichloroethane	40.0	ug/L	EPA 8260B	3/4/08	98.4	70-130
1,2-Dichloroethane	40.0	ug/L	EPA 8260B	3/4/08	88.6	70-130
Chlorobenzene	40.0	ug/L	EPA 8260B	3/4/08	101	70-130

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61313

QC Report : Laboratory Control Sample (LCS)

Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal**

Project Number : **77OT.43877.00**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Tert-Butanol	200	ug/L	EPA 8260B	3/4/08	98.4	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	3/4/08	82.4	70-130
1,1-Dichloroethane	40.0	ug/L	EPA 8260B	3/5/08	91.4	70-130
Benzene	40.0	ug/L	EPA 8260B	3/5/08	98.0	70-130
1,2-Dichloroethane	40.0	ug/L	EPA 8260B	3/5/08	88.5	70-130
Toluene	40.0	ug/L	EPA 8260B	3/5/08	97.6	70-130
Chlorobenzene	40.0	ug/L	EPA 8260B	3/5/08	101	70-130
Tert-Butanol	200	ug/L	EPA 8260B	3/5/08	91.4	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	3/5/08	94.6	70-130
1,1-Dichloroethane	40.0	ug/L	EPA 8260B	3/3/08	100	70-130
Benzene	40.0	ug/L	EPA 8260B	3/3/08	101	70-130
1,2-Dichloroethane	40.0	ug/L	EPA 8260B	3/3/08	98.9	70-130
Toluene	40.0	ug/L	EPA 8260B	3/3/08	101	70-130
Chlorobenzene	40.0	ug/L	EPA 8260B	3/3/08	100	70-130
Tert-Butanol	200	ug/L	EPA 8260B	3/3/08	102	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	3/3/08	97.3	70-130

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

March 06, 2008

CLS Work Order #: CRB1001
COC #: 61313

Troy Turpen
KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project Name: Tesoro Pittsburg Terminal Phase II

Enclosed are the results of analyses for samples received by the laboratory on 02/29/08 08:18. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

James Liang, Ph.D.
Laboratory Director

CA DOHS ELAP Accreditation/Registration number 1233

CALIFORNIA LABORATORY SERVICES

KIFF Analytical	Project: Tesoro Pittsburg Terminal Phase II	
2795 Second St. Suite 300	Project Number: 77OT.43877.00	**CLS Work Order #: CRB1001**
Davis, CA 95616	Project Manager: Troy Turpen	COC #: 61313

Revised COC

KIFF Analytical LLC

2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

California Lab Services
3249 Fitzgerald Rd
Rancho Cordova, CA 95742
Tel.: (916) 638-7301 COC# 61313 Page 1 of 1

Project Contact (Hardcopy or PDF to): Troy Turpen
Company/Address: Kiff Analytical, LLC
Phone No.: FAX No.:
Project Number: 77OT.43877.00 P.O. No.: 61313
Project Name: Tesoro Pittsburg Terminal Phase II
Project Address:

EDF Report? __ Yes _X_ No

Recommended but not mandatory to complete this section:
Sampling Company Log Code:
Global ID:
EDF Deliverable to (Email Address):
E-mail address: inbox@kiffanalytical.com

Chain-of-Custody Record and Analysis Request

Sample Designation	Sampling Date	Sampling Time	Container: VCA	Container: Poly	Container: Sleeve	Container: Amber	Container: Glass Jar	Preservative: HNO_3	Preservative: H_2SO_4	Preservative: $Na_2S_2O_3$	Preservative: ZnAc$_2$ & NaOH	Preservative: NONE	Matrix: WATER	Matrix: SOIL	Matrix: Air	Analysis Request: Dissolved Metals (EPA 6020)* **	Analysis Request: Dissolved Metals (EPA 6020)* ***	Date due: March 6, 2008	For Lab Use Only
GP-1WS	02/28/08	1105		1								1	X			X		X	
GP-4WS	02/28/08	1240		1								1	X				X	X	
GP-19WS	02/28/08	800		1								1	X				X	X	
GP-14WS	02/28/08	940		1								1	X				X	X	
GP-5WS	02/28/08	1445		1								1	X			X		X	
GP-20WS	02/28/08	1600		1								1	X			X		X	

Relinquished by:	Date	Time	Received by:	Remarks: *Please Lab Filter and Preserve. **As,Ni,Ba,V,Cu,Zn ***As, Ni,Ba,V,Cu,Zn, Pb
Relinquished by:	Date	Time	Received by:	
Relinquished by:	Date	Time	Received by Laboratory:	Bill to: Accounts Payable

KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project: Tesoro Pittsburg Terminal Phase II
Project Number: 77OT.43877.00 **CLS Work Order #: CRB1001**
Project Manager: Troy Turpen COC #: 61313

Metals by EPA 6000/7000 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
GP-1WS (CRB1001-01) Water Sampled: 02/28/08 11:05 Received: 02/29/08 08:18									
Arsenic	ND	5.0	µg/L	1	CR01749	03/03/08	03/03/08	EPA 6020/7000	
Barium	**20**	10	"	"	"	"	"	"	
Copper	**7.9**	2.0	"	"	"	"	"	"	
Nickel	**6.8**	2.0	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	
GP-4WS (CRB1001-02) Water Sampled: 02/28/08 12:40 Received: 02/29/08 08:18									
Arsenic	**10**	5.0	µg/L	1	CR01749	03/03/08	03/03/08	EPA 6020/7000	
Barium	**24**	10	"	"	"	"	"	"	
Copper	**13**	2.0	"	"	"	"	"	"	
Lead	ND	5.0	"	"	"	"	"	"	
Nickel	**15**	2.0	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	
GP-19WS (CRB1001-03) Water Sampled: 02/28/08 08:00 Received: 02/29/08 08:18									
Arsenic	ND	5.0	µg/L	1	CR01749	03/03/08	03/03/08	EPA 6020/7000	
Barium	**27**	10	"	"	"	"	"	"	
Copper	**5.5**	2.0	"	"	"	"	"	"	
Lead	ND	5.0	"	"	"	"	"	"	
Nickel	**3.8**	2.0	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	

KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project: Tesoro Pittsburg Terminal Phase II
Project Number: 77OT.43877.00
Project Manager: Troy Turpen

CLS Work Order #: CRB1001
COC #: 61313

Metals by EPA 6000/7000 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
GP-14WS (CRB1001-04) Water Sampled: 02/28/08 09:40 Received: 02/29/08 08:18									
Arsenic	ND	5.0	µg/L	1	CR01749	03/03/08	03/03/08	EPA 6020/7000	
Barium	**17**	10	"	"	"	"	"	"	
Copper	**5.7**	2.0	"	"	"	"	"	"	
Lead	ND	5.0	"	"	"	"	"	"	
Nickel	**3.2**	2.0	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	
GP-5WS (CRB1001-05) Water Sampled: 02/28/08 14:45 Received: 02/29/08 08:18									
Arsenic	**9.4**	5.0	µg/L	1	CR01749	03/03/08	03/03/08	EPA 6020/7000	
Barium	**74**	10	"	"	"	"	"	"	
Copper	**14**	2.0	"	"	"	"	"	"	
Nickel	**11**	2.0	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	
GP-20WS (CRB1001-06) Water Sampled: 02/28/08 16:00 Received: 02/29/08 08:18									
Arsenic	**11**	5.0	µg/L	1	CR01749	03/03/08	03/03/08	EPA 6020/7000	
Barium	**16**	10	"	"	"	"	"	"	
Copper	**4.5**	2.0	"	"	"	"	"	"	
Nickel	**5.1**	2.0	"	"	"	"	"	"	
Vanadium	**460**	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	

KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project: Tesoro Pittsburg Terminal Phase II
Project Number: 77OT.43877.00 **CLS Work Order #: CRB1001**
Project Manager: Troy Turpen COC #: 61313

Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CR01749 - EPA 3020A										
Blank (CR01749-BLK1)				Prepared & Analyzed: 03/03/08						
Arsenic	ND	5.0	µg/L							
Barium	ND	10	"							
Copper	ND	2.0	"							
Lead	ND	5.0	"							
Nickel	ND	2.0	"							
Vanadium	ND	20	"							
Zinc	ND	20	"							
LCS (CR01749-BS1)				Prepared & Analyzed: 03/03/08						
Arsenic	99.7	5.0	µg/L	100		99.7	80-120			
Barium	104	10	"	100		104	80-120			
Copper	106	2.0	"	100		106	80-120			
Lead	105	5.0	"	100		105	80-120			
Nickel	102	2.0	"	100		102	80-120			
Vanadium	108	20	"	100		108	80-120			
Zinc	103	20	"	100		103	80-120			
LCS Dup (CR01749-BSD1)				Prepared & Analyzed: 03/03/08						
Arsenic	104	5.0	µg/L	100		104	80-120	4.14	20	
Barium	106	10	"	100		106	80-120	2.45	20	
Copper	108	2.0	"	100		108	80-120	2.39	20	
Lead	109	5.0	"	100		109	80-120	3.53	20	
Nickel	105	2.0	"	100		105	80-120	2.78	20	
Vanadium	112	20	"	100		112	80-120	3.11	20	
Zinc	106	20	"	100		106	80-120	3.23	20	
Matrix Spike (CR01749-MS1)		**Source: CRB1020-01**		Prepared & Analyzed: 03/03/08						
Arsenic	113	5.0	µg/L	100	9.38	104	75-125			
Barium	555	10	"	100	444	110	75-125			
Copper	106	2.0	"	100	14.6	91.9	75-125			
Lead	110	5.0	"	100	1.20	108	75-125			
Nickel	90.6	2.0	"	100	0.800	89.8	75-125			

KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project: Tesoro Pittsburg Terminal Phase II
Project Number: 77OT.43877.00
Project Manager: Troy Turpen

CLS Work Order #: CRB1001
COC #: 61313

Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CR01749 - EPA 3020A										
Matrix Spike (CR01749-MS1)		**Source: CRB1020-01**		Prepared & Analyzed: 03/03/08						
Vanadium	122	20	µg/L	100	19.3	103	75-125			
Zinc	98.1	20	"	100	4.19	93.9	75-125			
Matrix Spike Dup (CR01749-MSD1)		**Source: CRB1020-01**		Prepared & Analyzed: 03/03/08						
Arsenic	113	5.0	µg/L	100	9.38	104	75-125	0.0530	25	
Barium	551	10	"	100	444	107	75-125	0.562	25	
Copper	106	2.0	"	100	14.6	91.0	75-125	0.820	25	
Lead	112	5.0	"	100	1.20	111	75-125	1.85	25	
Nickel	90.0	2.0	"	100	0.800	89.2	75-125	0.631	25	
Vanadium	122	20	"	100	19.3	103	75-125	0.0246	25	
Zinc	97.3	20	"	100	4.19	93.1	75-125	0.819	25	

KIFF Analytical	Project: Tesoro Pittsburg Terminal Phase II	
2795 Second St. Suite 300	Project Number: 77OT.43877.00	**CLS Work Order #: CRB1001**
Davis, CA 95616	Project Manager: Troy Turpen	COC #: 61313

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Calscience Environmental Laboratories, Inc.

March 06, 2008

Joel Kiff
Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Subject: **Calscience Work Order No.: 08-03-0021**
Client Reference: Tesoro Pittsburg Terminal Phase II

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 3/1/2008 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Amanda Porter

Calscience Environmental
Laboratories, Inc.
Amanda Porter
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 03/01/08
Work Order No: 08-03-0021
Preparation: EPA 3050B
Method: EPA 6020
Units: mg/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-4-1	**08-03-0021-4-A**	**02/28/08 10:35**	**Solid**	**ICP/MS A**	**03/04/08**	**03/05/08 00:07**	**080304L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	10.1	0.200	1		Nickel	22.6	0.100	1	
Barium	98.0	0.100	1		Vanadium	49.8	0.100	1	
Copper	23.2	0.100	1		Zinc	45.1	1.00	1	B
Lead	6.48	0.100	1						

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-5-1	**08-03-0021-10-A**	**02/28/08 14:00**	**Solid**	**ICP/MS A**	**03/04/08**	**03/05/08 00:11**	**080304L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	5.34	0.200	1		Nickel	65.7	0.100	1	
Barium	255	0.100	1		Vanadium	41.4	0.100	1	
Copper	22.6	0.100	1		Zinc	48.2	1.00	1	B

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-14-1	**08-03-0021-15-A**	**02/28/08 08:40**	**Solid**	**ICP/MS A**	**03/04/08**	**03/05/08 00:15**	**080304L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	10.6	0.200	1		Nickel	28.9	0.100	1	
Barium	220	0.100	1		Vanadium	38.6	0.100	1	
Copper	128	0.100	1		Zinc	1040	1.00	1	B
Lead	674	0.100	1						

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-1-1	**08-03-0021-20-A**	**02/28/08 09:45**	**Solid**	**ICP/MS A**	**03/04/08**	**03/05/08 00:20**	**080304L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	4.48	0.200	1		Nickel	20.8	0.100	1	
Barium	157	0.100	1		Vanadium	39.8	0.100	1	
Copper	19.7	0.100	1		Zinc	43.3	1.00	1	B

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-20-4	**08-03-0021-25-A**	**02/28/08 15:20**	**Solid**	**ICP/MS A**	**03/04/08**	**03/05/08 00:24**	**080304L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	3.24	0.200	1		Nickel	28.9	0.100	1	
Barium	139	0.100	1		Vanadium	64.4	0.100	1	
Copper	20.5	0.100	1		Zinc	45.5	1.00	1	B

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	03/01/08
2795 2nd Street, Suite 300		Work Order No:	08-03-0021
Davis, CA 95616-6593		Preparation:	EPA 3050B
		Method:	EPA 6020
		Units:	mg/kg
Project: Tesoro Pittsburg Terminal Phase II			Page 2 of 2

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**096-10-002-1,050**	**N/A**	**Solid**	**ICP/MS A**	**03/04/08**	**03/04/08 23:16**	**080304L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	ND	0.200	1		Nickel	ND	0.100	1	
Barium	ND	0.100	1		Vanadium	ND	0.100	1	
Copper	ND	0.100	1		Zinc	1.30	1.00	1	
Lead	ND	0.100	1						

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	03/01/08
2795 2nd Street, Suite 300		Work Order No:	08-03-0021
Davis, CA 95616-6593		Preparation:	EPA 3510B
		Method:	EPA 8270C
		Units:	ug/L

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-19WS	**08-03-0021-14-A**	**02/28/08 08:00**	**Aqueous**	**GC/MS P**	**03/03/08**	**03/05/08 02:16**	**080303L08**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	10	1		Benzo (a) Anthracene	ND	10	1	
Acenaphthylene	ND	10	1		Chrysene	ND	10	1	
Acenaphthene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (b) Fluoranthene	ND	10	1	
Pentachlorophenol	21	10	1		Benzo (a) Pyrene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Anthracene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Fluoranthene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Pyrene	ND	10	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	63	7-121		Phenol-d6	39	1-127	
Nitrobenzene-d5	98	50-146		2-Fluorobiphenyl	65	42-138	
2,4,6-Tribromophenol	109	41-137		p-Terphenyl-d14	144	47-173	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-14WS	**08-03-0021-19-B**	**02/28/08 09:40**	**Aqueous**	**GC/MS P**	**03/03/08**	**03/05/08 02:49**	**080303L08**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	10	1		Benzo (a) Anthracene	ND	10	1	
Acenaphthylene	ND	10	1		Chrysene	ND	10	1	
Acenaphthene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (b) Fluoranthene	ND	10	1	
Pentachlorophenol	ND	10	1		Benzo (a) Pyrene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Anthracene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Fluoranthene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Pyrene	ND	10	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	61	7-121		Phenol-d6	37	1-127	
Nitrobenzene-d5	103	50-146		2-Fluorobiphenyl	98	42-138	
2,4,6-Tribromophenol	104	41-137		p-Terphenyl-d14	148	47-173	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	03/01/08
2795 2nd Street, Suite 300		Work Order No:	08-03-0021
Davis, CA 95616-6593		Preparation:	EPA 3510B
		Method:	EPA 8270C
		Units:	ug/L

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-20WS	**08-03-0021-29-B**	**02/28/08 16:00**	**Aqueous**	**GC/MS P**	**03/03/08**	**03/05/08 03:23**	**080303L08**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	10	1		Benzo (a) Anthracene	ND	10	1	
Acenaphthylene	ND	10	1		Chrysene	ND	10	1	
Acenaphthene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (b) Fluoranthene	ND	10	1	
Pentachlorophenol	ND	10	1		Benzo (a) Pyrene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Anthracene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Fluoranthene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Pyrene	ND	10	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	65	7-121		Phenol-d6	43	1-127	
Nitrobenzene-d5	102	50-146		2-Fluorobiphenyl	111	42-138	
2,4,6-Tribromophenol	109	41-137		p-Terphenyl-d14	141	47-173	

Method Blank	**095-01-003-2,354**	**N/A**	**Aqueous**	**GC/MS P**	**03/03/08**	**03/04/08 18:17**	**080303L08**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	10	1		Benzo (a) Anthracene	ND	10	1	
Acenaphthylene	ND	10	1		Chrysene	ND	10	1	
Acenaphthene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (b) Fluoranthene	ND	10	1	
Pentachlorophenol	ND	10	1		Benzo (a) Pyrene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Anthracene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Fluoranthene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Pyrene	ND	10	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	46	7-121		Phenol-d6	27	1-127	
Nitrobenzene-d5	96	50-146		2-Fluorobiphenyl	109	42-138	
2,4,6-Tribromophenol	95	41-137		p-Terphenyl-d14	137	47-173	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	03/01/08
2795 2nd Street, Suite 300		Work Order No:	08-03-0021
Davis, CA 95616-6593		Preparation:	EPA 3510C
		Method:	EPA 8310
		Units:	ug/L

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-1WS	**08-03-0021-7-B**	**02/28/08 11:05**	**Aqueous**	**HPLC 5**	**03/03/08**	**03/04/08 13:19**	**080303L09**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	1.0	1		Benzo (a) Anthracene	ND	1.0	1	
Acenaphthylene	ND	1.0	1		Chrysene	ND	1.0	1	
Acenaphthene	ND	1.0	1		Benzo (b) Fluoranthene	ND	1.0	1	
Fluorene	ND	1.0	1		Benzo (k) Fluoranthene	ND	1.0	1	
Phenanthrene	ND	1.0	1		Benzo (a) Pyrene	ND	0.20	1	
Anthracene	ND	1.0	1		Dibenz (a,h) Anthracene	ND	1.0	1	
Fluoranthene	ND	1.0	1		Benzo (g,h,i) Perylene	ND	1.0	1	
Pyrene	ND	1.0	1		Indeno (1,2,3-c,d) Pyrene	ND	1.0	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	60	40-160	

GP-4WS	08-03-0021-9-A	02/28/08 12:40	Aqueous	HPLC 5	03/03/08	03/04/08 13:52	080303L09

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	1.1	1.11		Benzo (a) Anthracene	ND	1.1	1.11	
Acenaphthylene	ND	1.1	1.11		Chrysene	ND	1.1	1.11	
Acenaphthene	ND	1.1	1.11		Benzo (b) Fluoranthene	ND	1.1	1.11	
Fluorene	ND	1.1	1.11		Benzo (k) Fluoranthene	ND	1.1	1.11	
Phenanthrene	ND	1.1	1.11		Benzo (a) Pyrene	ND	0.22	1.11	
Anthracene	ND	1.1	1.11		Dibenz (a,h) Anthracene	ND	1.1	1.11	
Fluoranthene	ND	1.1	1.11		Benzo (g,h,i) Perylene	ND	1.1	1.11	
Pyrene	ND	1.1	1.11		Indeno (1,2,3-c,d) Pyrene	ND	1.1	1.11	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	66	40-160	

GP-5WS	08-03-0021-24-A	02/28/08 14:45	Aqueous	HPLC 5	03/03/08	03/04/08 14:24	080303L09

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	1.0	1		Benzo (a) Anthracene	ND	1.0	1	
Acenaphthylene	ND	1.0	1		Chrysene	ND	1.0	1	
Acenaphthene	ND	1.0	1		Benzo (b) Fluoranthene	ND	1.0	1	
Fluorene	ND	1.0	1		Benzo (k) Fluoranthene	ND	1.0	1	
Phenanthrene	ND	1.0	1		Benzo (a) Pyrene	ND	0.20	1	
Anthracene	ND	1.0	1		Dibenz (a,h) Anthracene	ND	1.0	1	
Fluoranthene	ND	1.0	1		Benzo (g,h,i) Perylene	ND	1.0	1	
Pyrene	ND	1.0	1		Indeno (1,2,3-c,d) Pyrene	ND	1.0	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	61	40-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	03/01/08
2795 2nd Street, Suite 300		Work Order No:	08-03-0021
Davis, CA 95616-6593		Preparation:	EPA 3510C
		Method:	EPA 8310
		Units:	ug/L

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-07-003-1,086**	**N/A**	**Aqueous**	**HPLC 5**	**03/03/08**	**03/03/08 23:01**	**080303L09**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	1.0	1		Benzo (a) Anthracene	ND	1.0	1	
Acenaphthylene	ND	1.0	1		Chrysene	ND	1.0	1	
Acenaphthene	ND	1.0	1		Benzo (b) Fluoranthene	ND	1.0	1	
Fluorene	ND	1.0	1		Benzo (k) Fluoranthene	ND	1.0	1	
Phenanthrene	ND	1.0	1		Benzo (a) Pyrene	ND	0.20	1	
Anthracene	ND	1.0	1		Dibenz (a,h) Anthracene	ND	1.0	1	
Fluoranthene	ND	1.0	1		Benzo (g,h,i) Perylene	ND	1.0	1	
Pyrene	ND	1.0	1		Indeno (1,2,3-c,d) Pyrene	ND	1.0	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	83	40-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	03/01/08
2795 2nd Street, Suite 300		Work Order No:	08-03-0021
Davis, CA 95616-6593		Preparation:	EPA 3545
		Method:	EPA 8310
		Units:	ug/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-4-1	**08-03-0021-4-A**	**02/28/08 10:35**	**Solid**	**HPLC 5**	**03/03/08**	**03/04/08 02:49**	**080303L07**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	15	1		Benzo (a) Anthracene	ND	10	1	
Acenaphthylene	ND	30	1		Chrysene	ND	10	1	
Acenaphthene	ND	15	1		Benzo (b) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
Anthracene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Fluoranthene	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Pyrene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	53	40-160	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-5-1	**08-03-0021-10-A**	**02/28/08 14:00**	**Solid**	**HPLC 5**	**03/03/08**	**03/04/08 03:21**	**080303L07**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	15	1		Benzo (a) Anthracene	ND	10	1	
Acenaphthylene	ND	30	1		Chrysene	ND	10	1	
Acenaphthene	ND	15	1		Benzo (b) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (a) Pyrene	12	10	1	
Anthracene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Fluoranthene	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Pyrene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	59	40-160	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-1-1	**08-03-0021-20-A**	**02/28/08 09:45**	**Solid**	**HPLC 5**	**03/03/08**	**03/03/08 22:28**	**080303L07**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	15	1		Benzo (a) Anthracene	ND	10	1	
Acenaphthylene	ND	30	1		Chrysene	ND	10	1	
Acenaphthene	ND	15	1		Benzo (b) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
Anthracene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Fluoranthene	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Pyrene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	53	40-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical	Date Received:	03/01/08
2795 2nd Street, Suite 300	Work Order No:	08-03-0021
Davis, CA 95616-6593	Preparation:	EPA 3545
	Method:	EPA 8310
	Units:	ug/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-07-002-1,003**	**N/A**	**Solid**	**HPLC 5**	**03/03/08**	**03/03/08 18:40**	**080303L07**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	15	1		Benzo (a) Anthracene	ND	10	1	
Acenaphthylene	ND	30	1		Chrysene	ND	10	1	
Acenaphthene	ND	15	1		Benzo (b) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
Anthracene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Fluoranthene	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Pyrene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	82	40-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	03/01/08
2795 2nd Street, Suite 300		Work Order No:	08-03-0021
Davis, CA 95616-6593		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-14-1	**08-03-0021-15-A**	**02/28/08 08:40**	**Solid**	**GC/MS P**	**03/03/08**	**03/05/08 04:31**	**080303L14**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	0.50	1		Benzo (a) Anthracene	ND	0.50	1	
Acenaphthylene	ND	0.50	1		Chrysene	ND	0.50	1	
Acenaphthene	ND	0.50	1		Benzo (k) Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1		Benzo (b) Fluoranthene	ND	0.50	1	
Pentachlorophenol	ND	2.5	1		Benzo (a) Pyrene	ND	0.50	1	
Phenanthrene	ND	0.50	1		Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Anthracene	ND	0.50	1		Dibenz (a,h) Anthracene	ND	0.50	1	
Fluoranthene	ND	0.50	1		Benzo (g,h,i) Perylene	ND	0.50	1	
Pyrene	ND	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	119	42-120		Phenol-d6	113	46-118	
Nitrobenzene-d5	104	42-150		2-Fluorobiphenyl	125	38-134	
2,4,6-Tribromophenol	108	36-132		p-Terphenyl-d14	141	35-167	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-20-4	**08-03-0021-25-A**	**02/28/08 15:20**	**Solid**	**GC/MS P**	**03/03/08**	**03/06/08 00:49**	**080303L14**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	0.50	1		Benzo (a) Anthracene	ND	0.50	1	
Acenaphthylene	ND	0.50	1		Chrysene	ND	0.50	1	
Acenaphthene	ND	0.50	1		Benzo (k) Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1		Benzo (b) Fluoranthene	ND	0.50	1	
Pentachlorophenol	ND	2.5	1		Benzo (a) Pyrene	ND	0.50	1	
Phenanthrene	ND	0.50	1		Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Anthracene	ND	0.50	1		Dibenz (a,h) Anthracene	ND	0.50	1	
Fluoranthene	ND	0.50	1		Benzo (g,h,i) Perylene	ND	0.50	1	
Pyrene	ND	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	89	42-120		Phenol-d6	86	46-118	
Nitrobenzene-d5	82	42-150		2-Fluorobiphenyl	65	38-134	
2,4,6-Tribromophenol	86	36-132		p-Terphenyl-d14	122	35-167	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	03/01/08
2795 2nd Street, Suite 300		Work Order No:	08-03-0021
Davis, CA 95616-6593		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-549-301**	**N/A**	**Solid**	**GC/MS P**	**03/03/08**	**03/04/08 18:51**	**080303L14**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	0.50	1		Benzo (a) Anthracene	ND	0.50	1	
Acenaphthylene	ND	0.50	1		Chrysene	ND	0.50	1	
Acenaphthene	ND	0.50	1		Benzo (k) Fluoranthene	ND	0.50	1	
Fluorene	ND	0.50	1		Benzo (b) Fluoranthene	ND	0.50	1	
Pentachlorophenol	ND	2.5	1		Benzo (a) Pyrene	ND	0.50	1	
Phenanthrene	ND	0.50	1		Indeno (1,2,3-c,d) Pyrene	ND	0.50	1	
Anthracene	ND	0.50	1		Dibenz (a,h) Anthracene	ND	0.50	1	
Fluoranthene	ND	0.50	1		Benzo (g,h,i) Perylene	ND	0.50	1	
Pyrene	ND	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	89	42-120		Phenol-d6	86	46-118	
Nitrobenzene-d5	88	42-150		2-Fluorobiphenyl	102	38-134	
2,4,6-Tribromophenol	80	36-132		p-Terphenyl-d14	117	35-167	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 03/01/08
Work Order No: 08-03-0021
Preparation: EPA 3050B
Method: EPA 6020

Project Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
GP-5-1	**Solid**	**ICP/MS A**	**03/04/08**	**03/04/08**	**080304S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	101	102	72-132	1	0-13	
Barium	4X	4X	50-152	4X	0-41	Q
Copper	100	110	25-157	5	0-22	
Lead	100	100	62-134	0	0-23	
Nickel	92	117	46-154	7	0-15	
Vanadium	124	134	28-178	4	0-28	
Zinc	101	123	23-173	7	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - PDS / PDSD

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical		Date Received	03/01/08
2795 2nd Street, Suite 300		Work Order No:	08-03-0021
Davis, CA 95616-6593		Preparation:	EPA 3050B
		Method:	EPA 6020

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
GP-5-1	**Solid**	**ICP/MS A**	**03/04/08**	**03/04/08**	**080304S01**

Parameter	PDS %REC	PDSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	110	112	75-125	2	0-13	
Barium	4X	4X	75-125	4X	0-41	Q
Copper	99	103	75-125	2	0-22	
Lead	104	105	75-125	1	0-23	
Nickel	106	114	75-125	2	0-15	
Vanadium	111	121	75-125	4	0-28	
Zinc	95	109	75-125	5	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 03/01/08
Work Order No: 08-03-0021
Preparation: EPA 3545
Method: EPA 8310

Project Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-02-1943-10	**Solid**	**HPLC 5**	**03/03/08**	**03/03/08**	**080303S07**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Naphthalene	90	85	40-160	6	0-20	
Acenaphthylene	84	85	40-160	0	0-20	
Acenaphthene	85	86	40-160	1	0-20	
Fluorene	85	85	40-160	0	0-20	
Phenanthrene	85	85	40-160	0	0-20	
Anthracene	75	75	40-160	0	0-20	
Fluoranthene	86	87	40-160	0	0-20	
Pyrene	88	89	40-160	0	0-20	
Benzo (a) Anthracene	86	86	40-160	1	0-20	
Chrysene	93	93	40-160	0	0-20	
Benzo (b) Fluoranthene	90	90	40-160	0	0-20	
Benzo (k) Fluoranthene	88	88	40-160	0	0-20	
Benzo (a) Pyrene	92	92	40-160	0	0-20	
Dibenz (a,h) Anthracene	85	85	40-160	0	0-20	
Benzo (g,h,i) Perylene	87	87	40-160	0	0-20	
Indeno (1,2,3-c,d) Pyrene	86	86	40-160	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 03/01/08
Work Order No: 08-03-0021
Preparation: EPA 3545
Method: EPA 8270C

Project Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
GP-20-4	**Solid**	**GC/MS P**	**03/03/08**	**03/06/08**	**080303S14**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Phenol	92	96	57-123	4	0-16	
2-Chlorophenol	91	95	57-111	4	0-17	
1,4-Dichlorobenzene	84	88	49-127	5	0-20	
N-Nitroso-di-n-propylamine	82	86	54-144	5	0-17	
1,2,4-Trichlorobenzene	82	90	42-132	9	0-20	
4-Chloro-3-Methylphenol	89	95	50-128	7	0-17	
Acenaphthene	79	87	49-133	10	0-18	
4-Nitrophenol	62	67	30-144	9	0-21	
2,4-Dinitrotoluene	76	82	50-128	8	0-18	
Pentachlorophenol	57	60	29-113	5	0-22	
Pyrene	87	92	47-149	6	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical		Date Received:	N/A
2795 2nd Street, Suite 300		Work Order No:	08-03-0021
Davis, CA 95616-6593		Preparation:	EPA 3050B
		Method:	EPA 6020

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
096-10-002-1,050	**Solid**	**ICP/MS A**	**03/04/08**	**03/04/08**	**080304L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	96	95	80-120	1	0-20	
Barium	98	99	80-120	2	0-20	
Copper	100	98	80-120	2	0-20	
Lead	93	94	80-120	1	0-20	
Nickel	99	97	80-120	2	0-20	
Vanadium	99	97	80-120	2	0-20	
Zinc	108	105	80-120	3	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-03-0021
Preparation: EPA 3510B
Method: EPA 8270C

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-003-2,354	**Aqueous**	**GC/MS P**	**03/03/08**	**03/04/08**	**080303L08**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Phenol	25	25	4-142	1	0-24	
2-Chlorophenol	80	82	53-113	2	0-17	
1,4-Dichlorobenzene	90	92	50-122	2	0-19	
N-Nitroso-di-n-propylamine	86	90	56-146	4	0-22	
4-Chloro-3-Methylphenol	86	86	55-121	0	0-18	
Acenaphthene	100	98	55-139	2	0-17	
4-Nitrophenol	22	22	1-145	1	0-29	
2,4-Dinitrotoluene	87	83	41-161	5	0-22	
Pentachlorophenol	58	58	34-130	0	0-23	
Pyrene	123	124	38-170	0	0-27	
1,2,4-Trichlorobenzene	97	100	49-121	3	0-19	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-03-0021
Preparation: EPA 3510C
Method: EPA 8310

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-003-1,086	**Aqueous**	**HPLC 5**	**03/03/08**	**03/03/08**	**080303L09**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Naphthalene	108	102	40-160	5	0-20	
Acenaphthylene	95	94	40-160	2	0-20	
Acenaphthene	100	97	40-160	3	0-20	
Fluorene	100	97	40-160	3	0-20	
Phenanthrene	100	97	40-160	4	0-20	
Anthracene	90	87	40-160	4	0-20	
Fluoranthene	98	94	40-160	4	0-20	
Pyrene	103	99	40-160	4	0-20	
Benzo (a) Anthracene	102	98	40-160	4	0-20	
Chrysene	106	102	40-160	4	0-20	
Benzo (b) Fluoranthene	105	102	40-160	4	0-20	
Benzo (k) Fluoranthene	106	102	40-160	4	0-20	
Benzo (a) Pyrene	99	95	40-160	4	0-20	
Dibenz (a,h) Anthracene	99	95	40-160	4	0-20	
Benzo (g,h,i) Perylene	106	102	40-160	4	0-20	
Indeno (1,2,3-c,d) Pyrene	100	96	40-160	4	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-03-0021
Preparation: EPA 3545
Method: EPA 8310

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-002-1,003	**Solid**	**HPLC 5**	**03/03/08**	**03/03/08**	**080303L07**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Naphthalene	101	105	40-160	5	0-20	
Acenaphthylene	95	99	40-160	4	0-20	
Acenaphthene	97	101	40-160	3	0-20	
Fluorene	98	101	40-160	3	0-20	
Phenanthrene	99	101	40-160	2	0-20	
Anthracene	90	91	40-160	1	0-20	
Fluoranthene	99	99	40-160	0	0-20	
Pyrene	103	103	40-160	0	0-20	
Benzo (a) Anthracene	104	103	40-160	2	0-20	
Chrysene	109	107	40-160	2	0-20	
Benzo (b) Fluoranthene	108	105	40-160	2	0-20	
Benzo (k) Fluoranthene	111	109	40-160	2	0-20	
Benzo (a) Pyrene	102	100	40-160	2	0-20	
Dibenz (a,h) Anthracene	105	103	40-160	2	0-20	
Benzo (g,h,i) Perylene	107	105	40-160	2	0-20	
Indeno (1,2,3-c,d) Pyrene	102	100	40-160	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical		Date Received:	N/A
2795 2nd Street, Suite 300		Work Order No:	08-03-0021
Davis, CA 95616-6593		Preparation:	EPA 3545
		Method:	EPA 8270C

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-549-301	**Solid**	**GC/MS P**	**03/03/08**	**03/04/08**	**080303L14**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Phenol	106	99	59-125	7	0-15	
2-Chlorophenol	104	98	60-114	6	0-15	
1,4-Dichlorobenzene	117	109	61-121	7	0-21	
N-Nitroso-di-n-propylamine	99	94	64-136	5	0-15	
1,2,4-Trichlorobenzene	118	114	58-118	4	0-18	
4-Chloro-3-Methylphenol	110	106	61-121	4	0-14	
Acenaphthene	116	110	59-125	6	0-15	
4-Nitrophenol	76	72	38-152	4	0-31	
2,4-Dinitrotoluene	91	90	51-141	2	0-16	
Pentachlorophenol	68	62	38-116	8	0-20	
Pyrene	107	102	51-141	5	0-14	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 08-03-0021

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

KIFF Analytical LLC
2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

0021

Lab No. _____ Page 1 of 3

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

Phone No.: FAX No.:

EDF Deliverable to (Email Address):

Project Number: 77OT.43877.00 P.O. No.: 61313

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Analysis Request

Date due: March 6, 2008

For Lab Use Only

Sample Designation	Sampling Date	Sampling Time	Container: Glass	Poly	Sleeve	Amber	Tedlar	Preservative: HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	Matrix: WATER	SOIL	Air	PAHs (EPA8310)	6 METALS (EPA6020) As,Ba,Cu,Ni,V,Zn	HOLD	PAHs & PCP (8270)	7 METALS (EPA 6020) As,Ba,Cu,Ni,V,Zn,Pb					
GP-1-6	02/28/08	1045	1									X		X				X							
GP-1-10	02/28/08	1050	1									X		X				X							
GP-1-15	02/28/08	1100	1									X		X				X							
GP-4-1	02/28/08	1035	1									X		X		X				X					X
GP-4-6	02/28/08	1210	1									X		X				X							
GP-4-10	02/28/08	1215	1									X		X				X							
GP-1WS	02/28/08	1105				2				2			X			X									X
GP-4-15	02/28/08	1225	1									X		X				X							
GP-4WS	02/28/08	1240				2				2			X			X									X
GP-5-1	02/28/08	1400	1									X		X		X	X								X

Relinquished by:	Date	Time	Received by:
Kiff Analytical	022908	1900	
Relinquished by: C.O. 13 1020 1321378, 1369	Date	Time	Received by:
Relinquished by: C. O.	Date 030108	Time 1000	Received by Laboratory: CEL

Remarks: Due date is FIRM!

Bill to: Accounts Payable

KIFF Analytical LLC
2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

0021

Lab No. _____ Page 2 of 3

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Chain-of-Custody Record and Analysis Request

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

EDF Deliverable to (Email Address):

Phone No.: FAX No.:

Project Number: 77OT.43877.00

P.O. No.: 61313

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling		Container					Preservative					Matrix			Analysis Request								Date due:	For Lab Use Only
	Date	Time	Glass	Poly	Sleeve	Amber	Tedlar	HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	WATER	SOIL	Air	PAHs (EPA8310)	6 METALS (EPA6020) As,Ba,Cu,Ni,V,Zn	HOLD	PAHs & PCP (8270)	7 METALS (EPA 6020) As,Ba,Cu,Ni,V,Zn,Pb					
GP-19-6	02/28/08	0745	1									X		X				X							
GP-19-10	02/28/08	0750	1									X		X				X							
GP-19-15	02/28/08	0755	1									X		X				X							
GP-19WS	02/28/08	0800				2				2			X						X					X	
GP-14-1	02/28/08	0840	1									X		X					X	X				X	
GP-14-6	02/28/08	0910	1									X		X				X							
GP-14-10	02/28/08	0915	1									X		X				X							
GP-14-15	02/28/08	0920	1									X		X				X							
GP-14WS	02/28/08	0940				2				2			X						X					X	
GP-1-1	02/28/08	0945	1									X		X		X	X							X	

Relinquished by: [signature] Kiff Analytical	Date 022908	Time 1900	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by: CO.	Date 030108	Time 1000	Received by Laboratory: [signature] CCL

Due Date is FIRM!

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Lab No. _____ Page 3 of 3

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Recommended but not mandatory to complete this section:

Company/Address: Kiff Analytical

Sampling Company Log Code:

Phone No.: FAX No.:

Global ID:

Project Number: 77OT.43877.00 P.O. No.: 61313

EDF Deliverable to (Email Address):

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling Date	Sampling Time	Container: Glass	Poly	Sleeve	Amber	Tedlar	Preservative: HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	Matrix: WATER	SOIL	Air	PAHs (EPA8310)	6 METALS (EPA6020) As,Ba,Cu,Ni,V,Zn	HOLD	PAHs & PCP (8270)	7 METALS (EPA 6020) As,Ba,Cu,Ni,V,Zn,Pb				Date due: March 6, 2008	For Lab Use Only
GP-5-6	02/28/08	1420	1									X		X				X							
GP-5-10	02/28/08	1425	1									X		X				X							
GP-5-15	02/28/08	1435	1									X		X				X							
GP-5WS	02/28/08	1445				2				2			X			X								X	
GP-20-4	02/28/08	1520	1									X		X			X		X					X	
GP-20-6	02/28/08	1530	1									X		X				X							
GP-20-10	02/28/08	1535	1									X		X				X							
GP-20-15	02/28/08	1540	1									X		X				X							
GP-20WS	02/28/08	1600				2				2			X						X					X	

Relinquished by:	Date	Time	Received by:
Kiff Analytical	022908	1900	
Relinquished by:	Date	Time	Received by:
Relinquished by: C.O.	Date 030108	Time 1000	Received by Laboratory: CEL

Remarks: Due Date is FIRM!

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Company/Address: Kiff Analytical

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Global ID:

Project Number: 77OT.43877.00 P.O. No.: 61313

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Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

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GP-5-6	02/28/08	1420	1									X		X				X							
GP-5-10	02/28/08	1425	1									X		X				X							
GP-5-15	02/28/08	1435	1									X		X				X							
GP-5WS	02/28/08	1445				2				2			X			X								X	
GP-20-4	02/28/08	1520	1									X		X			X		X					X	
GP-20-6	02/28/08	1530	1									X		X				X							
GP-20-10	02/28/08	1535	1									X		X				X							
GP-20-15	02/28/08	1540	1									X		X				X							
GP-20WS	02/28/08	1600				2				2			X						X					X	

Relinquished by:	Date	Time	Received by:
Kiff Analytical	022908	1900	
Relinquished by:	Date	Time	Received by:
Relinquished by: C.O.	Date 030108	Time 1000	Received by Laboratory: CEL

Remarks: Due Date is FIRM!

Bill to: Accounts Payable

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 08 - 03 - 0021

Cooler 1 of 2

SAMPLE RECEIPT FORM

CLIENT: KIFF DATE: 03/01/08

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.

_____ °C Temperature blank.

LABORATORY (Other than Calscience Courier):

2.3 °C Temperature blank.
_____ °C IR thermometer.
_____ Ambient temperature.

Initial: NC

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: ✓ No (Not Intact) : _____ Not Present: _____

Initial: NC

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sampler's name indicated on COC	✓		
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers and volume for analyses requested	✓		
Proper preservation noted on sample label(s)	✓		
VOA vial(s) free of headspace.			✓
Tedlar bag(s) free of condensation			✓

Initial: NC

COMMENTS:

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 08 - 03 - 0021

Cooler 2 of 2

SAMPLE RECEIPT FORM

CLIENT: KIFF DATE: 03/01/08

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.

_____ °C Temperature blank.

LABORATORY (Other than Calscience Courier):

2.1 °C Temperature blank.
_____ °C IR thermometer.
_____ Ambient temperature.

Initial: NC

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: ✓ No (Not Intact) : _____ Not Present: _____

Initial: NC

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sampler's name indicated on COC	✓		
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers and volume for analyses requested	✓		
Proper preservation noted on sample label(s)	✓		
VOA vial(s) free of headspace.			✓
Tedlar bag(s) free of condensation			✓

Initial: NC

COMMENTS:

Calscience Environmental Laboratories, Inc.

Supplemental Report 1

March 21, 2008

Additional requested analyses are reported as a stand-alone report.

Joel Kiff
Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Subject: **Calscience Work Order No.: 08-03-0021**
Client Reference: Tesoro Pittsburg Terminal Phase II

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 3/1/2008 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Amanda Porter

Calscience Environmental
Laboratories, Inc.
Amanda Porter
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 03/01/08
Work Order No: 08-03-0021
Preparation: EPA 3050B
Method: EPA 6020
Units: mg/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-1-6	**08-03-0021-1-A**	**02/28/08 10:45**	**Solid**	**ICP/MS A**	**03/20/08**	**03/20/08 14:00**	**080320L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	4.62	0.200	1		Vanadium	36.6	0.100	1	

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-4-6	**08-03-0021-5-A**	**02/28/08 12:10**	**Solid**	**ICP/MS A**	**03/20/08**	**03/20/08 14:04**	**080320L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	3.17	0.200	1		Vanadium	44.0	0.100	1	

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-19-6	**08-03-0021-11-A**	**02/28/08 07:45**	**Solid**	**ICP/MS A**	**03/20/08**	**03/20/08 14:08**	**080320L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	2.92	0.200	1		Vanadium	22.3	0.100	1	
Copper	10.4	0.100	1						

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-14-6	**08-03-0021-16-A**	**02/28/08 09:10**	**Solid**	**ICP/MS A**	**03/20/08**	**03/20/08 14:12**	**080320L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	3.50	0.200	1		Vanadium	33.1	0.100	1	
Lead	4.50	0.100	1		Zinc	36.6	1.00	1	

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-5-6	**08-03-0021-21-A**	**02/28/08 14:20**	**Solid**	**ICP/MS A**	**03/20/08**	**03/20/08 14:16**	**080320L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	5.70	0.200	1		Vanadium	48.0	0.100	1	

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-20-6	**08-03-0021-26-A**	**02/28/08 15:30**	**Solid**	**ICP/MS A**	**03/20/08**	**03/20/08 14:20**	**080320L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	2.20	0.200	1		Vanadium	34.7	0.100	1	

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**096-10-002-1,053**	**N/A**	**Solid**	**ICP/MS A**	**03/20/08**	**03/20/08 13:10**	**080320L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	ND	0.200	1		Vanadium	ND	0.100	1	
Copper	ND	0.100	1		Zinc	ND	1.00	1	
Lead	ND	0.100	1						

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 03/01/08
Work Order No: 08-03-0021
Preparation: EPA 3050B
Method: EPA 6020

Project Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
GP-1-6	**Solid**	**ICP/MS A**	**03/20/08**	**03/20/08**	**080320S04**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	107	107	72-132	1	0-13	
Barium	853	105	50-152	103	0-41	3,4
Copper	92	96	25-157	2	0-22	
Lead	104	108	62-134	2	0-23	
Nickel	103	109	46-154	3	0-15	
Vanadium	95	96	28-178	0	0-28	
Zinc	121	115	23-173	2	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - PDS / PDSD

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received 03/01/08
Work Order No: 08-03-0021
Preparation: EPA 3050B
Method: EPA 6020

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
GP-1-6	**Solid**	**ICP/MS A**	**03/20/08**	**03/20/08**	**080320S04**

Parameter	PDS %REC	PDSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	106	112	75-125	4	0-13	
Barium	96	105	75-125	3	0-41	
Copper	99	101	75-125	1	0-22	
Lead	105	110	75-125	4	0-23	
Nickel	106	109	75-125	2	0-15	
Vanadium	103	103	75-125	0	0-28	
Zinc	102	110	75-125	3	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical		Date Received:	N/A
2795 2nd Street, Suite 300		Work Order No:	08-03-0021
Davis, CA 95616-6593		Preparation:	EPA 3050B
		Method:	EPA 6020

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
096-10-002-1,053	**Solid**	**ICP/MS A**	**03/20/08**	**03/20/08**	**080320L04**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	100	103	80-120	3	0-20	
Copper	105	106	80-120	1	0-20	
Lead	104	107	80-120	3	0-20	
Vanadium	105	108	80-120	2	0-20	
Zinc	101	104	80-120	4	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 08-03-0021

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

0021

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Lab No. _____ Page 1 of 3

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Project Address:

Sample Designation	Sampling		Container					Preservative					Matrix			Analysis Request									Date due:	For Lab Use Only
	Date	Time	Glass	Poly	Sleeve	Amber	Tedlar	HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	WATER	SOIL	Air	PAHs (EPA8310)	6 METALS (EPA6020) As,Ba,Cu,Ni,V,Zn	HOLD	PAHs & PCP (8270)	7 METALS (EPA 6020) As,Ba,Cu,Ni,V,Zn,Pb				March 6, 2008	
GP-1-6	02/28/08	1045	1									X		X				X								
GP-1-10	02/28/08	1050	1									X		X				X								
GP-1-15	02/28/08	1100	1									X		X				X								
GP-4-1	02/28/08	1035	1									X		X		X				X					X	
GP-4-6	02/28/08	1210	1									X		X				X								
GP-4-10	02/28/08	1215	1									X		X				X								
GP-1WS	02/28/08	1105				2				2			X			X									X	
GP-4-15	02/28/08	1225	1									X		X				X								
GP-4WS	02/28/08	1240				2				2			X			X									X	
GP-5-1	02/28/08	1400	1									X		X		X	X								X	

Relinquished by:	Date	Time	Received by:
Kiff Analytical	022908	1900	
Relinquished by:	Date	Time	Received by:
C.O. B 1020 1321378, 1369			
Relinquished by: C. O.	Date 030108	Time 1000	Received by Laboratory: CEL

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Project Number: 77OT.43877.00 P.O. No.: 61313

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling Date	Sampling Time	Container: Glass	Poly	Sleeve	Amber	Tedlar	Preservative: HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	Matrix: WATER	SOIL	Air	PAHs (EPA8310)	6 METALS (EPA6020) As,Ba,Cu,Ni,V,Zn	HOLD	PAHs & PCP (8270)	7 METALS (EPA 6020) As,Ba,Cu,Ni,V,Zn,Pb				Date due: March 6, 2008	For Lab Use Only
GP-19-6	02/28/08	0745	1									X		X				X							
GP-19-10	02/28/08	0750	1									X		X				X							
GP-19-15	02/28/08	0755	1									X		X				X							
GP-19WS	02/28/08	0800				2				2			X						X					X	
GP-14-1	02/28/08	0840	1									X		X					X	X				X	
GP-14-6	02/28/08	0910	1									X		X				X							
GP-14-10	02/28/08	0915	1									X		X				X							
GP-14-15	02/28/08	0920	1									X		X				X							
GP-14WS	02/28/08	0940				2				2			X						X					X	
GP-1-1	02/28/08	0945	1									X		X		X	X							X	

Relinquished by:	Date	Time	Received by:
[signature] Kiff Analytical	022908	1900	
Relinquished by:	Date	Time	Received by:
Relinquished by: [signature] CO.	Date 030108	Time 1000	Received by Laboratory: [signature] CCL

Due Date is FIRM!

Bill to: Accounts Payable

KIFF Analytical LLC

2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

0021

Lab No. _____ Page 3 of 3

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Chain-of-Custody Record and Analysis Request

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

EDF Deliverable to (Email Address):

Phone No.: FAX No.:

Project Number: 77OT.43877.00

P.O. No.: 61313

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling		Container					Preservative					Matrix			Analysis Request								Date due:	For Lab Use Only
	Date	Time	Glass	Poly	Sleeve	Amber	Tedlar	HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	WATER	SOIL	Air	PAHs (EPA8310)	6 METALS (EPA6020) As,Ba,Cu,Ni,V,Zn	HOLD	PAHs & PCP (8270)	7 METALS (EPA 6020) As,Ba,Cu,Ni,V,Zn,Pb				March 6, 2008	
GP-5-6	02/28/08	1420	1									X		X				X							
GP-5-10	02/28/08	1425	1									X		X				X							
GP-5-15	02/28/08	1435	1									X		X				X							
GP-5WS	02/28/08	1445				2				2			X			X								X	
GP-20-4	02/28/08	1520	1									X		X			X		X					X	
GP-20-6	02/28/08	1530	1									X		X				X							
GP-20-10	02/28/08	1535	1									X		X				X							
GP-20-15	02/28/08	1540	1									X		X				X							
GP-20WS	02/28/08	1600				2				2			X						X					X	

Relinquished by:	Date	Time	Received by:
Kiff Analytical	022908	1900	
Relinquished by:	Date	Time	Received by:
Relinquished by: C.O.	Date 030108	Time 1000	Received by Laboratory: CEL

Remarks: Due Date is FIRM!

Bill to: Accounts Payable

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 08 - 03 - 0021

Cooler 1 of 2

SAMPLE RECEIPT FORM

CLIENT: KIFF DATE: 03/01/08

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.

_____ °C Temperature blank.

LABORATORY (Other than Calscience Courier):

2.3 °C Temperature blank.
_____ °C IR thermometer.
_____ Ambient temperature.

Initial: NC

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: ✓ No (Not Intact) : _____ Not Present: _____

Initial: NC

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sampler's name indicated on COC	✓		
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers and volume for analyses requested	✓		
Proper preservation noted on sample label(s)	✓		
VOA vial(s) free of headspace.			✓
Tedlar bag(s) free of condensation			✓

Initial: NC

COMMENTS:

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 08 - 03 - 0021

Cooler 2 of 2

SAMPLE RECEIPT FORM

CLIENT: KIFF DATE: 03/01/08

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.

_____ °C Temperature blank.

LABORATORY (Other than Calscience Courier):

2.1 °C Temperature blank.
_____ °C IR thermometer.
_____ Ambient temperature.

Initial: NC

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: ✓ No (Not Intact) : _____ Not Present: _____

Initial: NC

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sampler's name indicated on COC	✓		
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers and volume for analyses requested	✓		
Proper preservation noted on sample label(s)	✓		
VOA vial(s) free of headspace.			✓
Tedlar bag(s) free of condensation			✓

Initial: NC

COMMENTS:

KIFF Analytical LLC
2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. _____ Page 1 of 3

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

Phone No.: FAX No.:

Project Number: 77OT.43877.00

P.O. No.: 61313

EDF Deliverable to (Email Address):

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling		Container					Preservative					Matrix			Analysis Request										Date due:	Date due:	For Lab Use Only
	Date	Time	Glass	Poly	Sleeve	Amber	Tedlar	HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	WATER	SOIL	Air	PAHs (EPA8310)	6 METALS (EPA6020) As,Ba,Cu,Ni,V,Zn	HOLD	PAHs & PCP (8270)	7 METALS (EPA 6020) As,Ba,Cu,Ni,V,Zn,Pb	As, V (EPA 6020)	As, Cu, V (EPA 6020)	As, Pb, V, Zn (EPA 6020)			March 6, 2008	March 17, 2008	
GP-1-6	02/28/08	1045	1									X		X							X						X	
GP-1-10	02/28/08	1050	1									X		X				X										
GP-1-15	02/28/08	1100	1									X		X				X										
GP-4-1	02/28/08	1035	1									X		X		X				X						X		
GP-4-6	02/28/08	1210	1									X		X							X						X	
GP-4-10	02/28/08	1215	1									X		X				X										
GP-1WS	02/28/08	1105				2				2			X			X										X		
GP-4-15	02/28/08	1225	1									X		X				X										
GP-4WS	02/28/08	1240				2				2			X			X										X		
GP-5-1	02/28/08	1400	1									X		X		X	X									X		

Relinquished by: Troy A. Turpen	Date 3/14/08	Time 16:35	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:

Remarks: This is a revised COC for Work Order No. 08-03-0021, now with samples -1, -5, -11, -16, -21 and -26 off hold for additional analyses as marked. Please provide an XLS of the results as well as a PDF.

Bill to: Accounts Payable

KIFF Analytical LLC
2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. _____ Page 2 of 3

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Chain-of-Custody Record and Analysis Request

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

Phone No.: | FAX No.:

Project Number: 77OT.43877.00 | P.O. No.: 61313

EDF Deliverable to (Email Address):

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling		Container					Preservative						Matrix			Analysis Request											Date due:	Date due:	For Lab Use Only
	Date	Time	Glass	Poly	Sleeve	Amber	Tedlar	HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	WATER	SOIL	Air	PAHs (EPA8310)	6 METALS (EPA6020) As,Ba,Cu,Ni,V,Zn	HOLD	PAHs & PCP (8270)	7 METALS (EPA 6020) As,Ba,Cu,Ni,V,Zn,Pb	As, V (EPA 6020)	As, Cu, V (EPA 6020)	As, Pb, V, Zn (EPA 6020)						
GP-19-6	02/28/08	0745	1									X		X								X						March 6, 2008	March 17, 2008	
GP-19-10	02/28/08	0750	1									X		X				X												
GP-19-15	02/28/08	0755	1									X		X				X												
GP-19WS	02/28/08	0800				2				2			X						X									X		
GP-14-1	02/28/08	0840	1									X		X					X	X								X		
GP-14-6	02/28/08	0910	1									X		X									X						X	
GP-14-10	02/28/08	0915	1									X		X				X												
GP-14-15	02/28/08	0920	1									X		X				X												
GP-14WS	02/28/08	0940				2				2			X						X									X		
GP-1-1	02/28/08	0945	1									X		X		X	X											X		

Relinquished by:	Date	Time	Received by:
Troy A. Turpen	3/14/08	16:35	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:

Remarks: This is a revised COC for Work Order No. 08-03-0021, now with samples -1, -5, -11, -16, -21 and -26 off hold for additional analyses as marked. Please provide an XLS of the results as well as a PDF.

Bill to: Accounts Payable

KIFF Analytical LLC
2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. _____ Page 3 of 3

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Chain-of-Custody Record and Analysis Request

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

Phone No.: | FAX No.:

Project Number: 77OT.43877.00 | P.O. No.: 61313

EDF Deliverable to (Email Address):

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling		Container					Preservative					Matrix			Analysis Request										Date due:	Date due:	For Lab Use Only
	Date	Time	Glass	Poly	Sleeve	Amber	Tedlar	HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	WATER	SOIL	Air	PAHs (EPA8310)	6 METALS (EPA6020) As,Ba,Cu,Ni,V,Zn	HOLD	PAHs & PCP (8270)	7 METALS (EPA 6020) As,Ba,Cu,Ni,V,Zn,Pb	As, V (EPA 6020)	As, Cu, V (EPA 6020)	As, Pb, V, Zn (EPA 6020)			March 6, 2008	March 17, 2008	
GP-5-6	02/28/08	1420	1									X		X							X						X	
GP-5-10	02/28/08	1425	1									X		X				X										
GP-5-15	02/28/08	1435	1									X		X				X										
GP-5WS	02/28/08	1445				2				2			X			X										X		
GP-20-4	02/28/08	1520	1									X		X			X		X							X		
GP-20-6	02/28/08	1530	1									X		X							X						X	
GP-20-10	02/28/08	1535	1									X		X				X										
GP-20-15	02/28/08	1540	1									X		X				X										
GP-20WS	02/28/08	1600				2				2			X						X							X		

Relinquished by:	Date	Time	Received by:
Troy A. Turpen	3/14/08	16:35	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:

Remarks: This is a revised COC for Work Order No. 08-03-0021, now with samples -1, -5, -11, -16, -21 and -26 off hold for additional analyses as marked. Please provide an XLS of the results as well as a PDF.

Bill to: Accounts Payable

61313

SECOR Rancho Cordova Office
3017 Kilgore Road
Rancho Cordova, CA
TEL: (916) 861-0400 FAX: (916) 861-0430

SECOR International, Inc.

CHAIN OF CUSTODY RECORD

SECOR Company Contact(s):
Todd Brown, SECOR Project Manager
email - tbrown@secor.com, brorie@secor.com
chamilton@secor.com

SECOR Project: 77OT.43877.00

Tesoro Billing Info
Company: 5200
AFE: 023139641-T
WBS: 97618.0042.925
G/L : 767490

DATE: 2/28/08
PAGE: 1 OF 3

Project Name: Tesoro Pittsburg Terminal Phase II
Address: 595 East Third Street, Pittsburg, CA

Sampler(s): Printed Name: Bryan Rolfe
SAMPLER(S): (SIGNATURE)

Lab: KIFF ANALYTICAL
LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS)
☐ 10 DAYS ☒ 5 DAYS ☐ 72 HR ☐ 48 HR ☐ 24 HR ☐ <24 HR

SPECIAL INSTRUCTIONS OR NOTES: TEMPERATURE ON RECEIPT (C)

Direct Bill Jeff Baker of Tesoro Petroleum
All voa's preserved hcl - except GP-20WS
All Ambers preserved $Na_2S_2O_3$
All Poly's unpreserved

REQUESTED ANALYSIS

SAMPLE RECEIPT
Temp °C 0.6 Therm. ID# TR-1
Initial TJB Date 022808
Time 1924 Coolant present: (Yes) No

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	PRE-SERVE	TPHd-carbon chain distinction (8015M)	TPHg-carbon chain distinction (8260B)	PAHs (8310)	PAHs (8270) PCP	VOCs (8260B)	6 metals = As, Ni, Ba, V, Cu, Zn (6020)	7 metals = As, Ni, Ba, V, Cu, Zn, Pb (6020)	HOLD SAMPLE	Other:	Laboratory Notes
	GP- 1~6	2/28/08	1045	S	1	N/A	X	X	X			X		X		01
	GP- 1~10		1050	S	1	N/A			X			X		X		02
	GP- 1~15		1100	S	1	N/A			X			X		X		03
	GP- 4-1		1035	S	1	N/A			X		X		X			04
	GP- 4-6		~~1045~~ 1210	S	1	N/A			X		X		X	X	i	05
	GP- 4-10		~~1050~~ 1215	S	1	N/A			X		X		X	X		06
	GP- 1WS		1105	W	9	Note			X			X				07
	GP- 4-15		1225	S	1	N/A			X		X		X	X		08
	GP- 4WS		1240	W	9	Note			X		X		X			09
	GP- 5-1		1400	S	1	N/A			X			X				10

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Kiff Analytical	Date: 022808	Time: 1651

61313

SECOR Rancho Cordova Office

3017 Kilgore Road

Rancho Cordova, CA

TEL: (916) 861-0400 FAX: (916) 861-0430

SECOR International, Inc.

CHAIN OF CUSTODY RECORD

SECOR Company Contact(s):

Todd Brown, SECOR Project Manager

email - tbrown@secor.com, brorie@secor.com

chamilton@secor.com

SECOR Project: 77OT.43877.00

Tesoro Billing Info
Company: 5200
AFE: 023139641-T
WBS: 97618.0042.925
G/L : 767490

DATE: 2/28/08

PAGE: 2 OF 3

Project Name: Tesoro Pittsburg Terminal Phase II

Address: 595 East Third Street, Pittsburg, CA

Sampler(s): Printed Name: Bryan Rorie

SAMPLER(S): (SIGNATURE)

Lab: KIFF ANALYTICAL

LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS)

☐ 10 DAYS ☒ 5 DAYS ☐ 72 HR ☐ 48 HR ☐ 24 HR ☐ <24 HR

SPECIAL INSTRUCTIONS OR NOTES: **TEMPERATURE ON RECEIPT (C)**

Direct Bill Jeff Baker of Tesoro Petroleum

All voas preserved hcl - except GP-20WS

All Ambers preserved $Na_2S_2O_3$

All Poly's unpreserved

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	PRE-SERVE	TPHd-carbon chain distinction (8015M)	TPHg-carbon chain distinction (8260B)	PAHs (8310)	PAHs (8270)	VOCs (8260B)	6 metals = As, Ni, Ba, V, Cu, Zn (6020)	7 metals = As, Ni, Ba, V, Cu, Zn, Pb (6020)	HOLD SAMPLE	Other:	Laboratory Notes
	GP-19-6	2/28/08	745	S	1	N/A	X	X		X			X	X		11
	GP-19-10		750	S	1	N/A				X			X	X		12
	GP-19-15		755	S	1	N/A				X			X	X		13
	GP-19WS		800	W	9	Notes				X			X			14
	GP-14-1		840	S	1	N/A				X	X		X			15
	GP-14-6		910	S	1	N/A				X	X		X	X		16
	GP-14-10		915	S	1	N/A				X	X		X	X		17
	GP-14-15		920	S	1	N/A				X	X		X	X		18
	GP-14WS		940	W	9	Notes				X	X		X			19
	GP-1-1		945	S	1	N/A			X			X				20

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Kiff Analytical	Date: 022808	Time: 1651

61313

SECOR Rancho Cordova Office
3017 Kilgore Road
Rancho Cordova, CA
TEL: (916) 861-0400 FAX: (916) 861-0430

SECOR International, Inc.

CHAIN OF CUSTODY RECORD

SECOR Company Contact(s):
Todd Brown, SECOR Project Manager
email - tbrown@secor.com, brorie@secor.com
chamilton@secor.com

SECOR Project: 77OT.43877.00
Tesoro Billing Info
Company: 5200
AFE: 023139641-T
WBS: 97618.0042.925
G/L : 767490

DATE: 2/28/08
PAGE: 3 OF 5

Project Name: Tesoro Pittsburg Terminal Phase II
Address: 595 East Third Street, Pittsburg, CA

Sampler(s): Printed Name: Bryan Rolf
SAMPLER(S): (SIGNATURE)
Lab: KIFF ANALYTICAL
LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS)
☐ 10 DAYS ☒ 5 DAYS ☐ 72 HR ☐ 48 HR ☐ 24 HR ☐ <24 HR

SPECIAL INSTRUCTIONS OR NOTES: TEMPERATURE ON RECEIPT (C)
Direct Bill Jeff Baker of Tesoro Petroleum
All voa's preserved hcl - except GP-20ws
All Amber's preserved $Na_2S_2O_3$
All Poly's unpreserved

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	PRE-SERVE	TPHd-carbon chain distinction (8015M)	TPHg-carbon chain distinction (8260B)	PAHs (8310)	PAHs (8270)	VOCs (8260B)	6 metals = As, Ni, Ba, V, Cu, Zn (6020)	7 metals = As, Ni, Ba, V, Cu, Zn, Pb (6020)	HOLD SAMPLE	Other:	Laboratory Notes
	GP-5-6	2/28/08	1420	S	1	N/A	X	X	X			X		X		21
	GP-5-10		1425	S	1	N/A			X			X		X		22
	GP-5-15		1435	S	1	N/A			X			X		X		23
	GP-5WS		~~1445~~ 1600	W	9	Notes			X			X				24
	GP-20-4		1520	S	1	N/A				X	X	X				25
	GP-20-6		1530	S	1	N/A				X	X	X		X		26
	GP-20-10		1535	S	1	N/A				X	X	X		X		27
	GP-20-15		1540	S	1	N/A				X	X	X		X		28
	GP-20WS		1600	W	9	Notes				X	X	X				29
	GP-															

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Kiff Analytical	Date: 022808	Time: 1651

Troy Turpen

From: Caron Stofleth [cstofleth@secor.com]
Sent: Friday, March 07, 2008 5:19 PM
To: Troy Turpen
Cc: Todd Brown; Gary Haeck
Subject: FW: Pittsburg Terminal, samples off-hold

Troy,

These are the additional samples I would like to run from report 61313: (I will send the marked-up COC on Monday)

For sample GP-4-6, please run arsenic and vanadium

For sample GP-14-6, please run TPHd + mo carbon chain distinction, arsenic, vanadium, and zinc

For sample GP-5-6, please run arsenic and vanadium

For sample GP-1-6, please run arsenic and vanadium

For sample GP-20-6, please run arsenic and vanadium

Thanks,

Caron R. Stofleth
Project Scientist
SECOR International, now Stantec
Ph: (916) 384-0749
Fx: (916) 861-0430
caron.stofleth@stantec.com
stantec.com

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Please consider the environment before printing this email.

From: Caron Stofleth
Sent: Friday, March 07, 2008 5:06 PM
To: 'Troy Turpen'
Cc: Gary Haeck; Todd Brown
Subject: FW: Pittsburg Terminal, samples off-hold

Troy,

I have attached the COC's which indicate the following:

For GP-10-20 (soil), please analyze only for arsenic and vanadium.

For GP-6-6 (soil), please analyze for TPHd (& motor oil) carbon chain distinction, arsenic, barium, copper, vanadium, zinc, and PAHs (8310)

For GP-3-6 (soil), please analyze for TPHd (& motor oil) carbon chain distinction, arsenic, vanadium, lead, and PAHs (8310).

Let me know if you have questions,

I will be sending instructions regarding the samples from report 61313 this evening as well.

Thanks,

Caron R. Stofleth
Project Scientist
SECOR International, now Stantec
Ph: (916) 384-0749
Fx: (916) 861-0430
caron.stofleth@stantec.com
stantec.com

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Please consider the environment before printing this email.

Troy Turpen

From: Caron Stofleth [cstofleth@secor.com]
Sent: Monday, March 10, 2008 12:18 PM
To: Troy Turpen
Cc: Gary Haeck; Todd Brown
Subject: Pittsburg samples off hold
Importance: High
Attachments: kiff5_20080310130232.pdf

Troy,

I have attached the COC for the samples that I requested for you to take off hold on Friday.

I would also like sample GP-19-6 taken off hold and analyzed for TPHd + motor oil carbon chain distinction, arsenic, copper, and vanadium.

And sample GP-14-6 to be analyzed for lead (I did not indicate this in my previous email)

Let me know if you have any questions,

Thanks,

Caron R. Stofleth
Project Scientist
SECOR International, now Stantec
Ph: (916) 384-0749
Fx: (916) 861-0430
caron.stofleth@stantec.com
stantec.com

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61313

SECOR Rancho Cordova Office
3017 Kilgore Road
Rancho Cordova, CA
TEL: (916) 861-0400 FAX: (916) 861-0430

SECOR International, Inc.

CHAIN OF CUSTODY RECORD

SECOR Company Contact(s):
Todd Brown, SECOR Project Manager
email - tbrown@secor.com, brorie@secor.com
chamilton@secor.com

SECOR Project: 77OT.43877.00

Tesoro Billing Info
Company: 5200
AFE: 023139641-T
WBS: 97618.0042.925
G/L : 767490

DATE: 2/28/08
PAGE: 1 OF 3

Project Name: Tesoro Pittsburg Terminal Phase II
Address: 595 East Third Street, Pittsburg, CA

Sampler(s): Printed Name: Bryan Rolf
SAMPLER(S): (SIGNATURE)

Lab: KIFF ANALYTICAL
LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS)
☐ 10 DAYS ☒ 5 DAYS ☐ 72 HR ☐ 48 HR ☐ 24 HR ☐ <24 HR

SPECIAL INSTRUCTIONS OR NOTES: TEMPERATURE ON RECEIPT (C)

Direct Bill Jeff Baker of Tesoro Petroleum
All voa's preserved hcl - except GP-20WS
All Ambers preserved $Na_2S_2O_3$
All Poly's unpreserved

REQUESTED ANALYSIS

SAMPLE RECEIPT
Temp °C 0.6 Therm. ID# TR-1
Initial TJB Date 022808
Time 1924 Coolant present: (Yes) No

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	PRE-SERVE	TPHd-carbon chain distinction (8015M)	TPHg-carbon chain distinction (8260B)	PAHs (8310)	PAHs (8270) PCP	VOCs (8260B)	6 metals = As, Ni, Ba, V, Cu, Zn (6020)	7 metals = As, Ni, Ba, V, Cu, Zn, Pb (6020)	as + V	HOLD SAMPLE	Other:	Laboratory Notes
	GP-1-6 take off hold	2/28/08	1045	S	1	N/A	X	X	X			X		(X)	X		01
	GP-1-10		1050	S	1	N/A			X			X			X		02
	GP-1-15		1100	S	1	N/A			X			X			X		03
	GP-4-1		1035	S	1	N/A			X		X		X				04
	GP-4-6 take off hold		1210 1035	S	1	N/A			X		X		X	(X)	X	✓	05
	GP-4-10		12-15 1050	S	1	N/A			X		X		X		X		06
	GP-1WS		1105	W	9	Notes			X			X					07
	GP-4-15		1225	S	1	N/A			X		X		X		X		08
	GP-4WS		1240	W	9	Notes			X		X		X				09
	GP-5-1		1400	S	1	N/A			X			X					10

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Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Kiff Analytical	Date: 022808	Time: 1651

61313

SECOR International, Inc.

CHAIN OF CUSTODY RECORD

SECOR Rancho Cordova Office
3017 Kilgore Road
Rancho Cordova, CA
TEL: (916) 861-0400 FAX: (916) 861-0430

SECOR Company Contact(s):
Todd Brown, SECOR Project Manager
email - tbrown@secor.com, brorie@secor.com
chamilton@secor.com

SECOR Project: 77OT.43877.00

Tesoro Billing Info
Company: 5200
AFE: 023139641-T
WBS: 97618.0042.925
G/L : 767490

DATE: 2/28/08
PAGE: 2 OF 3

Project Name: Tesoro Pittsburg Terminal Phase II
Address: 595 East Third Street, Pittsburg, CA

Sampler(s): Printed Name: Bryan Rorie
SAMPLER(S): (SIGNATURE)
Lab: KIFF ANALYTICAL
LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS)
☐ 10 DAYS ☒ 5 DAYS ☐ 72 HR ☐ 48 HR ☐ 24 HR ☐ <24 HR

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All voas preserved hcl - except GP-20WS
All ambers preserved $Na_2S_2O_3$
All Poly's unpreserved

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	PRE-SERVE	TPHd-carbon chain distinction (8015M) + MO	TPHg-carbon chain distinction (8260B)	PAHs (8310)	PAHs (8270)	VOCs (8260B)	6 metals = As, Ni, Ba, V, Cu, Zn (6020)	7 metals = As, Ni, Ba, V, Cu, Zn, Pb (6020)	As, Cu, V	As, V, Zn, Pb				HOLD SAMPLE		Other:	Laboratory Notes
	GP-19-6 take off hold	2/28/08	745	S	1	N/A	X	X		X			X	X					X			11
	GP-19-10		750	S	1	N/A				X			X						X			12
	GP-19-15		755	S	1	N/A				X			X						X			13
	GP-19WS		800	W	9	HCl				X			X									14
	GP-14-1		840	S	1	N/A				X	X		X									15
	GP-14-6 take off hold		910	S	1	N/A	X			X	X		X		X				X			16
	GP-14-10		915	S	1	N/A				X	X		X						X			17
	GP-14-15		920	S	1	N/A				X	X		X						X			18
	GP-14WS		940	W	9	HCl				X	X		X									19
	GP-1-1		945	S	1	N/A			X			X										20

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Kiff Analytical	Date: 022808	Time: 1651

61313

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SECOR International, Inc.

CHAIN OF CUSTODY RECORD

SECOR Company Contact(s):
Todd Brown, SECOR Project Manager
email - tbrown@secor.com, brorie@secor.com
chamilton@secor.com

SECOR Project: 77OT.43877.00

Tesoro Billing Info
Company: 5200
AFE: 023139641-T
WBS: 97618.0042.925
G/L : 767490

DATE: 2/28/08
PAGE: 3 OF 5

Project Name: Tesoro Pittsburg Terminal Phase II
Address: 595 East Third Street, Pittsburg, CA

Sampler(s): Printed Name: Bryan Rolf
SAMPLER(S): (SIGNATURE)

Lab: KIFF ANALYTICAL
LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS)
☐ 10 DAYS ☒ 5 DAYS ☐ 72 HR ☐ 48 HR ☐ 24 HR ☐ <24 HR

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REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	PRE-SERVE	TPHd-carbon chain distinction (8015M)	TPHg-carbon chain distinction (8260B)	PAHs (8310)	PAHs (8270)	VOCs (8260B)	6 metals = As, Ni, Ba, V, Cu, Zn (6020)	7 metals = As, Ni, Ba, V, Cu, Zn, Pb (6020)	As,	HOLD SAMPLE	Other:	Laboratory Notes
	GP-5-6 take off hold	2/28/08	1420	S	1	N/A	X	X	X			X		X	X		21
	GP-5-10		1425	S	1	N/A			X			X			X		22
	GP-5-15		1435	S	1	N/A			X			X			X		23
	GP-5WS		~~1445~~ 1600	W	9	Notes			X			X					24
	GP-29-4		1520	S	1	N/A				X	X	X					25
	GP-20-6 take off hold		1530	S	1	N/A				X	X	X		X	X		26
	GP-20-10		1535	S	1	N/A				X	X	X			X		27
	GP-20-15		1540	S	1	N/A				X	X	X			X		28
	GP-20WS		1600	W	9	Notes				X	X	X					29
	GP-																

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Kiff Analytical	Date: 022808	Time: 1651

Hydrocarbon Ranges Report*

Project Name: Tesoro Pittsburg Terminal Phase II

Lab Number:	61313-04	61313-07	61313-09	61313-10	61313-14
Sample:	GP-4-1	GP-1WS	GP-4WS	GP-5-1	GP-19WS
Sample Date:	2/28/2008	2/28/2008	2/28/2008	2/28/2008	2/28/2008
Matrix:	Soil	Water	Water	Soil	Water
Units	mg/Kg	ug/L	ug/L	mg/Kg	ug/L
Hydrocarbon Range					
C8 to C9 Fraction	nd	4	5	nd	4
C10 to C11 Fraction	nd	nd	nd	nd	nd
C12 to C13 Fraction	0.32	nd	3	0.13	3
C14 to C15 Fraction	0.59	8	11	0.22	10
C16 to C17 Fraction	0.69	9	12	0.27	22
C18 to C19 Fraction	0.89	15	22	0.34	19
C20 to C21 Fraction	1.1	11	17	0.43	10
C22 to C23 Fraction	1.1	13	25	0.55	10
C24 to C25 Fraction	1.2	14	32	0.57	11
C26 to C27 Fraction	0.7	25	41	0.96	18
C28 to C29 Fraction	1.3	12	22	0.68	6
C30 to C31 Fraction	2.5	5	6	0.49	6
C32 to C33 Fraction	4.6	4	5	0.41	4
C34 to C35 Fraction	2.4	4	5	0.37	4
C36 to C37 Fraction	1.9	3	5	0.42	4
C38 to C39 Fraction	1.7	4	4	0.42	3
C40 Fraction	0.5	nd	2	0.20	nd
Reporting Limit:	0.04	2	2	0.04	2

*Hydrocarbon concentrations should be considered estimates

"nd" is non-detect at the specified Reporting Limit

Hydrocarbon Ranges Report*

Project Name: Tesoro Pittsburg Terminal Phase II

Lab Number:	61313-15	61313-19	61313-20	61313-24	61313-25
Sample:	GP-14-1	GP-14WS	GP-1-1	GP-5WS	GP-20-4
Sample Date:	2/28/2008	2/28/2008	2/28/2008	2/28/2008	2/28/2008
Matrix:	Soil	Water	Soil	Water	Soil
Units	mg/Kg	ug/L	mg/Kg	ug/L	mg/Kg
Hydrocarbon Range					
C8 to C9 Fraction	nd	8	nd	3	nd
C10 to C11 Fraction	0	nd	nd	nd	nd
C12 to C13 Fraction	4.2	5	0.19	nd	0.16
C14 to C15 Fraction	7.3	12	0.24	4	0.29
C16 to C17 Fraction	17	11	0.34	5	0.51
C18 to C19 Fraction	41	18	0.59	5	1.0
C20 to C21 Fraction	86	10	0.60	8	1.3
C22 to C23 Fraction	130	14	0.67	5	1.8
C24 to C25 Fraction	116	11	0.72	6	1.8
C26 to C27 Fraction	161	25	0.75	3	2.8
C28 to C29 Fraction	228	10	1.1	nd	4.1
C30 to C31 Fraction	397	4	3.0	3	2.2
C32 to C33 Fraction	317	3	7.8	nd	2.3
C34 to C35 Fraction	335	3	3.3	2	2.5
C36 to C37 Fraction	293	3	2.4	nd	2.8
C38 to C39 Fraction	249	3	2.4	nd	2.2
C40 Fraction	129	nd	1.7	nd	1.0
Reporting Limit:	0.04	2	0.04	2	0.04

***Hydrocarbon concentrations should be considered estimates**

"nd" is non-detect at the specified Reporting Limit

Hydrocarbon Ranges Report*

Project Name: Tesoro Pittsburg Terminal Phase II

Lab Number:	**61313-29**	**61313-11**	**61313-16**
Sample:	**GP-20WS**	**GP-19-6**	**GP-14-6**
Sample Date:	**2/28/2008**	**2/28/2008**	**2/28/2008**
Matrix:	**Water**	**Soil**	**Soil**
Units	**ug/L**	**mg/Kg**	**mg/Kg**
Hydrocarbon Range			
C8 to C9 Fraction	**4**	**-**	**-**
C10 to C11 Fraction	**nd**	**nd**	**nd**
C12 to C13 Fraction	**8**	**nd**	**nd**
C14 to C15 Fraction	**34**	**0.06**	**0.05**
C16 to C17 Fraction	**68**	**0.10**	**0.05**
C18 to C19 Fraction	**102**	**0.23**	**0.14**
C20 to C21 Fraction	**157**	**0.24**	**0.10**
C22 to C23 Fraction	**202**	**0.34**	**0.07**
C24 to C25 Fraction	**263**	**0.28**	**0.07**
C26 to C27 Fraction	**423**	**0.29**	**0.08**
C28 to C29 Fraction	**608**	**0.41**	**0.20**
C30 to C31 Fraction	**934**	**0.75**	**0.25**
C32 to C33 Fraction	**872**	**0.55**	**0.27**
C34 to C35 Fraction	**862**	**0.56**	**0.13**
C36 to C37 Fraction	**966**	**0.44**	**0.09**
C38 to C39 Fraction	**808**	**0.44**	**0.11**
C40 Fraction	**452**	**0.17**	**0.05**
Reporting Limit:	**2**	**0.04**	**0.04**

***Hydrocarbon concentrations should be considered estimates**

"nd" is non-detect at the specified Reporting Limit

KIFF Analytical LLC

Report Number : 61341
Date : 03/17/2008

Todd Brown
SECOR International, Inc.
3017 Kilgore Road, Suite 100
Rancho Cordova, CA 95670

Subject : 5 Soil Samples and 4 Water Samples
Project Name : Tesoro Pittsburg Terminal Phase II
Project Number : 77OT.43877.00

Dear Mr. Brown,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

KIFF Analytical LLC

Report Number : 61341
Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**
Project Number : **77OT.43877.00**

Sample : **GP-10-2** Matrix : Soil Lab Number : 61341-01
Sample Date :02/29/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**13**	1.0	mg/Kg	M EPA 8015	03/03/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**33**	10	mg/Kg	M EPA 8015	03/03/2008
1-Chlorooctadecane (Diesel Surrogate)	82.4		% Recovery	M EPA 8015	03/03/2008

Sample : **GP-6-1** Matrix : Soil Lab Number : 61341-02
Sample Date :02/29/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**330**	10	mg/Kg	M EPA 8015	03/04/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**880**	80	mg/Kg	M EPA 8015	03/04/2008
1-Chlorooctadecane (Diesel Surrogate)	Diluted Out		% Recovery	M EPA 8015	03/04/2008

Sample : **GP-10WS** Matrix : Water Lab Number : 61341-03
Sample Date :02/29/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**88**	50	ug/L	M EPA 8015	03/03/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**130**	100	ug/L	M EPA 8015	03/03/2008
Octacosane (Diesel Surrogate)	99.3		% Recovery	M EPA 8015	03/03/2008

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61341
Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**
Project Number : **77OT.43877.00**

Sample : **GP-6-6** Matrix : Soil Lab Number : 61341-05
Sample Date :02/29/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**2.6**	1.0	mg/Kg	M EPA 8015	03/13/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**< 10**	10	mg/Kg	M EPA 8015	03/13/2008
1-Chlorooctadecane (Diesel Surrogate)	76.8		% Recovery	M EPA 8015	03/13/2008

Sample : **GP-6WS** Matrix : Water Lab Number : 61341-08
Sample Date :02/29/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**320**	50	ug/L	M EPA 8015	03/03/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**640**	100	ug/L	M EPA 8015	03/03/2008
Octacosane (Diesel Surrogate)	102		% Recovery	M EPA 8015	03/03/2008

Sample : **GP-3-1** Matrix : Soil Lab Number : 61341-09
Sample Date :02/29/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**220**	10	mg/Kg	M EPA 8015	03/04/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**860**	80	mg/Kg	M EPA 8015	03/04/2008
1-Chlorooctadecane (Diesel Surrogate)	Diluted Out		% Recovery	M EPA 8015	03/04/2008

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61341
Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**
Project Number : **77OT.43877.00**

Sample : **GP-3-6** Matrix : Soil Lab Number : 61341-10
Sample Date :02/29/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**3.0**	1.0	mg/Kg	M EPA 8015	03/12/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**< 10**	10	mg/Kg	M EPA 8015	03/12/2008
1-Chlorooctadecane (Diesel Surrogate)	85.2		% Recovery	M EPA 8015	03/12/2008

Sample : **GP-3WS** Matrix : Water Lab Number : 61341-14
Sample Date :02/29/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**150**	50	ug/L	M EPA 8015	03/04/2008
TPH as Motor Oil	**< 100**	100	ug/L	M EPA 8015	03/04/2008
Octacosane (Diesel Surrogate)	106		% Recovery	M EPA 8015	03/04/2008

Sample : **GP-3WD** Matrix : Water Lab Number : 61341-17
Sample Date :02/29/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**140**	50	ug/L	M EPA 8015	03/04/2008
TPH as Motor Oil	**< 100**	100	ug/L	M EPA 8015	03/04/2008
Octacosane (Diesel Surrogate)	106		% Recovery	M EPA 8015	03/04/2008

Approved By: Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61341

Date : 03/17/2008

Sample : **GP-10-2**

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00** Lab Number : 61341-01 Date Analyzed : 03/05/08

Matrix : Soil Sample Date : 02/29/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	< 1.0	1.0	mg/Kg
Toluene - d8 (Surr)	100		% Recovery
4-Bromofluorobenzene (Surr)	104		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

Approved By:

Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61341

Date : 03/17/2008

Sample : **GP-6-1**

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00** Lab Number : 61341-02 Date Analyzed : 03/05/08

Matrix : Soil Sample Date :02/29/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	< 1.0	1.0	mg/Kg
Toluene - d8 (Surr)	99.9		% Recovery
4-Bromofluorobenzene (Surr)	105		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

Approved By:

Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61341

Date : 03/17/2008

Sample : **GP-10WS**

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00** Lab Number : 61341-03 Date Analyzed : 03/04/08

Matrix : Water Sample Date : 02/29/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	< 50	50	ug/L
Toluene - d8 (Surr)	99.4		% Recovery
4-Bromofluorobenzene (Surr)	104		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

Approved By:

Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61341

Date : 03/17/2008

Sample : **GP-6WS**

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00** Lab Number : 61341-08 Date Analyzed : 03/04/08

Matrix : Water Sample Date : 02/29/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	< 50	50	ug/L
Toluene - d8 (Surr)	101		% Recovery
4-Bromofluorobenzene (Surr)	104		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

Approved By:

Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61341

Date : 03/17/2008

Sample : **GP-3-1**

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00** Lab Number : 61341-09 Date Analyzed : 03/05/08, 03/03/08

Matrix : Soil Sample Date :02/29/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	< 1.0	1.0	mg/Kg
Dichlorodifluoromethane	< 0.0050	0.0050	mg/Kg
Chloromethane	< 0.0050	0.0050	mg/Kg
Vinyl Chloride	< 0.0050	0.0050	mg/Kg
Bromomethane	< 0.020	0.020	mg/Kg
Chloroethane	< 0.0050	0.0050	mg/Kg
Trichlorofluoromethane	< 0.0050	0.0050	mg/Kg
1,1-Dichloroethene	< 0.0050	0.0050	mg/Kg
Methylene Chloride	< 0.0050	0.0050	mg/Kg
trans-1,2-Dichloroethene	< 0.0050	0.0050	mg/Kg
1,1-Dichloroethane	< 0.0050	0.0050	mg/Kg
2,2-Dichloropropane	< 0.0050	0.0050	mg/Kg
cis-1,2-Dichloroethene	< 0.0050	0.0050	mg/Kg
Chloroform	< 0.0050	0.0050	mg/Kg
Bromochloromethane	< 0.0050	0.0050	mg/Kg
1,1,1-Trichloroethane	< 0.0050	0.0050	mg/Kg
1,1-Dichloropropene	< 0.0050	0.0050	mg/Kg
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg
Carbon Tetrachloride	< 0.0050	0.0050	mg/Kg
Benzene	< 0.0050	0.0050	mg/Kg
Trichloroethene	< 0.0050	0.0050	mg/Kg
1,2-Dichloropropane	< 0.0050	0.0050	mg/Kg
Bromodichloromethane	< 0.0050	0.0050	mg/Kg
Dibromomethane	< 0.0050	0.0050	mg/Kg
cis-1,3-Dichloropropene	< 0.0050	0.0050	mg/Kg
Toluene	< 0.0050	0.0050	mg/Kg
trans-1,3-Dichloropropene	< 0.0050	0.0050	mg/Kg
1,1,2-Trichloroethane	< 0.0050	0.0050	mg/Kg
1,3-Dichloropropane	< 0.0050	0.0050	mg/Kg
Tetrachloroethene	< 0.0050	0.0050	mg/Kg
Dibromochloromethane	< 0.0050	0.0050	mg/Kg
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg
Chlorobenzene	< 0.0050	0.0050	mg/Kg
1,1,1,2-Tetrachloroethane	< 0.0050	0.0050	mg/Kg
Ethylbenzene	< 0.0050	0.0050	mg/Kg
P,M-Xylene	< 0.0050	0.0050	mg/Kg
O-Xylene	< 0.0050	0.0050	mg/Kg
Styrene	< 0.0050	0.0050	mg/Kg

Parameter	Measured Value	MRL [1]	Units
Isopropyl benzene	< 0.0050	0.0050	mg/Kg
Bromoform	< 0.0050	0.0050	mg/Kg
1,1,2,2-Tetrachloroethane	< 0.0050	0.0050	mg/Kg
1,2,3-Trichloropropane	< 0.0050	0.0050	mg/Kg
n-Propylbenzene	< 0.0050	0.0050	mg/Kg
Bromobenzene	< 0.0050	0.0050	mg/Kg
1,3,5-Trimethylbenzene	< 0.0050	0.0050	mg/Kg
2+4-Chlorotoluene	< 0.0050	0.0050	mg/Kg
tert-Butylbenzene	< 0.0050	0.0050	mg/Kg
1,2,4-Trimethylbenzene	< 0.0050	0.0050	mg/Kg
sec-Butylbenzene	< 0.0050	0.0050	mg/Kg
p-Isopropyltoluene	< 0.0050	0.0050	mg/Kg
1,3-Dichlorobenzene	< 0.0050	0.0050	mg/Kg
1,4-Dichlorobenzene	< 0.0050	0.0050	mg/Kg
n-Butylbenzene	< 0.0050	0.0050	mg/Kg
1,2-Dichlorobenzene	< 0.0050	0.0050	mg/Kg
1,2-Dibromo-3-chloropropane	< 0.0050	0.0050	mg/Kg
1,2,4-Trichlorobenzene	< 0.0050	0.0050	mg/Kg
Hexachlorobutadiene	< 0.0050	0.0050	mg/Kg
Naphthalene	< 0.0050	0.0050	mg/Kg
1,2,3-Trichlorobenzene	< 0.0050	0.0050	mg/Kg
1,2-Dichloroethane-d4 (Surr)	103		% Recovery
Toluene-d8 (Surr)	101		% Recovery
4-Bromofluorobenzene (Surr)	99.7		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

Approved By:

Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61341

Date : 03/17/2008

Sample : **GP-3WS**

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00** Lab Number : 61341-14 Date Analyzed : 03/05/08

Matrix : Water Sample Date : 02/29/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	**86**	50	ug/L
Dichlorodifluoromethane	< 0.50	0.50	ug/L
Chloromethane	< 0.50	0.50	ug/L
Vinyl Chloride	< 0.50	0.50	ug/L
Bromomethane	< 20	20	ug/L
Chloroethane	< 0.50	0.50	ug/L
Trichlorofluoromethane	< 0.50	0.50	ug/L
1,1-Dichloroethene	< 0.50	0.50	ug/L
Methylene Chloride	< 5.0	5.0	ug/L
trans-1,2-Dichloroethene	< 0.50	0.50	ug/L
1,1-Dichloroethane	**0.61**	0.50	ug/L
2,2-Dichloropropane	< 0.50	0.50	ug/L
cis-1,2-Dichloroethene	< 0.50	0.50	ug/L
Chloroform	< 0.50	0.50	ug/L
Bromochloromethane	< 0.50	0.50	ug/L
1,1,1-Trichloroethane	< 0.50	0.50	ug/L
1,1-Dichloropropene	< 0.50	0.50	ug/L
1,2-Dichloroethane	< 0.50	0.50	ug/L
Carbon Tetrachloride	< 0.50	0.50	ug/L
Benzene	< 0.50	0.50	ug/L
Trichloroethene	**0.57**	0.50	ug/L
1,2-Dichloropropane	< 0.50	0.50	ug/L
Bromodichloromethane	< 0.50	0.50	ug/L
Dibromomethane	< 0.50	0.50	ug/L
cis-1,3-Dichloropropene	< 0.50	0.50	ug/L
Toluene	< 0.50	0.50	ug/L
trans-1,3-Dichloropropene	< 0.50	0.50	ug/L
1,1,2-Trichloroethane	< 0.50	0.50	ug/L
1,3-Dichloropropane	< 0.50	0.50	ug/L
Tetrachloroethene	< 0.50	0.50	ug/L
Dibromochloromethane	< 0.50	0.50	ug/L
1,2-Dibromoethane	< 0.50	0.50	ug/L
Chlorobenzene	< 0.50	0.50	ug/L
1,1,1,2-Tetrachloroethane	< 0.50	0.50	ug/L
Ethylbenzene	< 0.50	0.50	ug/L
P,M-Xylene	< 1.0	1.0	ug/L
O-Xylene	< 0.50	0.50	ug/L
Styrene	< 0.50	0.50	ug/L

Parameter	Measured Value	MRL [1]	Units
Isopropyl benzene	< 0.50	0.50	ug/L
Bromoform	< 0.50	0.50	ug/L
1,1,2,2-Tetrachloroethane	< 0.50	0.50	ug/L
1,2,3-Trichloropropane	< 0.50	0.50	ug/L
n-Propylbenzene	< 0.50	0.50	ug/L
Bromobenzene	< 0.50	0.50	ug/L
1,3,5-Trimethylbenzene	< 0.50	0.50	ug/L
2+4-Chlorotoluene	< 1.0	1.0	ug/L
tert-Butylbenzene	< 0.50	0.50	ug/L
1,2,4-Trimethylbenzene	< 0.50	0.50	ug/L
sec-Butylbenzene	< 0.50	0.50	ug/L
p-Isopropyltoluene	< 0.50	0.50	ug/L
1,3-Dichlorobenzene	< 0.50	0.50	ug/L
1,4-Dichlorobenzene	< 0.50	0.50	ug/L
n-Butylbenzene	< 0.50	0.50	ug/L
1,2-Dichlorobenzene	< 0.50	0.50	ug/L
1,2-Dibromo-3-chloropropane	< 0.50	0.50	ug/L
1,2,4-Trichlorobenzene	**1.1**	0.50	ug/L
Hexachlorobutadiene	< 0.50	0.50	ug/L
Naphthalene	< 0.50	0.50	ug/L
1,2,3-Trichlorobenzene	**1.1**	0.50	ug/L
1,2-Dichloroethane-d4 (Surr)	97.5		% Recovery
Toluene-d8 (Surr)	101		% Recovery
4-Bromofluorobenzene (Surr)	102		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

Approved By:

Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

Report Number : 61341

Date : 03/17/2008

Sample : **GP-3WD**

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00** Lab Number : 61341-17 Date Analyzed : 03/05/08

Matrix : Water Sample Date : 02/29/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	**56**	50	ug/L
(Note: Primarily compounds not found in typical Gasoline)			
Dichlorodifluoromethane	< 0.50	0.50	ug/L
Chloromethane	< 0.50	0.50	ug/L
Vinyl Chloride	< 0.50	0.50	ug/L
Bromomethane	< 20	20	ug/L
Chloroethane	< 0.50	0.50	ug/L
Trichlorofluoromethane	< 0.50	0.50	ug/L
1,1-Dichloroethene	**4.0**	0.50	ug/L
Methylene Chloride	< 5.0	5.0	ug/L
trans-1,2-Dichloroethene	< 0.50	0.50	ug/L
1,1-Dichloroethane	**17**	0.50	ug/L
2,2-Dichloropropane	< 0.50	0.50	ug/L
cis-1,2-Dichloroethene	**3.7**	0.50	ug/L
Chloroform	< 0.50	0.50	ug/L
Bromochloromethane	< 0.50	0.50	ug/L
1,1,1-Trichloroethane	< 0.50	0.50	ug/L
1,1-Dichloropropene	< 0.50	0.50	ug/L
1,2-Dichloroethane	< 0.50	0.50	ug/L
Carbon Tetrachloride	< 0.50	0.50	ug/L
Benzene	< 0.50	0.50	ug/L
Trichloroethene	**12**	0.50	ug/L
1,2-Dichloropropane	< 0.50	0.50	ug/L
Bromodichloromethane	< 0.50	0.50	ug/L
Dibromomethane	< 0.50	0.50	ug/L
cis-1,3-Dichloropropene	< 0.50	0.50	ug/L
Toluene	< 0.50	0.50	ug/L
trans-1,3-Dichloropropene	< 0.50	0.50	ug/L
1,1,2-Trichloroethane	< 0.50	0.50	ug/L
1,3-Dichloropropane	< 0.50	0.50	ug/L
Tetrachloroethene	< 0.50	0.50	ug/L
Dibromochloromethane	< 0.50	0.50	ug/L
1,2-Dibromoethane	< 0.50	0.50	ug/L
Chlorobenzene	< 0.50	0.50	ug/L
1,1,1,2-Tetrachloroethane	< 0.50	0.50	ug/L
Ethylbenzene	< 0.50	0.50	ug/L
P,M-Xylene	< 1.0	1.0	ug/L
O-Xylene	< 0.50	0.50	ug/L

Parameter	Measured Value	MRL [1]	Units
Styrene	< 0.50	0.50	ug/L
Isopropyl benzene	< 0.50	0.50	ug/L
Bromoform	< 0.50	0.50	ug/L
1,1,2,2-Tetrachloroethane	< 0.50	0.50	ug/L
1,2,3-Trichloropropane	< 0.50	0.50	ug/L
n-Propylbenzene	< 0.50	0.50	ug/L
Bromobenzene	< 0.50	0.50	ug/L
1,3,5-Trimethylbenzene	< 0.50	0.50	ug/L
2+4-Chlorotoluene	< 1.0	1.0	ug/L
tert-Butylbenzene	< 0.50	0.50	ug/L
1,2,4-Trimethylbenzene	< 0.50	0.50	ug/L
sec-Butylbenzene	< 0.50	0.50	ug/L
p-Isopropyltoluene	< 0.50	0.50	ug/L
1,3-Dichlorobenzene	< 0.50	0.50	ug/L
1,4-Dichlorobenzene	< 0.50	0.50	ug/L
n-Butylbenzene	< 0.50	0.50	ug/L
1,2-Dichlorobenzene	< 0.50	0.50	ug/L
1,2-Dibromo-3-chloropropane	< 0.50	0.50	ug/L
1,2,4-Trichlorobenzene	< 0.50	0.50	ug/L
Hexachlorobutadiene	< 0.50	0.50	ug/L
Naphthalene	< 0.50	0.50	ug/L
1,2,3-Trichlorobenzene	< 0.50	0.50	ug/L
1,2-Dichloroethane-d4 (Surr)	102		% Recovery
Toluene-d8 (Surr)	101		% Recovery
4-Bromofluorobenzene (Surr)	103		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

Approved By:

Joel Kiff

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61341

Date : 03/17/2008

QC Report : Method Blank Data

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	03/03/2008
TPH as Motor Oil	< 10	10	mg/Kg	M EPA 8015	03/03/2008
1-Chlorooctadecane (Diesel Surrogate)	79.9		%	M EPA 8015	03/03/2008
TPH as Diesel	< 50	50	ug/L	M EPA 8015	03/03/2008
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	03/03/2008
Octacosane (Diesel Surrogate)	101		%	M EPA 8015	03/03/2008
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	03/12/2008
TPH as Motor Oil	< 10	10	mg/Kg	M EPA 8015	03/12/2008
1-Chlorooctadecane (Diesel Surrogate)	78.0		%	M EPA 8015	03/12/2008
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	03/13/2008
TPH as Motor Oil	< 10	10	mg/Kg	M EPA 8015	03/13/2008
1-Chlorooctadecane (Diesel Surrogate)	85.9		%	M EPA 8015	03/13/2008
Dichlorodifluoromethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Chloromethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Vinyl Chloride	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Bromomethane	< 0.020	0.020	mg/Kg	EPA 8260B	03/03/2008
Chloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Trichlorofluoromethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,1-Dichloroethene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Methylene Chloride	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
trans-1,2-Dichloroethene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,1-Dichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
2,2-Dichloropropane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
cis-1,2-Dichloroethene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Chloroform	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Bromochloromethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,1,1-Trichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,1-Dichloropropene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Carbon Tetrachloride	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Trichloroethene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,2-Dichloropropane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Bromodichloromethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Dibromomethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
cis-1,3-Dichloropropene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
trans-1,3-Dichloropropene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,1,2-Trichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,3-Dichloropropane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Tetrachloroethene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Dibromochloromethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Chlorobenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,1,1,2-Tetrachloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
P,M-Xylene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
O-Xylene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Styrene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Isopropyl benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Bromoform	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,1,2,2-Tetrachloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,2,3-Trichloropropane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
n-Propylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Bromobenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,3,5-Trimethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
2+4-Chlorotoluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
tert-Butylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,2,4-Trimethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
sec-Butylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
p-Isopropyltoluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,3-Dichlorobenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,4-Dichlorobenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
n-Butylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,2-Dichlorobenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61341

Date : 03/17/2008

QC Report : Method Blank Data

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
1,2-Dibromo-3-chloropropane	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,2,4-Trichlorobenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Hexachlorobutadiene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
Naphthalene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,2,3-Trichlorobenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	03/03/2008
1,2-Dichloroethane-d4 (Surr)	102		%	EPA 8260B	03/03/2008
Toluene - d8 (Surr)	100		%	EPA 8260B	03/03/2008
4-Bromofluorobenzene (Surr)	101		%	EPA 8260B	03/03/2008
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	03/04/2008
Toluene - d8 (Surr)	99.6		%	EPA 8260B	03/04/2008
4-Bromofluorobenzene (Surr)	96.4		%	EPA 8260B	03/04/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	03/04/2008
Toluene - d8 (Surr)	99.3		%	EPA 8260B	03/04/2008
4-Bromofluorobenzene (Surr)	95.8		%	EPA 8260B	03/04/2008
Dichlorodifluoromethane	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
Chloromethane	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
Vinyl Chloride	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
Bromomethane	< 20	20	ug/L	EPA 8260B	03/05/2008
Chloroethane	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
Trichlorofluoromethane	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
1,1-Dichloroethene	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
Methylene Chloride	< 5.0	5.0	ug/L	EPA 8260B	03/05/2008
trans-1,2-Dichloroethene	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
1,1-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
2,2-Dichloropropane	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
cis-1,2-Dichloroethene	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
Chloroform	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
Bromochloromethane	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
1,1,1-Trichloroethane	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
1,1-Dichloropropene	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
Carbon Tetrachloride	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
Trichloroethene	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
1,2-Dichloropropane	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
Bromodichloromethane	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
Dibromomethane	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
cis-1,3-Dichloropropene	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
trans-1,3-Dichloropropene	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
1,1,2-Trichloroethane	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
1,3-Dichloropropane	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
Tetrachloroethene	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
Dibromochloromethane	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
Chlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
1,1,1,2-Tetrachloroethane	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
P,M-Xylene	< 1.0	1.0	ug/L	EPA 8260B	03/05/2008
O-Xylene	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
Styrene	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
Isopropyl benzene	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
Bromoform	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
1,1,2,2-Tetrachloroethane	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
1,2,3-Trichloropropane	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
n-Propylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
Bromobenzene	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
1,3,5-Trimethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
2+4-Chlorotoluene	< 1.0	1.0	ug/L	EPA 8260B	03/05/2008
tert-Butylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
1,2,4-Trimethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
sec-Butylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
p-Isopropyltoluene	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
1,3-Dichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
1,4-Dichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
n-Butylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
1,2-Dichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61341

Date : 03/17/2008

QC Report : Method Blank Data

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
1,2-Dibromo-3-chloropropane	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
1,2,4-Trichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
Hexachlorobutadiene	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
1,2,3-Trichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	03/05/2008
1,2-Dichloroethane-d4 (Surr)	101		%	EPA 8260B	03/05/2008
Toluene - d8 (Surr)	100		%	EPA 8260B	03/05/2008
4-Bromofluorobenzene (Surr)	102		%	EPA 8260B	03/05/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61341

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
TPH as Diesel	61313-20	5.2	20.0	20.0	20.5	21.4	mg/Kg	M EPA 8015	3/3/08	81.4	85.2	4.55	60-140	25
TPH as Diesel	Blank	<50	1000	1000	920	943	ug/L	M EPA 8015	3/3/08	92.0	94.3	2.49	70-130	25
TPH as Diesel	61426-07	260	20.0	20.0	251	255	mg/Kg	M EPA 8015	3/12/08	88.0	89.3	1.45	60-140	25
TPH as Diesel	61451-03	<1.0	20.0	20.0	19.9	19.9	mg/Kg	M EPA 8015	3/13/08	99.4	99.6	0.144	60-140	25
1,1-Dichloroethane	61268-06	<0.0050	0.0399	0.0393	0.0370	0.0364	mg/Kg	EPA 8260B	3/3/08	92.7	92.7	0.0562	70-130	25
Benzene	61268-06	<0.0050	0.0399	0.0393	0.0352	0.0350	mg/Kg	EPA 8260B	3/3/08	88.2	89.1	0.953	70-130	25
1,2-Dichloroethane	61268-06	<0.0050	0.0399	0.0393	0.0391	0.0389	mg/Kg	EPA 8260B	3/3/08	97.8	99.0	1.19	70-130	25
Toluene	61268-06	<0.0050	0.0399	0.0393	0.0332	0.0329	mg/Kg	EPA 8260B	3/3/08	83.2	83.8	0.757	70-130	25
Chlorobenzene	61268-06	<0.0050	0.0399	0.0393	0.0321	0.0308	mg/Kg	EPA 8260B	3/3/08	80.4	78.3	2.69	70-130	25
Tert-Butanol	61268-06	<0.0050	0.200	0.196	0.173	0.173	mg/Kg	EPA 8260B	3/3/08	86.8	88.2	1.62	70-130	25
Methyl-t-Butyl Ether	61268-06	<0.0050	0.0399	0.0393	0.0370	0.0383	mg/Kg	EPA 8260B	3/3/08	92.7	97.6	5.12	70-130	25
Benzene	61290-03	<0.0050	0.0392	0.0394	0.0396	0.0355	mg/Kg	EPA 8260B	3/4/08	101	90.1	11.4	70-130	25
Toluene	61290-03	<0.0050	0.0392	0.0394	0.0390	0.0347	mg/Kg	EPA 8260B	3/4/08	99.4	88.2	11.9	70-130	25
Methyl-t-Butyl Ether	61290-03	<0.0050	0.0392	0.0394	0.0329	0.0300	mg/Kg	EPA 8260B	3/4/08	83.9	76.1	9.72	70-130	25
1,1-Dichloroethane	61290-03	<0.0050	0.0392	0.0394	0.0376	0.0338	mg/Kg	EPA 8260B	3/4/08	96.0	85.7	11.3	70-130	25
1,2-Dichloroethane	61290-03	<0.0050	0.0392	0.0394	0.0360	0.0329	mg/Kg	EPA 8260B	3/4/08	91.8	83.5	9.53	70-130	25
Chlorobenzene	61290-03	<0.0050	0.0392	0.0394	0.0381	0.0349	mg/Kg	EPA 8260B	3/4/08	97.1	88.6	9.16	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61341

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Tert-Butanol	61290-03	<0.0050	0.196	0.197	0.177	0.183	mg/Kg	EPA 8260B	3/4/08	90.3	92.8	2.73	70-130	25
Benzene	61290-05	<0.50	40.0	40.0	41.5	40.5	ug/L	EPA 8260B	3/4/08	104	101	2.56	70-130	25
Toluene	61290-05	<0.50	40.0	40.0	41.6	41.2	ug/L	EPA 8260B	3/4/08	104	103	0.956	70-130	25
1,1-Dichloroethane	61290-05	<0.50	40.0	40.0	42.1	40.8	ug/L	EPA 8260B	3/4/08	105	102	3.25	70-130	25
1,2-Dichloroethane	61290-05	<0.50	40.0	40.0	44.6	43.7	ug/L	EPA 8260B	3/4/08	112	109	2.12	70-130	25
Chlorobenzene	61290-05	<0.50	40.0	40.0	41.9	41.3	ug/L	EPA 8260B	3/4/08	105	103	1.32	70-130	25
Tert-Butanol	61290-05	6.5	200	200	209	206	ug/L	EPA 8260B	3/4/08	101	99.6	1.88	70-130	25
Methyl-t-Butyl Ether	61290-05	<0.50	40.0	40.0	40.4	40.4	ug/L	EPA 8260B	3/4/08	101	101	0.0714	70-130	25
1,1-Dichloroethane	61388-11	<0.50	39.6	39.9	38.3	38.9	ug/L	EPA 8260B	3/5/08	96.6	97.5	0.960	70-130	25
Benzene	61388-11	<0.50	39.6	39.9	40.5	41.1	ug/L	EPA 8260B	3/5/08	102	103	0.568	70-130	25
1,2-Dichloroethane	61388-11	<0.50	39.6	39.9	36.6	38.1	ug/L	EPA 8260B	3/5/08	92.5	95.4	3.10	70-130	25
Toluene	61388-11	2.2	39.6	39.9	40.6	41.1	ug/L	EPA 8260B	3/5/08	96.9	97.6	0.679	70-130	25
Chlorobenzene	61388-11	<0.50	39.6	39.9	41.7	42.1	ug/L	EPA 8260B	3/5/08	105	106	0.180	70-130	25
Tert-Butanol	61388-11	<5.0	198	200	196	194	ug/L	EPA 8260B	3/5/08	99.2	97.0	2.29	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61341

QC Report : Laboratory Control Sample (LCS)

Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
TPH as Diesel	20.0	mg/Kg	M EPA 8015	3/3/08	85.5	70-130
TPH as Diesel	20.0	mg/Kg	M EPA 8015	3/12/08	84.0	70-130
TPH as Diesel	20.0	mg/Kg	M EPA 8015	3/13/08	87.2	70-130
1,1-Dichloroethane	0.0396	mg/Kg	EPA 8260B	3/3/08	85.7	70-130
Benzene	0.0396	mg/Kg	EPA 8260B	3/3/08	91.6	70-130
1,2-Dichloroethane	0.0396	mg/Kg	EPA 8260B	3/3/08	85.9	70-130
Toluene	0.0396	mg/Kg	EPA 8260B	3/3/08	91.2	70-130
Chlorobenzene	0.0396	mg/Kg	EPA 8260B	3/3/08	95.0	70-130
Tert-Butanol	0.198	mg/Kg	EPA 8260B	3/3/08	82.4	70-130
Methyl-t-Butyl Ether	0.0396	mg/Kg	EPA 8260B	3/3/08	85.5	70-130
Benzene	0.0387	mg/Kg	EPA 8260B	3/4/08	96.0	70-130
Toluene	0.0387	mg/Kg	EPA 8260B	3/4/08	95.0	70-130
Methyl-t-Butyl Ether	0.0387	mg/Kg	EPA 8260B	3/4/08	76.7	70-130
1,1-Dichloroethane	0.0387	mg/Kg	EPA 8260B	3/4/08	91.2	70-130
1,2-Dichloroethane	0.0387	mg/Kg	EPA 8260B	3/4/08	85.4	70-130
Chlorobenzene	0.0387	mg/Kg	EPA 8260B	3/4/08	93.3	70-130
Tert-Butanol	0.193	mg/Kg	EPA 8260B	3/4/08	91.1	70-130

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 61341

QC Report : Laboratory Control Sample (LCS)

Date : 03/17/2008

Project Name : **Tesoro Pittsburg Terminal Phase II**

Project Number : **77OT.43877.00**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	3/4/08	104	70-130
Toluene	40.0	ug/L	EPA 8260B	3/4/08	103	70-130
1,1-Dichloroethane	40.0	ug/L	EPA 8260B	3/4/08	98.4	70-130
1,2-Dichloroethane	40.0	ug/L	EPA 8260B	3/4/08	88.6	70-130
Chlorobenzene	40.0	ug/L	EPA 8260B	3/4/08	101	70-130
Tert-Butanol	200	ug/L	EPA 8260B	3/4/08	98.4	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	3/4/08	82.4	70-130
1,1-Dichloroethane	40.0	ug/L	EPA 8260B	3/5/08	91.4	70-130
Benzene	40.0	ug/L	EPA 8260B	3/5/08	98.0	70-130
1,2-Dichloroethane	40.0	ug/L	EPA 8260B	3/5/08	88.5	70-130
Toluene	40.0	ug/L	EPA 8260B	3/5/08	97.6	70-130
Chlorobenzene	40.0	ug/L	EPA 8260B	3/5/08	101	70-130
Tert-Butanol	200	ug/L	EPA 8260B	3/5/08	91.4	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	3/5/08	94.6	70-130

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

March 07, 2008

CLS Work Order #: CRB1037
COC #: 61341

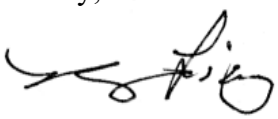
Troy Turpen
KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project Name: Tesoro Pittsburg Terminal Phase II

Enclosed are the results of analyses for samples received by the laboratory on 02/29/08 17:25. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,



James Liang, Ph.D.
Laboratory Director

CA DOHS ELAP Accreditation/Registration number 1233

CALIFORNIA LABORATORY SERVICES

KIFF Analytical	Project: Tesoro Pittsburg Terminal Phase II	
2795 Second St. Suite 300	Project Number: 77OT.43877.00	**CLS Work Order #: CRB1037**
Davis, CA 95616	Project Manager: Troy Turpen	COC #: 61341

CRB 1037

KIFF Analytical LLC

2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

California Lab Services
3249 Fitzgerald Rd.
Rancho Cordova, CA 95742
tel: (916) 638-7301 COC# 61341 Page 1 of 1

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen
Company/Address: Kiff Analytical, LLC
Phone No.: FAX No.:
Project Number: 77OT.43877.00 P.O. No.: 61341
Project Name: Tesoro Pittsburg Terminal Phase II
Project Address:

EDF Report? ___ Yes X No
Recommended but not mandatory to complete this section:
Sampling Company Log Code:
Global ID:
EDF Deliverable to (Email Address):
E-mail address: inbox@kiffanalytical.com

Analysis Request

Sample Designation	Sampling Date	Sampling Time	Container: VOA	Poly	Sleeve	Amber	Glass Jar	Preservative: HNO_3	H_2SO_4	$Na_2S_2O_3$	ZnAc & NaOH	NONE	Matrix: WATER	SOIL	Air	As, Ni, Ba, V, Cu, Zn (6020)	Pb (6020)	Date due: March 7, 2008	For Lab Use Only
GP-10WS	02/29/08	0820		1								1	X			X		X	
GP-6WS	02/29/08	0955		1								1	X			X		X	
GP-3WS	02/29/08	1215		1								1	X			X	X	X	
GP-3WD	02/29/08	1300		1								1	X			X	X	X	

	Date	Time	Received by:
Relinquished by:	02/29/08	1725	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory: Sonic 2-29-8 1725

Remarks: DUE DATE IS FIRM!
4°C
Bill to: Accounts Payable

p.1 5302974802 Kiff Analytical Feb 29 08 06:50p

CALIFORNIA LABORATORY SERVICES

03/07/08 08:21

KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project: Tesoro Pittsburg Terminal Phase II
Project Number: 77OT.43877.00
Project Manager: Troy Turpen

CLS Work Order #: CRB1037
COC #: 61341

Metals by EPA 6000/7000 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
GP-10WS (CRB1037-01) Water Sampled: 02/29/08 08:20 Received: 02/29/08 17:25									
Arsenic	**15**	5.0	µg/L	1	CR01774	03/03/08	03/04/08	EPA 6020/7000	
Barium	**980**	10	"	"	"	"	"	"	
Copper	**14**	2.0	"	"	"	"	"	"	
Nickel	**4.0**	2.0	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	
GP-6WS (CRB1037-02) Water Sampled: 02/29/08 09:55 Received: 02/29/08 17:25									
Arsenic	ND	5.0	µg/L	1	CR01774	03/03/08	03/04/08	EPA 6020/7000	
Barium	**45**	10	"	"	"	"	"	"	
Copper	**7.1**	2.0	"	"	"	"	"	"	
Nickel	**8.6**	2.0	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	
GP-3WS (CRB1037-03) Water Sampled: 02/29/08 12:15 Received: 02/29/08 17:25									
Arsenic	**5.1**	5.0	µg/L	1	CR01774	03/03/08	03/04/08	EPA 6020/7000	
Barium	**21**	10	"	"	"	"	"	"	
Copper	**7.1**	2.0	"	"	"	"	"	"	
Lead	ND	5.0	"	"	"	"	"	"	
Nickel	**5.6**	2.0	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	
GP-3WD (CRB1037-04) Water Sampled: 02/29/08 13:00 Received: 02/29/08 17:25									
Arsenic	ND	5.0	µg/L	1	CR01774	03/03/08	03/04/08	EPA 6020/7000	
Barium	**45**	10	"	"	"	"	"	"	
Copper	**7.6**	2.0	"	"	"	"	"	"	
Lead	ND	5.0	"	"	"	"	"	"	
Nickel	**12**	2.0	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	

KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project: Tesoro Pittsburg Terminal Phase II
Project Number: 77OT.43877.00
Project Manager: Troy Turpen

CLS Work Order #: CRB1037
COC #: 61341

Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CR01774 - EPA 3020A										
Blank (CR01774-BLK1)				Prepared: 03/03/08 Analyzed: 03/04/08						
Arsenic	ND	5.0	µg/L							
Barium	ND	10	"							
Copper	ND	2.0	"							
Lead	ND	5.0	"							
Nickel	ND	2.0	"							
Vanadium	ND	20	"							
Zinc	ND	20	"							
LCS (CR01774-BS1)				Prepared: 03/03/08 Analyzed: 03/04/08						
Arsenic	100	5.0	µg/L	100		100	80-120			
Barium	106	10	"	100		106	80-120			
Copper	105	2.0	"	100		105	80-120			
Lead	108	5.0	"	100		108	80-120			
Nickel	102	2.0	"	100		102	80-120			
Vanadium	109	20	"	100		109	80-120			
Zinc	102	20	"	100		102	80-120			
LCS Dup (CR01774-BSD1)				Prepared: 03/03/08 Analyzed: 03/04/08						
Arsenic	101	5.0	µg/L	100		101	80-120	0.368	20	
Barium	104	10	"	100		104	80-120	2.46	20	
Copper	103	2.0	"	100		103	80-120	1.88	20	
Lead	106	5.0	"	100		106	80-120	2.24	20	
Nickel	100	2.0	"	100		100	80-120	1.46	20	
Vanadium	108	20	"	100		108	80-120	0.765	20	
Zinc	99.6	20	"	100		99.6	80-120	2.08	20	
Matrix Spike (CR01774-MS1)	**Source: CRB1013-01**			Prepared: 03/03/08 Analyzed: 03/04/08						
Arsenic	105	5.0	µg/L	100	3.32	102	75-125			
Barium	155	10	"	100	52.5	102	75-125			
Copper	100	2.0	"	100	2.99	97.3	75-125			
Lead	107	5.0	"	100	ND	107	75-125			
Nickel	96.4	2.0	"	100	0.520	95.8	75-125			

KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project: Tesoro Pittsburg Terminal Phase II
Project Number: 77OT.43877.00
Project Manager: Troy Turpen

CLS Work Order #: CRB1037
COC #: 61341

Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CR01774 - EPA 3020A										
Matrix Spike (CR01774-MS1)		**Source: CRB1013-01**		Prepared: 03/03/08		Analyzed: 03/04/08				
Vanadium	112	20	µg/L	100	4.40	107	75-125			
Zinc	103	20	"	100	3.15	100	75-125			
Matrix Spike Dup (CR01774-MSD1)		**Source: CRB1013-01**		Prepared: 03/03/08		Analyzed: 03/04/08				
Arsenic	106	5.0	µg/L	100	3.32	102	75-125	0.607	25	
Barium	155	10	"	100	52.5	103	75-125	0.445	25	
Copper	101	2.0	"	100	2.99	97.6	75-125	0.299	25	
Lead	106	5.0	"	100	ND	106	75-125	0.225	25	
Nickel	96.9	2.0	"	100	0.520	96.3	75-125	0.518	25	
Vanadium	113	20	"	100	4.40	108	75-125	0.891	25	
Zinc	102	20	"	100	3.15	98.7	75-125	1.29	25	

CALIFORNIA LABORATORY SERVICES

03/07/08 08:21

KIFF Analytical	Project: Tesoro Pittsburg Terminal Phase II	
2795 Second St. Suite 300	Project Number: 77OT.43877.00	**CLS Work Order #: CRB1037**
Davis, CA 95616	Project Manager: Troy Turpen	COC #: 61341

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Calscience
Environmental
Laboratories, Inc.

March 07, 2008

Joel Kiff
Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Subject: **Calscience Work Order No.: 08-03-0022**
Client Reference: Tesoro Pittsburg Terminal Phase II

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 3/1/2008 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Amanda Porter

Calscience Environmental
Laboratories, Inc.
Amanda Porter
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 03/01/08
Work Order No: 08-03-0022
Preparation: EPA 3050B
Method: EPA 6020
Units: mg/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-10-2	**08-03-0022-1-A**	**02/29/08 07:40**	**Solid**	**ICP/MS A**	**03/04/08**	**03/05/08 00:28**	**080304L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	5.23	0.200	1		Nickel	23.6	0.100	1	
Barium	182	0.100	1		Vanadium	83.2	0.100	1	
Copper	70.4	0.100	1		Zinc	107	1.00	1	B

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-6-1	**08-03-0022-2-A**	**02/29/08 08:15**	**Solid**	**ICP/MS A**	**03/04/08**	**03/05/08 00:32**	**080304L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	38.8	0.200	1		Nickel	55.6	0.100	1	
Barium	951	0.100	1		Vanadium	35.7	0.100	1	
Copper	695	0.100	1		Zinc	6230	1.00	1	B

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-3-1	**08-03-0022-9-A**	**02/29/08 10:15**	**Solid**	**ICP/MS A**	**03/04/08**	**03/05/08 00:36**	**080304L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	5.51	0.200	1		Nickel	47.4	0.100	1	
Barium	198	0.100	1		Vanadium	44.1	0.100	1	
Copper	33.1	0.100	1		Zinc	157	1.00	1	B
Lead	551	0.100	1						

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**096-10-002-1,050**	**N/A**	**Solid**	**ICP/MS A**	**03/04/08**	**03/04/08 23:16**	**080304L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	ND	0.200	1		Nickel	ND	0.100	1	
Barium	ND	0.100	1		Vanadium	ND	0.100	1	
Copper	ND	0.100	1		Zinc	1.30	1.00	1	
Lead	ND	0.100	1						

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 03/01/08
Work Order No: 08-03-0022
Preparation: EPA 3510C
Method: EPA 8310
Units: ug/L

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-10WS	**08-03-0022-3-B**	**02/29/08 08:20**	**Aqueous**	**HPLC 5**	**03/03/08**	**03/04/08 14:57**	**080303L09**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	1.0	1		Benzo (a) Anthracene	ND	1.0	1	
Acenaphthylene	ND	1.0	1		Chrysene	ND	1.0	1	
Acenaphthene	ND	1.0	1		Benzo (b) Fluoranthene	ND	1.0	1	
Fluorene	ND	1.0	1		Benzo (k) Fluoranthene	ND	1.0	1	
Phenanthrene	ND	1.0	1		Benzo (a) Pyrene	ND	0.20	1	
Anthracene	ND	1.0	1		Dibenz (a,h) Anthracene	ND	1.0	1	
Fluoranthene	ND	1.0	1		Benzo (g,h,i) Perylene	ND	1.0	1	
Pyrene	ND	1.0	1		Indeno (1,2,3-c,d) Pyrene	ND	1.0	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	59	40-160	

GP-6WS	08-03-0022-8-A	02/29/08 09:55	Aqueous	HPLC 5	03/03/08	03/04/08 15:29	080303L09

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	1.1	1.11		Benzo (a) Anthracene	ND	1.1	1.11	
Acenaphthylene	ND	1.1	1.11		Chrysene	ND	1.1	1.11	
Acenaphthene	ND	1.1	1.11		Benzo (b) Fluoranthene	ND	1.1	1.11	
Fluorene	ND	1.1	1.11		Benzo (k) Fluoranthene	ND	1.1	1.11	
Phenanthrene	ND	1.1	1.11		Benzo (a) Pyrene	ND	0.22	1.11	
Anthracene	ND	1.1	1.11		Dibenz (a,h) Anthracene	ND	1.1	1.11	
Fluoranthene	ND	1.1	1.11		Benzo (g,h,i) Perylene	ND	1.1	1.11	
Pyrene	ND	1.1	1.11		Indeno (1,2,3-c,d) Pyrene	ND	1.1	1.11	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	68	40-160	

GP-3WS	08-03-0022-14-A	02/29/08 12:15	Aqueous	HPLC 5	03/03/08	03/04/08 16:02	080303L09

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	1.4	1.39		Benzo (a) Anthracene	ND	1.4	1.39	
Acenaphthylene	ND	1.4	1.39		Chrysene	ND	1.4	1.39	
Acenaphthene	ND	1.4	1.39		Benzo (b) Fluoranthene	ND	1.4	1.39	
Fluorene	ND	1.4	1.39		Benzo (k) Fluoranthene	ND	1.4	1.39	
Phenanthrene	ND	1.4	1.39		Benzo (a) Pyrene	ND	0.28	1.39	
Anthracene	ND	1.4	1.39		Dibenz (a,h) Anthracene	ND	1.4	1.39	
Fluoranthene	ND	1.4	1.39		Benzo (g,h,i) Perylene	ND	1.4	1.39	
Pyrene	ND	1.4	1.39		Indeno (1,2,3-c,d) Pyrene	ND	1.4	1.39	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	66	40-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	03/01/08
2795 2nd Street, Suite 300		Work Order No:	08-03-0022
Davis, CA 95616-6593		Preparation:	EPA 3510C
		Method:	EPA 8310
		Units:	ug/L

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-3WD	**08-03-0022-17-A**	**02/29/08 13:00**	**Aqueous**	**HPLC 5**	**03/03/08**	**03/04/08 16:34**	**080303L09**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	1.3	1.28		Benzo (a) Anthracene	ND	1.3	1.28	
Acenaphthylene	ND	1.3	1.28		Chrysene	ND	1.3	1.28	
Acenaphthene	ND	1.3	1.28		Benzo (b) Fluoranthene	ND	1.3	1.28	
Fluorene	ND	1.3	1.28		Benzo (k) Fluoranthene	ND	1.3	1.28	
Phenanthrene	ND	1.3	1.28		Benzo (a) Pyrene	ND	0.26	1.28	
Anthracene	ND	1.3	1.28		Dibenz (a,h) Anthracene	ND	1.3	1.28	
Fluoranthene	ND	1.3	1.28		Benzo (g,h,i) Perylene	ND	1.3	1.28	
Pyrene	ND	1.3	1.28		Indeno (1,2,3-c,d) Pyrene	ND	1.3	1.28	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	68	40-160	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-07-003-1,086**	**N/A**	**Aqueous**	**HPLC 5**	**03/03/08**	**03/03/08 23:01**	**080303L09**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	1.0	1		Benzo (a) Anthracene	ND	1.0	1	
Acenaphthylene	ND	1.0	1		Chrysene	ND	1.0	1	
Acenaphthene	ND	1.0	1		Benzo (b) Fluoranthene	ND	1.0	1	
Fluorene	ND	1.0	1		Benzo (k) Fluoranthene	ND	1.0	1	
Phenanthrene	ND	1.0	1		Benzo (a) Pyrene	ND	0.20	1	
Anthracene	ND	1.0	1		Dibenz (a,h) Anthracene	ND	1.0	1	
Fluoranthene	ND	1.0	1		Benzo (g,h,i) Perylene	ND	1.0	1	
Pyrene	ND	1.0	1		Indeno (1,2,3-c,d) Pyrene	ND	1.0	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	83	40-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	03/01/08
2795 2nd Street, Suite 300		Work Order No:	08-03-0022
Davis, CA 95616-6593		Preparation:	EPA 3545
		Method:	EPA 8310
		Units:	ug/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-10-2	**08-03-0022-1-A**	**02/29/08 07:40**	**Solid**	**HPLC 5**	**03/03/08**	**03/04/08 03:54**	**080303L07**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	15	1		Benzo (a) Anthracene	ND	10	1	
Acenaphthylene	ND	30	1		Chrysene	ND	10	1	
Acenaphthene	ND	15	1		Benzo (b) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
Anthracene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Fluoranthene	10	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Pyrene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	53	40-160	

GP-6-1	08-03-0022-2-A	02/29/08 08:15	Solid	HPLC 5	03/03/08	03/04/08 05:31	080303L07

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	830	15	1		Benzo (a) Anthracene	340	10	1	
Acenaphthylene	710	30	1		Chrysene	700	10	1	
Acenaphthene	500	15	1		Benzo (b) Fluoranthene	550	10	1	
Fluorene	46	10	1		Benzo (k) Fluoranthene	110	10	1	
Phenanthrene	580	10	1		Benzo (a) Pyrene	740	10	1	
Anthracene	56	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Fluoranthene	950	10	1		Benzo (g,h,i) Perylene	500	10	1	
Pyrene	690	10	1		Indeno (1,2,3-c,d) Pyrene	410	10	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	50	40-160	

GP-3-1	08-03-0022-9-A	02/29/08 10:15	Solid	HPLC 5	03/03/08	03/04/08 06:37	080303L07

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	60	15	1		Benzo (a) Anthracene	50	10	1	
Acenaphthylene	170	30	1		Chrysene	260	10	1	
Acenaphthene	65	15	1		Benzo (b) Fluoranthene	10	10	1	
Fluorene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Phenanthrene	22	10	1		Benzo (a) Pyrene	150	10	1	
Anthracene	ND	10	1		Dibenz (a,h) Anthracene	100	10	1	
Fluoranthene	76	10	1		Benzo (g,h,i) Perylene	26	10	1	
Pyrene	17	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	101	40-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	03/01/08
2795 2nd Street, Suite 300		Work Order No:	08-03-0022
Davis, CA 95616-6593		Preparation:	EPA 3545
		Method:	EPA 8310
		Units:	ug/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-07-002-1,003**	**N/A**	**Solid**	**HPLC 5**	**03/03/08**	**03/03/08 18:40**	**080303L07**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	15	1		Benzo (a) Anthracene	ND	10	1	
Acenaphthylene	ND	30	1		Chrysene	ND	10	1	
Acenaphthene	ND	15	1		Benzo (b) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
Anthracene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Fluoranthene	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Pyrene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	82	40-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 03/01/08
Work Order No: 08-03-0022
Preparation: EPA 3050B
Method: EPA 6020

Project Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-03-0021-10	**Solid**	**ICP/MS A**	**03/04/08**	**03/04/08**	**080304S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	101	102	72-132	1	0-13	
Barium	4X	4X	50-152	4X	0-41	Q
Copper	100	110	25-157	5	0-22	
Lead	100	100	62-134	0	0-23	
Nickel	92	117	46-154	7	0-15	
Vanadium	124	134	28-178	4	0-28	
Zinc	101	123	23-173	7	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - PDS / PDSD

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical		Date Received	03/01/08
2795 2nd Street, Suite 300		Work Order No:	08-03-0022
Davis, CA 95616-6593		Preparation:	EPA 3050B
		Method:	EPA 6020

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
08-03-0021-10	**Solid**	**ICP/MS A**	**03/04/08**	**03/04/08**	**080304S01**

Parameter	PDS %REC	PDSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	110	112	75-125	2	0-13	
Barium	4X	4X	75-125	4X	0-41	Q
Copper	99	103	75-125	2	0-22	
Lead	104	105	75-125	1	0-23	
Nickel	106	114	75-125	2	0-15	
Vanadium	111	121	75-125	4	0-28	
Zinc	95	109	75-125	5	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 03/01/08
Work Order No: 08-03-0022
Preparation: EPA 3545
Method: EPA 8310

Project Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-02-1943-10	**Solid**	**HPLC 5**	**03/03/08**	**03/03/08**	**080303S07**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Naphthalene	90	85	40-160	6	0-20	
Acenaphthylene	84	85	40-160	0	0-20	
Acenaphthene	85	86	40-160	1	0-20	
Fluorene	85	85	40-160	0	0-20	
Phenanthrene	85	85	40-160	0	0-20	
Anthracene	75	75	40-160	0	0-20	
Fluoranthene	86	87	40-160	0	0-20	
Pyrene	88	89	40-160	0	0-20	
Benzo (a) Anthracene	86	86	40-160	1	0-20	
Chrysene	93	93	40-160	0	0-20	
Benzo (b) Fluoranthene	90	90	40-160	0	0-20	
Benzo (k) Fluoranthene	88	88	40-160	0	0-20	
Benzo (a) Pyrene	92	92	40-160	0	0-20	
Dibenz (a,h) Anthracene	85	85	40-160	0	0-20	
Benzo (g,h,i) Perylene	87	87	40-160	0	0-20	
Indeno (1,2,3-c,d) Pyrene	86	86	40-160	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical		Date Received:	N/A
2795 2nd Street, Suite 300		Work Order No:	08-03-0022
Davis, CA 95616-6593		Preparation:	EPA 3050B
		Method:	EPA 6020

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
096-10-002-1,050	**Solid**	**ICP/MS A**	**03/04/08**	**03/04/08**	**080304L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	96	95	80-120	1	0-20	
Barium	98	99	80-120	2	0-20	
Copper	100	98	80-120	2	0-20	
Lead	93	94	80-120	1	0-20	
Nickel	99	97	80-120	2	0-20	
Vanadium	99	97	80-120	2	0-20	
Zinc	108	105	80-120	3	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-03-0022
Preparation: EPA 3510C
Method: EPA 8310

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-003-1,086	**Aqueous**	**HPLC 5**	**03/03/08**	**03/03/08**	**080303L09**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Naphthalene	108	102	40-160	5	0-20	
Acenaphthylene	95	94	40-160	2	0-20	
Acenaphthene	100	97	40-160	3	0-20	
Fluorene	100	97	40-160	3	0-20	
Phenanthrene	100	97	40-160	4	0-20	
Anthracene	90	87	40-160	4	0-20	
Fluoranthene	98	94	40-160	4	0-20	
Pyrene	103	99	40-160	4	0-20	
Benzo (a) Anthracene	102	98	40-160	4	0-20	
Chrysene	106	102	40-160	4	0-20	
Benzo (b) Fluoranthene	105	102	40-160	4	0-20	
Benzo (k) Fluoranthene	106	102	40-160	4	0-20	
Benzo (a) Pyrene	99	95	40-160	4	0-20	
Dibenz (a,h) Anthracene	99	95	40-160	4	0-20	
Benzo (g,h,i) Perylene	106	102	40-160	4	0-20	
Indeno (1,2,3-c,d) Pyrene	100	96	40-160	4	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-03-0022
Preparation: EPA 3545
Method: EPA 8310

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-002-1,003	**Solid**	**HPLC 5**	**03/03/08**	**03/03/08**	**080303L07**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Naphthalene	101	105	40-160	5	0-20	
Acenaphthylene	95	99	40-160	4	0-20	
Acenaphthene	97	101	40-160	3	0-20	
Fluorene	98	101	40-160	3	0-20	
Phenanthrene	99	101	40-160	2	0-20	
Anthracene	90	91	40-160	1	0-20	
Fluoranthene	99	99	40-160	0	0-20	
Pyrene	103	103	40-160	0	0-20	
Benzo (a) Anthracene	104	103	40-160	2	0-20	
Chrysene	109	107	40-160	2	0-20	
Benzo (b) Fluoranthene	108	105	40-160	2	0-20	
Benzo (k) Fluoranthene	111	109	40-160	2	0-20	
Benzo (a) Pyrene	102	100	40-160	2	0-20	
Dibenz (a,h) Anthracene	105	103	40-160	2	0-20	
Benzo (g,h,i) Perylene	107	105	40-160	2	0-20	
Indeno (1,2,3-c,d) Pyrene	102	100	40-160	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 08-03-0022

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

KIFF Analytical LLC

2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

0022

Lab No. _____ Page 1 of 2

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Chain-of-Custody Record and Analysis Request

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

EDF Deliverable to (Email Address):

Phone No.: FAX No.:

Project Number: 77OT.43877.00 P.O. No.: 61341

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Analysis Request

Sample Designation	Sampling: Date	Sampling: Time	Container: Glass	Container: Poly	Container: Sleeve	Container: Amber	Container: Tedlar	Preservative: HNO_3	Preservative: H_2SO_4	Preservative: $Na_2S_2O_3$	Preservative: $ZnAc_2$ & NaOH	Preservative: None	Matrix: WATER	Matrix: SOIL	Matrix: Air	PAHs (8310)	Hold	As, Ni, Ba, V, Cn, Zn (6020)	Pb (6020)					Date due: March 7, 2008	For Lab Use Only
GP-10-2	02/29/08	0740	1									1		X		X		X						X	
GP-6-1	02/29/08	0815	1									1		X		X		X						X	
GP-10WS	02/29/08	0820				2				2			X			X								X	
GP-10-20	02/29/08	0835	1									1		X			X							X	
GP-6-6	02/29/08	0935	1									1		X			X							X	
GP-6-10	02/29/08	0945	1									1		X			X							X	
GP-6-15	02/29/08	0950	1									1		X			X							X	
GP-6WS	02/29/08	0955				2				2			X			X								X	
GP-3-1	02/29/08	1015	1									1		X		X		X	X					X	
GP-3-6	02/29/08	1045	1									1		X			X							X	

	Date	Time	
Relinquished by: with Analytical	022908	1900	Received by:
Relinquished by: C.O. B1020132 1396, B1020132 1289			Received by:
Relinquished by:	030108	1000	Received by Laboratory: CER

Remarks: DUE DATE IS FIRM!

Bill to: Accounts Payable

0022

KIFF Analytical LLC

2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. _____ Page 2 of 2

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Chain-of-Custody Record and Analysis Request

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

EDF Deliverable to (Email Address):

Phone No.: FAX No.:

Project Number: 77OT.43877.00 P.O. No.: 61341

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling		Container					Preservative					Matrix			Analysis Request								Date due:	For Lab Use Only
	Date	Time	Glass	Poly	Sleeve	Amber	Tedlar	HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	WATER	SOIL	Air	PAHs (8310)	Hold	As, Ni, Ba, V, Cn, Zn (6020)	Pb (6020)					March 7, 2008	
GP-3-10	02/29/08	1050	1									1		X			X							X	
GP-3-15	02/29/08	1055	1									1		X			X							X	
GP-3-20	02/29/08	1115	1									1		X			X							X	
GP-3WS	02/29/08	1215				2				2			X			X								X	
GP-3-25	02/29/08	1245	1									1		X			X							X	
GP-3-30	02/29/08	1300	1									1		X			X							X	
GP-3WD	02/29/08	1300				2				2			X			X								X	

Relinquished by:	Date	Time	Received by:
Kiff Analytical	022908	1900	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:
	030108	1000	

Remarks: DUE DATE IS FIRM!

Bill to: Accounts Payable

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 08 - 03 - 0022

Cooler 1 of 2

SAMPLE RECEIPT FORM

CLIENT: KIFF DATE: 03/01/08

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.

_____ °C Temperature blank.

LABORATORY (Other than Calscience Courier):

1.8 °C Temperature blank.
_____ °C IR thermometer.
_____ Ambient temperature.

Initial: NC

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: ✓ No (Not Intact) : _____ Not Present: _____

Initial: NC

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sampler's name indicated on COC	✓		
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers and volume for analyses requested	✓		
Proper preservation noted on sample label(s)	✓		
VOA vial(s) free of headspace.			✓
Tedlar bag(s) free of condensation			✓

Initial: NC

COMMENTS:

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 08 - 03 - 0022

Cooler 2 of 2

SAMPLE RECEIPT FORM

CLIENT: KIFF DATE: 03/01/08

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.

_____ °C Temperature blank.

LABORATORY (Other than Calscience Courier):

2.1 °C Temperature blank.
_____ °C IR thermometer.
_____ Ambient temperature.

Initial: NC

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: ✓ No (Not Intact) : _____ Not Present: _____

Initial: NC

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sampler's name indicated on COC	✓		
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers and volume for analyses requested	✓		
Proper preservation noted on sample label(s)	✓		
VOA vial(s) free of headspace.			✓
Tedlar bag(s) free of condensation			✓

Initial: NC

COMMENTS:

Calscience Environmental Laboratories, Inc.

Supplemental Report 2

March 21, 2008

Additional requested analyses are reported as a stand-alone report.

Joel Kiff
Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Subject: **Calscience Work Order No.: 08-03-0022**
Client Reference: Tesoro Pittsburg Terminal Phase II

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 3/1/2008 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Amanda Porter

Calscience Environmental
Laboratories, Inc.
Amanda Porter
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 03/01/08
Work Order No: 08-03-0022
Preparation: EPA 3050B
Method: EPA 6020
Units: mg/kg

Project: Tesoro Pittsburg Terminal Phase II

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-10-20	**08-03-0022-4-A**	**02/29/08 08:35**	**Solid**	**ICP/MS A**	**03/20/08**	**03/20/08 14:28**	**080320L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	2.68	0.200	1		Vanadium	36.6	0.100	1	

GP-6-6	**08-03-0022-5-A**	**02/29/08 09:35**	**Solid**	**ICP/MS A**	**03/20/08**	**03/20/08 14:32**	**080320L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	3.92	0.200	1		Vanadium	31.0	0.100	1	
Barium	81.2	0.100	1		Zinc	39.7	1.00	1	
Copper	15.0	0.100	1						

GP-3-6	**08-03-0022-10-A**	**02/29/08 10:45**	**Solid**	**ICP/MS A**	**03/20/08**	**03/20/08 14:37**	**080320L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	2.13	0.200	1		Vanadium	27.2	0.100	1	
Lead	4.25	0.100	1						

Method Blank	**096-10-002-1,053**	**N/A**	**Solid**	**ICP/MS A**	**03/20/08**	**03/20/08 13:10**	**080320L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	ND	0.200	1		Lead	ND	0.100	1	
Barium	ND	0.100	1		Vanadium	ND	0.100	1	
Copper	ND	0.100	1		Zinc	ND	1.00	1	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 03/01/08
Work Order No: 08-03-0022
Preparation: EPA 3050B
Method: EPA 6020

Project Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-03-0021-1	**Solid**	**ICP/MS A**	**03/20/08**	**03/20/08**	**080320S04**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	107	107	72-132	1	0-13	
Barium	853	105	50-152	103	0-41	3,4
Copper	92	96	25-157	2	0-22	
Lead	104	108	62-134	2	0-23	
Nickel	103	109	46-154	3	0-15	
Vanadium	95	96	28-178	0	0-28	
Zinc	121	115	23-173	2	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - PDS / PDSD

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received 03/01/08
Work Order No: 08-03-0022
Preparation: EPA 3050B
Method: EPA 6020

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
08-03-0021-1	**Solid**	**ICP/MS A**	**03/20/08**	**03/20/08**	**080320S04**

Parameter	PDS %REC	PDSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	106	112	75-125	4	0-13	
Barium	96	105	75-125	3	0-41	
Copper	99	101	75-125	1	0-22	
Lead	105	110	75-125	4	0-23	
Nickel	106	109	75-125	2	0-15	
Vanadium	103	103	75-125	0	0-28	
Zinc	102	110	75-125	3	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-03-0022
Preparation: EPA 3050B
Method: EPA 6020

Project: Tesoro Pittsburg Terminal Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
096-10-002-1,053	**Solid**	**ICP/MS A**	**03/20/08**	**03/20/08**	**080320L04**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	100	103	80-120	3	0-20	
Barium	97	103	80-120	5	0-20	
Copper	105	106	80-120	1	0-20	
Lead	104	107	80-120	3	0-20	
Vanadium	105	108	80-120	2	0-20	
Zinc	101	104	80-120	4	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 08-03-0022

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

KIFF Analytical LLC

2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

0022

Lab No. _____ Page 1 of 2

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Chain-of-Custody Record and Analysis Request

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

EDF Deliverable to (Email Address):

Phone No.: FAX No.:

Project Number: 77OT.43877.00 P.O. No.: 61341

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling		Container					Preservative					Matrix			Analysis Request								Date due:	For Lab Use Only
	Date	Time	Glass	Poly	Sleeve	Amber	Tedlar	HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	WATER	SOIL	Air	PAHs (8310)	Hold	As, Ni, Ba, V, Cn, Zn (6020)	Pb (6020)					March 7, 2008	
GP-10-2	02/29/08	0740	1									1		X		X		X						X	
GP-6-1	02/29/08	0815	1									1		X		X		X						X	
GP-10WS	02/29/08	0820				2				2			X			X								X	
GP-10-20	02/29/08	0835	1									1		X			X							X	
GP-6-6	02/29/08	0935	1									1		X			X							X	
GP-6-10	02/29/08	0945	1									1		X			X							X	
GP-6-15	02/29/08	0950	1									1		X			X							X	
GP-6WS	02/29/08	0955				2				2			X			X								X	
GP-3-1	02/29/08	1015	1									1		X		X		X	X					X	
GP-3-6	02/29/08	1045	1									1		X			X							X	

	Date	Time		
Relinquished by: with Analytical	022908	1900	Received by:	Remarks: DUE DATE IS FIRM!
Relinquished by: C.O. B1020132 1396, B1020132 1289	Date	Time	Received by:	
Relinquished by:	Date 030108	Time 1000	Received by Laboratory: CER	Bill to: Accounts Payable

0022

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714-895-5494

Lab No. _____ Page 2 of 2

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Chain-of-Custody Record and Analysis Request

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

EDF Deliverable to (Email Address):

Phone No.: FAX No.:

Project Number: 77OT.43877.00 P.O. No.: 61341

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling Date	Sampling Time	Container: Glass	Poly	Sleeve	Amber	Tedlar	Preservative: HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	Matrix: WATER	SOIL	Air	PAHs (8310)	Hold	As, Ni, Ba, V, Cn, Zn (6020)	Pb (6020)					Date due: March 7, 2008	For Lab Use Only
GP-3-10	02/29/08	1050	1									1		X			X								X	
GP-3-15	02/29/08	1055	1									1		X			X								X	
GP-3-20	02/29/08	1115	1									1		X			X								X	
GP-3WS	02/29/08	1215				2				2			X			X									X	
GP-3-25	02/29/08	1245	1									1		X			X								X	
GP-3-30	02/29/08	1300	1									1		X			X								X	
GP-3WD	02/29/08	1300				2				2			X			X									X	

Relinquished by:	Date	Time	Received by:
Kiff Analytical	022908	1900	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date 030108	Time 1000	Received by Laboratory:

Remarks: DUE DATE IS FIRM!

Bill to: Accounts Payable

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 08 - 03 - 0022

Cooler 1 of 2

SAMPLE RECEIPT FORM

CLIENT: KIFF DATE: 03/01/08

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.

_____ °C Temperature blank.

LABORATORY (Other than Calscience Courier):

1.8 °C Temperature blank.
_____ °C IR thermometer.
_____ Ambient temperature.

Initial: NC

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: ✓ No (Not Intact) : _____ Not Present: _____

Initial: NC

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sampler's name indicated on COC	✓		
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers and volume for analyses requested	✓		
Proper preservation noted on sample label(s)	✓		
VOA vial(s) free of headspace.			✓
Tedlar bag(s) free of condensation			✓

Initial: NC

COMMENTS:

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 08 - 03 - 0022

Cooler 2 of 2

SAMPLE RECEIPT FORM

CLIENT: KIFF DATE: 03/01/08

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.

_____ °C Temperature blank.

LABORATORY (Other than Calscience Courier):

2.1 °C Temperature blank.
_____ °C IR thermometer.
_____ Ambient temperature.

Initial: NC

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: ✓ No (Not Intact) : _____ Not Present: _____

Initial: NC

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sampler's name indicated on COC	✓		
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers and volume for analyses requested	✓		
Proper preservation noted on sample label(s)	✓		
VOA vial(s) free of headspace.			✓
Tedlar bag(s) free of condensation			✓

Initial: NC

COMMENTS:

KIFF Analytical LLC
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Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. _____ Page 1 of 2

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

Phone No.: FAX No.:

Project Number: 77OT.43877.00

P.O. No.: 61341

EDF Deliverable to (Email Address):

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling		Container					Preservative						Matrix			Analysis Request								Date due:	Date due:	For Lab Use Only
	Date	Time	Glass	Poly	Sleeve	Amber	Tedlar	HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	WATER	SOIL	Air	PAHs (8310)	Hold	As, Ni, Ba, V, Cn, Zn (6020)	Pb (6020)	As, V (EPA 6020)	As, Ba, Cu, V, Zn (EPA 6020)		March 7, 2008	March 17, 2008	
GP-10-2	02/29/08	0740	1									1		X		X		X					X		
GP-6-1	02/29/08	0815	1									1		X		X		X					X		
GP-10WS	02/29/08	0820				2				2			X			X							X		
GP-10-20	02/29/08	0835	1									1		X						X				X	
GP-6-6	02/29/08	0935	1									1		X		X					X			X	
GP-6-10	02/29/08	0945	1									1		X			X								
GP-6-15	02/29/08	0950	1									1		X			X								
GP-6WS	02/29/08	0955				2				2			X			X							X		
GP-3-1	02/29/08	1015	1									1		X		X		X	X				X		
GP-3-6	02/29/08	1045	1									1		X		X			X	X				X	

Relinquished by: Troy A. Turpen	Date 3/14/08	Time 16:40	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:

Remarks: This is a revised COC for Work Order No. 08-03-0022, now with samples -4, -5 and -10 off hold for additional analyses as marked. Please provide an XLS of the results as well as a PDF.

Bill to: Accounts Payable

KIFF Analytical LLC
2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. _____ Page 2 of 2

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? __Yes _X_No

Chain-of-Custody Record and Analysis Request

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

Phone No.: | FAX No.:

Project Number: 77OT.43877.00 | P.O. No.: 61341

EDF Deliverable to (Email Address):

Project Name: Tesoro Pittsburg Terminal Phase II

E-mail address: inbox@kiffanalytical.com

Project Address:

Sample Designation	Sampling		Container					Preservative						Matrix			Analysis Request								Date due: March 7, 2008	Date due: March 17, 2008	For Lab Use Only
	Date	Time	Glass	Poly	Sleeve	Amber	Tedlar	HNO_3	H_2SO_4	$Na_2S_2O_3$	$ZnAc_2$ & NaOH	None	WATER	SOIL	Air	PAHs (8310)	Hold	As, Ni, Ba, V, Cn, Zn (6020)	Pb (6020)	As, V (EPA 6020)	As, Ba, Cu, V, Zn (EPA 6020)					
GP-3-10	02/29/08	1050	1									1		X			X										
GP-3-15	02/29/08	1055	1									1		X			X										
GP-3-20	02/29/08	1115	1									1		X			X										
GP-3WS	02/29/08	1215				2				2			X			X								X			
GP-3-25	02/29/08	1245	1									1		X			X										
GP-3-30	02/29/08	1300	1									1		X			X										
GP-3WD	02/29/08	1300				2				2			X			X								X			

Relinquished by: Troy A. Turpen	Date 3/14/08	Time 16:40	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:

Remarks: This is a revised COC for Work Order No. 08-03-0022, now with samples -4, -5 and -10 off hold for additional analyses as marked. Please provide an XLS of the results as well as a PDF.

Bill to: Accounts Payable

61341

SECOR Rancho Cordova Office
3017 Kilgore Road
Rancho Cordova, CA
TEL: (916) 861-0400 FAX: (916) 861-0430

SECOR International, Inc.

CHAIN OF CUSTODY RECORD

SECOR Company Contact(s):
Todd Brown, SECOR Project Manager
email - tbrown@secor.com, brorie@secor.com
chamilton@secor.com

SECOR Project: 77OT.43877.00

Tesoro Billing Info
Company: 5200
AFE: 023139641-T
WBS: 97618.0042.925
G/L : 767490

DATE: 2/29/08
PAGE: 1 OF 2

Project Name: Tesoro Pittsburg Terminal Phase II
Address: 595 East Third Street, Pittsburg, CA

Sampler(s): Printed Name: Bryan Rorie
SAMPLER(S): (SIGNATURE)
Lab: KIFF ANALYTICAL
LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS)
☐ 10 DAYS ☒ 5 DAYS ☐ 72 HR ☐ 48 HR ☐ 24 HR ☐ <24 HR

SPECIAL INSTRUCTIONS OR NOTES: TEMPERATURE ON RECEIPT (C)
Direct Bill Jeff Baker of Tesoro Petroleum
All voa's preserved w/ hcl
All ~~voa's~~ Ambers preserved w/ $Na_2S_2O_3$
All Poly's unpreserved

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	PRE-SERVE	TPHd-carbon chain distinction (8015M)	TPHg-carbon chain distinction (8260B)	PAHs (8310)	PAHs (8270) PCP	VOCs (8260B)	6 metals = As, Ni, Ba, V, Cu, Zn (6020)	7 metals = As, Ni, Ba, V, Cu, Zn, Pb (6020)	HOLD SAMPLE	Other:	Laboratory Notes
	GP-10-2	2/29/08	740	S	1	N/A	X	X	X			X				01
	GP-6-1		815	S	1	N/A			X			X				02
	GP-DUP/S		820	W	9	Notes			X			X				03
	GP-10-20		835	S	1	N/A			X			X		X		04
	GP-6-6		935	S	1	N/A			X			X		X		05
	GP-6-10		945	S	1	N/A			X			X		X		06
	GP-6-15		950	S	1	N/A			X			X		X		07
	GP-6WS		955	W	9	Notes			X			X				08
	GP-															
	GP-															

SAMPLE RECEIPT
Temp °C 8.4 Therm. ID# IR-2
Initial RLM Date 022908
Time 1625 Coolant present: Yes / No

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Kiff Analytical	Date: 022908	Time: 1630

61341

SECOR Rancho Cordova Office

3017 Kilgore Road

Rancho Cordova, CA

TEL: (916) 861-0400 FAX: (916) 861-0430

SECOR International, Inc.

CHAIN OF CUSTODY RECORD

SECOR Company Contact(s):

Todd Brown, SECOR Project Manager

email - tbrown@secor.com, brorie@secor.com

chamilton@secor.com

SECOR Project: 77OT.43877.00

Tesoro Billing Info
Company: 5200
AFE: 023139641-T
WBS: 97618.0042.925
G/L : 767490

DATE: 2/29/08

PAGE: 2 OF 2

Project Name: Tesoro Pittsburg Terminal Phase II

Address: 595 East Third Street, Pittsburg, CA

Sampler(s): Printed Name: Bryan Rorie

SAMPLER(S): (SIGNATURE)

Lab: KIFF ANALYTICAL

LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS)

☐ 10 DAYS ☒ 5 DAYS ☐ 72 HR ☐ 48 HR ☐ 24 HR ☐ <24 HR

SPECIAL INSTRUCTIONS OR NOTES: TEMPERATURE ON RECEIPT (C)

Direct Bill Jeff Baker of Tesoro Petroleum
All voa's preserved w/hcl
All Ambers preserved w/$Na_2S_2O_3$
All poly's unpreserved

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	PRE-SERVE	TPHd-carbon chain distinction (8015M)	TPHg-carbon chain distinction (8260B)	PAHs (8310)	PAHs (8270)	VOCs (8260B)	6 metals = As, Ni, Ba, V, Cu, Zn (6020)	7 metals = As, Ni, Ba, V, Cu, Zn, Pb (6020)	HOLD SAMPLE	Other:	Laboratory Notes
	GP-3-1	2/29/08	1015	S	1	N/A	X	X	X		X		X			09
	GP-3-6		1045	S	1	N/A	X	X	X		X		X	X		10
	GP-3-10		1050	S	1	N/A	X	X	X		X		X	X		11
	GP-3-15		1055	S	1	N/A	X	X	X		X		X	X		12
	GP-3-20		1115	S	1	N/A	X	X	X		X		X	X		13
	GP-3WS		1215	W	9	NONE	X	X	X		X		X			14
	GP-3-25		1245	S	1	N/A	X	X	X		X		X	X		15
	GP-3-30		1300	S	1	N/A	X	X	X		X		X	X		16
	GP-3WD		1300	W	9	NONE	X	X	X		X		X			17
	GP-															

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Kiff Analytical	Date: 022908	Time: 1630

Troy Turpen

From: Caron Stofleth [cstofleth@secor.com]
Sent: Friday, March 07, 2008 5:06 PM
To: Troy Turpen
Cc: Gary Haeck; Todd Brown
Subject: FW: Pittsburg Terminal, samples off-hold
Attachments: kiff4_20080307185113.pdf

Troy,

I have attached the COC's which indicate the following:

For GP-10-20 (soil), please analyze only for arsenic and vanadium.

For GP-6-6 (soil), please analyze for TPHd (& motor oil) carbon chain distinction, arsenic, barium, copper, vanadium, zinc, and PAHs (8310)

For GP-3-6 (soil), please analyze for TPHd (& motor oil) carbon chain distinction, arsenic, vanadium, lead, and PAHs (8310).

Let me know if you have questions,

I will be sending instructions regarding the samples from report 61313 this evening as well.

Thanks,

Caron R. Stofleth
Project Scientist
SECOR International, now Stantec
Ph: (916) 384-0749
Fx: (916) 861-0430
caron.stofleth@stantec.com
stantec.com

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Please consider the environment before printing this email.

61341

SECOR International, Inc.

CHAIN OF CUSTODY RECORD

SECOR Rancho Cordova Office
3017 Kilgore Road
Rancho Cordova, CA
TEL: (916) 861-0400 FAX: (916) 861-0430

SECOR Company Contact(s):
Todd Brown, SECOR Project Manager
email - tbrown@secor.com, brorie@secor.com
chamilton@secor.com

SECOR Project: 77OT.43877.00

Tesoro Billing Info
Company: 5200
AFE: 023139641-T
WBS: 97618.0042.925
G/L : 767490

DATE: 2/29/08
PAGE: 1 OF 2

Project Name: Tesoro Pittsburg Terminal Phase II
Address: 595 East Third Street, Pittsburg, CA

Sampler(s): Printed Name: Bryan Rose
SAMPLER(S): (SIGNATURE)
Lab: KIFF ANALYTICAL
LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS)
☐ 10 DAYS ☒ 5 DAYS ☐ 72 HR ☐ 48 HR ☐ 24 HR ☐ <24 HR

SPECIAL INSTRUCTIONS OR NOTES: TEMPERATURE ON RECEIPT (C)
Direct Bill Jeff Baker of Tesoro Petroleum
All voa's preserved w/ hcl
All ~~voa's~~ ambers preserved w/ $Na_2S_2O_3$
All Poly's unpreserved

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	PRE-SERVE	TPHd-carbon chain distinction (8015M) + motor oil	TPHg-carbon chain distinction (8260B)	PAHs (8310)	PAHs (8270) Acp	VOCs (8260B)	5 metals = As, Ni, Ba, V, Cu, Zn (6020)	7 metals = As, Ni, Ba, V, Cu, Zn, Pb (6020)	AS and V	HOLD SAMPLE	Other:	Laboratory Notes
•	GP-10-2	2/29/08	740	S	1	N/A	X	X	X			X					01
•	GP-6-1		815	S	1	N/A			X			X					02
•	GP-10WS		820	W	9	NONE			X			X					03
	GP-10-20 Take off hold		835	S	1	N/A			X			X			X		04
•	GP-6-6 Take off hold		935	S	1	N/A	(X)		(X)			(X)		(X)	X		05
•	GP-6-10		945	S	1	N/A			X			X			X		06
•	GP-6-15		950	S	1	N/A			X			X			X		07
•	GP-6WS		955	W	9	NONE			X			X					08
	GP-																
	GP-																

SAMPLE RECEIPT
Temp °C 8.4 Therm. ID# IR-2
Initial RCM Date 022908
Time 1625 Coolant present: (Yes) No

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Kiff Analytical	Date: 022908	Time: 1630

61341

SECOR International, Inc.

CHAIN OF CUSTODY RECORD

SECOR Rancho Cordova Office
3017 Kilgore Road
Rancho Cordova, CA
TEL: (916) 861-0400 FAX: (916) 861-0430

SECOR Company Contact(s):
Todd Brown, SECOR Project Manager
email - tbrown@secor.com, brorie@secor.com
chamilton@secor.com

SECOR Project: 77OT.43877.00

Tesoro Billing Info
Company: 5200
AFE: 023139641-T
WBS: 97618.0042.925
G/L : 767490

DATE: 2/29/08

PAGE: 1 OF 2

Project Name: Tesoro Pittsburg Terminal Phase II

Address: 595 East Third Street, Pittsburg, CA

Sampler(s): Printed Name: Bryan Rorie

SAMPLER(S): (SIGNATURE)

Lab: KIFF ANALYTICAL

LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS)
☐ 10 DAYS ☒ 5 DAYS ☐ 72 HR ☐ 48 HR ☐ 24 HR ☐ <24 HR

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All ambers preserved w/$Na_2S_2O_3$
All poly's unpreserved

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	GP-3-1	2/29/08	1018	S	1	N/A	X	X	X		X		X									09
	GP-3-6 take off hold		1045	S	1	N/A	X	X	X		X		X		X				X			10
	GP-3-10		1050	S	1	N/A	X	X	X		X		X						X			11
	GP-3-15		1055	S	1	N/A	X	X	X		X		X						X			12
	GP-3-20		1115	S	1	N/A	X	X	X		X		X						X			13
	GP-3-W5		1215	W	9	NONE	X	X	X		X		X									14
	GP-3-21		1245	S	1	N/A	X	X	X		X		X						X			15
	GP-3-30		1300	S	1	N/A	X	X	X		X		X						X			16
	GP-3W1		1300	W	9	NONE	X	X	X		X		X									17
	GP-																					

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Kiff Analytical	Date: 022908	Time: 1630

Hydrocarbon Ranges Report*

Project Name: Tesoro Pittsburg Terminal Phase II

Lab Number:	61341-01	61341-02	61341-03	61341-08	61341-09
Sample:	GP-10-2	GP-6-1	GP-10WS	GP-6WS	GP-3-1
Sample Date:	2/29/2008	2/29/2008	2/29/2008	2/29/2008	2/29/2008
Matrix:	Soil	Soil	Water	Water	Soil
Units	mg/Kg	mg/Kg	ug/L	ug/L	mg/Kg
Hydrocarbon Range					
C8 to C9 Fraction	nd	nd	5	nd	nd
C10 to C11 Fraction	nd	nd	nd	nd	nd
C12 to C13 Fraction	0.04	0.09	nd	nd	0.04
C14 to C15 Fraction	0.47	2.0	5	5	0.56
C16 to C17 Fraction	0.90	6.0	7	10	1.9
C18 to C19 Fraction	1.1	18	10	24	6.0
C20 to C21 Fraction	1.4	32	8	30	13
C22 to C23 Fraction	1.6	42	12	46	28
C24 to C25 Fraction	1.7	58	12	53	34
C26 to C27 Fraction	2.6	71	14	75	54
C28 to C29 Fraction	3.3	109	20	88	94
C30 to C31 Fraction	7.5	183	23	124	169
C32 to C33 Fraction	5.2	172	26	114	149
C34 to C35 Fraction	6.3	167	24	117	165
C36 to C37 Fraction	6.1	155	24	124	154
C38 to C39 Fraction	5.7	137	22	103	140
C40 Fraction	2.3	59	8	57	76
Reporting Limit:	0.04	0.04	2	2	0.04

*Hydrocarbon concentrations should be considered estimates

"nd" is non-detect at the specified Reporting Limit

Hydrocarbon Ranges Report*

Project Name: Tesoro Pittsburg Terminal Phase II

Lab Number:	61341-14	61341-17	61341-05	61341-10
Sample:	GP-3WS	GP-3WD	GP-6-6	GP-3-6
Sample Date:	2/29/2008	2/29/2008	2/29/2008	2/29/2008
Matrix:	Water	Water	Soil	Soil
Units	ug/L	ug/L	mg/Kg	mg/Kg
Hydrocarbon Range				
C8 to C9 Fraction	6	8	-	-
C10 to C11 Fraction	nd	nd	nd	nd
C12 to C13 Fraction	nd	nd	nd	nd
C14 to C15 Fraction	12	8	0.04	0.63
C16 to C17 Fraction	18	13	0.07	0.09
C18 to C19 Fraction	35	26	0.16	0.11
C20 to C21 Fraction	20	21	0.18	0.34
C22 to C23 Fraction	25	22	0.29	0.36
C24 to C25 Fraction	14	19	0.36	0.45
C26 to C27 Fraction	13	18	0.49	0.56
C28 to C29 Fraction	10	14	0.95	0.44
C30 to C31 Fraction	2	16	1.6	0.59
C32 to C33 Fraction	nd	13	1.6	0.76
C34 to C35 Fraction	nd	12	1.7	0.63
C36 to C37 Fraction	nd	11	1.8	0.70
C38 to C39 Fraction	nd	10	1.8	0.54
C40 Fraction	nd	6	0.89	0.09
Reporting Limit:	2	2	0.04	0.04

*Hydrocarbon concentrations should be considered estimates

"nd" is non-detect at the specified Reporting Limit

Stantec Consulting Corporation
3017 Kilgore Road Suite 100
Rancho Cordova CA 95670
Tel: (916) 861-0400
Fax: (916) 861-0430

Stantec

November 13, 2008
File: 77OT.43877.02

Mr. Rob Donovan
Tesoro Refining and Marketing Company
Corporate Environmental Affairs
3450 South 344th Way, Suite 201
Auburn, Washington 98001-5931

Dear Mr. Donovan:

Reference: **Additional Phase II Investigation Report**
Tesoro Pittsburg Terminal
595 East Third Street
Pittsburg, California

Enclosed please find a copy of the above-cited report prepared by Stantec Consulting Corporation. Should you have any questions please feel free to contact the undersigned at (916) 3834-0768.

Sincerely,

STANTEC CONSULTING CORPORATION



Gary D. Haeck, Ph.D., P.G.
Managing Senior Geologist
Tel: (916) 384-0768
Fax: (916) 861-0430
Gary.Haeck@Stantec.com

Attachment: Report

g i:\tesoro\tesoro pittsburg\additional pz ii\report\cover letter pittsburg additional phase ii report.doc

ADDITIONAL PHASE II INVESTIGATION REPORT

TESORO PITTSBURG TERMINAL
595 East 3rd Street
Pittsburg, CA

770T.43877.02

Zachary Brown FOR
Danielle Manning
Project Scientist



G D Haeck
Gary D. Haeck, Ph.D., P.G.
Managing Senior Geologist

November 13, 2008

Executive Summary

On behalf of Tesoro Refining and Marketing Company (Tesoro), Stantec Consulting Corporation (Stantec [formerly SECOR]) conducted additional soil and groundwater sampling at Tesoro's Pittsburg Terminal located at 595 East Third Street, Pittsburg, California (Site). SECOR previously conducted a Limited Phase II Investigation at the Site to evaluate potential environmental concerns identified in SECOR's March 21, 2008 *Phase I Environmental Site Assessment Report* (Phase I ESA). The phase I and phase II investigations were completed for Tesoro in connection with a potential property transfer. Subsequently Tesoro requested additional investigation of an adjacent part of the Site with a scope of work similar to the previous phase II investigation (Figures 1 and 2).

Two direct push soil borings were advanced, four soil samples and three groundwater grab samples (two shallow and one deep) were collected, and the samples were analyzed with the same analytical program conducted in the previous investigation. The soil results were compared with Regional Water Quality Control Board - San Francisco Region (RWQCB-SFR) industrial Environmental Screening Levels (ESLs) and the groundwater results were compared with the California Primary maximum contaminant levels (MCLs).

Total petroleum hydrocarbons as gasoline (TPHg), as diesel (TPHd), and as motor oil (TPHmo) were either below laboratory method reporting limits (MRLs) or below industrial ESLs in all four soil samples. Three of the four soil samples contained arsenic above the industrial ESL; and vanadium was detected above the industrial ESL in one sample. Nickel, copper, zinc, lead, and barium were not detected above their respective industrial ESLs in any soil sample. Volatile organic compounds (VOCs) were below MRLs and polycyclic aromatic hydrocarbons (PAHs) were below their respective industrial ESLs in all four soil samples.

The shallow water–bearing zone was encountered from 14 to 15 feet below ground surface (bgs) and a deeper water-bearing zone at 31 feet bgs. TPHd in one shallow and one deep groundwater grab sample was detected above industrial ESLs. Metals were not detected above their respective California primary MCLs nor were any PAHs detected above laboratory MRLs in the three groundwater samples.

The shallow groundwater contained trichloroethene and cis-1,2-dichloroethene at relatively low concentrations below California primary MCLs. The deeper groundwater sample contained trichloroethene, cis-1,2-dichloroethene, trans-1,2-dichloroethene and vinyl chloride at concentrations above their respective MCLs.

The origin of the VOCs in the deeper water-bearing unit is not clear but may be due to an off-site source. The lack of detectable VOCs in soil samples during this and the previous phase II investigation does not support an onsite source. A possible source for the VOC and TPHg impacts is the Johns Manville property located adjacent to the Site to the west and southwest. As documented in SECOR's Phase I ESA, the Johns Mansville property was reported as having soil and groundwater impacted with diesel fuel, gasoline, motor oil, and trichloroethene.

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List of Acronyms

AST	Above-ground storage tank
bgs	Below ground surface
BTEX	benzene, toluene, ethylbenzene and total xylenes
CBL	Cruz Brothers Locators
DOT	Department of Transportation
ELAP	Environmental Laboratory Accreditation Program
EMC	Environmental Management Consultants Laboratories
ESL	Environmental Screening Level
HASP	Health and Safety Plan
MCL	Maximum Contaminant Level
MRL	Method Reporting Limit
mg/kg	Milligrams per kilogram
mg/L	Milligrams per liter
NVLAP	National Voluntary Laboratory Accreditation Program
PAH	Polycyclic aromatic hydrocarbon
PCP	Pentachlorophenol
PID	Photoionization detector
PRG	Preliminary Remediation Goals
RWQCB-SFR	Regional Water Quality Control Board-San Francisco Region
SWRCB	State Water Resources Control Board
TPH	Total petroleum hydrocarbons
TPHd	Total petroleum hydrocarbons as diesel fuel
TPHg	Total petroleum hydrocarbons as gasoline
TPHmo	Total petroleum hydrocarbons as motor oil
USA	Underground Service Alert
USEPA	United States Environmental Protection Agency
USCS	Uniform Soil Classification System
µg/L	Micrograms per liter
WDC	WDC Exploration and Wells
VOC	Volatile Organic Compound

1.0 Introduction

On behalf of Tesoro Refining and Marketing Company (Tesoro), Stantec Consulting Corporation (Stantec, formerly SECOR) is pleased to submit this report presenting the results additional Phase II Investigation at Tesoro Pittsburg Terminal, located at 595 East 3rd Street, Pittsburg, California (Site) (Figures 1 and 2). SECOR recently completed phase I and limited phase II investigations at the Site in connection with a potential property transfer. Subsequently Tesoro indicated that the property transfer may include the adjacent part of the Site containing the water tank and requested that Stantec conduct additional phase II investigation at this location (Figure 2).

SECOR previously completed a Limited Phase II Investigation in the main portion of the Site to evaluate potential environmental concerns identified in SECOR's March 21, 2008 *Phase I Environmental Site Assessment* (Phase I ESA). The results of the Phase II investigation were documented in SECOR's April 24, 2008 *Limited Phase II Investigation Report* (Phase II Report), which was completed for Tesoro and subsequently submitted to Contra Costa Health Services Hazardous Materials Program on May 7, 2008. Contra Costa County verbally indicated that it would review the report and forward it to the Regional Water Quality Control Board - San Francisco Region (RWQCB-SFR) or retain it, as appropriate. Tesoro requested that the investigation of the adjacent portion of the Site, be conducted with the same scope of work previously completed at the Site.

1.1 SITE BACKGROUND

The Site is located at 595 East 3rd Street in an industrial area of the City of Pittsburg and is adjacent to the New York Slough, which is connected to the Suisun Bay (Figures 1 and 2). The Site is part of an onshore facility that was reportedly constructed in the 1920s for stevedoring various products. Current operations on the Site include conveying petroleum coke from the easterly adjacent petroleum coke piles through a subsurface conveyor connected to an above-ground conveyor. From the above-ground conveyor, the petroleum coke is loaded onto ships berthed at the adjacent wharf. The northeastern portion of the Site includes an asphalt-concrete paved area for employee parking. The southern portion of the Site is currently used to store miscellaneous conveyor parts, old metal equipment/parts, and wood fence poles. According to onsite personnel, the Site has been in use since the 1920s as a stevedoring facility for various products including iron ore, titanium ore (i.e., rutile), asbestos, beans, charcoal, and coffee. During Word War II, the site was reportedly used as an army base and was the Camp Stoneman military debarkation point for soldiers headed overseas.

2.0 Completed Scope of Work

Tesoro requested that the scope of work for this limited phase II investigation be based on that previously completed in the main portion of the Site and documented in SECOR's April 24, 2008 Phase II Report. The following tasks were performed as a part of this scope of work:

- Advance two continuously-cored borings (GP-21 and GP-22) to first-encountered groundwater at approximately 15 feet below ground surface (bgs) and advance one of these borings (GP-21) to second-encountered groundwater at approximately 30 feet bgs at the locations shown on Figure 2,
- Collect soil samples at approximately one foot bgs and at approximately six feet bgs in both borings,
- Collect one groundwater grab sample at first-encountered groundwater in borings GP-21 and GP-22 and collect one groundwater grab sample at second-encountered groundwater in boring GP-22,
- Log borings in accordance with the Uniform Soil Classification System (USCS) and prepare boring logs to record lithological information from the continuous cores,
- Submitted soil and groundwater samples for chemical laboratory analyses,
- Prepare summary tables and figures presenting the analytical data,
- Evaluate the lithological and analytical data to constrain the potential impacts, and
- Prepare this report presenting the results of the Phase II investigation.

3.0 Limited Phase II Investigation Field Activities

3.1 PRE-FIELD WORK ACTIVITIES

Stantec updated the existing site-specific Health and Safety Plan (HASP) prior to the commencement of fieldwork as required by the Occupational Health and Safety Administration Standard guidelines (29 CFR 1910.120), and by the California Occupational Health and Safety Administration guidelines (CCR Title 8, Section 5192). The HASP was reviewed by field staff and contractors before beginning field operations, and was in possession of Stantec personnel while conducting field related activities at the Site.

Stantec obtained the appropriate permit from Contra Costa County Environmental Health for the advancement of soil borings on the Site parcel. A copy of the permit is included in Appendix A.

Prior to initiating field activities, Stantec marked the boring locations, contacted Underground Service Alert (USA) at least 48 hours prior to the initiation of field work, and contracted Cruz Brothers Locators (CBL), a private underground utility locator, to determine whether the proposed boring locations were clear of potential subsurface utilities. The CBL field staff met Stantec field staff onsite to mark the Site and make adjustments to boring locations if needed due to subsurface utilities.

3.2 DRILLING AND SAMPLING FIELD ACTIVITIES

On August 1, 2008, Stantec supervised the advancement of two direct push soil borings (GP-21 and GP-22) at the locations shown on Figure 2. The two soil borings were advanced by WDC Exploration and Wells (WDC), a C-57 licensed driller, using a truck-mounted Geoprobe® rig equipped with dual-tube sampling equipment, to the upper water-bearing zone (approximately 15 feet below ground surface (bgs)). One of the borings was also advanced to the second water-bearing zone at approximately 30 feet bgs. The borings were drilled and sampled in accordance with Stantec's Standard Procedures (Appendix B).

Soil borings were continuously cored and logged for lithologic description under the direct supervision of a California-registered Professional Geologist using the Unified Soil Classification System. Boring logs are included in Appendix C. Soil samples were collected at depths of one foot bgs and at six feet bgs from both borings for laboratory analysis. The remainder of the soil samples were collected for possible laboratory analysis at minimum five-foot intervals using Geoprobe® sampling methods. These samples were collected in five-foot long acetate liners that were inserted into the sample collection tool (Macro-Core® Soil Sampler) of the Geoprobe®. Once the acetate sleeves were removed from the sampling tool, they were marked with the sample intervals using indelible ink and described in accordance with the Unified Soil Classification System by a Stantec scientist under the direction of a California Professional Geologist. Soil samples selected for potential laboratory analysis were cut into eight-inch sections from the five-foot acetate sleeves and covered with Teflon and plastic caps at each end. Soil samples were field-screened for odors, visible signs of discoloration, and for organic vapors using a photo-ionization detector (PID) that was calibrated daily. The soil samples were

named according to soil boring location and sample depth. For example, soil sample GP-21-6 was collected from soil boring GP-21 at six feet bgs.

Groundwater grab samples were collected from the upper water-bearing zone in both borings and one groundwater grab sample was collected from the second water-bearing zone. The grab groundwater samples were collected from temporary well casings set in the boreholes using disposable bailers. The outer drive casing was lifted from two to five feet to allow formation water to infiltrate into the temporary well screen. The actual groundwater sample depths for each boring are depicted on the soil boring logs (Appendix C). The groundwater samples were named according to soil boring location and relative aquifer depth. For example, groundwater sample GP-21WS was collected from soil boring GP-21 in the upper water-bearing zone (shallow) and groundwater sample GP-21WD was collected from soil boring GP-21 in the second water-bearing zone (deep).

Upon completion of drilling and sampling activities the soil borings were grouted to just below grade with a neat-cement grout through a tremmie pipe placed at the boring bottom. The boreholes were capped with an equivalent thickness of asphalt or soil patch to match finished grade.

3.3 LABORATORY ANALYTICAL PROGROM

As discussed above, Tesoro requested that the investigation be completed with the same analytical program utilized for the phase II investigation completed in the main portion of the Site. A total of four soil and three groundwater samples were transported under chain-of-custody procedures to Kiff Analytical, a California state-certified laboratory, and were analyzed in accordance with Table 1 for the following:

- Total petroleum hydrocarbons as gasoline (TPHg) with Environmental Protection Agency (EPA) Method 8260B,
- TPH as diesel (TPHd) and TPH as motor oil (TPHmo) with EPA Method 8015M,
- Carbon chain distinction of Total Petroleum Hydrocarbons,
- Polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8310,
- Metals (nickel, vanadium, barium, copper, zinc, lead, and arsenic) by EPA Method 6020, and
- Volatile organic compounds (VOCs) by EPA Method 8260B.

The metals analyses were based on previous studies conducted at the Site by the Regional Water Quality Control Board - San Francisco Region (RWQCB-SFR) and reported in the February 27, 2006 *Staff Report* entitled *Tesoro Petroleum Coke Storage and Handling Facility Pittsburg, Contra Costa County*.

3.4 INVESTIGATION DERIVED WASTES (IDW)

Soil cuttings and decontamination rinse water generated during the site assessment activities were temporarily stored in properly labeled Department of Transportation (DOT) approved 55-gallon steel drums. These drums were staged onsite pending results of laboratory characterization as non-hazardous waste. A licensed waste removal contractor has transported the drums off-site for appropriate disposal based on the analytical profiling. Copies of the manifests are included as Appendix D.

4.0 Results and Data Evaluation

4.1 SUBSURFACE CONDITIONS

Surface conditions at the Site consisted of silty gravel fill material with localized paved areas of asphaltic concrete. Subsurface soils consist primarily of silts and clays to approximate depths of nine to ten feet bgs. Beneath nine to ten feet bgs, fine to medium-grained silty sand with interbedded silty clay is present to approximately 22 feet bgs, and silts and clays are present to a depth of approximately 30 feet bgs. The soil between 30 to 34 feet bgs consists mainly of a fine to medium-grained silty sand. In general, first-encountered groundwater occurred at approximately 12 to 13 feet bgs. A less permeable silty clay layer was encountered at depths of approximately 22 to 30 feet bgs. This silt clay layer appears to function as aquitard between the shallow water-bearing zone and the deeper water-bearing zone. During assessment activities, field screening results (PID readings) were not reported above background levels (zero) in any soil samples. PID readings are recorded on the boring logs (Appendix C).

4.2 SOIL ANALYTICAL RESULTS

The soil analytical results were compared with the RWQCB-SFR commercial/industrial Environmental Screening Levels (ESLs). Laboratory analytical results for the four soil samples (GP-21-1, GP-21-6, GP-22-1, and GP-22-6), the Composite sample, and the respective industrial ESLs are summarized in Tables 1 through 4. The analytes detected above their respective industrial ESLs are shown in bold type in the tables and on Figure 3. Copies of the certified laboratory analytical reports and chain-of-custody documentation are presented in Appendix D.

4.2.1 TPH Results

TPH concentrations in the soil samples are summarized in Table 1 and depicted on Figure 3. TPHg was not detected in any of the soil samples at concentrations above laboratory method reporting limits (MRLs). TPHd was detected at concentrations ranging from 2.5 milligrams per kilogram (mg/kg) (GP-22-6) to 140 mg/kg (GP-22-1), which are all below the industrial ESL of 150 mg/kg. TPHmo was detected at concentrations of 88 mg/kg (GP-21-1) and 560 mg/kg (GP-22-1), which are all below the industrial ESL of 2,500 mg/kg.

4.2.2 Metals Results

Metal concentrations detected in the soil samples are summarized in Table 2 and depicted on Figure 3. Three of the four soil samples contained concentrations of arsenic above the industrial ESL of 1.5 mg/kg (all except for sample GP-21-1). Arsenic concentrations ranged from 1.35 mg/kg (GP-21-1) to 11.9 mg/kg (GP-22-1). Vanadium was only detected at concentrations above the industrial ESL of 190 mg/kg in sample GP-22-1 (389 mg/kg). Nickel, copper, zinc, lead, and barium were not detected above their respective industrial ESLs in any of the samples analyzed.

4.2.3 VOC Results

VOCs were not detected in any of the soil samples above laboratory method reporting limits (MRL) (Table 3). Because none of the VOCs were detected, they are not shown on Figure 3 with the other analytes detected in soil.

4.2.4 PAH Results

The concentrations of PAHs in the soil are summarized in Table 4 and depicted on Figure 3. None of the PAHs were detected at concentrations above their respective industrial ESLs.

4.3 GROUNDWATER ANALYTICAL RESULTS

The upper water–bearing zone was generally encountered in the soil borings from 14 to 15 feet bgs and the second water-bearing zone was generally encountered at 31 feet bgs. The groundwater analytical results were compared to the California primary maximum contaminant levels (MCLs) where established, and for TPH mixtures, to the RWQCB-SFR industrial ESLs. Laboratory analytical results for the three groundwater samples (two shallow samples: GP-21WS and GP-22WS; and one deep sample: GP-21WD) are summarized in Tables 5 through 8 and are presented on Figure 4. The analytes detected above their respective MCLs or industrial ESLs are shown in bold type in the tables and on Figure 4. The certified laboratory analytical report and chain-of-custody documentation are presented in Appendix D.

4.3.1 TPH Results

The concentrations of TPH in the groundwater samples are summarized in Table 5 and shown on Figure 4. TPHg was detected in the one deep water sample (GP-21WD) at a concentration of 1,300 micrograms per Liter (ug/L). However, the hydrocarbons eluting in the TPHg range are actually the chlorinated hydrocarbons (VOCs) detected in this sample, as described below in Section 4.3.3. Two of the groundwater samples contained TPHd concentrations greater than the RWQCB-SFR industrial ESL of 100 ug/L with concentrations of 110 ug/L (GP-21WD) and 290 ug/L (GP-21WS). TPHmo was not detected in the shallow groundwater samples or the deep groundwater sample above the laboratory MRLs.

4.3.2 Metals Results

The metal concentrations in the groundwater samples are summarized in Table 6. None of the groundwater samples contained levels of metals (arsenic, nickel, barium, vanadium, copper, zinc, or lead) above the California Primary MCLs for the respective metal.

4.3.3 VOC Results

VOC concentrations in the groundwater are summarized in Table 7. Groundwater sample GP-21WS contained concentrations of cis-1,2-dichloroethene (0.71 ug/L) and trichloroethene (2.7 ug/L), which are below their respective primary MCLs. The deep sample (GP-21WD) from the same boring contained concentrations of vinyl chloride (1.6 ug/L), trans-1,2-dichloroethene (28 ug/L), cis-1,2-dichloroethene (250 ug/L), and trichloroethene (1,000 ug/L), which exceeded their primary MCLs of 0.5 ug/L, 10 ug/L, 6 ug/L, and 5 ug/L, respectively. Groundwater sample GP-22WS contained a trichloroethene concentration of 0.77 ug/L, which is below the primary MCL.

4.3.4 PAH Results

PAH groundwater data are summarized in Table 8. PAHs were not detected in any of the groundwater samples above primary MCLs or laboratory MRLs.

5.0 Discussion and Conclusions

5.1 TOTAL PETROLEUM HYDROCARBON SOIL RESULTS

The soil samples analyzed contain detectable concentrations of TPHd and TPHmo, but these concentrations are below their respective industrial ESLs. These impacts may be related to the use of fuel oil for dust suppression at the Site.

5.2 METALS IN SOIL RESULTS

Three of the four soil samples (GP-21-6, GP-22-1, & GP-22-6) are impacted with arsenic concentrations above the industrial ESL. Vanadium also exceeds the industrial ESLs at one shallow soil sample location. Although these metals are naturally occurring in the soils, these metals also were detected in coke and reported in a RWQCB February 27, 2006 *Staff Report* entitled *Tesoro Petroleum Coke Storage and Handling Facility Pittsburg, Contra Costa County.* The report also states that petroleum coke can contain trace amounts of metals and PAHs. The *Staff Report* indicated previous analyses of the coke stored at the Site found minor amounts of copper, nickel, vanadium, and zinc. However, arsenic also occurs naturally in soils throughout California at concentrations that commonly exceed the arsenic ESL of 0.38 mg/kg. Data presented in a report entitled *Background Concentrations of Trace and Major Elements in California Soils* (Bradford et. al, 1996) indicate that arsenic concentrations in California range from 0.59 to 11 mg/kg with a mean of 3.54 mg/kg. An additional study entitled *Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States* also collected samples in the San Francisco Bay region (Shacklette and Boerngen, 1984) for which arsenic concentrations in the San Francisco Bay Area ranged from 16 to 97 mg/kg. Cal EPA does not generally require cleanup of naturally-occurring chemicals to less than background.

5.3 PAHS IN SOIL RESULTS

Several PAHs were detected above MRLs, but none of the samples contained concentrations above their respective industrial ESLs. The source of the PAHs is not certain, but is most likely related to the coke handling efforts at the Site. As discussed above, the RWQCB February 27, 2006 *Staff Report* states that petroleum coke can contain trace amounts of metals and PAHs.

5.4 GROUNDWATER RESULTS

Metals were not detected above their respective California primary MCLs nor were any PAHs detected above laboratory MRLs in the three groundwater samples.

TPHg was not detected in either shallow groundwater sample (GP21-WS and GP22-WS) but was detected in deep sample GP21-WD (1,300 ug/L). TPHd was detected in both the shallow and deep groundwater samples in boring GP-21 with relatively low concentrations of 290 ug/L and 110 ug/L, respectively. The presence of TPHd in the groundwater at the Site may be due to the current and historical use of fuel oil for dust suppression.

Both shallow groundwater samples (GP21-WS and GP22-WS) contained relatively low concentrations of trichloroethene (and cis-1,2-dichloroethene in GP21-WS) that were below

California primary MCLs. However, deep groundwater sample GP21-WD contained trichloroethene (1,000 ug/L), cis-1,2-dichloroethene (250 ug/L), trans-1,2-dichloroethene (28 ug/L) and vinyl chloride (1.6 ug/L) all at concentrations above their respective MCLs. As discussed above, VOCs were not detected in any of the five soil samples analyzed. Further, cis-1,2-dichloroethene, trans-1,2-dichloroethene, and vinyl chloride are all decay products of trichloroethene.

The origin of the VOCs and the TPHg in the deeper water-bearing unit is not clear but may be due the reported historical use of solvent at the Site or possibly an off-site source. The lack of detectable VOCs in soil samples during this and the previous phase II investigation as well as the relatively low VOC concentrations detected in the shallow groundwater samples does not support a local onsite source. A possible source for the VOC and TPHg impacts is the Johns Manville property located adjacent to the Site to the west and southwest for which the RWQCB-SFR has an open SLIC case file. As documented in SECOR's March 21, 2008 Phase I ESA, Johns Manville is the responsible party for a cleanup at the adjacent property, which was listed as having soil and groundwater impacted with diesel fuel, gasoline, motor oil, and trichloroethene. A Preliminary Endangerment Assessment was conducted on the Johns Manville property in 2001 followed by a removal action. A deed restriction was placed on the property in 2006/2007.

6.0 Limitations

This report was prepared in accordance with the scope of work outlined in Stantec's contract and with generally accepted professional engineering and environmental consulting practices existing at the time this report was prepared and applicable to the location of the Site. It was prepared for the exclusive use of Tesoro for the express purpose stated above. Any re-use of this report for a different purpose or by others not identified above shall be at the user's sole risk without liability to Stantec. To the extent that this report is based on information provided to Stantec by third parties, Stantec may have made efforts to verify this third party information, but Stantec cannot guarantee the completeness or accuracy of this information. The opinions expressed and data collected are based on the conditions of the Site existing at the time of the field investigation. No other warranties, expressed or implied are made by Stantec.

TABLES

TABLE 1
Total Petroleum Hydrocarbon Concentrations in Soil
Tesoro Pittsburg Terminal
595 East 3rd Street Pittsburg, CA

Total Petroleum Hydrocarbons in soil		TPHg	TPHd	TPHmo	C8 to C9 Fraction	C10 to C11 Fraction	C12 to C13 Fraction	C14 to C15 Fraction	C16 to C17 Fraction	C18 to C19 Fraction	C20 to C21 Fraction	C22 to C23 Fraction	C24 to C25 Fraction	C26 to C27 Fraction	C28 to C29 Fraction	C30 to C31 Fraction	C32 to C33 Fraction	C34 to C35 Fraction	C36 to C37 Fraction	C38 to C39 Fraction	C40 Fraction
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Residential ESL		1.0E+02	1.0E+02	4.1E+02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Commercial/Industrial ESL		**4.5E+02**	**1.5E+02**	**2.5E+03**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Samples	**Date**																				
GP-21-1	08/01/2008	< 1.0	36	88	<0.04	0.23	0.61	1.1	3.0	2.5	3.7	4.6	5.0	7.9	11	19	17	15	14	13	6.9
GP-21-6	08/01/2008	< 1.0	< 1.0	< 1.0	<0.04	<0.04	<0.04	<0.04	<0.04	0.05	0.05	0.06	<0.04	0.07	0.24	0.89	1.0	0.65	0.38	0.29	0.05
GP-22-1	08/01/2008	< 1.0	140	560	<0.04	0.53	1.3	2.0	3.0	5.5	12	18	21	37	53	96	96	96	105	101	52
GP-22-6	08/01/2008	< 1.0	2.5	<10	<0.04	<0.04	0.06	0.12	0.16	0.20	0.33	0.46	0.27	0.3	0.5	1.9	3.0	1.2	1.2	1.2	0.33
Composite	08/01/2008	< 1.0	-	-	<0.04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
(mg/kg) = Milligrams per kilogram
-- = Not applicable, not established
TPHg = total petroleum hydrocarbons as gasoline (analyzed by EPA Method 8260B)
TPHd = total petroleum hydrocarbons as diesel fuel (analyzed by EPA Method 8015M)
TPHmo = total petroleum hydrocarbons as motor oil (analyzed by EPA Method 8015M)
ESLs = Regional Water Quality Control Board Environmental Screening Levels
Analytical results in **bold** type exceed the RWQCB-SF region industrial ESL (groundwater is not a current or potential source of drinking water).

TABLE 2
Metal Concentrations in Soil
Tesoro Pittsburg Terminal
595 East 3rd Street Pittsburg, CA

Metals in soil		Arsenic	Nickel	Barium	Vanadium	Copper	Zinc	Lead
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Industrial PRG		1.6E+00	2.0E+04	6.7E+04	1.0E+03	4.1E+04	1.0E+05	8.0E+02
Commercial/Industrial ESL		**1.5E+00**	**1.5E+02**	**1.5E+03**	**1.9E+02**	**2.3E+02**	**6.0E+02**	**7.5E+02**
Sampled	**Date**							
GP-21-1	8/1/2008	1.35	15.3	100	40.8	42	80.1	39.7
GP-21-6	8/1/2008	**4.89**	20.2	213	29.8	26.5	303	17.7
GP-22-1	8/1/2008	**11.9**	31.9	509	**389**	186	155	339
GP-22-6	8/1/2008	**5.36**	13	205	25.7	14.1	55.4	7.02
Composite	8/1/2008	**7.6**	22	280	49	25	65	7.8

Notes:
(mg/kg) = Milligrams per kilogram
ESLs = Regional Water Quality Control Board Environmental screening levels
PRG = United States Environmental Protection Agency Region Nine's Preliminary Remediation Goals
NA = Not analyzed
All samples analyzed using EPA Method 6020
Analytical results in **bold** type exceed the RWQCB-SF region commercial/industrial ESL.

Table 3
Volatile Organic Compounds in Soil
Tesoro Pittsburg Terminal
595 East 3rd Street Pittsburg, California

VOC's in soil		Dichlorodifluoromethane	Chloromethane	Vinyl Chloride	Bromomethane	Chloroethane	Trichlorofluoromethane	1,1-Dichloroethene (1,1-DCE)	Methylene Chloride (MeCl2)	trans-1 ,2-Dichloroethene	1,1-Dichloroethane	2,2-Dichloropropane	cis-1 ,2-Dichloroethene (c-1,2-DCE)	Chloroform	Bromochloromethane	1,1 ,1-Trichloroethane (TCA)	1,1-Dichloropropene	1 ,2-Dichloroethane (DCA)	Carbon Tetrachloride	Benzene	Trichloroethene (TCE)	1 ,2-Dichloropropane	Bromodichloromethane	Dibromomethane	cis-1 ,3-Dichloropropene	Toluene	trans-1 ,3-Dichloropropene	1,1 ,2-Trichloroethane (1,1,2-TCA)	1 ,3-Dichloropropane	Tetrachloroethene (PCE)
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Industrial PRG		3.1E+02	1.6E+02	--	1.3E+01	6.5E+00	2.0E+03	--	2.1E+01	--	1.7E+03	--	--	4.7E-01	--	1.2E+03	--	6.03E-01	5.5E-01	1.4E+00	1.1E-01	7.4E-01	1.8E+00	--	1.76E+00	5.2E+02	--	1.6E+00	3.6E+02	1.3E+00
Commercial/Industrial ESL		**1.4E+01**	**6.4E+00**	**4.7E-02**	**2.3E+00**	**1.1E+01**	**--**	**8.8E-02**	**1.6E+01**	**3.4E+01**	**4.7E+00**	**--**	**2.2E+01**	**1.4E+00**	**1.2E+00**	**9.4E+02**	**--**	**4.8E-01**	**4.4E-02**	**2.6E-01**	**8.5E-01**	**1.0E+00**	**1.2E+00**	**--**	**3.60E-01**	**2.9E+01**	**3.6E-01**	**1.1E+00**	**--**	**8.5E-01**
Samples	**Date**																													
GP-21-1	8/1/2008	< 0.0050	< 0.0050	< 0.0050	< 0.020	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
GP-21-6	8/1/2008	< 0.0050	< 0.0050	< 0.0050	< 0.020	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
GP-22-1	8/1/2008	< 0.0050	< 0.0050	< 0.0050	< 0.020	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
GP-22-6	8/1/2008	< 0.0050	< 0.0050	< 0.0050	< 0.020	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Composite	8/1/2008	< 0.0050	< 0.0050	< 0.0050	< 0.020	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050

VOC's in soil		Dibromochloromethane	1 ,2-Dibromoethane (EDB)	Chlorobenzene	1,1,1 ,2-Tetrachloroethane	Ethylbenzene	P,M-Xylene	O-Xylene	Styrene	Isopropyl benzene	Bromoform	1,1 ,2,2-Tetrachloroethane	1 ,2,3-Trichloropropane	n-Propylbenzene	Bromobenzene	1 ,3,5-Trimethylbenzene	2+4-Chlorotoluene	tert-Butylbenzene	1 ,2,4-Trimethylbenzene	sec-Butylbenzene	p-Isopropyltoluene	1 ,3-Dichlorobenzene (1,3-DCB)	1 ,4-Dichlorobenzene	n-Butylbenzene	1 ,2-Dichlorobenzene	1 ,2-Dibromo-3-chloropropane	1 ,2,4-Trichlorobenzene (1,2,4-TCB)	Hexachlorobutadiene	Naphthalene	1 ,2,3-Trichlorobenzene
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Industrial PRG		2.6E+00	7.3E-02	5.3E+02	7.3E+00	4.0E+02	--	--	1.7E+03	2.0E+03	2.18E+02	9.3E-01	7.6E-02	2.40E+02	9.2E+01	7.0E+01	--	3.9E+02	1.7E+02	2.2E+02	--	6.0E+02	7.9E+00	2.4E+02	6.0E+02	2.0E+00	2.2E+02	2.2E+01	--	--
Commercial/Industrial ESL		**1.40E+01**	**4.2E-02**	**3.0E+01**	**4.4E+00**	**3.3E+01**	**1.00E+02**	**--**	**1.6E+01**	**--**	**1.1E+02**	**5.8E-01**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**3.0E+01**	**2.6E+00**	**--**	**1.1E+01**	**2.5E-01**	**2.7E+01**	**2.2E+01**	**2.8E+00**	**--**
Samples	**Date**																													
GP-21-1	8/1/2008	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
GP-21-6	8/1/2008	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
GP-22-1	8/1/2008	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
GP-22-6	8/1/2008	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Composite	8/1/2008	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050

Notes:
(mg/kg) = Milligrams per kilogram
ESLs = Regional Water Quality Control Board Environmental screening levels
PRG = United States Environmental Protection Agency Region Nine's Preliminary Remediation Goals
All samples analyzed using EPA Method 8260B
Analytical results in **bold** type exceed the RWQCB-SF region industrial ESL.

TABLE 4
PAH and PCP
Concentrations in Soil
Tesoro Pittsburg Terminal
595 East 3rd Street Pittsburg, California

PAHs and PCP in Soil		Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) Anthracene	Benzo (a) Pyrene	Benzo (b) Fluoranthene	Benzo (g,h,i) Perylene	Benzo (k) Fluoranthene	Chrysene	Dibenz (a,h) Anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-c,d) Pyrene	Naphthalene	Pentachlorophenol	Phenanthrene	Pyrene
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Industrial PRG		2.9E+04	--	1.0E+05	2.1E+00	2.1E-01	2.1E+00	--	2.1E+01	2.1E+02	2.1E-01	2.2E+04	2.6E+04	2.1E+00	1.9E+02	9.0E+00	--	2.9E+04
Commercial/Industrial ESL		**1.6E+02**	**8.3E+02**	**4.0E+01**	**1.3E+00**	**1.3E-01**	**1.3E+00**	**3.5E+01**	**1.3E+00**	**4.0E+01**	**2.1E-01**	**4.0E+01**	**1.0E+03**	**2.1E+00**	**2.8E+00**	**5.0E+00**	**4.0E+01**	**1.0E+03**
Samples	**Date**																	
GP-21-1	8/1/2008	<0.030	0.075	<0.020	<0.020	0.025	0.023	0.023	<0.020	0.037	<0.020	0.120	<0.020	0.021	0.059	NA	0.030	0.130
GP-21-6	8/1/2008	<0.015	0.120	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.028	NA	<0.010	<0.010
GP-22-1	8/1/2008	<0.150	<0.300	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	0.140	<0.100	<0.100	<0.100	<0.100	<0.150	NA	0.120	0.180
GP-22-6	8/1/2008	<0.015	0.100	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.015	NA	<0.010	<0.010

Notes:
(mg/kg) = Milligrams per kilogram
ESLs = Regional Water Quality Control Board Environmental Screening Levels
PRG = United States Environmental Protection Agency Region Nine's Preliminary Remediation Goals
PAH = Polycyclic aromatic hydrocarbon
PCP = Pentachlorophenol
NA = Not analyzed
-- = Not applicable/not established
Analytical results in **bold** type exceed the RWQCB-SF region industrial ESL.

TABLE 5
Total Petroleum Hydrocarbon Concentrations in Groundwater
Tesoro Pittsburg Terminal
595 East 3rd Street Pittsburg, CA

Total Petroleum Hydrocarbons in Water		TPHg	TPHd	TPHmo	C8 to C9 Fraction	C10 to C11 Fraction	C12 to C13 Fraction	C14 to C15 Fraction	C16 to C17 Fraction	C18 to C19 Fraction	C20 to C21 Fraction	C22 to C23 Fraction	C24 to C25 Fraction	C26 to C27 Fraction	C28 to C29 Fraction	C30 to C31 Fraction	C32 to C33 Fraction	C34 to C35 Fraction	C36 to C37 Fraction	C38 to C39 Fraction	C40 Fraction
		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
USEPA Taste and Odor Threshold*		--	1.0E+02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Commercial/Industrial ESL		**1.0E+02**	**1.0E+02**	**1.0E+02**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Samples	**Date**																				
GP-21WS	08/01/2008	<50	**290**	< 100	8	7	13	24	30	43	66	52	30	20	16	15	12	12	6	8	<2.0
GP-21WD	08/01/2008	**1300** (1)	**110**	< 100	6	3	5	8	11	16	25	14	15	10	9	<2.0	2	2	<2.0	<2.0	<2.0
GP-22WS	08/01/2008	<50	70	< 100	7	<2.0	<2.0	4	8	12	15	18	9	4	3	3	<2.0	<2.0	<2.0	<2.0	<2.0

Notes:
(ug/L) = Micrograms per Liter
WS = Shallow water sample
WD = Deep water sample
-- = Not applicable/not established
TPHg = total petroleum hydrocarbons as gasoline (analyzed by EPA Method 8260B)
TPHd = total petroleum hydrocarbons as diesel fuel (analyzed by EPA Method 8015M)
TPHmo = total petroleum hydrocarbons as motor oil (analyzed by EPA Method 8015M)
(1) = These hydrocarbons are chlorinated hydrocarbons detected in the TPHg range. See Table 5 and laboratory analytical report which shows the detection of a similar concentration of chlorinated hydrocarbons.
Analytical results in **bold** type exceed the RWQCB-SF region commercial/industrial ESL.

TABLE 6
Metal Concentrations in Groundwater
Tesoro Pittsburg Terminal
595 East 3rd Street Pittsburg, CA

Metals in water		Arsenic	Nickel	Barium	Vanadium	Copper	Zinc	Lead
		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
CDPH Primary MCL		**50**	**100**	**1,000**	**50***	**1,300**	**5,000****	**15**
SAMPLE ID	**Date**							
GP-21WS	08/01/2008	<5.0	6.2	38	<20	3.4	<20	<5.0
GP-21WD	08/01/2008	6.7	9.0	43	<20	4.3	<20	<5.0
GP-22WS	08/01/2008	16	6.9	160	<20	3.5	<20	<5.0

Notes:
(ug/L) = Micrograms per Liter
WS = Shallow water sample
WD = Deep water sample
CDPH = California Department of Public Health
MCLs = Maximum contaminant levels
NA = Not analyzed
All samples analyzed using EPA Method 6020
Analytical results in **bold** type exceed the MCLs.

Table 7
Volatile Organic Compounds in Groundwater
Tesoro Pittsburg Terminal
595 East 3rd Street Pittsburg, California

Volatile Organic Compounds in Groundwater		Dichlorodifluoromethane	Chloromethane	Vinyl Chloride	Bromomethane	Chloroethane	Trichlorofluoromethane	1,1-Dichloroethene (1,1-DCE)	Methylene Chloride (MeCl2)	trans-1 ,2-Dichloroethene	1,1-Dichloroethane	2,2-Dichloropropane	cis-1 ,2-Dichloroethene (c-1,2-DCE)	Chloroform	Bromochloromethane	1,1 ,1-Trichloroethane (TCA)	1,1-Dichloropropene	1 ,2-Dichloroethane (DCA)	Carbon Tetrachloride	Benzene	Trichloroethene (TCE)	1 ,2-Dichloropropane	Bromodichloromethane	Dibromomethane	cis-1 ,3-Dichloropropene	Toluene	trans-1 ,3-Dichloropropene	1,1 ,2-Trichloroethane (1,1,2-TCA)	1 ,3-Dichloropropane	Tetrachloroethene (PCE)
		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
CDPH Primary MCL		**1,000***	**--**	**0.5**	**--**	**--**	**150**	**6**	**--**	**10**	**5**	**--**	**6**	**80**	**80**	**200**	**--**	**0.5**	**0.5**	**1**	**5**	**5**	**80**	**--**	**0.5**	**150**	**0.5**	**5**	**--**	**5**
Samples	**Date**																														
GP-21WS	08/01/2008	< 0.50	< 0.50	< 0.50	< 20	< 0.50	< 0.50	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50	0.71	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.7	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
GP-21WD	08/01/2008	< 0.50	< 0.50	**1.6**	< 20	< 0.50	< 0.50	2.9	< 5.0	**28**	1.7	< 0.50	**250**	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	**1,000**	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
GP-22WS	08/01/2008	< 0.50	< 0.50	< 0.50	< 20	< 0.50	< 0.50	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.77	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50

Volatile Organic Compounds in Groundwater		Dibromochloromethane	1 ,2-Dibromoethane (EDB)	Chlorobenzene	1,1,1 ,2-Tetrachloroethane	Ethylbenzene	P,M-Xylene	O-Xylene	Styrene	Isopropyl benzene	Bromoform	1,1 ,2,2-Tetrachloroethane	1 ,2,3-Trichloropropane	n-Propylbenzene	Bromobenzene	1 ,3,5-Trimethylbenzene	2+4-Chlorotoluene	tert-Butylbenzene	1 ,2,4-Trimethylbenzene	sec-Butylbenzene	p-Isopropyltoluene	1 ,3-Dichlorobenzene (1,3-DCB)	1 ,4-Dichlorobenzene	n-Butylbenzene	1 ,2-Dichlorobenzene	1 ,2-Dibromo-3-chloropropane	1 ,2,4-Trichlorobenzene (1,2,4-TCB)	Hexachlorobutadiene	Naphthalene	1 ,2,3-Trichlorobenzene
		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
CDPH Primary MCL		**80**	**0.05**	**70**	**--**	**300**	**1,750****	**1,750****	**100**	**--**	**80**	**1**	**0.005***	**260***	**--**	**330***	**140***	**260***	**330***	**260***	**--**	**600***	**5**	**--**	**600**	**0.2**	**5**	**--**	**17***	**--**
Samples	**Date**																														
GP-21WS	08/01/2008	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
GP-21WD	08/01/2008	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
GP-22WS	08/01/2008	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50

Notes:
(ug/L) = Micrograms per Liter
WS = Shallow Water sample
WD = Deep water sample
CDPH = California Department of Public Health
MCLs = Maximum Contaminant Levels
-- = Not applicable/not established
All samples analyzed using EPA Method 8260B.
Analytical results in **bold** type exceed the MCLs.

TABLE 8
PAH and PCP
Concentrations in Groundwater
Tesoro Pittsburg Terminal
595 East 3rd Street Pittsburg, California

PAHs and PCP in Groundwater		Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) Anthracene	Benzo (a) Pyrene	Benzo (b) Fluoranthene	Benzo (g,h,i) Perylene	Benzo (k) Fluoranthene	Chrysene	Dibenz (a,h) Anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-c,d) Pyrene	Naphthalene	Pentachlorophenol	Phenanthrene	Pyrene
		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
CDPH Primary MCL		**--**	**--**	**--**	**0.1***	**0.2**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**17****	**1**	**--**	**--**
Samples	**Date**																	
GP-21WS	8/1/2008	<1.1	<1.1	<1.1	<1.1	<0.22	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	NA	<1.1	<1.1
GP-21WD	8/1/2008	<1.4	<1.4	<1.4	<1.4	<0.28	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	NA	<1.4	<1.4
GP-22WS	8/1/2008	<1.0	<1.0	<1.0	<1.0	<0.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	<1.0

Notes:

(ug/L) = Micrograms per Liter

WS = Shallow water sample

WD = Deep water sample

* = U.S. Environmental Protection Agency Primary MCL

** = CDPH Notification Level for Drinking Water

MCLs = Maximum contaminant levels

NA = Not analyzed

PAH = Polycylic aromatic hydrocarbons

PCP = Pentachlorophenol

Samples GP-1 through GP-12 were analyzed with EPA Method 8310. Samples GP-13 through GP-20 were analzyed with EPA Method 8270.

Analytical results in **bold** type exceed the MCLs.

FIGURES





1 1/2 0 1

SCALE (MILES)

1000 0 1000 2000 3000 4000 5000 6000 7000

SCALE (FEET)

REFERENCE: USGS 7.5 MINUTE QUADRANGLE, HOOKER BAY, CALIFORNIA

Stantec	FOR: TESORO PITTSBURG TERMINAL 595 EAST 3RD STREET PITTSBURG, CALIFORNIA		SITE LOCATION MAP		FIGURE: 1
	JOB NUMBER: 77OT.49877.00	DRAWN BY: MDR	CHECKED BY: CS	APPROVED BY: GH	DATE: 02/13/08



LEGEND:

- PREVIOUS PHASE II AREA
- ADDITIONAL AREA OF INVESTIGATION
- GEOPROBE® BORING LOCATIONS

N

0 100 200

APPROXIMATE SCALE IN FEET

REFERENCE: THIS FIGURE IS BASED ON A IMAGE FROM GOOGLE EARTH, AND IS INTENDED FOR ILLUSTRATION ONLY.

Stantec

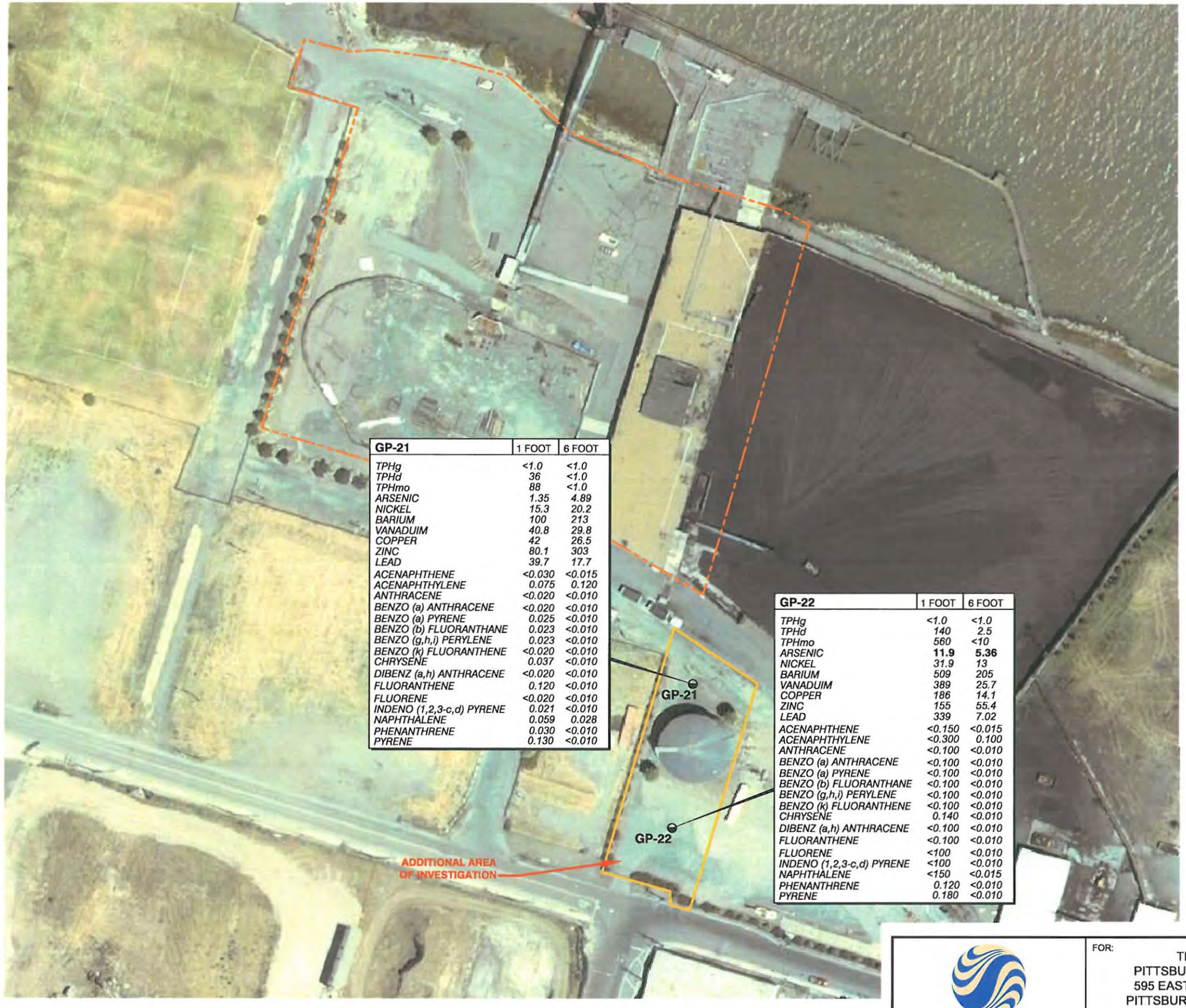
FOR: TESORO
PITTSBURG TERMINAL
595 EAST 3RD STREET
PITTSBURG, CALIFORNIA

SITE PLAN

FIGURE: **2**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
77OT.43877.02	MDR	BR	GH	02/13/08

FILEPATH:M:\TESORO\PITTSBURG TERMINAL\ADDITIONAL SOIL BORING\FIG-2 SITE PLAN.dwg | Layout Tab: Layout1 | Drafter: miramirez | Sep 11, 2008 at 13:42



GP-21	1 FOOT	6 FOOT
TPHg	<1.0	<1.0
TPHd	36	<1.0
TPHmo	88	<1.0
ARSENIC	1.35	4.89
NICKEL	15.3	20.2
BARIUM	100	213
VANADUIM	40.8	29.8
COPPER	42	26.5
ZINC	80.1	303
LEAD	39.7	17.7
ACENAPHTHENE	<0.030	<0.015
ACENAPHTHYLENE	0.075	0.120
ANTHRACENE	<0.020	<0.010
BENZO (a) ANTHRACENE	<0.020	<0.010
BENZO (a) PYRENE	0.025	<0.010
BENZO (b) FLUORANTHANE	0.023	<0.010
BENZO (g,h,i) PERYLENE	0.023	<0.010
BENZO (k) FLUORANTHENE	<0.020	<0.010
CHRYSENE	0.037	<0.010
DIBENZ (a,h) ANTHRACENE	<0.020	<0.010
FLUORANTHENE	0.120	<0.010
FLUORENE	<0.020	<0.010
INDENO (1,2,3-c,d) PYRENE	0.021	<0.010
NAPHTHALENE	0.059	0.028
PHENANTHRENE	0.030	<0.010
PYRENE	0.130	<0.010

GP-22	1 FOOT	6 FOOT
TPHg	<1.0	<1.0
TPHd	140	2.5
TPHmo	560	<10
ARSENIC	**11.9**	**5.36**
NICKEL	31.9	13
BARIUM	509	205
VANADUIM	389	25.7
COPPER	186	14.1
ZINC	155	55.4
LEAD	339	7.02
ACENAPHTHENE	<0.150	<0.015
ACENAPHTHYLENE	<0.300	0.100
ANTHRACENE	<0.100	<0.010
BENZO (a) ANTHRACENE	<0.100	<0.010
BENZO (a) PYRENE	<0.100	<0.010
BENZO (b) FLUORANTHANE	<0.100	<0.010
BENZO (g,h,i) PERYLENE	<0.100	<0.010
BENZO (k) FLUORANTHENE	<0.100	<0.010
CHRYSENE	0.140	<0.010
DIBENZ (a,h) ANTHRACENE	<0.100	<0.010
FLUORANTHENE	<0.100	<0.010
FLUORENE	<100	<0.010
INDENO (1,2,3-c,d) PYRENE	<100	<0.010
NAPHTHALENE	<150	<0.015
PHENANTHRENE	0.120	<0.010
PYRENE	0.180	<0.010

LEGEND:

PREVIOUS PHASE II AREA

ADDITIONAL AREA OF INVESTIGATION

GEOPROBE® BORING LOCATIONS

CHEMICAL ANALYTICAL RESULTS:

SAMPLE ID — DEPTH (BGS)

ANALYTES — CONCENTRATION (mg/kg)

GP-21	1 FOOT	6 FOOT
TPHg	<1.0	<1.0
TPHd	36	<1.0
TPHmo	88	<1.0
ARSENIC	1.35	4.89
NICKEL	15.3	20.2
BARIUM	100	213
VANADUIM	40.8	29.8
COPPER	42	26.5
ZINC	80.1	303
LEAD	39.7	17.7
ACENAPHTHENE	<0.030	<0.015
ACENAPHTHYLENE	0.075	0.120
ANTHRACENE	<0.020	<0.010
BENZO (a) ANTHRACENE	<0.020	<0.010
BENZO (a) PYRENE	0.025	<0.010
BENZO (b) FLUORANTHANE	0.023	<0.010
BENZO (g,h,i) PERYLENE	0.023	<0.010
BENZO (k) FLUORANTHENE	<0.020	<0.010
CHRYSENE	0.037	<0.010
DIBENZ (a,h) ANTHRACENE	<0.020	<0.010
FLUORANTHENE	0.120	<0.010
FLUORENE	<0.020	<0.010
INDENO (1,2,3-c,d) PYRENE	0.021	<0.010
NAPHTHALENE	0.059	0.028
PHENANTHRENE	0.030	<0.010
PYRENE	0.130	<0.010

NUMBERS IN **BOLD** EXCEED THE RWQCB-SFR REGION INDUSTRIAL ESLs

< — NOT DETECTED AT OR ABOVE THE LABORATORY REPORTING LIMIT

BGS — BELOW GROUND SURFACE

ESLs — ENVIRONMENTAL SCREENING LEVELS

RWQCB-SFR — REGIONAL WATER QUALITY CONTROL BOARD-SAN FRANCISCO REGION

ANALYTES:

TPHg — TOTAL PETROLEUM HYDROCARBONS AS GASOLINE (mg/kg)

TPHd — TOTAL PETROLEUM HYDROCARBONS AS DIESEL (mg/kg)

TPHmo — TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL (mg/kg)

mg/kg — MILLOGRAMS PER KILOGRAM

N

0 100 200

APPROXIMATE SCALE IN FEET

REFERENCE: THIS FIGURE IS BASED ON A IMAGE FROM GOOGLE EARTH, AND IS INTENDED FOR ILLUSTRATION ONLY.

Stantec

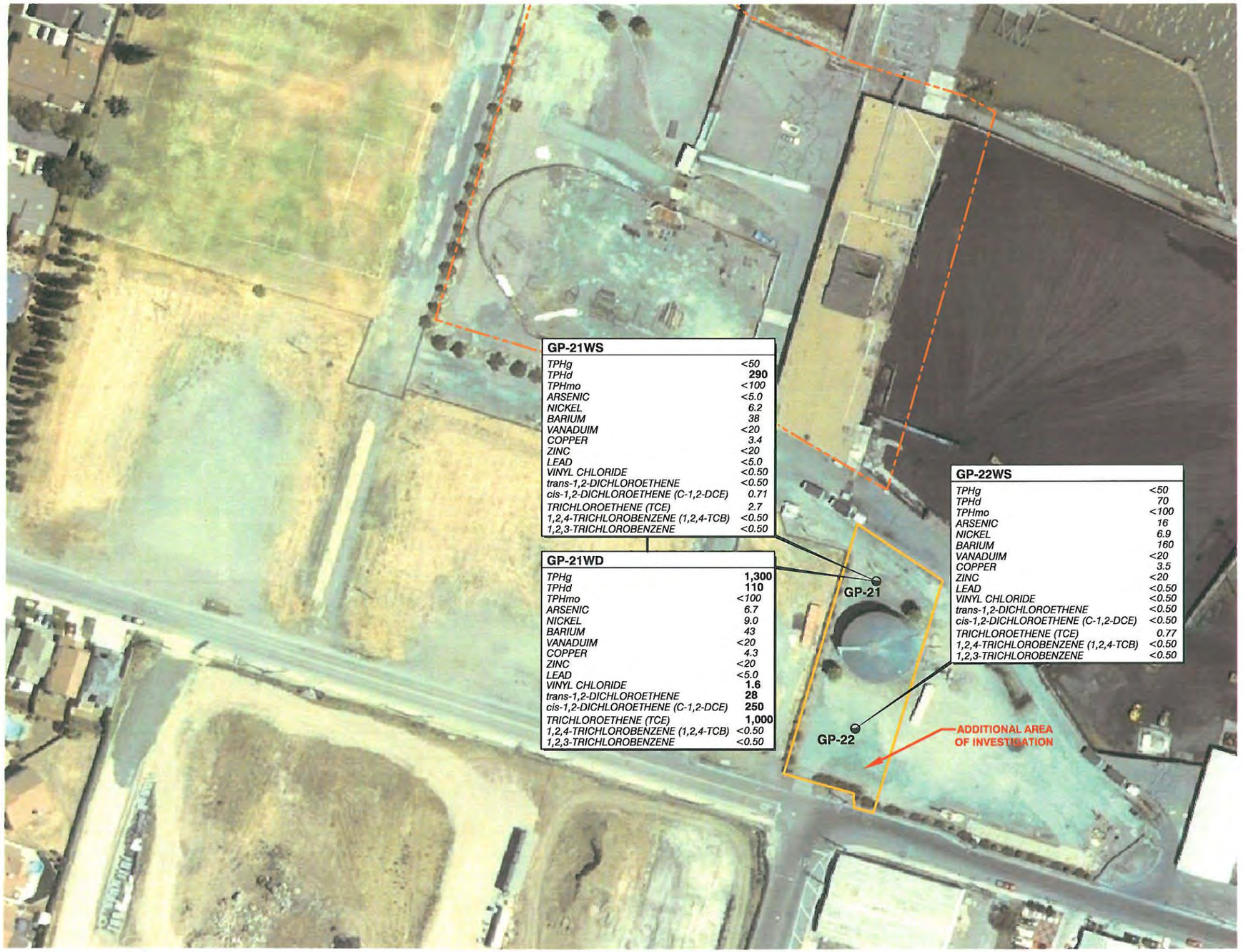
FOR: TESORO PITTSBURG TERMINAL 595 EAST 3RD STREET PITTSBURG, CALIFORNIA

TPH, METALS AND PAH CONCENTRATIONS IN SOIL

FIGURE: **3**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
77OT.43877.02	MDR	BR	GH	08/25/08

FILEPATH:M:\TESORO\PITTSBURG TERMINAL\ADDITIONAL SOIL BORING\FIG-3 SITE PLAN CONC IN SOIL.dwg | Layout Tab: Layout1 | Drafter: miramirez | Nov 12, 2008 at 16:07



LEGEND:

- PREVIOUS PHASE II AREA
- ADDITIONAL AREA OF INVESTIGATION
- GEOPROBE® BORING LOCATIONS
- *WS* — SHALLOW GRAB SAMPLES (12-15 FEET BGS)
- *WD* — DEEP GRAB SAMPLES (30-35 FEET BGS)

SAMPLE ID

GP-21WS	
TPHg	<50
TPHd	**290**
TPHmo	<100
ARSENIC	<5.0
NICKEL	6.2
BARIUM	38
VANADUIM	<20
COPPER	3.4
ZINC	<20
LEAD	<5.0
VINYL CHLORIDE	<0.50
trans-1,2-DICHLOROETHENE	<0.50
cis-1,2-DICHLOROETHENE (C-1,2-DCE)	0.71
TRICHLOROETHENE (TCE)	2.7
1,2,4-TRICHLOROBENZENE (1,2,4-TCB)	<0.50
1,2,3-TRICHLOROBENZENE	<0.50

ANALYTES — CONCENTRATION (µg/L)

NUMBERS IN **BOLD** EXCEED THE CALIFORNIA MCLs OR THE RWQCB-SFR COMMERCIAL/INDUSTRIAL ESL

ANALYTES:

- *TPHg* — TOTAL PETROLEUM HYDROCARBONS AS GASOLINE (µg/L)
- *TPHd* — TOTAL PETROLEUM HYDROCARBONS AS DIESEL (µg/L)
- *TPHmo* — TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL (µg/L)
- *BGS* — BELOW GROUND SURFACE
- *PAH* — POLYCYCLIC AROMATIC HYDROCARBON
- *PCP* — PENTACHLOROPHENOL
- *ESLs* — ENVIRONMENTAL SCREENING LEVELS
- *RWQCB-SFR* — REGIONAL WATER QUALITY CONTROL BOARD-SAN FRANCISCO REGION
- *VOC* — VOLATILE ORGANIC COMPOUND
- *µg/L* — MICROGRAMS PER LITER
- *MCL* — MAXIMUM CONTAMINANT LEVEL

N

0 100 200

APPROXIMATE SCALE IN FEET

REFERENCE: THIS FIGURE IS BASED ON A IMAGE FROM GOOGLE EARTH, AND IS INTENDED FOR ILLUSTRATION ONLY.

Stantec

FOR:				FIGURE:
TESORO PITTSBURG TERMINAL 595 EAST 3RD STREET PITTSBURG, CALIFORNIA		**TPH, METALS, AND VOC CONCENTRATIONS IN GROUNDWATER**		**4**
JOB NUMBER: 77OT.43877.02	DRAWN BY: MDR	CHECKED BY: BR	APPROVED BY: GH	DATE: 08/25/08

FILEPATH:M:\TESORO\PITTSBURG TERMINAL\ADDITIONAL SOIL BORING\FIG-4 SITE PLAN CONC IN GW.dwg | Layout Tab: Layout1 | Drafter: miramirez | Nov 12, 2008 at 16:11

APPENDIX A
PERMITS

CONTRA COSTA
ENVIRONMENTAL HEALTH DIVISION
2120 DIAMOND BOULEVARD, SUITE 200
CONCORD, CA 94520
(925) 692-2500
www.cocoeh.org

Well Permit

WP0011409

PR Number:	**35379**	**PE Number:**	**4301**
Date Received:	**25 JULY 2008**	**Permit Number:**	**08B-2300**

Permit Approved/Issued by: _____ **Date Issued: 29 JULY 2008**

Environmental Health Specialist

NEW WELL	(2) SOIL BORINGS	WELL ABANDONMENT	REPAIR

The issuance of this permit by Contra Costa County Environmental Health Division does not guarantee a satisfactory and an indefinite operation of any well. Permit expires in 180 calendar days from date of approval. Permits are non-transferable, and can be suspended or revoked. If more time is required for the project, a time extension may be granted if reasons warrant it in writing.

PROJECT SITE INFORMATION

Site Address:	**595 E 3RD ST, PITTSBURG**		
APN:	**073 010 013**	**Lot/Parcel #:**	
Subdivision #:		**Minor Subdivision #:**	

DRILLER / CONSULTANT INFORMATION

Driller:	**WOODWARD DRILLING**	**Contact Person:**	**SCOTT**
Phone #:	**707 374-4300**	**FAX#:**	**707 374-5677**
Consultant:	**STANTEC**	**Contact Person:**	**BRYAN RORIE**
Phone #:	**916 861-0400, EXT 323**	**FAX#:**	**916 861-0430**

LEGAL OWNER INFORMATION

Legal Owner Name:	**TESORO ENVIRONMENTAL RESOURCES CO**		
Owner Address:	**3450 S 344TH WY, STE 201**		
City/State/Zip:	**AUBURN, WA 98001**		
Phone #:	**253 896-8708**	**Alternate Phone #:**	

Prior to any drilling construction or destruction of a well, requests for inspection appointment must be received 24 to 48 hours in advance (excluding weekends and holidays) by faxing your written request to (925) 692-2504 or email to ehlu@hsd.cccounty.us. Voice mail messages are not acceptable.

Well drillers must posses a valid C-57 license and must have on file a performance bond of $5,000.00 with Contra Costa County before commencing with any well construction, destruction or repairs.

WELL PERMIT CONDITIONS:

1. Proper annular seals and surface construction features are to be installed and required water analyses completed within 30 days of commencing drilling.
2. Monitoring well/soil boring shall be destroyed pursuant to County regulations within 30 days of completing monitoring activities.
3. Other: _____

_____

Final Approval by: _____ **Date:** _____

(06/08)

APPENDIX B
FIELD AND LABORATORY PROCEDURES

STANTEC

STANDARD PROCEDURE FOR HYDRAULIC PUSH (GEOPROBE) DRILLING

Prior to drilling, all boring locations are marked with white paint or other discernible marking and cleared for underground utilities through Underground Service Alert (USA). A private utility locator is also contracted to confirm USA markings and clear other subsurface utilities. In addition, a minimum of the first five feet of each borehole are cleared for power equipment drilling by hand auger or air-knife equipment.

Once pre-drilling efforts to identify subsurface structures are complete, pre-cleaned push rods (typically one to two inches in diameter) are advanced using a hydraulic and percussive force with a direct-push type rig for the purpose of collecting samples and evaluating subsurface conditions. Upon arriving at the designated sampling point, the pointed push tip is retracted to expose the sampler lined with brass, stainless steel or plastic sample tubes. The sampler is pushed, or driven using a hydraulic hammer, into underlying soil approximately 24-inches (48 to 60 inches for continuous core) to fill the sample tube or sleeves. Once the sample is -collected, the rods and sampler are retracted and the sample tubes are removed from the sampler head. The sampler head is then cleaned, filled with clean sample tubes, inserted into the borehole and advanced to the next sampling point where the sample collection process is repeated.

Upon completion of drilling and sampling the rods are retracted and the resulting borehole is filled with concrete, bentonite grout, hydrated bentonite chips or pellets as required by the regulatory agency. In areas where the borehole penetrates asphalt or concrete, the borehole is capped with an equivalent thickness of asphalt or concrete patch to match finish grade.

During the sampling process a physical description of observed soil characteristics (i.e. soil type, color, moisture content, consistency, odor, etc.), drilling difficulty as a function of depth are described on boring logs in accordance with the Unified Soil Classification System (USCS).

No soil cuttings are generated during drilling as the underlying soils are displaced by the push rods. However, hand auger cuttings generated in the upper five feet during the initial utility clearance may be compacted in the upper portion of the hole immediately under the asphalt cap. Alternatively, depending on regulatory requirements hand auger cuttings and excess sample core are temporarily stored on-site in 55-gallon Department of Transportation-approved drums pending laboratory analysis, waste profiling, and proper disposal. A label is affixed to the drums indicating the contents of the drum, suspected contaminants, date of drilling, borehole number, and depth interval from which the contents were generated.

Related Procedures:

- *Standard Procedure for Equipment Decontamination*

Stantec

STANDARD PROCEDURE FOR EQUIPMENT DECONTAMINATION

Equipment that could potentially contact subsurface media and compromise the integrity of the samples is carefully decontaminated prior to sampling. Samplers, groundwater pumps, sample sleeves, and other equipment are decontaminated in an Alconox (or equivalent) scrub solution and double rinsed in clean tap water rinse followed by a final distilled water rinse.

Decontamination waste water generated during the field activities is temporarily stored within a polyethylene tank mounted on the sampler's truck. The purge water is typically pumped through the DPE system at the TARP site, and discharged into the sanitary sewer.

APPENDIX C
BORING LOGS

PROJECT: **Tesoro Pittsburg**
LOCATION: **Pittsburg, CA**
PROJECT NUMBER: **77OT.43877.02**

WELL **GP-21**

STANTEC

DRILLING: STARTED **8/1/08** COMPLETED: **8/1/08**
INSTALLATION: STARTED **8/1/08** COMPLETED: **8/1/08**
DRILLING COMPANY: **WDC**
DRILLING EQUIPMENT: **GEOPROBE**
DRILLING METHOD: **Direct Push**
SAMPLING EQUIPMENT: **Clear PVC - Continuous core**

NORTHING (ft):
EASTING (ft):
LATITUDE:
LONGITUDE:
GROUND ELEV (ft):
TOC ELEV (ft):
INITIAL DTW (ft): **NE**
BOREHOLE DEPTH (ft): **34.0**
STATIC DTW (ft): **NE**
WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---**
BOREHOLE DIAMETER (in): **3.25**
LOGGED BY: **B Rorie**
CHECKED BY: **G. Haeck**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Borehole Backfill
		GM	**SILTY GRAVEL** ; GM; Top 6" is gravel fill material							
		ML	**SILT WITH CLAY AND GRAVEL** ; ML; 10YR 2/1 black; low plasticity; stiff; moist; no odor; stained throughout (15, 5, 80)		830 GP-21-1'			0		
5			Same as above, 10YR 3/3 dark brown		850 GP-21-6'			0	5	
10		SW	**SAND** ; SW; 2.5Y 5/3 light yellow brown; medium to coarse-grained; very loose; wet; well graded; (0, 95, 5)		855 GP-21-10'			0	10	
		ML	**SILT WITH SAND** ; ML; 10YR 4/3 brown; fine-grained; medium plasticity; stiff; moist; (0, 15, 85)							
		SM	**SILTY SAND** ; SM; 10YR 4/3 brown; fine-grained; loose; wet; (0, 80, 20)		920 GP-21WS, 13' - 17'					
15					900 GP-21-15'			0	15	
		CL	**SILTY CLAY** ; CL; 10YR 3/6 yellow brown; medium plasticity; stiff; moist; (0, 5, 95)							
		SM	**SILTY SAND** ; SM; 10YR 4/3 brown; fine-grained; loose; wet; (0, 70, 30)							Grout
20					950 GP-21-20'			0	20	
		CL	**SILTY CLAY TRACE SAND** ; CL; 10YR 3/6 yellow brown; medium plasticity; stiff; moist; (0, 5, 95)							
25			Same as above		1010 GP-21-25'			0	25	
					1055 GP-21WD					
30		SM	**SILTY SAND** ; SM; 10YR 3/6 yellow brown; fine to medium-grained; loose; wet; (0, 75, 25)		1030 GP-21-30', 29' - 34'			0	30	
			Hole terminated at 34 feet.		1035 GP-21-34'			0		

GEO FORM 304 TESORO PITTSBURG 9-8-08.GPJ SECOR INTL.GDT 11/13/08

PROJECT: **Tesoro Pittsburg**
LOCATION: **Pittsburg, CA**
PROJECT NUMBER: **77OT.43877.02**

WELL **GP-22**

STANTEC

DRILLING: STARTED **8/1/08** COMPLETED: **8/1/08**
INSTALLATION: STARTED **8/1/08** COMPLETED: **8/1/08**
DRILLING COMPANY: **WDC**
DRILLING EQUIPMENT: **GEOPROBE**
DRILLING METHOD: **Direct Push**
SAMPLING EQUIPMENT: **Clear PVC - Continuous core**

NORTHING (ft):
EASTING (ft):
LATITUDE:
LONGITUDE:
GROUND ELEV (ft):
TOC ELEV (ft):
INITIAL DTW (ft): **NE**
BOREHOLE DEPTH (ft): **16.0**
STATIC DTW (ft): **NE**
WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---**
BOREHOLE DIAMETER (in): **3.25**
LOGGED BY: **B Rorie**
CHECKED BY: **G. Haeck**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Borehole Backfill
			Asphaltic concrete							
		GM	**SILTY GRAVEL** ; GM; fill material							
		CL	**SILTY CLAY** ; CL; 10YR 2/2 very dark brown; medium plasticity; stiff; moist; no odor; staining throughout, (5, 10, 85)		1305 GP-22-1'			0		
5			Same as above, no staining		1315 GP-22-6'			0	5	
			Same as above							Grout
10		SM	**SILTY SAND** ; SM; GLEY1 2/1 very dark greenish gray; fine-grained; loose; wet; no odor; some staining, (0, 75, 25)		1320 GP-22-10'			0	10	
					1350 GP-22WS, 12' - 16'					
15		SP	**SAND** ; SP; 2.5Y 4/3 light olive brown; fine-grained; very loose; wet; no odor; no staining; poorly graded; (0, 90, 10)		1325 GP-22-15'			0	15	
			Hole terminated at 16 feet.							

GEO FORM 304 TESORO PITTSBURG 9-8-08.GPJ SECOR INTL.GDT 11/13/08

APPENDIX D
DISPOSAL MANIFESTS

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
CAR000091496	1	949-699-3706	002156679 FLE

GENERATOR

5. Generator's Name and Mailing Address
Tesoro
P.O. Box 80730
Rancho Santa Margarita, CA 92688
Generator's Phone: 949-460-5200

Generator's Site Address (if different than mailing address)
Tesoro Pittsburg Terminal
595 East Third Street
Pittsburg, CA 94565

6. Transporter 1 Company Name: BELSHIRE — U.S. EPA ID Number: CAR000183913

7. Transporter 2 Company Name: Triad Transport Inc. — U.S. EPA ID Number: OKD981583791

8. Designated Facility Name and Site Address
US Ecology, Nevada Operations
Highway 95, 12 miles S. of Beatty
Beatty, NV 89003
Facility's Phone: 775-553-2203
U.S. EPA ID Number: NVT330010000

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. Hazardous Waste, Solid, n.o.s., 9, NA3077, PG III (Contains lead - D008)	1	DM	100	P	D008	611	
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
ERG#: 171
07-012-8303-345
Soil Contaminated with Lead
WEAR ALL APPROPRIATE PROTECTIVE CLOTHING.
BESI: 158767

FOLD LABEL AT DOTTED LINE. AFFIX TO RIGHT SIDE OF HAZARDOUS MATERIAL BILLS SO THE TAB STICKS OUT.
LT196U © 1997 LABEL-MASTER

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Larry Moothart of BESI on behalf of generator — Signature — Month 10 Day 01 Year 08

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Andrew Rios — Signature — Month 10 Day 01 Year 08
Transporter 2 Printed/Typed Name: Terry Miller — Signature — Month 10 Day 9 Year 08

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H132			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: M. CATHART — Signature — Month 10 Day 10 Year 08

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: CAR000091496 | 2. Page 1 of: 1 | 3. Emergency Response Phone: 949-699-3708 | 4. Manifest Tracking Number: 000781187 FLE

GENERATOR

5. Generator's Name and Mailing Address
Tesoro
P.O. Box 80750
Rancho Santa Margarita, CA 92688
Generator's Phone: 949-480-5200

Generator's Site Address (if different than mailing address)
Tesoro Pittsburg Terminal
595 E. Tenth St.
Pittsburg, CA 94565

6. Transporter 1 Company Name: BELSHIRE | U.S. EPA ID Number: CAR000182913

7. Transporter 2 Company Name | U.S. EPA ID Number

8. Designated Facility Name and Site Address
Debarmo Kerdoon
2000 N. Alameda St
Compton, CA 90222
Facility's Phone: 310-537-7100

U.S. EPA ID Number: CAT080013352

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. ~~Gasoline Mixture, 3, UN1203, PG II~~ NA					136		
Y	2. Hazardous Waste, Liquid, N.O.S., 9, NA3082, PG III (D040, Trichloroethylene)	1	DM	10	G	D040	134	
	3.							
	4.							

14. Special Handling Instructions and Additional Information
ERG# 128 171
~~Gasoline & Water~~ NA
Water Contaminated w/ TCE / VOC
WEAR ALL APPROPRIATE PROTECTIVE CLOTHING.
BESI 158767
158767

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Larry Moolhart of BESI on behalf of generator | Signature | Month: 10 | Day: 1 | Year: 08

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Andres Rios | Signature | Month: 10 | Day: 1 | Year: 08

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) | Month | Day | Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Armando Villarreal | Signature | Month: 10 | Day: 07 | Year: 08

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

TRANSPORTER'S COPY

APPENDIX E
CERTIFIED LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION

KIFF Analytical LLC

Report Number : 63990
Date : 08/08/2008

Gary Haeck
Stantec Consulting Corporation
3017 Kilgore Road, Suite 100
Rancho Cordova, CA 95670

Subject : 5 Soil Samples and 3 Water Samples
Project Name : Tesoro Pittsburg Terminal Additional Phase II
Project Number : 77OT.43877.02

Dear Mr. Haeck,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

KIFF Analytical LLC

Report Number : 63990
Date : 08/08/2008

Subject : 5 Soil Samples and 3 Water Samples
Project Name : Tesoro Pittsburg Terminal Additional Phase II
Project Number : 77OT.43877.02

Case Narrative

Matrix Spike/Matrix Spike Duplicate results associated with sample Composite for the analyte Antimony were outside of control limits. This may indicate a bias for the sample that was spiked. Since the LCS recoveries were within control limits, no data are flagged.

Matrix Spike/Matrix Spike Duplicate results associated with sample Composite for the analyte Barium were affected by the analyte concentrations already present in the un-spiked sample.

KIFF Analytical LLC

Report Number : 63990
Date : 08/08/2008

Project Name : **Tesoro Pittsburg Terminal Additional Phase II**
Project Number : **77OT.43877.02**

Sample : **GP-21-1** Matrix : Soil Lab Number : 63990-01
Sample Date :08/01/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**36**	5.0	mg/Kg	M EPA 8015	08/04/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**88**	40	mg/Kg	M EPA 8015	08/04/2008
1-Chlorooctadecane (Diesel Surrogate)	85.8		% Recovery	M EPA 8015	08/04/2008

Sample : **GP-21-6** Matrix : Soil Lab Number : 63990-02
Sample Date :08/01/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**< 1.0**	1.0	mg/Kg	M EPA 8015	08/04/2008
TPH as Motor Oil	**< 10**	10	mg/Kg	M EPA 8015	08/04/2008
1-Chlorooctadecane (Diesel Surrogate)	82.0		% Recovery	M EPA 8015	08/04/2008

Sample : **GP-21WS** Matrix : Water Lab Number : 63990-08
Sample Date :08/01/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**290**	50	ug/L	M EPA 8015	08/05/2008
TPH as Motor Oil	**< 100**	100	ug/L	M EPA 8015	08/05/2008
Octacosane (Diesel Surrogate)	104		% Recovery	M EPA 8015	08/05/2008

KIFF Analytical LLC

Report Number : 63990
Date : 08/08/2008

Project Name : **Tesoro Pittsburg Terminal Additional Phase II**
Project Number : **77OT.43877.02**

Sample : **GP-21WD** Matrix : Water Lab Number : 63990-09
Sample Date :08/01/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**110**	50	ug/L	M EPA 8015	08/05/2008
TPH as Motor Oil	**< 100**	100	ug/L	M EPA 8015	08/05/2008
Octacosane (Diesel Surrogate)	100		% Recovery	M EPA 8015	08/05/2008

Sample : **GP-22-1** Matrix : Soil Lab Number : 63990-11
Sample Date :08/01/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**140**	10	mg/Kg	M EPA 8015	08/04/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**560**	80	mg/Kg	M EPA 8015	08/04/2008
1-Chlorooctadecane (Diesel Surrogate)	Diluted Out		% Recovery	M EPA 8015	08/04/2008

Sample : **GP-22-6** Matrix : Soil Lab Number : 63990-12
Sample Date :08/01/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**2.5**	1.0	mg/Kg	M EPA 8015	08/04/2008
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Motor Oil	**< 10**	10	mg/Kg	M EPA 8015	08/04/2008
1-Chlorooctadecane (Diesel Surrogate)	89.8		% Recovery	M EPA 8015	08/04/2008

KIFF Analytical LLC

Report Number : 63990

Date : 08/08/2008

Project Name : **Tesoro Pittsburg Terminal Additional Phase II**

Project Number : **77OT.43877.02**

Sample : **GP-22WS** Matrix : Water Lab Number : 63990-15

Sample Date :08/01/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**70**	50	ug/L	M EPA 8015	08/05/2008
TPH as Motor Oil	**< 100**	100	ug/L	M EPA 8015	08/05/2008
Octacosane (Diesel Surrogate)	78.4		% Recovery	M EPA 8015	08/05/2008

KIFF Analytical LLC

Report Number : 63990

Date : 08/08/2008

Sample : **GP-21-1**

Project Name : **Tesoro Pittsburg Terminal Additional Phase II**

Project Number : **77OT.43877.02** Lab Number : 63990-01 Date Analyzed : 08/02/08

Matrix : Soil Sample Date : 08/01/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	< 1.0	1.0	mg/Kg
Dichlorodifluoromethane	< 0.0050	0.0050	mg/Kg
Chloromethane	< 0.0050	0.0050	mg/Kg
Vinyl Chloride	< 0.0050	0.0050	mg/Kg
Bromomethane	< 0.020	0.020	mg/Kg
Chloroethane	< 0.0050	0.0050	mg/Kg
Trichlorofluoromethane	< 0.0050	0.0050	mg/Kg
1,1-Dichloroethene	< 0.0050	0.0050	mg/Kg
Methylene Chloride	< 0.0050	0.0050	mg/Kg
trans-1,2-Dichloroethene	< 0.0050	0.0050	mg/Kg
1,1-Dichloroethane	< 0.0050	0.0050	mg/Kg
2,2-Dichloropropane	< 0.0050	0.0050	mg/Kg
cis-1,2-Dichloroethene	< 0.0050	0.0050	mg/Kg
Chloroform	< 0.0050	0.0050	mg/Kg
Bromochloromethane	< 0.0050	0.0050	mg/Kg
1,1,1-Trichloroethane	< 0.0050	0.0050	mg/Kg
1,1-Dichloropropene	< 0.0050	0.0050	mg/Kg
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg
Carbon Tetrachloride	< 0.0050	0.0050	mg/Kg
Benzene	< 0.0050	0.0050	mg/Kg
Trichloroethene	< 0.0050	0.0050	mg/Kg
1,2-Dichloropropane	< 0.0050	0.0050	mg/Kg
Bromodichloromethane	< 0.0050	0.0050	mg/Kg
Dibromomethane	< 0.0050	0.0050	mg/Kg
cis-1,3-Dichloropropene	< 0.0050	0.0050	mg/Kg
Toluene	< 0.0050	0.0050	mg/Kg
trans-1,3-Dichloropropene	< 0.0050	0.0050	mg/Kg
1,1,2-Trichloroethane	< 0.0050	0.0050	mg/Kg
1,3-Dichloropropane	< 0.0050	0.0050	mg/Kg
Tetrachloroethene	< 0.0050	0.0050	mg/Kg
Dibromochloromethane	< 0.0050	0.0050	mg/Kg
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg
Chlorobenzene	< 0.0050	0.0050	mg/Kg
1,1,1,2-Tetrachloroethane	< 0.0050	0.0050	mg/Kg
Ethylbenzene	< 0.0050	0.0050	mg/Kg
P,M-Xylene	< 0.0050	0.0050	mg/Kg
O-Xylene	< 0.0050	0.0050	mg/Kg
Styrene	< 0.0050	0.0050	mg/Kg

Parameter	Measured Value	MRL [1]	Units
Isopropyl benzene	< 0.0050	0.0050	mg/Kg
Bromoform	< 0.0050	0.0050	mg/Kg
1,1,2,2-Tetrachloroethane	< 0.0050	0.0050	mg/Kg
1,2,3-Trichloropropane	< 0.0050	0.0050	mg/Kg
n-Propylbenzene	< 0.0050	0.0050	mg/Kg
Bromobenzene	< 0.0050	0.0050	mg/Kg
1,3,5-Trimethylbenzene	< 0.0050	0.0050	mg/Kg
2+4-Chlorotoluene	< 0.0050	0.0050	mg/Kg
tert-Butylbenzene	< 0.0050	0.0050	mg/Kg
1,2,4-Trimethylbenzene	< 0.0050	0.0050	mg/Kg
sec-Butylbenzene	< 0.0050	0.0050	mg/Kg
p-Isopropyltoluene	< 0.0050	0.0050	mg/Kg
1,3-Dichlorobenzene	< 0.0050	0.0050	mg/Kg
1,4-Dichlorobenzene	< 0.0050	0.0050	mg/Kg
n-Butylbenzene	< 0.0050	0.0050	mg/Kg
1,2-Dichlorobenzene	< 0.0050	0.0050	mg/Kg
1,2-Dibromo-3-chloropropane	< 0.0050	0.0050	mg/Kg
1,2,4-Trichlorobenzene	< 0.0050	0.0050	mg/Kg
Hexachlorobutadiene	< 0.0050	0.0050	mg/Kg
Naphthalene	< 0.0050	0.0050	mg/Kg
1,2,3-Trichlorobenzene	< 0.0050	0.0050	mg/Kg
1,2-Dichloroethane-d4 (Surr)	93.1		% Recovery
4-Bromofluorobenzene (Surr)	99.2		% Recovery
Toluene - d8 (Surr)	102		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

KIFF Analytical LLC

Report Number : 63990

Date : 08/08/2008

Sample : **GP-21-6**

Project Name : **Tesoro Pittsburg Terminal Additional Phase II**

Project Number : **77OT.43877.02** Lab Number : 63990-02 Date Analyzed : 08/02/08

Matrix : Soil Sample Date : 08/01/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	< 1.0	1.0	mg/Kg
Dichlorodifluoromethane	< 0.0050	0.0050	mg/Kg
Chloromethane	< 0.0050	0.0050	mg/Kg
Vinyl Chloride	< 0.0050	0.0050	mg/Kg
Bromomethane	< 0.020	0.020	mg/Kg
Chloroethane	< 0.0050	0.0050	mg/Kg
Trichlorofluoromethane	< 0.0050	0.0050	mg/Kg
1,1-Dichloroethene	< 0.0050	0.0050	mg/Kg
Methylene Chloride	< 0.0050	0.0050	mg/Kg
trans-1,2-Dichloroethene	< 0.0050	0.0050	mg/Kg
1,1-Dichloroethane	< 0.0050	0.0050	mg/Kg
2,2-Dichloropropane	< 0.0050	0.0050	mg/Kg
cis-1,2-Dichloroethene	< 0.0050	0.0050	mg/Kg
Chloroform	< 0.0050	0.0050	mg/Kg
Bromochloromethane	< 0.0050	0.0050	mg/Kg
1,1,1-Trichloroethane	< 0.0050	0.0050	mg/Kg
1,1-Dichloropropene	< 0.0050	0.0050	mg/Kg
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg
Carbon Tetrachloride	< 0.0050	0.0050	mg/Kg
Benzene	< 0.0050	0.0050	mg/Kg
Trichloroethene	< 0.0050	0.0050	mg/Kg
1,2-Dichloropropane	< 0.0050	0.0050	mg/Kg
Bromodichloromethane	< 0.0050	0.0050	mg/Kg
Dibromomethane	< 0.0050	0.0050	mg/Kg
cis-1,3-Dichloropropene	< 0.0050	0.0050	mg/Kg
Toluene	< 0.0050	0.0050	mg/Kg
trans-1,3-Dichloropropene	< 0.0050	0.0050	mg/Kg
1,1,2-Trichloroethane	< 0.0050	0.0050	mg/Kg
1,3-Dichloropropane	< 0.0050	0.0050	mg/Kg
Tetrachloroethene	< 0.0050	0.0050	mg/Kg
Dibromochloromethane	< 0.0050	0.0050	mg/Kg
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg
Chlorobenzene	< 0.0050	0.0050	mg/Kg
1,1,1,2-Tetrachloroethane	< 0.0050	0.0050	mg/Kg
Ethylbenzene	< 0.0050	0.0050	mg/Kg
P,M-Xylene	< 0.0050	0.0050	mg/Kg
O-Xylene	< 0.0050	0.0050	mg/Kg
Styrene	< 0.0050	0.0050	mg/Kg

Parameter	Measured Value	MRL [1]	Units
Isopropyl benzene	< 0.0050	0.0050	mg/Kg
Bromoform	< 0.0050	0.0050	mg/Kg
1,1,2,2-Tetrachloroethane	< 0.0050	0.0050	mg/Kg
1,2,3-Trichloropropane	< 0.0050	0.0050	mg/Kg
n-Propylbenzene	< 0.0050	0.0050	mg/Kg
Bromobenzene	< 0.0050	0.0050	mg/Kg
1,3,5-Trimethylbenzene	< 0.0050	0.0050	mg/Kg
2+4-Chlorotoluene	< 0.0050	0.0050	mg/Kg
tert-Butylbenzene	< 0.0050	0.0050	mg/Kg
1,2,4-Trimethylbenzene	< 0.0050	0.0050	mg/Kg
sec-Butylbenzene	< 0.0050	0.0050	mg/Kg
p-Isopropyltoluene	< 0.0050	0.0050	mg/Kg
1,3-Dichlorobenzene	< 0.0050	0.0050	mg/Kg
1,4-Dichlorobenzene	< 0.0050	0.0050	mg/Kg
n-Butylbenzene	< 0.0050	0.0050	mg/Kg
1,2-Dichlorobenzene	< 0.0050	0.0050	mg/Kg
1,2-Dibromo-3-chloropropane	< 0.0050	0.0050	mg/Kg
1,2,4-Trichlorobenzene	< 0.0050	0.0050	mg/Kg
Hexachlorobutadiene	< 0.0050	0.0050	mg/Kg
Naphthalene	< 0.0050	0.0050	mg/Kg
1,2,3-Trichlorobenzene	< 0.0050	0.0050	mg/Kg
1,2-Dichloroethane-d4 (Surr)	96.8		% Recovery
4-Bromofluorobenzene (Surr)	97.8		% Recovery
Toluene - d8 (Surr)	103		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

KIFF Analytical LLC

Report Number : 63990

Date : 08/08/2008

Sample : **GP-21WS**

Project Name : **Tesoro Pittsburg Terminal Additional Phase II**

Project Number : **77OT.43877.02** Lab Number : 63990-08 Date Analyzed : 08/04/08

Matrix : Water Sample Date : 08/01/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	< 50	50	ug/L
Dichlorodifluoromethane	< 0.50	0.50	ug/L
Chloromethane	< 0.50	0.50	ug/L
Vinyl Chloride	< 0.50	0.50	ug/L
Bromomethane	< 20	20	ug/L
Chloroethane	< 0.50	0.50	ug/L
Trichlorofluoromethane	< 0.50	0.50	ug/L
1,1-Dichloroethene	< 0.50	0.50	ug/L
Methylene Chloride	< 5.0	5.0	ug/L
trans-1,2-Dichloroethene	< 0.50	0.50	ug/L
1,1-Dichloroethane	< 0.50	0.50	ug/L
2,2-Dichloropropane	< 0.50	0.50	ug/L
cis-1,2-Dichloroethene	**0.71**	0.50	ug/L
Chloroform	< 0.50	0.50	ug/L
Bromochloromethane	< 0.50	0.50	ug/L
1,1,1-Trichloroethane	< 0.50	0.50	ug/L
1,1-Dichloropropene	< 0.50	0.50	ug/L
1,2-Dichloroethane	< 0.50	0.50	ug/L
Carbon Tetrachloride	< 0.50	0.50	ug/L
Benzene	< 0.50	0.50	ug/L
Trichloroethene	**2.7**	0.50	ug/L
1,2-Dichloropropane	< 0.50	0.50	ug/L
Bromodichloromethane	< 0.50	0.50	ug/L
Dibromomethane	< 0.50	0.50	ug/L
cis-1,3-Dichloropropene	< 0.50	0.50	ug/L
Toluene	< 0.50	0.50	ug/L
trans-1,3-Dichloropropene	< 0.50	0.50	ug/L
1,1,2-Trichloroethane	< 0.50	0.50	ug/L
1,3-Dichloropropane	< 0.50	0.50	ug/L
Tetrachloroethene	< 0.50	0.50	ug/L
Dibromochloromethane	< 0.50	0.50	ug/L
1,2-Dibromoethane	< 0.50	0.50	ug/L
Chlorobenzene	< 0.50	0.50	ug/L
1,1,1,2-Tetrachloroethane	< 0.50	0.50	ug/L
Ethylbenzene	< 0.50	0.50	ug/L
P,M-Xylene	< 1.0	1.0	ug/L
O-Xylene	< 0.50	0.50	ug/L
Styrene	< 0.50	0.50	ug/L

Parameter	Measured Value	MRL [1]	Units
Isopropyl benzene	< 0.50	0.50	ug/L
Bromoform	< 0.50	0.50	ug/L
1,1,2,2-Tetrachloroethane	< 0.50	0.50	ug/L
1,2,3-Trichloropropane	< 0.50	0.50	ug/L
n-Propylbenzene	< 0.50	0.50	ug/L
Bromobenzene	< 0.50	0.50	ug/L
1,3,5-Trimethylbenzene	< 0.50	0.50	ug/L
2+4-Chlorotoluene	< 1.0	1.0	ug/L
tert-Butylbenzene	< 0.50	0.50	ug/L
1,2,4-Trimethylbenzene	< 0.50	0.50	ug/L
sec-Butylbenzene	< 0.50	0.50	ug/L
p-Isopropyltoluene	< 0.50	0.50	ug/L
1,3-Dichlorobenzene	< 0.50	0.50	ug/L
1,4-Dichlorobenzene	< 0.50	0.50	ug/L
n-Butylbenzene	< 0.50	0.50	ug/L
1,2-Dichlorobenzene	< 0.50	0.50	ug/L
1,2-Dibromo-3-chloropropane	< 0.50	0.50	ug/L
1,2,4-Trichlorobenzene	< 0.50	0.50	ug/L
Hexachlorobutadiene	< 0.50	0.50	ug/L
Naphthalene	< 0.50	0.50	ug/L
1,2,3-Trichlorobenzene	< 0.50	0.50	ug/L
1,2-Dichloroethane-d4 (Surr)	100		% Recovery
4-Bromofluorobenzene (Surr)	99.2		% Recovery
Toluene - d8 (Surr)	105		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

KIFF Analytical LLC

Report Number : 63990

Date : 08/08/2008

Sample : **GP-21WD**

Project Name : **Tesoro Pittsburg Terminal Additional Phase II**

Project Number : **77OT.43877.02** Lab Number : 63990-09 Date Analyzed : 08/05/08, 08/04/08

Matrix : Water Sample Date : 08/01/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	**1300**	50	ug/L
(Note: Primarily compounds not found in typical Gasoline)			
Dichlorodifluoromethane	< 0.50	0.50	ug/L
Chloromethane	< 0.50	0.50	ug/L
Vinyl Chloride	**1.6**	0.50	ug/L
Bromomethane	< 20	20	ug/L
Chloroethane	< 0.50	0.50	ug/L
Trichlorofluoromethane	< 0.50	0.50	ug/L
1,1-Dichloroethene	**2.9**	0.50	ug/L
Methylene Chloride	< 5.0	5.0	ug/L
trans-1,2-Dichloroethene	**28**	0.50	ug/L
1,1-Dichloroethane	**1.7**	0.50	ug/L
2,2-Dichloropropane	< 0.50	0.50	ug/L
cis-1,2-Dichloroethene	**250**	5.0	ug/L
Chloroform	< 0.50	0.50	ug/L
Bromochloromethane	< 0.50	0.50	ug/L
1,1,1-Trichloroethane	< 0.50	0.50	ug/L
1,1-Dichloropropene	< 0.50	0.50	ug/L
1,2-Dichloroethane	< 0.50	0.50	ug/L
Carbon Tetrachloride	< 0.50	0.50	ug/L
Benzene	< 0.50	0.50	ug/L
Trichloroethene	**1000**	5.0	ug/L
1,2-Dichloropropane	< 0.50	0.50	ug/L
Bromodichloromethane	< 0.50	0.50	ug/L
Dibromomethane	< 0.50	0.50	ug/L
cis-1,3-Dichloropropene	< 0.50	0.50	ug/L
Toluene	< 0.50	0.50	ug/L
trans-1,3-Dichloropropene	< 0.50	0.50	ug/L
1,1,2-Trichloroethane	< 0.50	0.50	ug/L
1,3-Dichloropropane	< 0.50	0.50	ug/L
Tetrachloroethene	< 0.50	0.50	ug/L
Dibromochloromethane	< 0.50	0.50	ug/L
1,2-Dibromoethane	< 0.50	0.50	ug/L
Chlorobenzene	< 0.50	0.50	ug/L
1,1,1,2-Tetrachloroethane	< 0.50	0.50	ug/L
Ethylbenzene	< 0.50	0.50	ug/L
P,M-Xylene	< 1.0	1.0	ug/L
O-Xylene	< 0.50	0.50	ug/L

Parameter	Measured Value	MRL [1]	Units
Styrene	< 0.50	0.50	ug/L
Isopropyl benzene	< 0.50	0.50	ug/L
Bromoform	< 0.50	0.50	ug/L
1,1,2,2-Tetrachloroethane	< 0.50	0.50	ug/L
1,2,3-Trichloropropane	< 0.50	0.50	ug/L
n-Propylbenzene	< 0.50	0.50	ug/L
Bromobenzene	< 0.50	0.50	ug/L
1,3,5-Trimethylbenzene	< 0.50	0.50	ug/L
2+4-Chlorotoluene	< 1.0	1.0	ug/L
tert-Butylbenzene	< 0.50	0.50	ug/L
1,2,4-Trimethylbenzene	< 0.50	0.50	ug/L
sec-Butylbenzene	< 0.50	0.50	ug/L
p-Isopropyltoluene	< 0.50	0.50	ug/L
1,3-Dichlorobenzene	< 0.50	0.50	ug/L
1,4-Dichlorobenzene	< 0.50	0.50	ug/L
n-Butylbenzene	< 0.50	0.50	ug/L
1,2-Dichlorobenzene	< 0.50	0.50	ug/L
1,2-Dibromo-3-chloropropane	< 0.50	0.50	ug/L
1,2,4-Trichlorobenzene	< 0.50	0.50	ug/L
Hexachlorobutadiene	< 0.50	0.50	ug/L
Naphthalene	< 0.50	0.50	ug/L
1,2,3-Trichlorobenzene	< 0.50	0.50	ug/L
1,2-Dichloroethane-d4 (Surr)	103		% Recovery
4-Bromofluorobenzene (Surr)	98.9		% Recovery
Toluene - d8 (Surr)	106		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

KIFF Analytical LLC

Report Number : 63990

Date : 08/08/2008

Sample : **GP-22-1**

Project Name : **Tesoro Pittsburg Terminal Additional Phase II**

Project Number : **77OT.43877.02** Lab Number : 63990-11 Date Analyzed : 08/02/08

Matrix : Soil Sample Date : 08/01/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	< 1.0	1.0	mg/Kg
Dichlorodifluoromethane	< 0.0050	0.0050	mg/Kg
Chloromethane	< 0.0050	0.0050	mg/Kg
Vinyl Chloride	< 0.0050	0.0050	mg/Kg
Bromomethane	< 0.020	0.020	mg/Kg
Chloroethane	< 0.0050	0.0050	mg/Kg
Trichlorofluoromethane	< 0.0050	0.0050	mg/Kg
1,1-Dichloroethene	< 0.0050	0.0050	mg/Kg
Methylene Chloride	< 0.0050	0.0050	mg/Kg
trans-1,2-Dichloroethene	< 0.0050	0.0050	mg/Kg
1,1-Dichloroethane	< 0.0050	0.0050	mg/Kg
2,2-Dichloropropane	< 0.0050	0.0050	mg/Kg
cis-1,2-Dichloroethene	< 0.0050	0.0050	mg/Kg
Chloroform	< 0.0050	0.0050	mg/Kg
Bromochloromethane	< 0.0050	0.0050	mg/Kg
1,1,1-Trichloroethane	< 0.0050	0.0050	mg/Kg
1,1-Dichloropropene	< 0.0050	0.0050	mg/Kg
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg
Carbon Tetrachloride	< 0.0050	0.0050	mg/Kg
Benzene	< 0.0050	0.0050	mg/Kg
Trichloroethene	< 0.0050	0.0050	mg/Kg
1,2-Dichloropropane	< 0.0050	0.0050	mg/Kg
Bromodichloromethane	< 0.0050	0.0050	mg/Kg
Dibromomethane	< 0.0050	0.0050	mg/Kg
cis-1,3-Dichloropropene	< 0.0050	0.0050	mg/Kg
Toluene	< 0.0050	0.0050	mg/Kg
trans-1,3-Dichloropropene	< 0.0050	0.0050	mg/Kg
1,1,2-Trichloroethane	< 0.0050	0.0050	mg/Kg
1,3-Dichloropropane	< 0.0050	0.0050	mg/Kg
Tetrachloroethene	< 0.0050	0.0050	mg/Kg
Dibromochloromethane	< 0.0050	0.0050	mg/Kg
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg
Chlorobenzene	< 0.0050	0.0050	mg/Kg
1,1,1,2-Tetrachloroethane	< 0.0050	0.0050	mg/Kg
Ethylbenzene	< 0.0050	0.0050	mg/Kg
P,M-Xylene	< 0.0050	0.0050	mg/Kg
O-Xylene	< 0.0050	0.0050	mg/Kg
Styrene	< 0.0050	0.0050	mg/Kg

Parameter	Measured Value	MRL [1]	Units
Isopropyl benzene	< 0.0050	0.0050	mg/Kg
Bromoform	< 0.0050	0.0050	mg/Kg
1,1,2,2-Tetrachloroethane	< 0.0050	0.0050	mg/Kg
1,2,3-Trichloropropane	< 0.0050	0.0050	mg/Kg
n-Propylbenzene	< 0.0050	0.0050	mg/Kg
Bromobenzene	< 0.0050	0.0050	mg/Kg
1,3,5-Trimethylbenzene	< 0.0050	0.0050	mg/Kg
2+4-Chlorotoluene	< 0.0050	0.0050	mg/Kg
tert-Butylbenzene	< 0.0050	0.0050	mg/Kg
1,2,4-Trimethylbenzene	< 0.0050	0.0050	mg/Kg
sec-Butylbenzene	< 0.0050	0.0050	mg/Kg
p-Isopropyltoluene	< 0.0050	0.0050	mg/Kg
1,3-Dichlorobenzene	< 0.0050	0.0050	mg/Kg
1,4-Dichlorobenzene	< 0.0050	0.0050	mg/Kg
n-Butylbenzene	< 0.0050	0.0050	mg/Kg
1,2-Dichlorobenzene	< 0.0050	0.0050	mg/Kg
1,2-Dibromo-3-chloropropane	< 0.0050	0.0050	mg/Kg
1,2,4-Trichlorobenzene	< 0.0050	0.0050	mg/Kg
Hexachlorobutadiene	< 0.0050	0.0050	mg/Kg
Naphthalene	< 0.0050	0.0050	mg/Kg
1,2,3-Trichlorobenzene	< 0.0050	0.0050	mg/Kg
1,2-Dichloroethane-d4 (Surr)	95.4		% Recovery
4-Bromofluorobenzene (Surr)	98.5		% Recovery
Toluene - d8 (Surr)	104		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

KIFF Analytical LLC

Report Number : 63990

Date : 08/08/2008

Sample : **GP-22-6**

Project Name : **Tesoro Pittsburg Terminal Additional Phase II**

Project Number : **77OT.43877.02** Lab Number : 63990-12 Date Analyzed : 08/02/08

Matrix : Soil Sample Date : 08/01/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	< 1.0	1.0	mg/Kg
Dichlorodifluoromethane	< 0.0050	0.0050	mg/Kg
Chloromethane	< 0.0050	0.0050	mg/Kg
Vinyl Chloride	< 0.0050	0.0050	mg/Kg
Bromomethane	< 0.020	0.020	mg/Kg
Chloroethane	< 0.0050	0.0050	mg/Kg
Trichlorofluoromethane	< 0.0050	0.0050	mg/Kg
1,1-Dichloroethene	< 0.0050	0.0050	mg/Kg
Methylene Chloride	< 0.0050	0.0050	mg/Kg
trans-1,2-Dichloroethene	< 0.0050	0.0050	mg/Kg
1,1-Dichloroethane	< 0.0050	0.0050	mg/Kg
2,2-Dichloropropane	< 0.0050	0.0050	mg/Kg
cis-1,2-Dichloroethene	< 0.0050	0.0050	mg/Kg
Chloroform	< 0.0050	0.0050	mg/Kg
Bromochloromethane	< 0.0050	0.0050	mg/Kg
1,1,1-Trichloroethane	< 0.0050	0.0050	mg/Kg
1,1-Dichloropropene	< 0.0050	0.0050	mg/Kg
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg
Carbon Tetrachloride	< 0.0050	0.0050	mg/Kg
Benzene	< 0.0050	0.0050	mg/Kg
Trichloroethene	< 0.0050	0.0050	mg/Kg
1,2-Dichloropropane	< 0.0050	0.0050	mg/Kg
Bromodichloromethane	< 0.0050	0.0050	mg/Kg
Dibromomethane	< 0.0050	0.0050	mg/Kg
cis-1,3-Dichloropropene	< 0.0050	0.0050	mg/Kg
Toluene	< 0.0050	0.0050	mg/Kg
trans-1,3-Dichloropropene	< 0.0050	0.0050	mg/Kg
1,1,2-Trichloroethane	< 0.0050	0.0050	mg/Kg
1,3-Dichloropropane	< 0.0050	0.0050	mg/Kg
Tetrachloroethene	< 0.0050	0.0050	mg/Kg
Dibromochloromethane	< 0.0050	0.0050	mg/Kg
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg
Chlorobenzene	< 0.0050	0.0050	mg/Kg
1,1,1,2-Tetrachloroethane	< 0.0050	0.0050	mg/Kg
Ethylbenzene	< 0.0050	0.0050	mg/Kg
P,M-Xylene	< 0.0050	0.0050	mg/Kg
O-Xylene	< 0.0050	0.0050	mg/Kg
Styrene	< 0.0050	0.0050	mg/Kg

Parameter	Measured Value	MRL [1]	Units
Isopropyl benzene	< 0.0050	0.0050	mg/Kg
Bromoform	< 0.0050	0.0050	mg/Kg
1,1,2,2-Tetrachloroethane	< 0.0050	0.0050	mg/Kg
1,2,3-Trichloropropane	< 0.0050	0.0050	mg/Kg
n-Propylbenzene	< 0.0050	0.0050	mg/Kg
Bromobenzene	< 0.0050	0.0050	mg/Kg
1,3,5-Trimethylbenzene	< 0.0050	0.0050	mg/Kg
2+4-Chlorotoluene	< 0.0050	0.0050	mg/Kg
tert-Butylbenzene	< 0.0050	0.0050	mg/Kg
1,2,4-Trimethylbenzene	< 0.0050	0.0050	mg/Kg
sec-Butylbenzene	< 0.0050	0.0050	mg/Kg
p-Isopropyltoluene	< 0.0050	0.0050	mg/Kg
1,3-Dichlorobenzene	< 0.0050	0.0050	mg/Kg
1,4-Dichlorobenzene	< 0.0050	0.0050	mg/Kg
n-Butylbenzene	< 0.0050	0.0050	mg/Kg
1,2-Dichlorobenzene	< 0.0050	0.0050	mg/Kg
1,2-Dibromo-3-chloropropane	< 0.0050	0.0050	mg/Kg
1,2,4-Trichlorobenzene	< 0.0050	0.0050	mg/Kg
Hexachlorobutadiene	< 0.0050	0.0050	mg/Kg
Naphthalene	< 0.0050	0.0050	mg/Kg
1,2,3-Trichlorobenzene	< 0.0050	0.0050	mg/Kg
1,2-Dichloroethane-d4 (Surr)	99.4		% Recovery
4-Bromofluorobenzene (Surr)	98.1		% Recovery
Toluene - d8 (Surr)	104		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

KIFF Analytical LLC

Report Number : 63990

Date : 08/08/2008

Sample : **GP-22WS**

Project Name : **Tesoro Pittsburg Terminal Additional Phase II**

Project Number : **77OT.43877.02** Lab Number : 63990-15 Date Analyzed : 08/04/08

Matrix : Water Sample Date : 08/01/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	< 50	50	ug/L
Dichlorodifluoromethane	< 0.50	0.50	ug/L
Chloromethane	< 0.50	0.50	ug/L
Vinyl Chloride	< 0.50	0.50	ug/L
Bromomethane	< 20	20	ug/L
Chloroethane	< 0.50	0.50	ug/L
Trichlorofluoromethane	< 0.50	0.50	ug/L
1,1-Dichloroethene	< 0.50	0.50	ug/L
Methylene Chloride	< 5.0	5.0	ug/L
trans-1,2-Dichloroethene	< 0.50	0.50	ug/L
1,1-Dichloroethane	< 0.50	0.50	ug/L
2,2-Dichloropropane	< 0.50	0.50	ug/L
cis-1,2-Dichloroethene	< 0.50	0.50	ug/L
Chloroform	< 0.50	0.50	ug/L
Bromochloromethane	< 0.50	0.50	ug/L
1,1,1-Trichloroethane	< 0.50	0.50	ug/L
1,1-Dichloropropene	< 0.50	0.50	ug/L
1,2-Dichloroethane	< 0.50	0.50	ug/L
Carbon Tetrachloride	< 0.50	0.50	ug/L
Benzene	< 0.50	0.50	ug/L
Trichloroethene	**0.77**	0.50	ug/L
1,2-Dichloropropane	< 0.50	0.50	ug/L
Bromodichloromethane	< 0.50	0.50	ug/L
Dibromomethane	< 0.50	0.50	ug/L
cis-1,3-Dichloropropene	< 0.50	0.50	ug/L
Toluene	< 0.50	0.50	ug/L
trans-1,3-Dichloropropene	< 0.50	0.50	ug/L
1,1,2-Trichloroethane	< 0.50	0.50	ug/L
1,3-Dichloropropane	< 0.50	0.50	ug/L
Tetrachloroethene	< 0.50	0.50	ug/L
Dibromochloromethane	< 0.50	0.50	ug/L
1,2-Dibromoethane	< 0.50	0.50	ug/L
Chlorobenzene	< 0.50	0.50	ug/L
1,1,1,2-Tetrachloroethane	< 0.50	0.50	ug/L
Ethylbenzene	< 0.50	0.50	ug/L
P,M-Xylene	< 1.0	1.0	ug/L
O-Xylene	< 0.50	0.50	ug/L
Styrene	< 0.50	0.50	ug/L

Parameter	Measured Value	MRL [1]	Units
Isopropyl benzene	< 0.50	0.50	ug/L
Bromoform	< 0.50	0.50	ug/L
1,1,2,2-Tetrachloroethane	< 0.50	0.50	ug/L
1,2,3-Trichloropropane	< 0.50	0.50	ug/L
n-Propylbenzene	< 0.50	0.50	ug/L
Bromobenzene	< 0.50	0.50	ug/L
1,3,5-Trimethylbenzene	< 0.50	0.50	ug/L
2+4-Chlorotoluene	< 1.0	1.0	ug/L
tert-Butylbenzene	< 0.50	0.50	ug/L
1,2,4-Trimethylbenzene	< 0.50	0.50	ug/L
sec-Butylbenzene	< 0.50	0.50	ug/L
p-Isopropyltoluene	< 0.50	0.50	ug/L
1,3-Dichlorobenzene	< 0.50	0.50	ug/L
1,4-Dichlorobenzene	< 0.50	0.50	ug/L
n-Butylbenzene	< 0.50	0.50	ug/L
1,2-Dichlorobenzene	< 0.50	0.50	ug/L
1,2-Dibromo-3-chloropropane	< 0.50	0.50	ug/L
1,2,4-Trichlorobenzene	< 0.50	0.50	ug/L
Hexachlorobutadiene	< 0.50	0.50	ug/L
Naphthalene	< 0.50	0.50	ug/L
1,2,3-Trichlorobenzene	< 0.50	0.50	ug/L
1,2-Dichloroethane-d4 (Surr)	97.8		% Recovery
4-Bromofluorobenzene (Surr)	102		% Recovery
Toluene - d8 (Surr)	105		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

KIFF Analytical LLC

Report Number : 63990

Date : 08/08/2008

Sample : **Composite**

Project Name : **Tesoro Pittsburg Terminal Additional Phase II**

Project Number : **77OT.43877.02** Lab Number : 63990-16 Date Analyzed : 08/02/08

Matrix : Soil Sample Date : 08/01/2008 Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
TPH as Gasoline	< 1.0	1.0	mg/Kg
Dichlorodifluoromethane	< 0.0050	0.0050	mg/Kg
Chloromethane	< 0.0050	0.0050	mg/Kg
Vinyl Chloride	< 0.0050	0.0050	mg/Kg
Bromomethane	< 0.020	0.020	mg/Kg
Chloroethane	< 0.0050	0.0050	mg/Kg
Trichlorofluoromethane	< 0.0050	0.0050	mg/Kg
1,1-Dichloroethene	< 0.0050	0.0050	mg/Kg
Methylene Chloride	< 0.0050	0.0050	mg/Kg
trans-1,2-Dichloroethene	< 0.0050	0.0050	mg/Kg
1,1-Dichloroethane	< 0.0050	0.0050	mg/Kg
2,2-Dichloropropane	< 0.0050	0.0050	mg/Kg
cis-1,2-Dichloroethene	< 0.0050	0.0050	mg/Kg
Chloroform	< 0.0050	0.0050	mg/Kg
Bromochloromethane	< 0.0050	0.0050	mg/Kg
1,1,1-Trichloroethane	< 0.0050	0.0050	mg/Kg
1,1-Dichloropropene	< 0.0050	0.0050	mg/Kg
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg
Carbon Tetrachloride	< 0.0050	0.0050	mg/Kg
Benzene	< 0.0050	0.0050	mg/Kg
Trichloroethene	< 0.0050	0.0050	mg/Kg
1,2-Dichloropropane	< 0.0050	0.0050	mg/Kg
Bromodichloromethane	< 0.0050	0.0050	mg/Kg
Dibromomethane	< 0.0050	0.0050	mg/Kg
cis-1,3-Dichloropropene	< 0.0050	0.0050	mg/Kg
Toluene	< 0.0050	0.0050	mg/Kg
trans-1,3-Dichloropropene	< 0.0050	0.0050	mg/Kg
1,1,2-Trichloroethane	< 0.0050	0.0050	mg/Kg
1,3-Dichloropropane	< 0.0050	0.0050	mg/Kg
Tetrachloroethene	< 0.0050	0.0050	mg/Kg
Dibromochloromethane	< 0.0050	0.0050	mg/Kg
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg
Chlorobenzene	< 0.0050	0.0050	mg/Kg
1,1,1,2-Tetrachloroethane	< 0.0050	0.0050	mg/Kg
Ethylbenzene	< 0.0050	0.0050	mg/Kg
P,M-Xylene	< 0.0050	0.0050	mg/Kg
O-Xylene	< 0.0050	0.0050	mg/Kg
Styrene	< 0.0050	0.0050	mg/Kg

Parameter	Measured Value	MRL [1]	Units
Isopropyl benzene	< 0.0050	0.0050	mg/Kg
Bromoform	< 0.0050	0.0050	mg/Kg
1,1,2,2-Tetrachloroethane	< 0.0050	0.0050	mg/Kg
1,2,3-Trichloropropane	< 0.0050	0.0050	mg/Kg
n-Propylbenzene	< 0.0050	0.0050	mg/Kg
Bromobenzene	< 0.0050	0.0050	mg/Kg
1,3,5-Trimethylbenzene	< 0.0050	0.0050	mg/Kg
2+4-Chlorotoluene	< 0.0050	0.0050	mg/Kg
tert-Butylbenzene	< 0.0050	0.0050	mg/Kg
1,2,4-Trimethylbenzene	< 0.0050	0.0050	mg/Kg
sec-Butylbenzene	< 0.0050	0.0050	mg/Kg
p-Isopropyltoluene	< 0.0050	0.0050	mg/Kg
1,3-Dichlorobenzene	< 0.0050	0.0050	mg/Kg
1,4-Dichlorobenzene	< 0.0050	0.0050	mg/Kg
n-Butylbenzene	< 0.0050	0.0050	mg/Kg
1,2-Dichlorobenzene	< 0.0050	0.0050	mg/Kg
1,2-Dibromo-3-chloropropane	< 0.0050	0.0050	mg/Kg
1,2,4-Trichlorobenzene	< 0.0050	0.0050	mg/Kg
Hexachlorobutadiene	< 0.0050	0.0050	mg/Kg
Naphthalene	< 0.0050	0.0050	mg/Kg
1,2,3-Trichlorobenzene	< 0.0050	0.0050	mg/Kg
1,2-Dichloroethane-d4 (Surr)	92.9		% Recovery
4-Bromofluorobenzene (Surr)	99.5		% Recovery
Toluene - d8 (Surr)	105		% Recovery

1) MRL = Method reporting limit
2) MRL raised due to interference

KIFF Analytical LLC

Report Number : 63990

Date : 08/08/2008

Project Name : **Tesoro Pittsburg Terminal Additional Phase II**

Project Number : **77OT.43877.02**

Sample : **Composite** Matrix : Soil Lab Number : 63990-16

Sample Date :08/01/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Antimony	**< 0.75**	0.75	mg/Kg	EPA 6010B	08/06/2008
Arsenic	**7.6**	0.75	mg/Kg	EPA 6010B	08/06/2008
Barium	**280**	0.50	mg/Kg	EPA 6010B	08/06/2008
Beryllium	**0.60**	0.25	mg/Kg	EPA 6010B	08/06/2008
Cadmium	**< 0.50**	0.50	mg/Kg	EPA 6010B	08/06/2008
Chromium	**28**	0.25	mg/Kg	EPA 6010B	08/06/2008
Cobalt	**8.5**	0.25	mg/Kg	EPA 6010B	08/06/2008
Copper	**25**	0.50	mg/Kg	EPA 6010B	08/06/2008
Lead	**7.8**	0.50	mg/Kg	EPA 6010B	08/06/2008
Molybdenum	**0.28**	0.25	mg/Kg	EPA 6010B	08/06/2008
Nickel	**22**	0.25	mg/Kg	EPA 6010B	08/06/2008
Selenium	**< 0.75**	0.75	mg/Kg	EPA 6010B	08/06/2008
Silver	**< 0.25**	0.25	mg/Kg	EPA 6010B	08/06/2008
Thallium	**< 0.75**	0.75	mg/Kg	EPA 6010B	08/06/2008
Vanadium	**49**	0.25	mg/Kg	EPA 6010B	08/06/2008
Zinc	**65**	1.0	mg/Kg	EPA 6010B	08/06/2008
Mercury	**< 0.050**	0.050	mg/Kg	EPA 7471	08/04/2008

Report Number : 63990

Date : 08/08/2008

QC Report : Method Blank Data

Project Name : **Tesoro Pittsburg Terminal Additional Phase II**

Project Number : **77OT.43877.02**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Antimony	< 0.75	0.75	mg/Kg	EPA 6010B	08/06/2008
Arsenic	< 0.75	0.75	mg/Kg	EPA 6010B	08/06/2008
Barium	< 0.50	0.50	mg/Kg	EPA 6010B	08/06/2008
Beryllium	< 0.25	0.25	mg/Kg	EPA 6010B	08/06/2008
Cadmium	< 0.50	0.50	mg/Kg	EPA 6010B	08/06/2008
Chromium	< 0.25	0.25	mg/Kg	EPA 6010B	08/06/2008
Cobalt	< 0.25	0.25	mg/Kg	EPA 6010B	08/06/2008
Copper	< 0.50	0.50	mg/Kg	EPA 6010B	08/06/2008
Lead	< 0.50	0.50	mg/Kg	EPA 6010B	08/06/2008
Molybdenum	< 0.25	0.25	mg/Kg	EPA 6010B	08/06/2008
Nickel	< 0.25	0.25	mg/Kg	EPA 6010B	08/06/2008
Selenium	< 0.75	0.75	mg/Kg	EPA 6010B	08/06/2008
Silver	< 0.25	0.25	mg/Kg	EPA 6010B	08/06/2008
Thallium	< 0.75	0.75	mg/Kg	EPA 6010B	08/06/2008
Vanadium	< 0.25	0.25	mg/Kg	EPA 6010B	08/06/2008
Zinc	< 1.0	1.0	mg/Kg	EPA 6010B	08/06/2008
Mercury	< 0.050	0.050	mg/Kg	EPA 7471	08/04/2008
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	08/04/2008
TPH as Motor Oil	< 10	10	mg/Kg	M EPA 8015	08/04/2008
1-Chlorooctadecane (Diesel Surrogate)	79.0		%	M EPA 8015	08/04/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	< 50	50	ug/L	M EPA 8015	08/05/2008
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	08/05/2008
Octacosane (Diesel Surrogate)	116		%	M EPA 8015	08/05/2008
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	08/02/2008
Dichlorodifluoromethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
Chloromethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
Vinyl Chloride	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
Bromomethane	< 0.020	0.020	mg/Kg	EPA 8260B	08/02/2008
Chloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
Trichlorofluoromethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
1,1-Dichloroethene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
Methylene Chloride	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
trans-1,2-Dichloroethene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
1,1-Dichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
2,2-Dichloropropane	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
cis-1,2-Dichloroethene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
Chloroform	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
Bromochloromethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
1,1,1-Trichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
1,1-Dichloropropene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
Carbon Tetrachloride	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
Trichloroethene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
1,2-Dichloropropane	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
Bromodichloromethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
Dibromomethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
cis-1,3-Dichloropropene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
trans-1,3-Dichloropropene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
1,1,2-Trichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
1,3-Dichloropropane	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
Tetrachloroethene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
Dibromochloromethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008

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QC Report : Method Blank Data

Project Name : **Tesoro Pittsburg Terminal Additional Phase II**

Project Number : **77OT.43877.02**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
Chlorobenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
1,1,1,2-Tetrachloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
P,M-Xylene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
O-Xylene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
Styrene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
Isopropyl benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
Bromoform	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
1,1,2,2-Tetrachloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
1,2,3-Trichloropropane	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
n-Propylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
Bromobenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
1,3,5-Trimethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
2+4-Chlorotoluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
tert-Butylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
1,2,4-Trimethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
sec-Butylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
p-Isopropyltoluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
1,3-Dichlorobenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
1,4-Dichlorobenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
n-Butylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
1,2-Dichlorobenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
1,2-Dibromo-3-chloropropane	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
1,2,4-Trichlorobenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
Hexachlorobutadiene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
Naphthalene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
1,2,3-Trichlorobenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	08/02/2008
1,2-Dichloroethane-d4 (Surr)	94.4		%	EPA 8260B	08/02/2008
4-Bromofluorobenzene (Surr)	96.2		%	EPA 8260B	08/02/2008
Toluene - d8 (Surr)	103		%	EPA 8260B	08/02/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	08/04/2008
Dichlorodifluoromethane	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
Chloromethane	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
Vinyl Chloride	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
Bromomethane	< 20	20	ug/L	EPA 8260B	08/04/2008
Chloroethane	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
Trichlorofluoromethane	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
1,1-Dichloroethene	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
Methylene Chloride	< 5.0	5.0	ug/L	EPA 8260B	08/04/2008
trans-1,2-Dichloroethene	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
1,1-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
2,2-Dichloropropane	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
cis-1,2-Dichloroethene	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
Chloroform	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
Bromochloromethane	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
1,1,1-Trichloroethane	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
1,1-Dichloropropene	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
Carbon Tetrachloride	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
Benzene	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
Trichloroethene	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
1,2-Dichloropropane	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
Bromodichloromethane	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
Dibromomethane	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
cis-1,3-Dichloropropene	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
trans-1,3-Dichloropropene	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
1,1,2-Trichloroethane	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
1,3-Dichloropropane	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
Tetrachloroethene	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
Dibromochloromethane	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
Chlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
1,1,1,2-Tetrachloroethane	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008

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QC Report : Method Blank Data

Project Name : **Tesoro Pittsburg Terminal Additional Phase II**

Project Number : **77OT.43877.02**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
P,M-Xylene	< 1.0	1.0	ug/L	EPA 8260B	08/04/2008
O-Xylene	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
Styrene	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
Isopropyl benzene	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
Bromoform	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
1,1,2,2-Tetrachloroethane	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
1,2,3-Trichloropropane	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
n-Propylbenzene	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
Bromobenzene	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
1,3,5-Trimethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
2+4-Chlorotoluene	< 1.0	1.0	ug/L	EPA 8260B	08/04/2008
tert-Butylbenzene	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
1,2,4-Trimethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
sec-Butylbenzene	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
p-Isopropyltoluene	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
1,3-Dichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
1,4-Dichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
n-Butylbenzene	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
1,2-Dichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
1,2-Dibromo-3-chloropropane	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
1,2,4-Trichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
Hexachlorobutadiene	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
1,2,3-Trichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	08/04/2008
1,2-Dichloroethane-d4 (Surr)	92.8		%	EPA 8260B	08/04/2008
4-Bromofluorobenzene (Surr)	94.5		%	EPA 8260B	08/04/2008
Toluene - d8 (Surr)	104		%	EPA 8260B	08/04/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	08/05/2008
Dichlorodifluoromethane	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
Chloromethane	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
Vinyl Chloride	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
Bromomethane	< 20	20	ug/L	EPA 8260B	08/05/2008
Chloroethane	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
Trichlorofluoromethane	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
1,1-Dichloroethene	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
Methylene Chloride	< 5.0	5.0	ug/L	EPA 8260B	08/05/2008
trans-1,2-Dichloroethene	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
1,1-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
2,2-Dichloropropane	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
Chloroform	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
Bromochloromethane	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
1,1,1-Trichloroethane	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
1,1-Dichloropropene	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
Carbon Tetrachloride	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
Benzene	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
1,2-Dichloropropane	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
Bromodichloromethane	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
Dibromomethane	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
cis-1,3-Dichloropropene	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
trans-1,3-Dichloropropene	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
1,1,2-Trichloroethane	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
1,3-Dichloropropane	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
Tetrachloroethene	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
Dibromochloromethane	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
Chlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
1,1,1,2-Tetrachloroethane	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
P,M-Xylene	< 1.0	1.0	ug/L	EPA 8260B	08/05/2008
O-Xylene	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008

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QC Report : Method Blank Data

Date : 08/08/2008

Project Name : **Tesoro Pittsburg Terminal Additional Phase II**

Project Number : **77OT.43877.02**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Styrene	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
Isopropyl benzene	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
Bromoform	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
1,1,2,2-Tetrachloroethane	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
1,2,3-Trichloropropane	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
n-Propylbenzene	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
Bromobenzene	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
1,3,5-Trimethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
2+4-Chlorotoluene	< 1.0	1.0	ug/L	EPA 8260B	08/05/2008
tert-Butylbenzene	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
1,2,4-Trimethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
sec-Butylbenzene	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
p-Isopropyltoluene	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
1,3-Dichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
1,4-Dichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
n-Butylbenzene	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
1,2-Dichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
1,2-Dibromo-3-chloropropane	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
1,2,4-Trichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
Hexachlorobutadiene	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
1,2,3-Trichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	08/05/2008
1,2-Dichloroethane-d4 (Surr)	98.7		%	EPA 8260B	08/05/2008
4-Bromofluorobenzene (Surr)	99.1		%	EPA 8260B	08/05/2008
Toluene - d8 (Surr)	105		%	EPA 8260B	08/05/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed

Report Number : 63990

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 08/08/2008

Project Name : **Tesoro Pittsburg Terminal Additional Phase II**

Project Number : **77OT.43877.02**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Antimony	63990-16	< 0.75	50.0	50.0	9.52	9.90	mg/Kg	EPA 6010B	8/6/08	18.2	19.0	3.86	75-125	20
Arsenic	63990-16	7.6	50.0	50.0	55.6	56.2	mg/Kg	EPA 6010B	8/6/08	95.9	97.1	1.12	75-125	20
Barium	63990-16	280	50.0	50.0	306	288	mg/Kg	EPA 6010B	8/6/08	57.5	21.0	6.15	75-125	20
Beryllium	63990-16	0.60	50.0	50.0	50.6	50.3	mg/Kg	EPA 6010B	8/6/08	100	99.5	0.500	75-125	20
Cadmium	63990-16	< 0.50	50.0	50.0	50.4	50.4	mg/Kg	EPA 6010B	8/6/08	100	99.9	0.0496	75-125	20
Chromium	63990-16	28	50.0	50.0	85.7	88.2	mg/Kg	EPA 6010B	8/6/08	116	121	2.79	75-125	20
Cobalt	63990-16	8.5	50.0	50.0	58.5	58.5	mg/Kg	EPA 6010B	8/6/08	100	100	0.0855	75-125	20
Copper	63990-16	25	50.0	50.0	78.4	79.6	mg/Kg	EPA 6010B	8/6/08	107	109	1.55	75-125	20
Lead	63990-16	7.8	50.0	50.0	66.0	68.8	mg/Kg	EPA 6010B	8/6/08	116	122	4.15	75-125	20
Molybdenum	63990-16	0.28	50.0	50.0	37.9	38.3	mg/Kg	EPA 6010B	8/6/08	75.3	76.0	0.919	75-125	20
Nickel	63990-16	22	50.0	50.0	74.5	75.2	mg/Kg	EPA 6010B	8/6/08	104	106	0.869	75-125	20
Selenium	63990-16	< 0.75	50.0	50.0	48.9	48.3	mg/Kg	EPA 6010B	8/6/08	97.1	95.9	1.24	75-125	20
Silver	63990-16	< 0.25	12.5	12.5	12.6	12.4	mg/Kg	EPA 6010B	8/6/08	101	98.8	1.80	75-125	20
Thallium	63990-16	< 0.75	50.0	50.0	48.8	48.5	mg/Kg	EPA 6010B	8/6/08	97.7	97.0	0.668	75-125	20
Vanadium	63990-16	49	50.0	50.0	109	110	mg/Kg	EPA 6010B	8/6/08	120	122	0.799	75-125	20
Zinc	63990-16	65	50.0	50.0	124	125	mg/Kg	EPA 6010B	8/6/08	119	121	0.740	75-125	20
TPH as Diesel	63990-04	<1.0	20.0	20.0	15.4	15.2	mg/Kg	M EPA 8015	8/4/08	76.9	76.1	0.952	60-140	25
TPH as Diesel	BLANK	<50	1000	1000	1270	1170	ug/L	M EPA 8015	8/5/08	127	117	8.01	70-130	25
1,1-Dichloroethane	63990-03	<0.0050	0.0386	0.0392	0.0375	0.0362	mg/Kg	EPA 8260B	8/2/08	97.0	92.4	4.88	70-130	25

Report Number : 63990

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 08/08/2008

Project Name : **Tesoro Pittsburg Terminal Additional Phase II**

Project Number : **77OT.43877.02**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
1,2-Dichloroethane	63990-03	<0.0050	0.0382	0.0388	0.0387	0.0383	mg/Kg	EPA 8260B	8/2/08	101	98.8	2.72	70-130	25
Benzene	63990-03	<0.0050	0.0390	0.0396	0.0380	0.0375	mg/Kg	EPA 8260B	8/2/08	97.2	94.6	2.72	70-130	25
Chlorobenzene	63990-03	<0.0050	0.0391	0.0397	0.0388	0.0389	mg/Kg	EPA 8260B	8/2/08	99.2	98.1	1.16	70-130	25
Toluene	63990-03	<0.0050	0.0385	0.0391	0.0357	0.0362	mg/Kg	EPA 8260B	8/2/08	92.7	92.6	0.170	70-130	25
1,1-Dichloroethane	63984-07	<0.50	39.5	39.4	38.1	38.0	ug/L	EPA 8260B	8/4/08	96.6	96.4	0.109	70-130	25
1,2-Dichloroethane	63984-07	<0.50	39.0	38.9	44.7	44.6	ug/L	EPA 8260B	8/4/08	115	114	0.138	70-130	25
Benzene	63984-07	<0.50	39.9	39.8	35.9	36.0	ug/L	EPA 8260B	8/4/08	90.1	90.5	0.500	70-130	25
Chlorobenzene	63984-07	<0.50	39.9	39.9	37.3	37.4	ug/L	EPA 8260B	8/4/08	93.3	93.8	0.518	70-130	25
Toluene	63984-07	<0.50	39.3	39.2	38.0	38.2	ug/L	EPA 8260B	8/4/08	96.6	97.3	0.722	70-130	25
1,1-Dichloroethane	64006-01	<0.50	38.5	38.9	33.2	33.3	ug/L	EPA 8260B	8/5/08	86.3	85.5	0.890	70-130	25
1,2-Dichloroethane	64006-01	<0.50	38.1	38.5	43.8	44.2	ug/L	EPA 8260B	8/5/08	115	115	0.122	70-130	25
Benzene	64006-01	<0.50	39.0	39.3	34.3	34.0	ug/L	EPA 8260B	8/5/08	88.1	86.5	1.84	70-130	25
Chlorobenzene	64006-01	<0.50	39.0	39.4	34.5	33.3	ug/L	EPA 8260B	8/5/08	88.4	84.6	4.34	70-130	25
Toluene	64006-01	<0.50	38.4	38.8	37.4	37.5	ug/L	EPA 8260B	8/5/08	97.4	96.7	0.682	70-130	25
Mercury	63990-16	< 0.050	0.100	0.100	0.119	0.125	mg/Kg	EPA 7471	8/4/08	101	107	4.92	75-125	20

Report Number : 63990

QC Report : Laboratory Control Sample (LCS)

Date : 08/08/2008

Project Name : **Tesoro Pittsburg Terminal Additional Phase II**

Project Number : **77OT.43877.02**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Antimony	50.0	mg/Kg	EPA 6010B	8/6/08	102	85-115
Arsenic	50.0	mg/Kg	EPA 6010B	8/6/08	101	85-115
Barium	50.0	mg/Kg	EPA 6010B	8/6/08	100	85-115
Beryllium	50.0	mg/Kg	EPA 6010B	8/6/08	98.6	85-115
Cadmium	50.0	mg/Kg	EPA 6010B	8/6/08	103	85-115
Chromium	50.0	mg/Kg	EPA 6010B	8/6/08	104	85-115
Cobalt	50.0	mg/Kg	EPA 6010B	8/6/08	101	85-115
Copper	50.0	mg/Kg	EPA 6010B	8/6/08	102	85-115
Lead	50.0	mg/Kg	EPA 6010B	8/6/08	104	85-115
Molybdenum	50.0	mg/Kg	EPA 6010B	8/6/08	99.6	85-115
Nickel	50.0	mg/Kg	EPA 6010B	8/6/08	102	85-115
Selenium	50.0	mg/Kg	EPA 6010B	8/6/08	101	85-115
Silver	12.5	mg/Kg	EPA 6010B	8/6/08	102	85-115
Thallium	50.0	mg/Kg	EPA 6010B	8/6/08	104	85-115
Vanadium	50.0	mg/Kg	EPA 6010B	8/6/08	97.8	85-115
Zinc	50.0	mg/Kg	EPA 6010B	8/6/08	103	85-115
Mercury	0.100	mg/Kg	EPA 7471	8/4/08	99.6	85-115
TPH as Diesel	20.0	mg/Kg	M EPA 8015	8/4/08	75.2	70-130
1,1-Dichloroethane	0.0392	mg/Kg	EPA 8260B	8/2/08	93.4	70-130

Report Number : 63990

QC Report : Laboratory Control Sample (LCS)

Date : 08/08/2008

Project Name : **Tesoro Pittsburg Terminal Additional Phase II**

Project Number : **77OT.43877.02**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
1,2-Dichloroethane	0.0388	mg/Kg	EPA 8260B	8/2/08	99.0	70-130
Benzene	0.0396	mg/Kg	EPA 8260B	8/2/08	95.2	70-130
Chlorobenzene	0.0397	mg/Kg	EPA 8260B	8/2/08	99.1	70-130
Toluene	0.0391	mg/Kg	EPA 8260B	8/2/08	94.8	70-130
1,1-Dichloroethane	39.7	ug/L	EPA 8260B	8/4/08	95.5	70-130
1,2-Dichloroethane	39.2	ug/L	EPA 8260B	8/4/08	116	70-130
Benzene	40.1	ug/L	EPA 8260B	8/4/08	89.2	70-130
Chlorobenzene	40.2	ug/L	EPA 8260B	8/4/08	93.2	70-130
Toluene	39.5	ug/L	EPA 8260B	8/4/08	96.1	70-130
1,1-Dichloroethane	39.7	ug/L	EPA 8260B	8/5/08	90.2	70-130
1,2-Dichloroethane	39.2	ug/L	EPA 8260B	8/5/08	112	70-130
Benzene	40.1	ug/L	EPA 8260B	8/5/08	84.3	70-130
Chlorobenzene	40.2	ug/L	EPA 8260B	8/5/08	90.1	70-130
Toluene	39.5	ug/L	EPA 8260B	8/5/08	94.4	70-130

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

August 11, 2008

CLS Work Order #: CRH0064
COC #: 63990

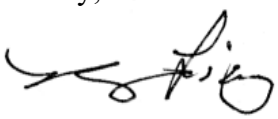
Troy Turpen
KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project Name: Tesoro Pittsburg Terminal Phase II

Enclosed are the results of analyses for samples received by the laboratory on 08/01/08 18:20. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,



James Liang, Ph.D.
Laboratory Director

CA DOHS ELAP Accreditation/Registration number 1233

CALIFORNIA LABORATORY SERVICES

KIFF Analytical	Project: Tesoro Pittsburg Terminal Phase II	
2795 Second St. Suite 300	Project Number: 77OT.43877.02	**CLS Work Order #: CRH0064**
Davis, CA 95616	Project Manager: Troy Turpen	COC #: 63990

CRH0064

KIFF Analytical LLC
2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

CLS
3249 Fitzgerald Road
Rancho Cordova, CA 95742
916-638-7301

COC No 63990 Page 1 of 1

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen
Company/Address: Kiff Analytical
Phone No.: 530-297-4800
FAX No.: 530-297-4808
Project Number: 77OT.43877.02
P.O. No.: 63990
Project Name: Tesoro Pittsburg Terminal Additional Phase II
Project Address:

EDF Report? NO

Recommended but not mandatory to complete this section:
Sampling Company Log Code:
Global ID:
Deliverables to (Email Address): inbox@kiffanalytical.com

Sample Designation	Sampling Date	Sampling Time	Container / Preservative: 250ml Poly None	Matrix: Water	Analysis Request: ICP-MS 6020 Dissolved SUB (1)	TAT: Standard	For Lab Use Only
GP-21WS	08/01/08	09:20	1	X	X	X	
GP-21WD	08/01/08	10:55	1	X	X	X	
GP-22WS	08/01/08	13:50	1	X	X	X	

Relinquished by: Kiff Analytical	Date 080108	Time 1820	Received by:	Remarks: Please refer to attached Test Detail. Please lab filter and preserve all samples.
Relinquished by:	Date	Time	Received by:	4°C
Relinquished by:	Date	Time	Received by Laboratory: JonR 8-1-8 1820	Bill to: Accounts Payable

KIFF Analytical	Project: Tesoro Pittsburg Terminal Phase II	
2795 Second St. Suite 300	Project Number: 77OT.43877.02	**CLS Work Order #: CRH0064**
Davis, CA 95616	Project Manager: Troy Turpen	COC #: 63990

Test Detail for Kiff Work Order: 63990

ICP-MS 6020 Dissolved SUB (1)
Arsenic, Dissolved
Barium, Dissolved
Copper, Dissolved
Lead, Dissolved
Nickel, Dissolved
Vanadium, Dissolved
Zinc, Dissolved

Page 1 of 1

KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project: Tesoro Pittsburg Terminal Phase II
Project Number: 77OT.43877.02
Project Manager: Troy Turpen

CLS Work Order #: CRH0064
COC #: 63990

Metals by EPA 6000/7000 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
GP-21WS (CRH0064-01) Water Sampled: 08/01/08 09:20 Received: 08/01/08 18:20									
Arsenic	ND	5.0	µg/L	1	CR06451	08/05/08	08/06/08	EPA 6020/7000	
Barium	**38**	10	"	"	"	"	"	"	
Copper	**3.4**	2.0	"	"	"	"	"	"	
Lead	ND	5.0	"	"	"	"	"	"	
Nickel	**6.2**	2.0	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	
GP-21WD (CRH0064-02) Water Sampled: 08/01/08 10:55 Received: 08/01/08 18:20									
Arsenic	**6.7**	5.0	µg/L	1	CR06451	08/05/08	08/06/08	EPA 6020/7000	
Barium	**43**	10	"	"	"	"	"	"	
Copper	**4.3**	2.0	"	"	"	"	"	"	
Lead	ND	5.0	"	"	"	"	"	"	
Nickel	**9.0**	2.0	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	
GP-22WS (CRH0064-03) Water Sampled: 08/01/08 13:50 Received: 08/01/08 18:20									
Arsenic	**16**	5.0	µg/L	1	CR06451	08/05/08	08/06/08	EPA 6020/7000	
Barium	**160**	10	"	"	"	"	"	"	
Copper	**3.5**	2.0	"	"	"	"	"	"	
Lead	ND	5.0	"	"	"	"	"	"	
Nickel	**6.9**	2.0	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	

KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project: Tesoro Pittsburg Terminal Phase II
Project Number: 77OT.43877.02
Project Manager: Troy Turpen

CLS Work Order #: CRH0064
COC #: 63990

Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CR06451 - EPA 3020A										
Blank (CR06451-BLK1)				Prepared: 08/05/08 Analyzed: 08/06/08						
Arsenic	ND	5.0	µg/L							
Barium	ND	10	"							
Copper	ND	2.0	"							
Lead	ND	5.0	"							
Nickel	ND	2.0	"							
Vanadium	ND	20	"							
Zinc	ND	20	"							
LCS (CR06451-BS1)				Prepared: 08/05/08 Analyzed: 08/06/08						
Arsenic	105	5.0	µg/L	100		105	80-120			
Barium	105	10	"	100		105	80-120			
Copper	104	2.0	"	100		104	80-120			
Lead	104	5.0	"	100		104	80-120			
Nickel	104	2.0	"	100		104	80-120			
Vanadium	108	20	"	100		108	80-120			
Zinc	104	20	"	100		104	80-120			
LCS Dup (CR06451-BSD1)				Prepared: 08/05/08 Analyzed: 08/06/08						
Arsenic	104	5.0	µg/L	100		104	80-120	0.640	20	
Barium	105	10	"	100		105	80-120	0.361	20	
Copper	106	2.0	"	100		106	80-120	1.47	20	
Lead	103	5.0	"	100		103	80-120	0.473	20	
Nickel	107	2.0	"	100		107	80-120	3.21	20	
Vanadium	109	20	"	100		109	80-120	1.04	20	
Zinc	105	20	"	100		105	80-120	1.01	20	
Matrix Spike (CR06451-MS1)	**Source: CRH0099-01**			Prepared: 08/05/08 Analyzed: 08/06/08						
Arsenic	102	5.0	µg/L	100	2.09	99.7	75-125			
Barium	228	10	"	100	132	95.6	75-125			
Copper	92.3	2.0	"	100	2.26	90.0	75-125			
Lead	102	5.0	"	100	ND	102	75-125			
Nickel	93.0	2.0	"	100	0.740	92.3	75-125			

KIFF Analytical
2795 Second St. Suite 300
Davis, CA 95616

Project: Tesoro Pittsburg Terminal Phase II
Project Number: 77OT.43877.02
Project Manager: Troy Turpen

CLS Work Order #: CRH0064
COC #: 63990

Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CR06451 - EPA 3020A										
Matrix Spike (CR06451-MS1)		**Source: CRH0099-01**		Prepared: 08/05/08		Analyzed: 08/06/08				
Vanadium	106	20	µg/L	100	5.20	101	75-125			
Zinc	99.3	20	"	100	6.11	93.2	75-125			
Matrix Spike Dup (CR06451-MSD1)		**Source: CRH0099-01**		Prepared: 08/05/08		Analyzed: 08/06/08				
Arsenic	108	5.0	µg/L	100	2.09	106	75-125	5.81	25	
Barium	236	10	"	100	132	103	75-125	3.34	25	
Copper	92.8	2.0	"	100	2.26	90.5	75-125	0.519	25	
Lead	106	5.0	"	100	ND	106	75-125	4.07	25	
Nickel	92.8	2.0	"	100	0.740	92.0	75-125	0.312	25	
Vanadium	107	20	"	100	5.20	102	75-125	0.713	25	
Zinc	97.6	20	"	100	6.11	91.5	75-125	1.71	25	

KIFF Analytical	Project: Tesoro Pittsburg Terminal Phase II	
2795 Second St. Suite 300	Project Number: 77OT.43877.02	**CLS Work Order #: CRH0064**
Davis, CA 95616	Project Manager: Troy Turpen	COC #: 63990

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Calscience
Environmental
Laboratories, Inc.

August 11, 2008

Joel Kiff
Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Subject: **Calscience Work Order No.: 08-08-0198**
Client Reference: Tesoro Pittsburg Terminal Additional Phase II

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 8/5/2008 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Amanda Porter

Calscience Environmental
Laboratories, Inc.
Amanda Porter
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 08/05/08
Work Order No: 08-08-0198
Preparation: EPA 3050B
Method: EPA 6020
Units: mg/kg

Project: Tesoro Pittsburg Terminal Additional Phase II

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-21-1	**08-08-0198-1-A**	**08/01/08 08:30**	**Solid**	**ICP/MS A**	**08/05/08**	**08/05/08 23:18**	**080805L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	1.35	0.200	1		Nickel	15.3	0.100	1	
Barium	100	0.100	1		Vanadium	40.8	0.100	1	
Copper	42.0	0.100	1		Zinc	80.1	1.00	1	
Lead	39.7	0.100	1						

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-21-6	**08-08-0198-2-A**	**08/01/08 08:50**	**Solid**	**ICP/MS A**	**08/05/08**	**08/05/08 23:22**	**080805L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	4.89	0.200	1		Nickel	20.2	0.100	1	
Barium	213	0.100	1		Vanadium	29.8	0.100	1	
Copper	26.5	0.100	1		Zinc	303	1.00	1	
Lead	17.7	0.100	1						

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-22-1	**08-08-0198-11-A**	**08/01/08 13:05**	**Solid**	**ICP/MS A**	**08/05/08**	**08/05/08 23:26**	**080805L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	11.9	0.200	1		Nickel	31.9	0.100	1	
Barium	509	0.100	1		Vanadium	389	0.100	1	
Copper	186	0.100	1		Zinc	155	1.00	1	
Lead	339	0.100	1						

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-22-6	**08-08-0198-12-A**	**08/01/08 13:15**	**Solid**	**ICP/MS A**	**08/05/08**	**08/05/08 23:30**	**080805L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	5.36	0.200	1		Nickel	12.5	0.100	1	
Barium	205	0.100	1		Vanadium	25.7	0.100	1	
Copper	14.1	0.100	1		Zinc	55.4	1.00	1	
Lead	7.02	0.100	1						

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**096-10-002-1,199**	**N/A**	**Solid**	**ICP/MS A**	**08/05/08**	**08/06/08 15:47**	**080805L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Arsenic	ND	0.200	1		Nickel	ND	0.100	1	
Barium	ND	0.100	1		Vanadium	ND	0.100	1	
Copper	ND	0.100	1		Zinc	ND	1.00	1	
Lead	ND	0.100	1						

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	08/05/08
2795 2nd Street, Suite 300		Work Order No:	08-08-0198
Davis, CA 95616-6593		Preparation:	EPA 3510C
		Method:	EPA 8310
		Units:	ug/L

Project: Tesoro Pittsburg Terminal Additional Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-21WS	**08-08-0198-8-A**	**08/01/08 09:20**	**Aqueous**	**HPLC 5**	**08/05/08**	**08/06/08 22:59**	**080805L08A**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	1.1	1.1		Benzo (a) Anthracene	ND	1.1	1.1	
Acenaphthylene	ND	1.1	1.1		Chrysene	ND	1.1	1.1	
Acenaphthene	ND	1.1	1.1		Benzo (b) Fluoranthene	ND	1.1	1.1	
Fluorene	ND	1.1	1.1		Benzo (k) Fluoranthene	ND	1.1	1.1	
Phenanthrene	ND	1.1	1.1		Benzo (a) Pyrene	ND	0.22	1.1	
Anthracene	ND	1.1	1.1		Dibenz (a,h) Anthracene	ND	1.1	1.1	
Fluoranthene	ND	1.1	1.1		Benzo (g,h,i) Perylene	ND	1.1	1.1	
Pyrene	ND	1.1	1.1		Indeno (1,2,3-c,d) Pyrene	ND	1.1	1.1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	59	40-160	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-21WD	**08-08-0198-9-A**	**08/01/08 10:55**	**Aqueous**	**HPLC 5**	**08/05/08**	**08/07/08 20:31**	**080805L08A**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	1.4	1.4		Benzo (a) Anthracene	ND	1.4	1.4	
Acenaphthylene	ND	1.4	1.4		Chrysene	ND	1.4	1.4	
Acenaphthene	ND	1.4	1.4		Benzo (b) Fluoranthene	ND	1.4	1.4	
Fluorene	ND	1.4	1.4		Benzo (k) Fluoranthene	ND	1.4	1.4	
Phenanthrene	ND	1.4	1.4		Benzo (a) Pyrene	ND	0.28	1.4	
Anthracene	ND	1.4	1.4		Dibenz (a,h) Anthracene	ND	1.4	1.4	
Fluoranthene	ND	1.4	1.4		Benzo (g,h,i) Perylene	ND	1.4	1.4	
Pyrene	ND	1.4	1.4		Indeno (1,2,3-c,d) Pyrene	ND	1.4	1.4	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	57	40-160	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-22WS	**08-08-0198-15-A**	**08/01/08 13:50**	**Aqueous**	**HPLC 5**	**08/05/08**	**08/07/08 16:43**	**080805L08A**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	1.0	1		Benzo (a) Anthracene	ND	1.0	1	
Acenaphthylene	ND	1.0	1		Chrysene	ND	1.0	1	
Acenaphthene	ND	1.0	1		Benzo (b) Fluoranthene	ND	1.0	1	
Fluorene	ND	1.0	1		Benzo (k) Fluoranthene	ND	1.0	1	
Phenanthrene	ND	1.0	1		Benzo (a) Pyrene	ND	0.20	1	
Anthracene	ND	1.0	1		Dibenz (a,h) Anthracene	ND	1.0	1	
Fluoranthene	ND	1.0	1		Benzo (g,h,i) Perylene	ND	1.0	1	
Pyrene	ND	1.0	1		Indeno (1,2,3-c,d) Pyrene	ND	1.0	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	44	40-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	08/05/08
2795 2nd Street, Suite 300		Work Order No:	08-08-0198
Davis, CA 95616-6593		Preparation:	EPA 3510C
		Method:	EPA 8310
		Units:	ug/L

Project: Tesoro Pittsburg Terminal Additional Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-07-003-1,170**	**N/A**	**Aqueous**	**HPLC 5**	**08/05/08**	**08/07/08 17:48**	**080805L08A**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	1.0	1		Benzo (a) Anthracene	ND	1.0	1	
Acenaphthylene	ND	1.0	1		Chrysene	ND	1.0	1	
Acenaphthene	ND	1.0	1		Benzo (b) Fluoranthene	ND	1.0	1	
Fluorene	ND	1.0	1		Benzo (k) Fluoranthene	ND	1.0	1	
Phenanthrene	ND	1.0	1		Benzo (a) Pyrene	ND	0.20	1	
Anthracene	ND	1.0	1		Dibenz (a,h) Anthracene	ND	1.0	1	
Fluoranthene	ND	1.0	1		Benzo (g,h,i) Perylene	ND	1.0	1	
Pyrene	ND	1.0	1		Indeno (1,2,3-c,d) Pyrene	ND	1.0	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	63	40-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	08/05/08
2795 2nd Street, Suite 300		Work Order No:	08-08-0198
Davis, CA 95616-6593		Preparation:	EPA 3545
		Method:	EPA 8310
		Units:	ug/kg

Project: Tesoro Pittsburg Terminal Additional Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-21-1	**08-08-0198-1-A**	**08/01/08 08:30**	**Solid**	**HPLC 5**	**08/05/08**	**08/07/08 19:58**	**080805L06**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	59	30	2		Benzo (a) Anthracene	ND	20	2	
Acenaphthylene	75	60	2		Chrysene	37	20	2	
Acenaphthene	ND	30	2		Benzo (b) Fluoranthene	23	20	2	
Fluorene	ND	20	2		Benzo (k) Fluoranthene	ND	20	2	
Phenanthrene	30	20	2		Benzo (a) Pyrene	25	20	2	
Anthracene	ND	20	2		Dibenz (a,h) Anthracene	ND	20	2	
Fluoranthene	120	20	2		Benzo (g,h,i) Perylene	23	20	2	
Pyrene	130	20	2		Indeno (1,2,3-c,d) Pyrene	21	20	2	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	66	40-160	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-21-6	**08-08-0198-2-A**	**08/01/08 08:50**	**Solid**	**HPLC 5**	**08/05/08**	**08/06/08 18:06**	**080805L06**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	28	15	1		Benzo (a) Anthracene	ND	10	1	
Acenaphthylene	120	30	1		Chrysene	ND	10	1	
Acenaphthene	ND	15	1		Benzo (b) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
Anthracene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Fluoranthene	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Pyrene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	69	40-160	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-22-1	**08-08-0198-11-A**	**08/01/08 13:05**	**Solid**	**HPLC 5**	**08/05/08**	**08/06/08 19:11**	**080805L06**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	150	10		Benzo (a) Anthracene	ND	100	10	
Acenaphthylene	ND	300	10		Chrysene	140	100	10	
Acenaphthene	ND	150	10		Benzo (b) Fluoranthene	ND	100	10	
Fluorene	ND	100	10		Benzo (k) Fluoranthene	ND	100	10	
Phenanthrene	120	100	10		Benzo (a) Pyrene	ND	100	10	
Anthracene	ND	100	10		Dibenz (a,h) Anthracene	ND	100	10	
Fluoranthene	ND	100	10		Benzo (g,h,i) Perylene	ND	100	10	
Pyrene	180	100	10		Indeno (1,2,3-c,d) Pyrene	ND	100	10	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	47	40-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical		Date Received:	08/05/08
2795 2nd Street, Suite 300		Work Order No:	08-08-0198
Davis, CA 95616-6593		Preparation:	EPA 3545
		Method:	EPA 8310
		Units:	ug/kg

Project: Tesoro Pittsburg Terminal Additional Phase II

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GP-22-6	**08-08-0198-12-A**	**08/01/08 13:15**	**Solid**	**HPLC 5**	**08/05/08**	**08/06/08 18:38**	**080805L06**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	15	1		Benzo (a) Anthracene	ND	10	1	
Acenaphthylene	100	30	1		Chrysene	ND	10	1	
Acenaphthene	ND	15	1		Benzo (b) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
Anthracene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Fluoranthene	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Pyrene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	70	40-160	

Method Blank	099-07-002-1,099	N/A	Solid	HPLC 5	08/05/08	08/06/08 17:01	080805L06

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Naphthalene	ND	15	1		Benzo (a) Anthracene	ND	10	1	
Acenaphthylene	ND	30	1		Chrysene	ND	10	1	
Acenaphthene	ND	15	1		Benzo (b) Fluoranthene	ND	10	1	
Fluorene	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
Phenanthrene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
Anthracene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
Fluoranthene	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Pyrene	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	

Surrogates:	REC (%)	Control Limits	Qual
Decafluorobiphenyl	67	40-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 08/05/08
Work Order No: 08-08-0198
Preparation: EPA 3050B
Method: EPA 6020

Project Tesoro Pittsburg Terminal Additional Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-08-0211-1	**Solid**	**ICP/MS A**	**08/05/08**	**08/05/08**	**080805S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	63	63	72-132	1	0-13	3
Barium	4X	4X	50-152	4X	0-41	Q
Copper	61	66	25-157	4	0-22	
Lead	72	63	62-134	4	0-23	
Nickel	71	82	46-154	5	0-15	
Vanadium	78	81	28-178	2	0-28	
Zinc	51	53	23-173	1	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 08/05/08
Work Order No: 08-08-0198
Preparation: EPA 3545
Method: EPA 8310

Project Tesoro Pittsburg Terminal Additional Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-08-0181-1	**Solid**	**HPLC 5**	**08/05/08**	**08/06/08**	**080805S06**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Naphthalene	5	4	40-160	8	0-20	3
Acenaphthylene	5	4	40-160	14	0-20	3
Acenaphthene	1	1	40-160	20	0-20	3
Fluorene	2	1	40-160	17	0-20	3
Phenanthrene	2	2	40-160	13	0-20	3
Anthracene	2	1	40-160	16	0-20	3
Fluoranthene	14	0	40-160	199	0-20	3,4
Pyrene	1	0	40-160	21	0-20	3,4
Benzo (a) Anthracene	0	0	40-160	13	0-20	3
Chrysene	0	0	40-160	5	0-20	3
Benzo (b) Fluoranthene	0	0	40-160	5	0-20	3
Benzo (k) Fluoranthene	9	8	40-160	8	0-20	3
Benzo (a) Pyrene	0	0	40-160	3	0-20	3
Dibenz (a,h) Anthracene	0	0	40-160	25	0-20	3,4
Benzo (g,h,i) Perylene	0	0	40-160	3	0-20	3
Indeno (1,2,3-c,d) Pyrene	0	0	40-160	2	0-20	3

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-08-0198
Preparation: EPA 3050B
Method: EPA 6020

Project: Tesoro Pittsburg Terminal Additional Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
096-10-002-1,199	**Solid**	**ICP/MS A**	**08/05/08**	**08/06/08**	**080805L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	99	102	80-120	3	0-20	
Barium	100	98	80-120	3	0-20	
Copper	107	106	80-120	1	0-20	
Lead	100	100	80-120	0	0-20	
Nickel	103	104	80-120	1	0-20	
Vanadium	99	99	80-120	0	0-20	
Zinc	106	107	80-120	1	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-08-0198
Preparation: EPA 3510C
Method: EPA 8310

Project: Tesoro Pittsburg Terminal Additional Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-003-1,170	**Aqueous**	**HPLC 5**	**08/05/08**	**08/06/08**	**080805L08A**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Naphthalene	151	152	40-160	0	0-20	
Acenaphthylene	60	60	40-160	1	0-20	
Acenaphthene	66	59	40-160	12	0-20	
Fluorene	64	63	40-160	1	0-20	
Phenanthrene	68	69	40-160	1	0-20	
Anthracene	64	65	40-160	1	0-20	
Fluoranthene	76	77	40-160	1	0-20	
Pyrene	82	76	40-160	8	0-20	
Benzo (a) Anthracene	91	91	40-160	0	0-20	
Chrysene	96	97	40-160	1	0-20	
Benzo (b) Fluoranthene	95	95	40-160	1	0-20	
Benzo (k) Fluoranthene	98	98	40-160	1	0-20	
Benzo (a) Pyrene	87	87	40-160	1	0-20	
Dibenz (a,h) Anthracene	92	92	40-160	0	0-20	
Benzo (g,h,i) Perylene	92	93	40-160	1	0-20	
Indeno (1,2,3-c,d) Pyrene	90	91	40-160	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 08-08-0198
Preparation: EPA 3545
Method: EPA 8310

Project: Tesoro Pittsburg Terminal Additional Phase II

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-002-1,099	**Solid**	**HPLC 5**	**08/05/08**	**08/06/08**	**080805L06**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Naphthalene	148	151	40-160	2	0-20	
Acenaphthylene	79	87	40-160	9	0-20	
Acenaphthene	87	88	40-160	1	0-20	
Fluorene	82	89	40-160	8	0-20	
Phenanthrene	82	90	40-160	10	0-20	
Anthracene	77	85	40-160	9	0-20	
Fluoranthene	81	91	40-160	11	0-20	
Pyrene	82	89	40-160	8	0-20	
Benzo (a) Anthracene	85	96	40-160	11	0-20	
Chrysene	88	99	40-160	12	0-20	
Benzo (b) Fluoranthene	87	97	40-160	11	0-20	
Benzo (k) Fluoranthene	89	99	40-160	11	0-20	
Benzo (a) Pyrene	81	91	40-160	11	0-20	
Dibenz (a,h) Anthracene	84	85	40-160	1	0-20	
Benzo (g,h,i) Perylene	84	96	40-160	13	0-20	
Indeno (1,2,3-c,d) Pyrene	84	94	40-160	12	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 08-08-0198

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	A Marginal Exceedance (ME) is defined as a LCS percent recovery beyond the normal 3 standard deviation Control Limits but still within the marginal exceedance limits (set at 4 standard deviations from the mean)
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

KIFF Analytical LLC
2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Calscience
7440 Lincoln Way
Garden Grove, CA 92841-1427
714-895-5494

0198
COC No. ~~63990~~

Chain-of-Custody Record and Analysis Request

EDF Report? NO

Project Contact (Hardcopy or PDF to): Troy Turpen

Company/Address: Kiff Analytical

Phone No.: 530-297-4800 FAX No.: 530-297-4808

Project Number: 77OT.43877.02 P.O. No.: 63990

Project Name: Tesoro Pittsburg Terminal Additional Phase II

Project Address:

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

Deliverables to (Email Address): inbox@kiffanalytical.com

Sample Designation	Sampling Date	Sampling Time	Container / Preservative: 1-L Amber Na2S2O3	Container / Preservative: 1-Glass Jar	Matrix: Soil	Matrix: Water	Analysis Request: Hold Sub	Analysis Request: ICP-MS 6020 (1)	Analysis Request: PNAs by EPA 8310	TAT: Standard	For Lab Use Only
GP-21-1	08/01/08	08:30		1	X			X	X	X	1
GP-21-6	08/01/08	08:50		1	X			X	X	X	2
GP-21-10	08/01/08	08:55		1	X		X				3
GP-21-15	08/01/08	09:00		1	X		X				4
GP-21-20	08/01/08	09:50		1	X		X				5
GP-21-25	08/01/08	10:10		1	X		X				6
GP-21-30	08/01/08	10:20		1	X		X				7
GP-21WS	08/01/08	09:20	2			X			X	X	8
GP-21WD	08/01/08	10:55	2			X			X	X	9
GP-21-34	08/01/08	10:40		1	X		X				10

Relinquished by	Date	Time	Received by
[illegible] Kiff Analytical	08/01/08	1557	
COB102206491266	8/5/08	0815	W Wyatt CE

Remarks: Please refer to attached Test Detail.

Bill to: Accounts Payable

KIFF Analytical LLC
2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Calscience
7440 Lincoln Way
Garden Grove, CA 92841-1427
714-895-5494

0198
COC No. ~~63990~~ Page 2 of 2

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? NO

Company/Address: Kiff Analytical

Phone No.: 530-297-4800 FAX No.: 530-297-4808

Project Number: 77OT.43877.02 P.O. No.: 63990

Project Name: Tesoro Pittsburg Terminal Additional Phase II

Project Address:

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

Deliverables to (Email Address): inbox@kiffanalytical.com

Sample Designation	Sampling Date	Sampling Time	Container / Preservative: 1-L Amber Na2S2O3	Container / Preservative: 1-Glass Jar	Matrix: Soil	Matrix: Water	Analysis Request: Hold Sub	Analysis Request: ICP-MS 6020 (1)	Analysis Request: PNAs by EPA 8310	TAT: Standard	For Lab Use Only
GP-22-1	08/01/08	13:05		1	X			X	X	X	11
GP-22-6	08/01/08	13:15		1	X			X	X	X	12
GP-22-10	08/01/08	13:20		1	X		X				13
GP-22-15	08/01/08	13:25		1	X		X				14
GP-22WS	08/01/08	13:50	2			X			X	X	15

Relinquished by:	Date	Time	Received by:
Kiff Analytical	080408	1955	
Relinquished by:	Date	Time	Received by:
Relinquished by: COB102206499266	Date 8/5/08	Time 0815	Received by Laboratory:

Remarks:

Bill to: Accounts Payable

0198

Test Detail for Kiff Work Order: 63990

ICP-MS 6020 (1)
Arsenic
Barium
Copper
Lead
Nickel
Vanadium
Zinc

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 08 - 08-0198

Cooler 1 of 1

SAMPLE RECEIPT FORM

CLIENT: KPF ANALYTICAL **DATE:** 8-5-08

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature (For Air & Filter Only).
___ ___ . ___ °C Temperature blank.

LABORATORY (Other than Calscience Courier):

__3__ . __6__ °C Temperature blank.
___ ___ . ___ °C IR Thermometer.
_____ Ambient temperature (For Air & Filter Only).

Initial: WB

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: ✓ No (Not Intact) : _____ Not Present: _____

Initial: WB

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sampler's name indicated on COC		✓	
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers and volume for analyses requested	✓		
Proper preservation noted on sample label(s)	✓		
VOA vial(s) free of headspace.			✓
Tedlar bag(s) free of condensation			✓

Initial: WB

COMMENTS:

C3990

Stantec Consulting Corporation

CHAIN OF CUSTODY RECORD

Stantec

Rancho Cordova Office

3017 Kilgore Road

Rancho Cordova, CA

TEL: (916) 861-0400 FAX: (916) 861-0430

SECOR Company Contact(s):

Gary Haeck, SECOR Project Manager

email - gary.haeck@stantec.com, bryan.rorie@stantec.com

SECOR Project: 77OT.43877.02

Tesoro Billing Info
Company: 5200
AFE: 023139641-T
WBS: 97618.0042.925
G/L : 767490

DATE: 8/ 1 /08

PAGE: 1 OF 2

Project Name: Tesoro Pittsburg Terminal Additional Phase II

Address: 595 East Third Street, Pittsburg, CA

Sampler(s): Printed Name: Bryan Rorie

SAMPLER(S): (SIGNATURE)

Lab: KIFF ANALYTICAL

LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS)

☐ 10 DAYS ☒ 5 DAYS ☐ 72 HR ☐ 48 HR ☐ 24 HR ☐ <24 HR

SPECIAL INSTRUCTIONS OR NOTES: TEMPERATURE ON RECEIPT (C)

Direct Bill Jeff Baker of Tesoro Petroleum

All Voa's preserved w/hcl, all Ambers preserved w/ Na2S2O3, All Poly's unpreserved

Please filter metals

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	PRE-SERVE	TPHd-carbon chain distinction (8015M)	TPHg-carbon chain distinction (8260B)	PAHs (8310)	PAHs (8270)	VOCs (8260B) Full List	6 metals = As, Ni, Ba, V, Cu, Zn (6020)	7 metals = As, Ni, Ba, V, Cu, Zn, Pb (6020)	CAM 17 (6010)				HOLD SAMPLE		Other:	Laboratory Notes	
	GP-21-1	8/1/08	0830	S	1	N/A	X	X	X		X		X									01
	GP-21-6		0850	S	1	N/A																02
	GP-21-10		855	S	1	N/A																03
	GP-21-15		900	S	1	N/A																04
	GP-21-20		950	S	1	N/A																05
	GP-21-25		1010	S	1	N/A																06
	GP-21-30		1020	S	1	N/A																07
	GP-21WS		920	W	9	Notes																08
	GP-21WD		1055	W	9	Notes																09
	GP-21-34		1040	S	1	N/A	X	X	X		X		X									10

SAMPLE RECEIPT

Temp °C 3.6 Therm. ID# IR2

Initial JJC Date 080108

Time 1620 Coolant present: (Yes) No

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Kiff Analytical	Date: 080108	Time: 1630

63990

Stantec Consulting Corporation

CHAIN OF CUSTODY RECORD

Stantec **Rancho Cordova Office**
3017 Kilgore Road
Rancho Cordova, CA
TEL: (916) 861-0400 FAX: (916) 861-0430

SECOR Company Contact(s):
Gary Haeck, SECOR Project Manager
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SECOR Project: 77OT.43877.02

Tesoro Billing Info
Company: 5200
AFE: 023139641-T
WBS: 97618.0042.925
G/L : 767490

DATE: 8/ 1 /08

PAGE: 2 OF 2

Project Name: Tesoro Pittsburg Terminal Additional Phase II

Address: 595 East Third Street, Pittsburg, CA

Sampler(s): Printed Name: Bryan Rorie

SAMPLER(S): (SIGNATURE)

Lab: KIFF ANALYTICAL

LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS)
☐ 10 DAYS ☒ 5 DAYS ☐ 72 HR ☐ 48 HR ☐ 24 HR ☐ <24 HR

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	GP- 22-1	8/1/08	1305	S	1	N/A	X	X	X		X		X										11
	GP- 22-6		1315	S	1	N/A	X	X	X				X										12
	GP- 22-10		1320	S	1	N/A	X	X	X				X										13
	GP- 22-15		1325	S	1	N/A	X	X	X				X										14
	GP- 22WS		1350	W	9	Notes	X	X	X				X										15
	~~GP-~~ Composite		1415	S	1	N/A		X						X									16
	GP-																						
	GP-																						
	GP-																						
	GP-																						

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Kiff Analytical	Date: 080108	Time: 1630

Troy Turpen

From: Haeck, Gary [Gary.Haeck@stantec.com]
Sent: Wednesday, August 06, 2008 10:34 AM
To: Troy Turpen
Cc: Rorie, Bryan
Subject: Pittsburg project revised COC

Troy per our discussions a revised COC is attached.

Thanks Gary

Gary D. Haeck, Ph.D., P.G.
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SECOR Project: 77OT.43877.02

Tesoro Billing Info
Company: 5200
AFE: 023139641-T
WBS: 97618.0042.925
G/L : 767490

DATE: 8/ 1 /08

PAGE: 1 OF 2

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Address: 595 East Third Street, Pittsburg, CA

Sampler(s): Printed Name: Bryan Rorie

SAMPLER(S): (SIGNATURE)

Lab: KIFF ANALYTICAL

LAB USE ONLY

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	GP-21-25		1010	S	1	N/A																06
	GP-21-30		1020	S	1	N/A																07
	GP-21WS		920	W	9	Notes																08
	GP-21WD		1055	W	9	Notes																09
	GP-21-34		1040	S	1	N/A	X	X	X		X		X									10

HOLD

SAMPLE RECEIPT
Temp °C 2.6 Therm. ID#: IR2
Initial: JJC Date: 080108
Time: 1620 Coolant present: (Yes) No

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
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	GP- 22-1	8/1/08	1305	S	1	N/A	X	X	X		X		X										11
	GP- 22-6		1315	S	1	N/A	X	X	X				X										12
	GP- 22-10 HOLD		1320	S	1	N/A	X	X	X				X										13
	GP- 22-15 HOLD		1325	S	1	N/A	X	X	X				X										14
	GP- 22WS		1350	W	9	Notes	X	X	X				X										15
	~~GP-~~ Composite		1415	S	1	N/A		X						X									16
	GP-																						
	GP-																						
	GP-																						
	GP-																						

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Kiff Analytical	Date: 080108	Time: 1630

Hydrocarbon Ranges Report*

Project Name: Tesoro Pittsburg Terminal Phase II

Lab Number:	63990-01	63990-02	63990-08	63990-09	63990-11
Sample:	GP-21-1	GP-21-6	GP-21WS	GP-21WD	GP-22-1
Sample Date:	8/1/2008	8/1/2008	8/1/2008	8/1/2008	8/1/2008
Matrix:	Soil	Soil	Water	Water	Soil
Units	mg/Kg	mg/Kg	ug/L	ug/L	mg/Kg
Hydrocarbon Range					
C8 to C9 Fraction	nd	nd	8	6	nd
C10 to C11 Fraction	0.23	nd	7	3	0.53
C12 to C13 Fraction	0.61	nd	13	5	1.3
C14 to C15 Fraction	1.1	nd	24	8	2.0
C16 to C17 Fraction	3.0	nd	30	11	3.0
C18 to C19 Fraction	2.5	0.05	43	16	5.5
C20 to C21 Fraction	3.7	0.05	66	25	12
C22 to C23 Fraction	4.6	0.06	52	14	18
C24 to C25 Fraction	5.0	nd	30	15	21
C26 to C27 Fraction	7.9	0.07	20	10	37
C28 to C29 Fraction	11	0.24	16	9	53
C30 to C31 Fraction	19	0.89	15	nd	96
C32 to C33 Fraction	17	1.0	12	2	96
C34 to C35 Fraction	15	0.65	12	2	96
C36 to C37 Fraction	14	0.38	6	nd	105
C38 to C39 Fraction	13	0.29	8	nd	101
C40 Fraction	6.9	0.05	nd	nd	52
Reporting Limit:	0.04	0.04	2	2	0.04

***Hydrocarbon concentrations should be considered estimates**

"nd" is non-detect at the specified Reporting Limit

Hydrocarbon Ranges Report*

Project Name: Tesoro Pittsburg Terminal Phase II

Lab Number:	63990-12	63990-15	63990-16
Sample:	GP-22WS	GP-22WS	Composite
Sample Date:	8/1/2008	8/1/2008	8/1/2008
Matrix:	Soil	Water	Soil
Units	mg/Kg	ug/L	mg/Kg
Hydrocarbon Range			
C8 to C9 Fraction	nd	7	nd
C10 to C11 Fraction	nd	nd	-
C12 to C13 Fraction	0.06	nd	-
C14 to C15 Fraction	0.12	4	-
C16 to C17 Fraction	0.16	8	-
C18 to C19 Fraction	0.20	12	-
C20 to C21 Fraction	0.33	15	-
C22 to C23 Fraction	0.46	18	-
C24 to C25 Fraction	0.27	9	-
C26 to C27 Fraction	0.30	4	-
C28 to C29 Fraction	0.50	3	-
C30 to C31 Fraction	1.9	3	-
C32 to C33 Fraction	3.2	nd	-
C34 to C35 Fraction	1.2	nd	-
C36 to C37 Fraction	1.2	nd	-
C38 to C39 Fraction	1.2	nd	-
C40 Fraction	0.33	nd	-
Reporting Limit:	0.04	2	0.04

***Hydrocarbon concentrations should be considered estimates**

"nd" is non-detect at the specified Reporting Limit

FINAL
SUPPLEMENTAL SOIL CHARACTERIZATION
420 EAST THIRD STREET
PITTSBURG, CALIFORNIA

PREPARED FOR:

TRAMMELL CROW RESIDENTIAL
2682 BISHOP DRIVE
SAN RAMON, CALIFORNIA 94583-4452

MARCH 10, 2006

APPROVAL FORM

Signature: _____ Date: 3/10/06

Name: Susan Flakus
Title: Senior Project Manager
URS Corporation

Signature: _____ Date: 3/10/06

Name: Gus Raggambi
Title: Geologist
URS Corporation

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Appendix D Asbestos Analytical Results

Trammell Crow Residential (TCR) is planning for construction and redevelopment into multi-family residential and mixed-use housing on a portion of the 21-acre property located at 420 East Third Street in Pittsburg, California (as shown on Figure 1), that is the subject of this Supplemental Soils Characterization Report. The Supplemental Soils Characterization was conducted by URS Corporation (URS) to provide additional site characterization of the chemical quality of the subsurface soils in the zone of the planned construction in the multi-family portion of the proposed Harbor Park Development that is located at the property of the former Johns Manville Plant (JMP). The anticipated vertical depth of construction will be within eight feet below the current grade, with grading to occur within the first two feet of the current grade. This zone for construction is for purposes of placement of foundations and earthwork/soil removal to support the construction. This zone under review by this Supplemental Site Characterization will be sufficiently deep so as to predict impacts to ad hoc maintenance worker earthwork associated with the multi-family dwellings, and samples collected from this zone will be useable to predict potential exposures to soils and indoor air concerns for future residents. It is currently predicted that residents will not be allowed to conduct vertical digging in the limited "yard" areas of the multi-family units and that there will be common areas covered with vegetation as well as asphalt and concrete ground cover.

TCR is addressing potential contamination concerns for this site's proposed construction project as part of its due diligence conducted for a property transaction with the current owner, the Pittsburg River Park LLC (PRP-LLC) entity. The PRP-LLC has been conducting site investigations and has recently proposed a remedial action that is currently under review by the CalEPA Department of Toxic Substances Control (DTSC), located in Berkeley, California, as part a voluntary cleanup agreement (VCA). These efforts have focused on the southeast quadrant of the site in which an evaporation pond was located and in which waste was routinely deposited through decades of the former Johns Manville Plant operations. This plant manufactured asbestos-containing material (ACM) and various constituents of concern have been detected in this evaporation pond area. There has been minimal sampling in the majority of the site apart from this southeast corner as seen on Figure 2, Historical Sampling Locations.

Based on review of the recent and historical site investigation documents and the proposed remedial action, TCR requested URS to perform supplemental sampling of the site soils related

to their construction plans. On behalf of TCR, URS prepared a Sampling and Analysis Plan (SAP), dated October 26, 2005, to address subsurface impacts at the site that are associated with former site operations or historic land use or composition, such as asbestos-contaminated soils, in the zone of planned construction. This SAP governed the conductance of the recently completed field investigation and was prepared in accordance with DTSC and USEPA requirements and designed to cover the parameters of concern for residential developments.

2.1 PHYSICAL DESCRIPTION

This approximately 21-acre site is located approximately 1,000 feet south of the New York Slough that connects to Suisun Bay (ERM, 2005b). Figure 1 shows the location of the site and surrounding features of this portion of Pittsburg.

The site is bordered on the north by Third Street, on the east by Harbor Street, with industrial and commercial land use occurring in these areas, and on the south and the west by residential properties. The former JMP manufacturing area is comprised of four buildings within the northern ten acres of the site. There is a warehouse building in the southwest corner of the property. There is high berm along the west of the site. The site is surrounded by fencing. The site is generally flat and covered with concrete, asphalt and gravel, as well as buildings.

2.2 SITE HISTORY

2.2.1 Operational History

The site and nearby areas were primarily tidal mudflats and marshland prior to development in the early 1900s. As summarized by ERM (ERM, 2005b) and as evidenced by the historic documents, the following are pertinent aspects of the historic site operations. The manufacturing buildings of the JMP were constructed between 1925 and 1928. In 1957, a large warehouse was constructed south of the manufacturing buildings. Asbestos-cement products, asbestos-containing pipe covering, and asphalt roofing products were the main products that were manufactured through 1980. Until its closure in approximately 2003, JMP manufactured commercial roofing materials using fiberglass mat, asphalt, sand, and limestone. Petroleum-based resins and solvents were also used onsite (ERM, 2005b).

On page 9 of the recent ERM "*Draft Removal Action Workplan for Onsite Waste Consolidation*" (ERM, 2005b), ERM summarizes pertinent aspects of site operations and the evaporation pond:

> "A series of four asphalt stills, located along the southwestern margin of JMP Building 4, was used to convert heavy oil to asphalt. The stills were fueled by fuel oil and later with natural gas. In the process of converting heavy oil to asphalt, off-gas vapors were collected, condensed, and mixed with water to form an oil-water slurry that was transported via an underground pipe to the evaporation pond. The residual oil in the

evaporation pond was reportedly burned approximately twice a year. Use of the evaporation pond began in 1946. It remained relatively constant in size until 1959, when discharge of effluent was discontinued, and it was subsequently filled with scrap and construction debris. The size of the pond at the time of closure was approximately 150 feet long by 75 feet wide with a maximum depth of 10 feet (Figure 3)."

Other operational aspects of the facility included five warehouse structures totaling approximately 328,000 square feet. Four of the warehouses located in the northern portion of the site were serviced by railroad tracks, that were located in between each of the buildings. A boiler house, elevated water tank, fuel and asphalt tanks, silos, pump house, and a main office were also part of the operational aspects of the facility. The buildings and associated plant-operating infrastructure were being demolished at the time of the supplemental soils investigation conducted in November 2005.

2.2.2 Neighboring Properties

The surrounding areas have been used for residential, industrial, and commercial purposes throughout the years (since at least the early 1900s).

2.3 ENVIRONMENTAL INVESTIGATIONS

Pertinent historical data that contribute to the characterization of the zone in question for the planned construction of multi-family homes were considered during the planning for this Supplemental Soils Characterization. This zone terminates at 8 feet bgs of the current grade.

The average onsite water table elevation has generally been measured between 5 to 19 feet bgs (Harding ESE, 2003) during various investigations. The historic and more recent investigations and remedial actions performed to date, as documented, are included in the administrative and historic record that has already been compiled and reviewed by TCR and URS on TCR's behalf, by the PRP-LLC, and by the DTSC in its current role as oversight agency. This Supplemental Soils Characterization Report incorporates by reference the previous investigation summaries contained in the administrative record.

3.1 FIELD SAMPLING PROGRAM

3.1.1 Drilling and Soil Sample Collection

URS conducted drilling and soil sampling on November 11 and 15, 2005, in accordance with the SAP. Prior to the initiation of field activities, a public utility clearance was conducted for the site by contacting the Northern California Underground Services Alert (USA). A private utility locator, OHJ Utility Location, was also subcontracted to conduct a utility clearance in the proposed drilling areas. The drilling activities for the Supplemental Soils Characterization were performed in accordance with URS' Health and Safety Plan developed for work at the site.

Drilling was conducted by URS' drilling subcontractor, Gregg Drilling, under the supervision of a URS field geologist. Concrete slabs were cored at locations where thickened slabs were present, prior to advancing boreholes. Continuous soil samples were collected using 4-foot-long, 2-inch-diameter barrel samplers with acetate liners. Proper decontamination procedures were used throughout the field investigation activities.

Onsite Borings

Sixteen onsite borings (SB-1 through SB-16) were advanced to depths of approximately 8 feet bgs. One boring, SB-17 was advanced to 20 feet bgs. Locations and rationale for the soil borings are as follows:

- SB-1 was placed in the northwest corner of the site adjacent to JMP manufacturing Building 1, within a paved transit route near the front gate to the site off Third Street. This location along with SB-2 through SB-10 checked for contamination in association with the former JMP manufacturing operations in the northern half of the site within the footprint of the planned multi-family residences. This contamination may stem from active processing waste streams and handling and storage of hazardous materials.
- SB-2 and SB-3 were located 150 feet apart in the paved area between Buildings 1 and 2. See above.
- SB-4 through SB-10 were located between Buildings 3 and 4. There are numerous tanks, processors and equipment from the historic manufacturing process still in evidence, especially in the vicinity of SB-07 through SB-10. Locations SB-6 through SB-10 also

checked on contamination associated with the rail lines leading from Buildings 3 and 4. SB-08 through SB-10 provided focused checks on the processing waste stream, including conveyance to the evaporation pond area. Along with the parameters designated for shallow or deeper interval samples, samples were collected for analysis for TPH in these locations near the southwest corner of Building 4 due to the historic use of petroleum product to fuel the series of asphalt stills that converted heavy oil to asphalt. An oil-water slurry was reportedly transported via an underground pipe to the evaporation pond area, and the competency of the pipeline has not been confirmed by previous investigations. See also notes above under SB-1.

- SB-11 was located along one of the rail lines leading toward the evaporation pond area to the south of Buildings 3 and 4, then off the site. This location was set to confirmed if contamination remains from an underground process waste conveyance line, as indicated above, that linked these manufacturing processes with the waste sent to the evaporation pond as well as other subsurface impoundments at the edge of the evaporation pond area. The location also checked on contamination associated with the rail lines leading from Buildings 3 and 4.

- SB-12 through SB-14 were located in the southeast corner of the site to confirm the nature of soils at the edge of the evaporation pond area. Due to the presence of PCBs within evaporation pond media and gaps in the historic collection of PCB data, samples collected from these borings were analyzed for PCBs.

- SB-15 and SB-16 were located off the back entrance to the warehouse in the southwest quadrant of the site to check for possible issues from materials loading and poor housekeeping practices and were located in a portion of the site that had not been sampled for asbestos or other contaminants of concern. These sample locations were set to provide a point of comparison to the manufacturing and evaporation pond areas and possibly indicate and/or confirm background levels for native soils or nearby native soils that have reportedly been brought to the site historically.

- SB-17 was drilled to investigate the subsurface conditions of a topographically elevated sand stockpile located in the southwest corner of the site.

Samples for chemical analysis were collected at depth intervals ranging from 2 to 3 feet bgs and 7 to 8 feet bgs for boreholes SB-01 to SB-16 and intervals of 2 to 3 feet bgs and 14 to 15 feet bgs for borehole SB-17. Soil sampling was conducted using a truck-mounted direct-push sampling system that advanced the probe into the subsurface with a hydraulic hammer to collect the soil samples. As the probe was advanced, soil was driven into a 1.5-inch-diameter, 4-foot-long butyl-acetate sampling tube lining the inside of the sampling probe. The butyl-acetate tube was cut in ½-foot lengths with a hacksaw to obtain the desired soil sample interval. After the tube was cut, the ends of the tube were covered with Teflon sheets and sealed with plastic end caps.

Soil from boreholes was classified according to the Unified Soil Classification System (USCS) and boring logs are presented in Appendix A. A portion of the soil sample from each sampling interval was placed into resealable plastic bags and the headspace was screened for organic vapor using a photoionization detector (PID). Headspace readings, as well as visual and/or olfactory signs of impact, were recorded.

Further details regarding the field operations and associated quality control requirements may be found in the SAP (URS, 2005).

Analytical Parameters

Samples for chemical analysis were collected from two intervals: 2 to 3 feet bgs to check for future near-surface soil characteristics and 7 to 8 feet bgs to check for soils at the base of the planned construction and maintenance zone. Analysis of the shallow interval of the 16 soil boring locations included asbestos, SVOCs, and CAM 17 metals. Some of the shallow interval were also analyzed for TPH – diesel and heavy chain or "motor oil" carbon chain ranges and PCBs. Samples from the shallow interval were analyzed for PAHs at low detection limits to meet risk screening criteria for carcinogenic-PAH levels of concern, and the deeper interval samples were temporarily archived by the laboratory should analysis for PAHs be merited pending review of the shallow sample and deeper SVOC results. The deeper interval samples were analyzed for VOCs, SVOCs, and CAM 17 metals as well as asbestos and TPH-gas range for certain locations.

Soil samples were analyzed for VOCs by EPA Method 5035 prep/8260B, SVOCs by EPA Method 8270C, CAM 17 metals by EPA Method 6010/7000 series, PAHs by EPA Method 8310,

TPH by EPA 8015-M, PCBs by EPA Method 8082, and asbestos by polarized light microscopy (PLM) by EPA Method EPA/600/R-93/116. Curtis and Tompkins Laboratory of Berkeley, California, performed the analyses for all parameters except asbestos, which was performed by Micro Analytical Laboratories of Emeryville, California.

The analytical parameters for the soil samples are included on Table 1. The results of the analyses are presented in Section 5 and Tables 2 and 3.

3.1.2 Surface Soil Sample Collection

URS sampled surface soils at two locations within the elevated sand piles located at the southwestern corner of the site. Samples SAMPLE PILE EAST and SAMPLE PILE WEST consisted of grab samples and were sampled using nitrile gloves. Both samples were collected within the upper foot of the sand pile and were removed from the eastern and western portions of the sand pile.

Soil samples were appropriately labeled, placed into insulated ice-filled coolers, and delivered to Curtis and Tompkins for analysis. The chain-of-custody forms that accompanied the sample shipments are provided in Appendix B along with the original laboratory data reports.

4.1 SURFACE CONDITIONS

The subject site is located at 420 East Third Street in Pittsburg, County, California. The site is approximately 21 acres and is located approximately 1,000 feet south of the New York Slough that connects to Suisun Bay (ERM, 2005b). Figure 1 shows the location of the site and surrounding features of this portion of Pittsburg.

The site is bordered by Third Street to the north, Harbor Street to the east, with industrial and commercial land use occurring in these areas, and residential properties to the south and west. The former Johns Manville Plant manufacturing area is comprised of four buildings within the northern ten acres of the site. There is a warehouse building in the southwest corner of the property. A high berm exists adjacent to the residential properties along the west side of the site. The site is generally flat and covered with concrete, asphalt, and gravel or with buildings.

Topographic coverage of the subject site is provided by the United States Geological Survey (USGS), Honker Bay, Contra Costa County, California 7.5-Minute Quadrangle. The subject site is situated approximately 17 feet above mean sea level (msl).

4.2 REGIONAL GEOLOGY AND HYDROGEOLOGY

ERM states that, regionally, the JMP site is within:

> "an area characterized by (1) alluvial sediment eroded from Tertiary and Cretaceous rocks of the Coast Range Physiographic Province, and (2) Pleistocene to recent fluvial deposits from the Sacramento River Delta consisting of clays, silts, and sands."

No natural surface water resources for domestic or industrial use are present within or adjacent to the site. The New York Slough leading to Suisun Bay is located approximately 1,000 feet north of the site (ERM, 2005b).

Based on the topography and surficial drainage patterns shown on the USGS Honker Bay, California, 7.5-minute series quadrangle map, the direction of shallow groundwater flow at the site is likely to the north-northeast toward the New York Slough, located approximately 1,000 feet north of the subject site. Groundwater was not encountered during URS' Supplemental Soils investigation. Previous reports have shown groundwater between 5 to 19 feet below the

ground surface (bgs). Salt-water intrusion problems have limited the use of the shallow groundwater in the area (Harding ESE, 2003).

4.3 SITE GEOLOGY

The Coast Ranges represent northwest-southeast trending structural blocks comprised of a variety of basement lithologies that are juxtaposed by major geologic structures. The Coast Ranges-Sierran Block boundary zone lies to the east of the site. To the west, the major boundary is the San Andreas fault zone, which separates Franciscan Complex rocks of the North American plate from the Salinian basement rocks on the Pacific plate. The Coast Ranges ophiolites within the Franciscan Complex have been deformed by a series of thrust faults, most of which appear to be inactive.

The Diablo Range, located to the south of the site, extends from the Sacramento River delta, south along the western side of the San Joaquin Valley. Rocks of the Mesozoic Great Valley are thrust upon Franciscan basement along the San Joaquin Valley margin, and are covered locally by younger sediments of Paleocene to Pleistocene age.

The Diablo Range is bounded to the east by the Coast Range-Sierran Block boundary zone, which typically is represented by a series of blind and partially concealed thrust faults (Wong et al., 1988; Unruh and Moores, 1992). The eastern side of Mount Diablo is bounded by the San Joaquin fault (Sowers et al., 1992).

The surficial geology underlying and in the vicinity of the site is Holocene alluvial deposits. The geologic units underlying the site formed as a result of migrating streams. The streams meandered at the base of the alluvial fan, which originated from the hills to the south of the site. These deposits include varying amounts of clay, silt, sand, and gravel.

The soils encountered during this Supplemental Soils Characterization consisted of fill materials underlain by native alluvial deposits composed of silt, sand, clay and gravel. Subsurface conditions were investigated in the northern, northeastern to central-eastern, and southern portions of the site. Full details of the subsurface lithology may be found in the soil boring logs included in Appendix A.

Northern Portion

This portion of the site includes the areas next to and between Buildings 1 and 2 (Borings SB-1 to SB-3) and between Buildings 3 and 4 (Borings SB-4 to SB-5) (See Figure 3). Subsurface conditions consisted of fill material from 0 to 2 feet bgs. Fill materials typically consisted of brown to reddish and yellowish brown sandy clay, sand, and sandy gravel with clay. Sediments underlying fill materials consisted of sand, sandy clay to clayey sand, and clayey gravel. These native alluvial materials were typically dark brown to yellowish brown, moist, soft to very stiff and were interbedded with varying amounts of clay, silt, sand, and gravel. This alluvium was found between 2 to 8 feet bgs, the depth of the deepest boring.

Northeastern to Central Eastern Portion

This northeast portion of the site includes the area between Buildings 3 and 4 in which former railroad tracks were located. Borings SB-6 to SB-11 were completed in this portion. Borings SB-6 to SB-9 consisted of fill material between 1 to 2½ feet bgs that was brown to yellowish brown clayey to sandy gravel. Fill was found in Borings SB-10 and SB-11 between 0 to 5½ and 0 to 7 feet bgs, respectively, and consisted of gray gravel and dark brown sandy clay with gravel. The fill in these two borings included glass and tar fragments. Material underlying the fill in borings SB-6 to SB-11 consisted of native alluvial units that were composed primarily of yellowish brown to gray clay, silt, and sand. Alluvial units composed of clay were soft to very stiff and moist. Sands were dense and moist.

Southern Portion

The southern portion of the site includes the southeastern portion of the site surrounding the former evaporation pond, addressed by borings SB-12 to SB-14. The subsurface investigation continues westward along the southern property line of the site. Borings SB-15 to SB-17 were located in this area, south of the former warehouse building that was recently demolished. Boring SB-17 was located within the area of the sand stockpile. Subsurface conditions at SB-12 to SB-14 consisted entirely of fill to 8 feet bgs, the maximum depth explored in this area. The upper fill was composed primarily of brown to yellowish brown clayey gravel to gravelly clay with various metal debris, wood fragments, fibrous materials, and tar fragments. Well-graded,

moist, loose sand that was red, blue, and green in color was found in these borings from between 4½ to 7½ feet bgs. Borings SB-15 and SB-16 consisted of fill materials to 7 feet bgs. Fill was composed primarily of brown sandy gravel, dark brown sandy clay, and dark brown to black clayey gravel. Material underlying the fill consisted of yellowish brown sandy clay, which was stiff to very stiff and moist. Boring SB-17, completed to a total depth of 20 feet bgs, was advanced through the sandy pile material to the underlying soils. Between 0 to 1½ feet bgs, sand fill was found that was white, red, and blue in color and underlain by native alluvium, that was brown clay with sand interbeds.

5.1 SUBSURFACE SOIL

Two subsurface soil samples were collected for chemical testing from each of the 17 soil borings. Sample analytical results are shown on Tables 2, by type of constituent. Table 2 includes applicable risk screening criteria for the detected constituents. These include the applicable EPA Region 9 PRGs and RWQCB ESLs for residential land use. In the following text, results are compared to the lowest PRGs and ESLs where generally the ESLs are lower than the PRGs.

Volatile Organic Compounds

VOCs were analyzed in samples collected from the 7 to 8-foot bgs interval at locations SB-1 to SB-16. No VOCs were detected above reporting limits.

Semi-Volatile Organic Compounds by EPA Method 8270C

SVOCs were analyzed at boring locations SB-1 to SB-16 at the 8 foot interval and SB-4 to SB-14 at the 3 foot interval. SVOC's were analyzed in SB-17 at the 15 foot interval. Levels of SVOCs were lower than the applicable ESLs in all borings with exception of SB-7. Laboratory results of SB-7 at the 3 foot interval indicate that levels of the PAHs methlnaphthalene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and phenanthrene were elevated above the ESL level.

Polynuclear Aromatic Hydrocarbons by EPA Method 8310 – Low Detection Limits

Samples were analyzed for PAHs and levels were lower than the appropriate ESLs in all 17 borings with exception of SB-8 at the 3 foot interval and SB-11 to SB-15 at the 3 foot intervals. The chemical dibenz(a,h)anthracene, which ranged from 0.081 (SB-13) to 0.17 mg/kg (SB-14) was elevated above the applicable ESL level of 0.062 mg/kg in SB-8 as well as SB-11 to SB-15 at the 3 foot interval. Other chemicals with levels above the ESL included indeno(1, 2, 3-cd)pyrene located at SB-11 and SB-14 at the 3-foot interval. The applicable ESL level of indeno(1, 2, 3-cd)pyrene is 0.62 mg/kg. Benzo(a)pyrene and benzo(b)fluoranthene were found with levels above the ESL of 0.062 mg/kg and 0.38 mg/kg respectively at borings SB-12 at the 3 foot interval.

Polychlorinated Biphenyls

Four samples were analyzed for PCBs and only one sample located at SB-13 at the 3 foot interval was higher than the reportable limit, although not higher than the applicable PRG or ESL.

Total Metals

Samples were analyzed for CAM-17 metals and these results are also presented in Table 2. Overall the heavy metal concentrations were below the applicable ESLs for all analytes except: arsenic, barium, chromium, cobalt, copper, lead, nickel, thalium, and zinc.

Arsenic concentrations ranged from 0.53 to 11 mg/kg, all in exceedence of the EPA PRG of 0.062 mg/kg. The higher-level concentrations of arsenic were found in SB-11 at 8 feet and SB-14 at 8 feet.

A barium level of 1,300 mg/kg was found in SB-7 at 3 feet, and was the only location where Barium was above the ESL of 750 mg/kg.

Results for chromium ranged from 82 to 370 mg/Kg. Chromium was found in SB-11, SB-12, and SB-14 at 8 feet and SB-13 at 3 feet, above its ESL of 58 mg/kg.

Cobalt was found only in sample SB-12 at 8 feet with a result of 49 mg/Kg, above its ESL of 40 mg/kg.

Copper was detected above the ESL in SB-14 at 8 feet with a value of 4,000 mg/Kg and in SB-16 at 3 feet at a concentration of 240 mg/Kg. SB-14 also had lead levels of 2,600 mg/Kg above its PRG of 150 mg/kg.

Lead was detected above the ESL of 150 mg/kg in SB-14 at 8 feet with a value of 40,000 mg/kg.

Nickel was above its ESL of 150 mg/kg in four locations, SB-11-8, SB-12-8, SB-13-3, and SB-14-8. Levels ranged from 150 to 1,100 mg/Kg at these locations and representative depths.

Thalium was detected above its ESL of 1 mg/kg in SB-9-8 at a concentration of 8.1 mg/kg.

Zinc was found in SB-11-3, SB-12-3, SB-13-8, and SB-14-8 at levels ranging from 700 to 6,900 mg/Kg, all above its ESL of 600 mg/kg.

Total Petroleum Hydrocarbons

TPH-diesel ranged from 1.9 (SB-6-3) to 3,500 mg/kg (SB-11-3) in subsurface soils. Heavier fraction TPH-motor oil ranged from 59 (SB-7-3) to 25,000 mg/kg (SB-11-3). TPH-diesel which was found above its ESL of 500 mg/kg was found in SB-4, SB-7, SB-8, SB10, SB-11, SB-17, as well as in the eastern portion of the sandy stockpile. TPH-diesel found above its ESL was found in these locations in the 3 foot interval. TPH-motor oil which was found above its ESL of 500 mg/kg were identified in the same borings and at the same depths as TPH-diesel. Concentrations of TPH-gasoline in the subsurface soils at all locations were below the reportable laboratory limit.

Asbestos

Two asbestos samples were removed from each of the borings with exception of SB-17, where deeper exploration depths allowed for the removal of 4 samples. Bulk asbestos samples were sent to Micro Analytical Laboratories, Inc., an accredited laboratory, for PLM (Polarized Light Microscope) analysis. Samples were transported in resealable plastic bags with appropriate chain of custody.

Results of the asbestos analysis at the investigated areas indicate that asbestos was found in all borings with exception of SB-1, SB-3, SB-4, SB-6, SB-7, SB-8, and SB-10. Asbestos fiber area percentages were below 1% in borings SB-2 at the 3 foot depth interval, located in between Buildings 1 and 2. Between Buildings 3 and 4, SB-5 showed results of less than 1% fiber area percentage at the 3 foot depth interval. Soil borings SB-9 and SB-11 had asbestos fiber area percentages of 2% and less than 1% respectively, at the 3 foot sampling interval. These two borings were located at the southeastern to south portion of Building 4. In general the southern portion of the site adjacent to the former evaporation pond showed the highest fiber area percentages for asbestos. Soil boring SB-12 had results of 2% area percentage for asbestos fibers at the 3 foot interval. Soil borings SB-13 and SB-14 had fiber area percentages of 2% and 3% respectively, at both the 3 foot and 8 foot sampling intervals. Located to the south of the former warehouse at the southwestern corner of the site, SB-15 at the 8 foot interval was less than 1%,

and SB-16 had results of 3% fiber area percentages. Sample SB-17, located in the sandy stockpile south of the former warehouse had surface results of less than 1% fiber area percentages.

5.2 SURFACE SOILS

The two surface soil samples collected within the sand stockpile at the southwest corner of the site were analyzed for CAM 17 metals, SVOCs, TPH-diesel, and TPH-motor oil. TPH-diesel and TPH-motor oil were detected in the two surface soil samples at concentrations ranging from 320 to 650 mg/Kg and 82 to 160 mg/Kg respectively. Results of CAM 17 metals tests indicate that the only metals found to be above the ESL limits were that of arsenic, with levels ranging from 0.53 to 0.64 mg/Kg. Data obtained from SVOC testing showed that results were below the ESL for all SVOCs at the sand stockpile.

5.3 QUALITY CONTROL SAMPLES

Five sets of soil field duplicate samples were collected by labeling adjacent acetate sleeves and submitting them as separate samples. The five field duplicate pairs were: SB-12-03/(duplicate) SB-18-03; SB-03-08/(duplicate)SB-19-08; SB-02-08/(duplicate)SB-20-08; SB-09-03/(duplicate)SB-21-03; and, SB-09-08/SB-21-08. A review of the soil field duplicate results indicates that there was good agreement between the duplicate samples indicating that the sample matrix is homogeneous relative to contamination. The use of false soil boring location for the duplicate samples allowed these samples to be submitted "blind" to the laboratory. On-equipment rinsate blanks was selected for all parameters with the Sampling and Analysis Plan (SAP). Remaining quality controls are discussed in Appendix C, the memorandum.

URS has performed our services for this project in accordance with our Agreement with TCR dated October 26, 2005. As per the scope of this Supplemental Soils Characterization, this report was to provide data gathered during the recent sampling and analytical activities and has only provided applicable and published federal and state risk-screening criteria as an initial step in the evaluation of analytical results. Final determination of clean-up levels will be made under any applicable oversight by an agency, such as the current arrangement for review by the DTSC under the VCA with the PRP – LLC. No guarantees are either expressed or implied. The scope of this investigation was limited to a limited subsurface soil field-sampling program within the site boundaries. This approach reflects current professional practice.

No investigation is thorough enough to preclude the presence of materials on the subject site that currently, or in the future, may be considered hazardous. Because regulatory evaluation criteria are constantly changing, concentrations of contaminants present and considered to be acceptable may, in the future, become subject to different regulatory standards, and require remediation.

Opinions and judgments expressed herein, which are based on our understanding and interpretation of current regulatory standards, should not be construed as legal opinions. This document and the information contained herein have been prepared solely for the use of TCR and its lenders. No other third party shall have the right to rely on URS opinions rendered in connection with the services or in this document without URS' written consent, and the third party's agreement to be bound to the same conditions and limitations as the client. No warranty or guarantee of subject site conditions is intended.

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TABLE 1
SAMPLE LOCATION AND ANALYSIS
SUPPLEMENTAL SOILS CHARACTERIZATION
JOHNS MANVILLE PLANT
420 EAST THIRD STREET
PITTSBURG, CALIFORNIA

Sample Number	Sample Depth	Sample Type	Analytical Method
SB01-03	3 feet	Soil	PAHs
		Soil	METALS
SB01-08	8 feet	Soil	SVOCs
		Soil	VOCs
		Soil	METALS
SB02-03	3 feet	Soil	PAHs
		Soil	METALS
SB02-08	8 feet	Soil	SVOCs
		Soil	VOCs
		Soil	METALS
SB03-03	3 feet	Soil	PAHs
		Soil	METALS
SB03-08	8 feet	Soil	SVOCs
		Soil	VOCs
		Soil	METALS
SB04-03	3 feet	Soil	TPH-D/MO
		Soil	PAHs
		Soil	METALS
		Soil	SVOCs
SB04-08	8 feet	Soil	VOCs
		Soil	SVOCs
		Soil	METALS
SB05-02	2 feet	Soil	TPH-D/MO
		Soil	PAHs
		Soil	METALS
		Soil	SVOCs
SB05-08	8 feet	Soil	VOCs
		Soil	SVOCs
		Soil	METALS
SB06-03	3 feet	Soil	TPH-D/MO
		Soil	PAHs
		Soil	METALS
		Soil	SVOCs
SB06-08	8 feet	Soil	VOCs
		Soil	SVOCs
		Soil	METALS
SB07-03	3 feet	Soil	TPH-D/MO
		Soil	PAHs
		Soil	METALS
		Soil	SVOCs
SB07-08	8 feet	Soil	VOCs
		Soil	SVOCs
		Soil	METALS
SB08-03	3 feet	Soil	TPH-D/MO
		Soil	PAHs
		Soil	METALS
		Soil	SVOCs

TABLE 1
SAMPLE LOCATION AND ANALYSIS
SUPPLEMENTAL SOILS CHARACTERIZATION
JOHNS MANVILLE PLANT
420 EAST THIRD STREET
PITTSBURG, CALIFORNIA

Sample Number	Sample Depth	Sample Type	Analytical Method
SB08-08	8 feet	Soil	VOCs
		Soil	SVOCs
		Soil	METALS
SB09-03	3 feet	Soil	TPH-D/MO
		Soil	PAHs
		Soil	METALS
		Soil	SVOCs
SB09-08	8 feet	Soil	VOCs
		Soil	SVOCs
		Soil	METALS
SB10-03	3 feet	Soil	TPH-D/MO
		Soil	PAHs
		Soil	PCBs
		Soil	METALS
		Soil	SVOCs
SB10-08	8 feet	Soil	VOCs
		Soil	SVOCs
		Soil	METALS
SB11-03	3 feet	Soil	VOCs
		Soil	TPH-D/MO
		Soil	PAHs
		Soil	PCBs
		Soil	METALS
		Soil	SVOCs
SB11-08	8 feet	Soil	VOCs
		Soil	SVOCs
		Soil	METALS
SB12-03	3 feet	Soil	PAHs
		Soil	PCBs
		Soil	METALS
		Soil	SVOCs
SB12-08	8 feet	Soil	SVOCs
		Soil	VOCs
		Soil	METALS
SB13-03	3 feet	Soil	PAHs
		Soil	PCBs
		Soil	METALS
		Soil	SVOCs
SB13-08	8 feet	Soil	SVOCs
		Soil	VOCs
		Soil	METALS
SB14-03	3 feet	Soil	PAHs
		Soil	METALS
		Soil	SVOCs
SB14-08	8 feet	Soil	SVOCs
		Soil	VOCs
		Soil	METALS

TABLE 1
SAMPLE LOCATION AND ANALYSIS
SUPPLEMENTAL SOILS CHARACTERIZATION
JOHNS MANVILLE PLANT
420 EAST THIRD STREET
PITTSBURG, CALIFORNIA

Sample Number	Sample Depth	Sample Type	Analytical Method
SB15-03	3 feet	Soil	PAHs
		Soil	METALS
SB15-08	8 feet	Soil	SVOCs
		Soil	VOCs
		Soil	METALS
SB16-03	3 feet	Soil	PAHs
		Soil	METALS
SB16-08	8 feet	Soil	SVOCs
		Soil	VOCs
		Soil	METALS
SB-17-15	15 feet	Soil	VOCs
		Soil	TPH-D/MO
		Soil	TPH-D/MO
		Soil	SVOCs
		Soil	METALS
SB-17-3	3 feet	Soil	TPH-D/MO
		Soil	TPH-D/MO
		Soil	SVOCs
		Soil	METALS
SB18-03 Dup of SB12-03	3 feet	Soil	PAHs
		Soil	METALS
SB19-08 Dup of SB03-08	8 feet	Soil	SVOCs
		Soil	VOCs
		Soil	METALS
SB20-08 Dup of SB02-08	8 feet	Soil	SVOCs
		Soil	VOCs
		Soil	METALS
SB21-03 Dup of SB09-03	3 feet	Soil	PAHs
		Soil	METALS
SB21-08 Dup of SB09-08	8 feet	Soil	SVOCs
		Soil	VOCs
		Soil	METALS
SAMPLE PILE EAST	surface	Soil	TPH-D/MO
		Soil	SVOCs
		Soil	METALS
SAMPLE PILE WEST	surface	Soil	TPH-D/MO
		Soil	SVOCs
		Soil	METALS

TABLE 2A
VOCs
SUPPLEMENTAL SOILS CHARACTERIZATION
JOHNS MANVILLE PLANT
420 EAST THIRD STREET
PITTSBURG, CALIFORNIA

Sample ID		SB01-08		SB02-08		SB03-08		SB04-08		SB05-08		SB06-08		SB07-08		SB08-08		SB09-08		SB10-08		SB11-03	
Location		SB-01		SB-02		SB-03		SB-04		SB-05		SB-06		SB-07		SB-08		SB-09		SB-10		SB-11	
Sample Date		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005	
Matrix		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
VOCS	Units	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result
1,1,1,2-Tetrachloroethane	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
1,1,1-Trichloroethane	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
1,1,2,2-Tetrachloroethane	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
1,1,2-Trichloroethane	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
1,1-Dichloroethane	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
1,1-Dichloroethene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
1,1-Dichloropropene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
1,2,3-Trichlorobenzene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
1,2,3-Trichloropropane	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
1,2,4-Trichlorobenzene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
1,2,4-Trimethylbenzene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
1,2-Dibromo-3-Chloropropane	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
1,2-Dibromoethane	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
1,2-Dichlorobenzene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
1,2-Dichloroethane	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
1,2-Dichloropropane	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
1,3,5-Trimethylbenzene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
1,3-Dichlorobenzene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
1,3-Dichloropropane	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
1,4-Dichlorobenzene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
2,2-Dichloropropane	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
2-Butanone	ug/Kg, ug/l	10	ND	10	ND	11	ND	11	ND	11	ND	9.3	ND	10	ND	10	ND	12	ND	11	ND	9.3	ND
2-Chlorotoluene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
2-Hexanone	ug/Kg, ug/l	10	ND	10	ND	11	ND	11	ND	11	ND	9.3	ND	10	ND	10	ND	12	ND	11	ND	9.3	ND
4-Chlorotoluene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
4-Methyl-2-Pentanone	ug/Kg, ug/l	10	ND	10	ND	11	ND	11	ND	11	ND	9.3	ND	10	ND	10	ND	12	ND	11	ND	9.3	ND
Acetone	ug/Kg, ug/l	20	ND	20	ND	22	ND	23	ND	22	ND	19	ND	20	ND	20	ND	24	ND	23	ND	19	ND
Benzene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
Bromobenzene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
Bromochloromethane	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
Bromodichloromethane	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
Bromoform	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
Bromomethane	ug/Kg, ug/l	10	ND	10	ND	11	ND	11	ND	11	ND	9.3	ND	10	ND	10	ND	12	ND	11	ND	9.3	ND
Carbon Disulfide	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
Carbon Tetrachloride	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
Chlorobenzene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
Chloroethane	ug/Kg, ug/l	10	ND	10	ND	11	ND	11	ND	11	ND	9.3	ND	10	ND	10	ND	12	ND	11	ND	9.3	ND
Chloroform	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
Chloromethane	ug/Kg, ug/l	10	ND	10	ND	11	ND	11	ND	11	ND	9.3	ND	10	ND	10	ND	12	ND	11	ND	9.3	ND
cis-1,2-Dichloroethene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
cis-1,3-Dichloropropene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
Dibromochloromethane	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
Dibromomethane	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
Ethylbenzene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
Freon 113	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
Freon 12	ug/Kg, ug/l	10	ND	10	ND	11	ND	11	ND	11	ND	9.3	ND	10	ND	10	ND	12	ND	11	ND	9.3	ND
Gasoline C6-C10	ug/Kg, ug/l							1100	ND	1100	ND	930	ND	1000	ND	1000	ND	1200	ND	1100	ND	930	ND
Hexachlorobutadiene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
Isopropylbenzene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
m,p-Xylenes	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
Methylene Chloride	ug/Kg, ug/l	20	ND	20	ND	22	ND	23	ND	22	ND	19	ND	20	ND	20	ND	24	ND	23	ND	19	ND
MTBE	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
Naphthalene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
n-Butylbenzene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
o-Xylene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
para-Isopropyl Toluene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
Propylbenzene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
sec-Butylbenzene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
Styrene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
tert-Butylbenzene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
Tetrachloroethene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
Toluene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
trans-1,2-Dichloroethene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
trans-1,3-Dichloropropene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
Trichloroethene	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
Trichlorofluoromethane	ug/Kg, ug/l	5	ND	5.1	ND	5.4	ND	5.7	ND	5.4	ND	4.7	ND	5	ND	5.1	ND	5.9	ND	5.7	ND	4.7	ND
Vinyl Acetate	ug/Kg, ug/l	50	ND	51	ND	54	ND	57	ND	54	ND	47	ND	50	ND	51	ND	59	ND	57	ND	47	ND
Vinyl Chloride	ug/Kg, ug/l	10	ND	10	ND	11	ND	11	ND	11	ND	9.3	ND	10	ND	10	ND	12	ND	11	ND	9.3	ND

TABLE 2A
VOCs
SUPPLEMENTAL SOILS CHARACTERIZATION
JOHNS MANVILLE PLANT
420 EAST THIRD STREET
PITTSBURG, CALIFORNIA

Sample ID		SB11-08		SB12-08		SB13-08		SB14-08		SB15-08		SB16-08		SB-17-15		SB19-08		SB20-08		SB21-08	
Location		SB-11		SB-12		SB-13		SB-14		SB-15		SB-16		SB-17		SB-19		SB-20		SB-21	
Sample Date		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/15/2005		11/11/2005		11/11/2005		11/11/2005	
Matrix		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
VOCS	Units	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result
1,1,1,2-Tetrachloroethane	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
1,1,1-Trichloroethane	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
1,1,2,2-Tetrachloroethane	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
1,1,2-Trichloroethane	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
1,1-Dichloroethane	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
1,1-Dichloroethene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
1,1-Dichloropropene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
1,2,3-Trichlorobenzene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
1,2,3-Trichloropropane	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
1,2,4-Trichlorobenzene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
1,2,4-Trimethylbenzene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
1,2-Dibromo-3-Chloropropane	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
1,2-Dibromoethane	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
1,2-Dichlorobenzene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
1,2-Dichloroethane	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
1,2-Dichloropropane	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
1,3,5-Trimethylbenzene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
1,3-Dichlorobenzene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
1,3-Dichloropropane	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
1,4-Dichlorobenzene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
2,2-Dichloropropane	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
2-Butanone	ug/Kg, ug/l	13	ND	18	ND	13	ND	12	ND	11	ND	9.7	ND	8.3	ND	9.4	ND	9.9	ND	11	ND
2-Chlorotoluene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
2-Hexanone	ug/Kg, ug/l	13	ND	18	ND	13	ND	12	ND	11	ND	9.7	ND	8.3	ND	9.4	ND	9.9	ND	11	ND
4-Chlorotoluene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
4-Methyl-2-Pentanone	ug/Kg, ug/l	13	ND	18	ND	13	ND	12	ND	11	ND	9.7	ND	8.3	ND	9.4	ND	9.9	ND	11	ND
Acetone	ug/Kg, ug/l	25	ND	36	ND	26	ND	23	ND	22	ND	19	ND	17	ND	19	ND	20	ND	22	ND
Benzene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
Bromobenzene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
Bromochloromethane	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
Bromodichloromethane	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
Bromoform	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
Bromomethane	ug/Kg, ug/l	13	ND	18	ND	13	ND	12	ND	11	ND	9.7	ND	8.3	ND	9.4	ND	9.9	ND	11	ND
Carbon Disulfide	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
Carbon Tetrachloride	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
Chlorobenzene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
Chloroethane	ug/Kg, ug/l	13	ND	18	ND	13	ND	12	ND	11	ND	9.7	ND	8.3	ND	9.4	ND	9.9	ND	11	ND
Chloroform	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
Chloromethane	ug/Kg, ug/l	13	ND	18	ND	13	ND	12	ND	11	ND	9.7	ND	8.3	ND	9.4	ND	9.9	ND	11	ND
cis-1,2-Dichloroethene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
cis-1,3-Dichloropropene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
Dibromochloromethane	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
Dibromomethane	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
Ethylbenzene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
Freon 113	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
Freon 12	ug/Kg, ug/l	13	ND	18	ND	13	ND	12	ND	11	ND	9.7	ND	8.3	ND	9.4	ND	9.9	ND	11	ND
Gasoline C6-C10	ug/Kg, ug/l	1300	ND																		
Hexachlorobutadiene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
Isopropylbenzene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
m,p-Xylenes	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
Methylene Chloride	ug/Kg, ug/l	25	ND	36	ND	26	ND	23	ND	22	ND	19	ND	17	ND	19	ND	20	ND	22	ND
MTBE	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
Naphthalene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
n-Butylbenzene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
o-Xylene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
para-Isopropyl Toluene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
Propylbenzene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
sec-Butylbenzene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
Styrene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
tert-Butylbenzene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
Tetrachloroethene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
Toluene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
trans-1,2-Dichloroethene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
trans-1,3-Dichloropropene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
Trichloroethene	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
Trichlorofluoromethane	ug/Kg, ug/l	6.4	ND	8.9	ND	6.5	ND	5.9	ND	5.5	ND	4.9	ND	4.2	ND	4.7	ND	5	ND	5.5	ND
Vinyl Acetate	ug/Kg, ug/l	64	ND	89	ND	65	ND	59	ND	55	ND	49	ND	42	ND	47	ND	50	ND	55	ND
Vinyl Chloride	ug/Kg, ug/l	13	ND	18	ND	13	ND	12	ND	11	ND	9.7	ND	8.3	ND	9.4	ND	9.9	ND	11	ND

TABLE 2B
SVOCs BY EPA METHOD 8270C
SUPPLEMENTAL SOILS CHARACTERIZATION
JOHNS MANVILLE PLANT
420 EAST THIRD STREET
PITTSBURG, CALIFORNIA

Sample ID				SB01-08		SB02-08		SB03-08		SB04-03		SB04-08		SB05-02		SB05-08		SB06-03		SB06-08	
Location				SB-01		SB-02		SB-03		SB-04		SB-04		SB-05		SB-05		SB-06		SB-06	
Sample Date				11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005	
Matrix				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SVOCS	US EPA REGION IX PRGs*	RWQCB ESLs**	Units	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result
1,2,4-Trichlorobenzene			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
1,2-Dichlorobenzene			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
1,3-Dichlorobenzene			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
1,4-Dichlorobenzene			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
2,4,5-Trichlorophenol			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
2,4,6-Trichlorophenol			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
2,4-Dichlorophenol			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
2,4-Dimethylphenol			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
2,4-Dinitrotoluene			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
2,6-Dinitrotoluene			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
2-Chloronaphthalene			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
2-Chlorophenol			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
2-Methylnaphthalene		0.25	mg/kg	0.076	ND	0.075	ND	0.079	ND	0.082	ND	0.076	ND	0.79	ND	0.08	ND	0.082	ND	0.079	ND
2-Methylphenol			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
2-Nitroaniline			mg/kg	0.76	ND	0.75	ND	0.79	ND	0.82	ND	0.76	ND	7.9	ND	0.8	ND	0.82	ND	0.79	ND
2-Nitrophenol			mg/kg	0.76	ND	0.75	ND	0.79	ND	0.82	ND	0.76	ND	7.9	ND	0.8	ND	0.82	ND	0.79	ND
3,3'-Dichlorobenzidine			mg/kg	0.76	ND	0.75	ND	0.79	ND	0.82	ND	0.76	ND	7.9	ND	0.8	ND	0.82	ND	0.79	ND
4,6-Dinitro-2-methylphenol			mg/kg	0.76	ND	0.75	ND	0.79	ND	0.82	ND	0.76	ND	7.9	ND	0.8	ND	0.82	ND	0.79	ND
4-Bromophenyl-phenylether			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
4-Chloro-3-methylphenol			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
4-Chloroaniline			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
4-Chlorophenyl-phenylether			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
4-Methylphenol			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
Acenaphthene		13	mg/kg	0.076	ND	0.075	ND	0.079	ND	0.082	ND	0.076	ND	0.79	ND	0.08	ND	0.082	ND	0.079	ND
Anthracene	22,000	2.8	mg/kg	0.076	ND	0.075	ND	0.079	ND	0.082	ND	0.076	ND	0.79	ND	0.08	ND	0.082	ND	0.079	ND
Benzo(a)anthracene	0.62	0.38	mg/kg	0.076	ND	0.075	ND	0.079	ND	0.082	ND	0.076	ND	0.79	ND	0.08	ND	0.082	ND	0.079	ND
Benzo(a)pyrene	0.062	0.038	mg/kg	0.076	ND	0.075	ND	0.079	ND	0.082	ND	0.076	ND	0.79	ND	0.08	ND	0.082	ND	0.079	ND
Benzo(b)fluoranthene	0.62	0.38	mg/kg	0.076	ND	0.075	ND	0.079	ND	0.082	ND	0.076	ND	0.79	ND	0.08	ND	0.082	ND	0.079	ND
Benzo(g,h,i)perylene			mg/kg	0.076	ND	0.075	ND	0.079	ND	0.082	ND	0.076	ND	0.79	ND	0.08	ND	0.082	ND	0.079	ND
Benzo(k)fluoranthene	0.38	0.38	mg/kg	0.076	ND	0.075	ND	0.079	ND	0.082	ND	0.076	ND	0.79	ND	0.08	ND	0.082	ND	0.079	ND
Benzoic acid			mg/kg	1.9	ND	1.9	ND	2	ND	2.1	ND	1.9	ND	20	ND	2	ND	2	ND	2	ND
Benzyl alcohol			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
bis(2-Chloroethoxy)methane			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
bis(2-Chloroethyl)ether			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
bis(2-Ethylhexyl)phthalate			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
Butylbenzylphthalate	12,000		mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	0.86	3.9	ND	0.4	ND	0.41	ND	0.39	ND
Chrysene	3.8	3.8	mg/kg	0.076	ND	0.075	ND	0.079	ND	0.082	ND	0.076	ND	0.79	ND	0.08	ND	0.082	ND	0.079	ND
Dibenz(a,h)anthracene			mg/kg	0.076	ND	0.075	ND	0.079	ND	0.082	ND	0.076	ND	0.79	ND	0.08	ND	0.082	ND	0.079	ND
Diethylphthalate			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
Dimethylphthalate			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
Di-n-butylphthalate			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
Di-n-octylphthalate			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
Fluoranthene	2,300	40	mg/kg	0.076	ND	0.075	ND	0.079	ND	0.082	ND	0.076	ND	0.79	ND	0.08	ND	0.082	ND	0.079	ND
Fluorene	3,700	8.9	mg/kg	0.076	ND	0.075	ND	0.079	ND	0.082	ND	0.076	ND	0.79	ND	0.08	ND	0.082	ND	0.079	ND
Hexachlorobenzene			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
Hexachlorobutadiene			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
Hexachlorocyclopentadiene			mg/kg	0.76	ND	0.75	ND	0.79	ND	0.82	ND	0.76	ND	7.9	ND	0.8	ND	0.82	ND	0.79	ND
Hexachloroethane			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
Indeno(1,2,3-cd)pyrene			mg/kg	0.076	ND	0.075	ND	0.079	ND	0.082	ND	0.076	ND	0.79	ND	0.08	ND	0.082	ND	0.079	ND
Isophorone			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
Naphthalene			mg/kg	0.076	ND	0.075	ND	0.079	ND	0.082	ND	0.076	ND	0.79	ND	0.08	ND	0.082	ND	0.079	ND
Nitrobenzene			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
N-Nitrosodimethylamine			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
N-Nitroso-di-n-propylamine			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
N-Nitrosodiphenylamine			mg/kg	0.38	ND	0.38	ND	0.39	ND	0.41	ND	0.38	ND	3.9	ND	0.4	ND	0.41	ND	0.39	ND
Pentachlorophenol			mg/kg	0.76	ND	0.75	ND	0.79	ND	0.82	ND	0.76	ND	7.9	ND	0.8	ND	0.82	ND	0.79	ND
Phenanthrene		11	mg/kg	0.076	ND	0.075	ND	0.079	ND	0.082	ND	0.076	ND	0.79	ND	0.08	ND	0.082	ND	0.079	ND
Phenol	18,000	19	mg/kg	0.38	1.1	0.38	1.7	0.39	0.72	0.41	2.6	0.38	3.3	3.9	ND	0.4	0.91	0.41	1.9	0.39	2
Pyrene	2,300	85	mg/kg	0.076	ND	0.075	ND	0.079	ND	0.082	ND	0.076	ND	0.79	ND	0.08	ND	0.082	ND	0.079	ND

Notes
* Residential land use
** Residential land use, less than 3 meters, non-potable
Results with highlights indicate above lowest criteria for PRG or ESL.

TABLE 2B
SVOCs BY EPA METHOD 8270C
SUPPLEMENTAL SOILS CHARACTERIZATION
JOHNS MANVILLE PLANT
420 EAST THIRD STREET
PITTSBURG, CALIFORNIA

Sample ID				SB07-03		SB07-08		SB08-03		SB08-08		SB09-03		SB09-08		SB10-03		SB10-08		SB11-03	
Location				SB-07		SB-07		SB-08		SB-08		SB-09		SB-09		SB-10		SB-10		SB-11	
Sample Date				11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005	
Matrix				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SVOCS	US EPA REGION IX PRGs*	RWQCB ESLs**	Units	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result
1,2,4-Trichlorobenzene			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
1,2-Dichlorobenzene			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
1,3-Dichlorobenzene			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
1,4-Dichlorobenzene			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
2,4,5-Trichlorophenol			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
2,4,6-Trichlorophenol			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
2,4-Dichlorophenol			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
2,4-Dimethylphenol			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
2,4-Dinitrotoluene			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
2,6-Dinitrotoluene			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
2-Chloronaphthalene			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
2-Chlorophenol			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
2-Methylnaphthalene		0.25	mg/kg	0.79	**0.83**	0.078	ND	0.082	ND	0.08	ND	0.8	ND	0.083	ND	0.079	ND	0.43	ND	0.074	ND
2-Methylphenol			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
2-Nitroaniline			mg/kg	7.9	ND	0.78	ND	0.82	ND	0.8	ND	8	ND	0.83	ND	0.79	ND	4.3	ND	0.74	ND
2-Nitrophenol			mg/kg	7.9	ND	0.78	ND	0.82	ND	0.8	ND	8	ND	0.83	ND	0.79	ND	4.3	ND	0.74	ND
3,3'-Dichlorobenzidine			mg/kg	7.9	ND	0.78	ND	0.82	ND	0.8	ND	8	ND	0.83	ND	0.79	ND	4.3	ND	0.74	ND
4,6-Dinitro-2-methylphenol			mg/kg	7.9	ND	0.78	ND	0.82	ND	0.8	ND	8	ND	0.83	ND	0.79	ND	4.3	ND	0.74	ND
4-Bromophenyl-phenylether			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
4-Chloro-3-methylphenol			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
4-Chloroaniline			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
4-Chlorophenyl-phenylether			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
4-Methylphenol			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
Acenaphthene		13	mg/kg	0.79	2	0.078	ND	0.082	ND	0.08	ND	0.8	ND	0.083	ND	0.079	ND	0.43	ND	0.074	ND
Anthracene	22,000	2.8	mg/kg	0.79	**2.9**	0.078	ND	0.082	ND	0.08	ND	0.8	ND	0.083	ND	0.079	ND	0.43	ND	0.074	ND
Benzo(a)anthracene	0.62	0.38	mg/kg	0.79	**3.2**	0.078	ND	0.082	ND	0.08	ND	0.8	ND	0.083	ND	0.079	ND	0.43	ND	0.074	ND
Benzo(a)pyrene	0.062	0.038	mg/kg	0.79	**1.6**	0.078	ND	0.082	ND	0.08	ND	0.8	ND	0.083	ND	0.079	ND	0.43	ND	0.074	ND
Benzo(b)fluoranthene	0.62	0.38	mg/kg	0.79	1.1	0.078	ND	0.082	ND	0.08	ND	0.8	ND	0.083	ND	0.079	ND	0.43	ND	0.074	ND
Benzo(g,h,i)perylene			mg/kg	0.79	ND	0.078	ND	0.082	ND	0.08	ND	0.8	ND	0.083	ND	0.079	ND	0.43	ND	0.074	ND
Benzo(k)fluoranthene	0.38	0.38	mg/kg	0.79	**1.5**	0.078	ND	0.082	ND	0.08	ND	0.8	ND	0.083	ND	0.079	ND	0.43	ND	0.074	ND
Benzoic acid			mg/kg	20	ND	1.9	ND	2.1	ND	2	ND	20	ND	2.1	ND	2	ND	11	ND	1.8	ND
Benzyl alcohol			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
bis(2-Chloroethoxy)methane			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
bis(2-Chloroethyl)ether			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
bis(2-Ethylhexyl)phthalate			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
Butylbenzylphthalate	12,000		mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	820	2.1	ND	0.37	ND
Chrysene	3.8	3.8	mg/kg	0.79	**4.3**	0.078	ND	0.082	ND	0.08	ND	0.8	ND	0.083	ND	0.079	ND	0.43	ND	0.074	ND
Dibenz(a,h)anthracene			mg/kg	0.79	ND	0.078	ND	0.082	ND	0.08	ND	0.8	ND	0.083	ND	0.079	ND	0.43	ND	0.074	ND
Diethylphthalate			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
Dimethylphthalate			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
Di-n-butylphthalate			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
Di-n-octylphthalate			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
Fluoranthene	2,300	40	mg/kg	0.79	5.2	0.078	ND	0.082	ND	0.08	ND	0.8	ND	0.083	ND	0.079	ND	0.43	ND	0.074	ND
Fluorene	3,700	8.9	mg/kg	0.79	2.1	0.078	ND	0.082	ND	0.08	ND	0.8	ND	0.083	ND	0.079	ND	0.43	ND	0.074	ND
Hexachlorobenzene			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
Hexachlorobutadiene			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
Hexachlorocyclopentadiene			mg/kg	7.9	ND	0.78	ND	0.82	ND	0.8	ND	8	ND	0.83	ND	0.79	ND	4.3	ND	0.74	ND
Hexachloroethane			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
Indeno(1,2,3-cd)pyrene			mg/kg	0.79	ND	0.078	ND	0.082	ND	0.08	ND	0.8	ND	0.083	ND	0.079	ND	0.43	ND	0.074	ND
Isophorone			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
Naphthalene			mg/kg	0.79	ND	0.078	ND	0.082	ND	0.08	ND	0.8	ND	0.083	ND	0.079	ND	0.43	ND	0.074	ND
Nitrobenzene			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
N-Nitrosodimethylamine			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
N-Nitroso-di-n-propylamine			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
N-Nitrosodiphenylamine			mg/kg	3.9	ND	0.39	ND	0.41	ND	0.4	ND	4	ND	0.41	ND	0.4	ND	2.1	ND	0.37	ND
Pentachlorophenol			mg/kg	7.9	ND	0.78	ND	0.82	ND	0.8	ND	8	ND	0.83	ND	0.79	ND	4.3	ND	0.74	ND
Phenanthrene		11	mg/kg	0.79	**13**	0.078	ND	0.082	ND	0.08	ND	0.8	ND	0.083	ND	0.079	ND	0.43	ND	0.074	ND
Phenol	18,000	19	mg/kg	3.9	ND	0.39	1.6	0.41	1.7	0.4	0.91	4	ND	0.41	1.9	0.4	1.9	2.1	2.5	0.37	1.1
Pyrene	2,300	85	mg/kg	0.79	**7,300**	0.078	ND	0.082	ND	0.08	ND	0.8	ND	0.083	ND	0.079	ND	0.43	ND	0.074	ND

Notes
* Residential land use
** Residential land use, less than 3 meters, non-potable
Results with highlights indicate above lowest criteria for PRG or ESL.

TABLE 2B
SVOCs BY EPA METHOD 8270C
SUPPLEMENTAL SOILS CHARACTERIZATION
JOHNS MANVILLE PLANT
420 EAST THIRD STREET
PITTSBURG, CALIFORNIA

Sample ID				SB11-08		SB12-03		SB12-08		SB13-03		SB13-08		SB14-03		SB14-08		SB15-08		SB16-08	
Location				SB-11		SB-12		SB-12		SB-13		SB-13		SB-14		SB-14		SB-15		SB-16	
Sample Date				11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005	
Matrix				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SVOCS	US EPA REGION IX PRGs*	RWQCB ESLs**	Units	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result
1,2,4-Trichlorobenzene			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
1,2-Dichlorobenzene			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
1,3-Dichlorobenzene			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
1,4-Dichlorobenzene			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
2,4,5-Trichlorophenol			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
2,4,6-Trichlorophenol			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
2,4-Dichlorophenol			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
2,4-Dimethylphenol			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
2,4-Dinitrotoluene			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
2,6-Dinitrotoluene			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
2-Chloronaphthalene			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
2-Chlorophenol			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
2-Methylnaphthalene		0.25	mg/kg	0.53	ND	14	ND	0.57	ND	1.5	ND	1.6	ND	0.36	ND	0.37	ND	0.16	ND	0.08	ND
2-Methylphenol			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
2-Nitroaniline			mg/kg	5.3	ND	140	ND	5.7	ND	15	ND	16	ND	3.6	ND	3.7	ND	1.6	ND	0.8	ND
2-Nitrophenol			mg/kg	5.3	ND	140	ND	5.7	ND	15	ND	16	ND	3.6	ND	3.7	ND	1.6	ND	0.8	ND
3,3'-Dichlorobenzidine			mg/kg	5.3	ND	140	ND	5.7	ND	15	ND	16	ND	3.6	ND	3.7	ND	1.6	ND	0.8	ND
4,6-Dinitro-2-methylphenol			mg/kg	5.3	ND	140	ND	5.7	ND	15	ND	16	ND	3.6	ND	3.7	ND	1.6	ND	0.8	ND
4-Bromophenyl-phenylether			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
4-Chloro-3-methylphenol			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
4-Chloroaniline			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
4-Chlorophenyl-phenylether			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
4-Methylphenol			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
Acenaphthene		13	mg/kg	0.53	ND	14	ND	0.57	ND	1.5	ND	1.6	ND	0.36	ND	0.37	ND	0.16	ND	0.08	ND
Anthracene	22,000	2.8	mg/kg	0.53	ND	14	ND	0.57	ND	1.5	ND	1.6	ND	0.36	ND	0.37	ND	0.16	ND	0.08	ND
Benzo(a)anthracene	0.62	0.38	mg/kg	0.53	ND	14	ND	0.57	ND	1.5	ND	1.6	ND	0.36	ND	0.37	ND	0.16	ND	0.08	ND
Benzo(a)pyrene	0.062	0.038	mg/kg	0.53	ND	14	ND	0.57	ND	1.5	ND	1.6	ND	0.36	ND	0.37	ND	0.16	ND	0.08	ND
Benzo(b)fluoranthene	0.62	0.38	mg/kg	0.53	ND	14	ND	0.57	ND	1.5	ND	1.6	ND	0.36	ND	0.37	ND	0.16	ND	0.08	ND
Benzo(g,h,i)perylene			mg/kg	0.53	ND	14	ND	0.57	ND	1.5	ND	1.6	ND	0.36	ND	0.37	ND	0.16	ND	0.08	ND
Benzo(k)fluoranthene	0.38	0.38	mg/kg	0.53	ND	14	ND	0.57	ND	1.5	ND	1.6	ND	0.36	ND	0.37	ND	0.16	ND	0.08	ND
Benzoic acid			mg/kg	13	ND	350	ND	14	ND	39	ND	40	ND	9	ND	9.3	ND	4	ND	2	ND
Benzyl alcohol			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
bis(2-Chloroethoxy)methane			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
bis(2-Chloroethyl)ether			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
bis(2-Ethylhexyl)phthalate			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
Butylbenzylphthalate	12,000		mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
Chrysene	3.8	3.8	mg/kg	0.53	ND	14	ND	0.57	ND	1.5	ND	1.6	ND	0.36	ND	0.37	ND	0.16	ND	0.08	ND
Dibenz(a,h)anthracene			mg/kg	0.53	ND	14	ND	0.57	ND	1.5	ND	1.6	ND	0.36	ND	0.37	ND	0.16	ND	0.08	ND
Diethylphthalate			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
Dimethylphthalate			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
Di-n-butylphthalate			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
Di-n-octylphthalate			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
Fluoranthene	2,300	40	mg/kg	0.53	ND	14	ND	0.57	ND	1.5	ND	1.6	ND	0.36	ND	0.37	ND	0.16	ND	0.08	ND
Fluorene	3,700	8.9	mg/kg	0.53	ND	14	ND	0.57	ND	1.5	ND	1.6	ND	0.36	ND	0.37	ND	0.16	ND	0.08	ND
Hexachlorobenzene			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
Hexachlorobutadiene			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
Hexachlorocyclopentadiene			mg/kg	5.3	ND	140	ND	5.7	ND	15	ND	16	ND	3.6	ND	3.7	ND	1.6	ND	0.8	ND
Hexachloroethane			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
Indeno(1,2,3-cd)pyrene			mg/kg	0.53	ND	14	ND	0.57	ND	1.5	ND	1.6	ND	0.36	ND	0.37	ND	0.16	ND	0.08	ND
Isophorone			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
Naphthalene			mg/kg	0.53	ND	14	ND	0.57	ND	1.5	ND	1.6	ND	0.36	ND	0.37	ND	0.16	ND	0.08	ND
Nitrobenzene			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
N-Nitrosodimethylamine			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
N-Nitroso-di-n-propylamine			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
N-Nitrosodiphenylamine			mg/kg	2.7	ND	71	ND	2.8	ND	7.7	ND	7.9	ND	1.8	ND	1.9	ND	0.81	ND	0.4	ND
Pentachlorophenol			mg/kg	5.3	ND	140	ND	5.7	ND	15	ND	16	ND	3.6	ND	3.7	ND	1.6	ND	0.8	ND
Phenanthrene		11	mg/kg	0.53	ND	14	ND	0.57	ND	1.5	ND	1.6	ND	0.36	ND	0.37	ND	0.16	ND	0.08	ND
Phenol	18,000	19	mg/kg	2.7	ND	71	ND	2.8	9.6	7.7	ND	7.9	ND	1.8	5.1	1.9	2.8	0.81	2.4	0.4	2.3
Pyrene	2,300	85	mg/kg	0.53	ND	14	ND	0.57	ND	1.5	ND	1.6	ND	0.36	ND	0.37	ND	0.16	ND	0.08	ND

Notes
* Residential land use
** Residential land use, less than 3 meters, non-potable
Results with highlights indicate above lowest criteria for PRG or ESL.

TABLE 2B
SVOCs BY EPA METHOD 8270C
SUPPLEMENTAL SOILS CHARACTERIZATION
JOHNS MANVILLE PLANT
420 EAST THIRD STREET
PITTSBURG, CALIFORNIA

Sample ID				SB-17-15		SB-17-3		SB19-08		SB20-08		SB21-08		SAMPLE PILE EAST		SAMPLE PILE WEST	
Location				SB-17		SB-17		Dup of SB03-08		Dup of SB02-08		Dup of SB09-08		SAMPLE		SAMPLE	
Sample Date				11/15/2005		11/15/2005		11/11/2005		11/11/2005		11/11/2005		11/15/2005		11/15/2005	
Matrix				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SVOCS	US EPA REGION IX PRGs*	RWQCB ESLs**	Units	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result
1,2,4-Trichlorobenzene			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
1,2-Dichlorobenzene			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
1,3-Dichlorobenzene			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
1,4-Dichlorobenzene			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
2,4,5-Trichlorophenol			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
2,4,6-Trichlorophenol			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
2,4-Dichlorophenol			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
2,4-Dimethylphenol			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
2,4-Dinitrotoluene			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
2,6-Dinitrotoluene			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
2-Chloronaphthalene			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
2-Chlorophenol			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
2-Methylnaphthalene		0.25	mg/kg	0.08	ND	0.39	ND	0.078	ND	0.076	ND	0.084	ND	0.2	ND	0.2	ND
2-Methylphenol			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
2-Nitroaniline			mg/kg	0.8	ND	3.9	ND	0.78	ND	0.76	ND	0.84	ND	2	ND	2	ND
2-Nitrophenol			mg/kg	0.8	ND	3.9	ND	0.78	ND	0.76	ND	0.84	ND	2	ND	2	ND
3,3'-Dichlorobenzidine			mg/kg	0.8	ND	3.9	ND	0.78	ND	0.76	ND	0.84	ND	2	ND	2	ND
4,6-Dinitro-2-methylphenol			mg/kg	0.8	ND	3.9	ND	0.78	ND	0.76	ND	0.84	ND	2	ND	2	ND
4-Bromophenyl-phenylether			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
4-Chloro-3-methylphenol			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
4-Chloroaniline			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
4-Chlorophenyl-phenylether			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
4-Methylphenol			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
Acenaphthene		13	mg/kg	0.08	ND	0.39	ND	0.078	ND	0.076	ND	0.084	ND	0.2	ND	0.2	ND
Anthracene	22,000	2.8	mg/kg	0.08	ND	0.39	ND	0.078	ND	0.076	ND	0.084	ND	0.2	ND	0.2	ND
Benzo(a)anthracene	0.62	0.38	mg/kg	0.08	ND	0.39	ND	0.078	ND	0.076	ND	0.084	ND	0.2	ND	0.2	ND
Benzo(a)pyrene	0.062	0.038	mg/kg	0.08	ND	0.39	ND	0.078	ND	0.076	ND	0.084	ND	0.2	ND	0.2	ND
Benzo(b)fluoranthene	0.62	0.38	mg/kg	0.08	ND	0.39	ND	0.078	ND	0.076	ND	0.084	ND	0.2	ND	0.2	ND
Benzo(g,h,i)perylene			mg/kg	0.08	ND	0.39	ND	0.078	ND	0.076	ND	0.084	ND	0.2	ND	0.2	ND
Benzo(k)fluoranthene	0.38	0.38	mg/kg	0.08	ND	0.39	ND	0.078	ND	0.076	ND	0.084	ND	0.2	ND	0.2	ND
Benzoic acid			mg/kg	2	ND	9.8	ND	2	ND	1.9	ND	2.1	ND	5	ND	5	ND
Benzyl alcohol			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
bis(2-Chloroethoxy)methane			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
bis(2-Chloroethyl)ether			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
bis(2-Ethylhexyl)phthalate			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
Butylbenzylphthalate	12,000		mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
Chrysene	3.8	3.8	mg/kg	0.08	ND	0.39	ND	0.078	ND	0.076	ND	0.084	ND	0.2	ND	0.2	ND
Dibenz(a,h)anthracene			mg/kg	0.08	ND	0.39	ND	0.078	ND	0.076	ND	0.084	ND	0.2	ND	0.2	ND
Diethylphthalate			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
Dimethylphthalate			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
Di-n-butylphthalate			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
Di-n-octylphthalate			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
Fluoranthene	2,300	40	mg/kg	0.08	ND	0.39	ND	0.078	ND	0.076	ND	0.084	ND	0.2	ND	0.2	ND
Fluorene	3,700	8.9	mg/kg	0.08	ND	0.39	ND	0.078	ND	0.076	ND	0.084	ND	0.2	ND	0.2	ND
Hexachlorobenzene			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
Hexachlorobutadiene			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
Hexachlorocyclopentadiene			mg/kg	0.8	ND	3.9	ND	0.78	ND	0.76	ND	0.84	ND	2	ND	2	ND
Hexachloroethane			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
Indeno(1,2,3-cd)pyrene			mg/kg	0.08	ND	0.39	ND	0.078	ND	0.076	ND	0.084	ND	0.2	ND	0.2	ND
Isophorone			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
Naphthalene			mg/kg	0.08	ND	0.39	ND	0.078	ND	0.076	ND	0.084	ND	0.2	ND	0.2	ND
Nitrobenzene			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
N-Nitrosodimethylamine			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
N-Nitroso-di-n-propylamine			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
N-Nitrosodiphenylamine			mg/kg	0.4	ND	2	ND	0.39	ND	0.38	ND	0.42	ND	1	ND	1	ND
Pentachlorophenol			mg/kg	0.8	ND	3.9	ND	0.78	ND	0.76	ND	0.84	ND	2	ND	2	ND
Phenanthrene		11	mg/kg	0.08	ND	0.39	ND	0.078	ND	0.076	ND	0.084	ND	0.2	ND	0.2	ND
Phenol	18,000	19	mg/kg	0.4	0.93	2	ND	0.39	2.9	0.38	0.95	0.42	1.9	1	ND	1	ND
Pyrene	2,300	85	mg/kg	0.08	ND	0.39	ND	0.078	ND	0.076	ND	0.084	ND	0.2	ND	0.2	ND

Notes
* Residential land use
** Residential land use, less than 3 meters, non-potable
Results with highlights indicate above lowest criteria for PRG or ESL

TABLE 2C
PAHs BY EPA METHOD 8310
SUPPLEMENTAL SOILS CHARACTERIZATION
JOHNS MANVILLE PLANT
420 EAST THIRD STREET
PITTSBURG, CALIFORNIA

Sample ID				SB01-03		SB02-03		SB03-03		SB04-03		SB05-02		SB06-03	
Location				SB-01		SB-02		SB-03		SB-04		SB-05		SB-06	
Sample Date				11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005	
Matrix				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
PAHS	US EPA REGION IX PRGs*	RWQCB ESLs**	Units	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result
						0									
Acenaphthene	3,700	19	mg/kg	0.04	ND	0.039	ND	0.04	ND	0.4	ND	0.16	ND	0.04	ND
Anthracene	22,000	2.8	mg/kg	0.004	ND	0.0039	ND	0.004	ND	0.04	ND	0.016	ND	0.004	ND
Benzo(a)anthracene	0.62	0.38	mg/kg	0.004	ND	0.0039	ND	0.004	ND	0.04	ND	0.016	ND	0.004	ND
Benzo(a)pyrene	0.062	0.038	mg/kg	0.004	ND	0.0039	ND	0.004	ND	0.04	ND	0.016	ND	0.004	ND
Benzo(b)fluoranthene	0.62	0.38	mg/kg	0.0081	ND	0.0078	ND	0.008	ND	0.081	ND	0.032	ND	0.0081	ND
Benzo(g,h,i)perylene		27	mg/kg	0.0081	ND	0.0078	ND	0.008	ND	0.081	ND	0.032	0.033	0.0081	ND
Benzo(k)fluoranthene	0.38	0.38	mg/kg	0.004	ND	0.0039	ND	0.004	ND	0.04	ND	0.016	ND	0.004	ND
Chrysene	3.8	3.8	mg/kg	0.004	ND	0.0039	ND	0.004	ND	0.04	0.17	0.016	0.024	0.004	ND
Dibenz(a,h)anthracene	0.062	0.11	mg/kg	0.0081	ND	0.0078	ND	0.008	ND	0.081	ND	0.032	ND	0.0081	ND
Fluoranthene	2,300	40	mg/kg	0.0081	ND	0.0078	ND	0.008	ND	0.081	0.12	0.032	0.059	0.0081	ND
Fluorene	2,700	8.9	mg/kg	0.0081	ND	0.0078	ND	0.008	ND	0.081	ND	0.032	ND	0.0081	ND
Indeno(1,2,3-cd)pyrene	0.62	0.38	mg/kg	0.004	ND	0.0039	ND	0.004	ND	0.04	0.074	0.016	0.017	0.004	ND
Naphthalene	1.7	4.5	mg/kg	0.04	ND	0.039	ND	0.04	ND	0.4	ND	0.16	ND	0.04	ND
Phenanthrene		11	mg/kg	0.004	ND	0.0039	ND	0.004	ND	0.04	0.051	0.016	0.021	0.004	ND
Pyrene	2300	85	mg/kg	0.004	ND	0.0039	ND	0.004	ND	0.04	0.082	0.016	0.029	0.004	ND

Notes

* Residential land use

** Residential land use, less than 3 meters, non-potable

Results with highlights indicate above lowest criteria for PRG or ESL.

TABLE 2C
PAHs BY EPA METHOD 8310
SUPPLEMENTAL SOILS CHARACTERIZATION
JOHNS MANVILLE PLANT
420 EAST THIRD STREET
PITTSBURG, CALIFORNIA

Sample ID				SB07-03		SB08-03		SB09-03		SB10-03		SB11-03		SB12-03	
Location				SB-07		SB-08		SB-09		SB-10		SB-11		SB-12	
Sample Date				11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005	
Matrix				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
PAHS	US EPA REGION IX PRGs*	RWQCB ESLs**	Units	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result
Acenaphthene	3,700	19	mg/kg	0.16	ND	0.41	ND	0.04	ND	0.15	ND	3.7	ND	0.35	ND
Anthracene	22,000	2.8	mg/kg	0.016	ND	0.041	ND	0.004	ND	0.015	ND	0.37	ND	0.035	0.073
Benzo(a)anthracene	0.62	0.38	mg/kg	0.016	ND	0.041	ND	0.004	ND	0.015	ND	0.37	ND	0.035	0.072
Benzo(a)pyrene	0.062	0.038	mg/kg	0.016	ND	0.041	ND	0.004	ND	0.015	ND	0.37	ND	0.035	**0.059**
Benzo(b)fluoranthene	0.62	0.38	mg/kg	0.032	ND	0.082	ND	0.0079	ND	0.031	ND	0.74	ND	0.071	0.1
Benzo(g,h,i)perylene		27	mg/kg	0.032	ND	0.082	0.089	0.0079	ND	0.031	ND	0.74	ND	0.071	0.26
Benzo(k)fluoranthene	0.38	0.38	mg/kg	0.016	ND	0.041	ND	0.004	ND	0.015	ND	0.37	ND	0.035	0.036
Chrysene	3.8	3.8	mg/kg	0.016	ND	0.041	ND	0.004	0.0057	0.015	0.057	0.37	ND	0.035	0.42
Dibenz(a,h)anthracene	0.062	0.11	mg/kg	0.032	ND	0.082	**0.16**	0.0079	ND	0.031	ND	0.74	**0.76**	0.071	**0.23**
Fluoranthene	2,300	40	mg/kg	0.032	ND	0.082	ND	0.0079	ND	0.031	ND	0.74	ND	0.071	0.27
Fluorene	2,700	8.9	mg/kg	0.032	ND	0.082	ND	0.0079	ND	0.031	ND	0.74	ND	0.071	ND
Indeno(1,2,3-cd)pyrene	0.62	0.38	mg/kg	0.016	0.019	0.041	0.044	0.004	ND	0.015	ND	0.37	**0.58**	0.035	0.048
Naphthalene	1.7	4.5	mg/kg	0.16	ND	0.41	ND	0.04	ND	0.15	ND	3.7	ND	0.35	ND
Phenanthrene		11	mg/kg	0.016	ND	0.041	ND	0.004	ND	0.015	0.022	0.37	ND	0.035	0.17
Pyrene	2300	85	mg/kg	0.016	ND	0.041	ND	0.004	ND	0.015	0.018	0.37	ND	0.035	0.13

Notes

* Residential land use

** Residential land use, less than 3 meters, non-potable

Results with highlights indicate above lowest criteria for PRG or ESL.

TABLE 2C
PAHs BY EPA METHOD 8310
SUPPLEMENTAL SOILS CHARACTERIZATION
JOHNS MANVILLE PLANT
420 EAST THIRD STREET
PITTSBURG, CALIFORNIA

Sample ID				SB13-03		SB14-03		SB15-03		SB16-03		SB18-03		SB21-03	
Location				SB-13		SB-14		SB-15		SB-16		Dup of SB12-03		Dup of SB09-03	
Sample Date				11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005	
Matrix				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
PAHS	US EPA REGION IX PRGs*	RWQCB ESLs**	Units	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result
Acenaphthene	3,700	19	mg/kg	0.39	ND	0.36	ND	0.37	ND	3.6	ND	4.2	ND	0.039	ND
Anthracene	22,000	2.8	mg/kg	0.039	ND	0.036	ND	0.037	ND	0.36	ND	0.42	ND	0.0039	ND
Benzo(a)anthracene	0.62	0.38	mg/kg	0.039	ND	0.036	0.17	0.037	ND	0.36	ND	0.42	ND	0.0039	ND
Benzo(a)pyrene	0.062	0.038	mg/kg	0.039	ND	0.036	ND	0.037	ND	0.36	ND	0.42	ND	0.0039	ND
Benzo(b)fluoranthene	0.62	0.38	mg/kg	0.078	ND	0.072	0.19	0.075	ND	0.72	ND	0.84	ND	0.0079	ND
Benzo(g,h,i)perylene		27	mg/kg	0.078	0.14	0.072	0.56	0.075	0.11	0.72	ND	0.84	ND	0.0079	ND
Benzo(k)fluoranthene	0.38	0.38	mg/kg	0.039	ND	0.036	ND	0.037	ND	0.36	ND	0.42	ND	0.0039	ND
Chrysene	3.8	3.8	mg/kg	0.039	0.18	0.036	0.48	0.037	0.076	0.36	ND	0.42	ND	0.0039	0.0084
Dibenz(a,h)anthracene	0.062	0.11	mg/kg	0.078	**0.081**	0.072	**0.17**	0.075	**0.1**	0.72	ND	0.84	ND	0.0079	0.0084
Fluoranthene	2,300	40	mg/kg	0.078	0.11	0.072	0.24	0.075	0.077	0.72	ND	0.84	ND	0.0079	ND
Fluorene	2,700	8.9	mg/kg	0.078	ND	0.072	ND	0.075	ND	0.72	ND	0.84	ND	0.0079	ND
Indeno(1,2,3-cd)pyrene	0.62	0.38	mg/kg	0.039	0.041	0.036	0.1	0.037	0.059	0.36	ND	0.42	ND	0.0039	ND
Naphthalene	1.7	4.5	mg/kg	0.39	ND	0.36	ND	0.37	ND	3.6	ND	4.2	ND	0.039	ND
Phenanthrene		11	mg/kg	0.039	0.07	0.036	0.2	0.037	ND	0.36	ND	0.42	ND	0.0039	ND
Pyrene	2300	85	mg/kg	0.039	0.063	0.036	0.17	0.037	ND	0.36	ND	0.42	ND	0.0039	ND

Notes

* Residential land use

** Residential land use, less than 3 meters, non-potable

Results with highlights indicate above lowest criteria for PRG or ESL.

TABLE 2D
PCBs BY EPA METHOD 8082
SUPPLEMENTAL SOILS CHARACTERIZATION
JOHNS MANVILLE PLANT
420 EAST THIRD STREET
PITTSBURG, CALIFORNIA

Sample ID				SB10-03		SB11-03		SB12-03		SB13-03	
Location				SB-10		SB-11		SB-12		SB-13	
Sample Date				11/11/2005		11/11/2005		11/11/2005		11/11/2005	
Matrix				SOIL		SOIL		SOIL		SOIL	
PESTPCBS	US EPA REGION IX PRGs*	RWQCB ESLs**	Units	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result
Aroclor-1016			mg/kg	0.011	ND	0.01	ND	0.01	ND	0.011	ND
Aroclor-1221			mg/kg	0.023	ND	0.021	ND	0.021	ND	0.023	ND
Aroclor-1232			mg/kg	0.011	ND	0.01	ND	0.01	ND	0.011	ND
Aroclor-1242			mg/kg	0.011	ND	0.01	ND	0.01	ND	0.011	ND
Aroclor-1248			mg/kg	0.011	ND	0.01	ND	0.01	ND	0.011	ND
Aroclor-1254	0.22		mg/kg	0.011	ND	0.01	ND	0.01	ND	0.011	**61**
Aroclor-1260			mg/kg	0.011	ND	0.01	ND	0.01	ND	0.011	ND

Notes

* Residential land use

** Residential land use, less than 3 meters, non-potable

Results with highlights indicate above lowest criteria for PRG or ESL.

TABLE 2E
TOTAL METALS
SUPPLEMENTAL SOILS CHARACTERIZATION
JOHNS MANVILLE PLANT
420 EAST THIRD STREET
PITTSBURG, CALIFORNIA

Sample ID				SB01-03		SB01-08		SB02-03		SB02-08		SB03-03		SB03-08	
Location				SB-01		SB-01		SB-02		SB-02		SB-03		SB-03	
Sample Date				11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005	
Matrix				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
METALS	US EPA REGION IX PRGs*	RWQCB ESLs**	Units	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result
Antimony	31	6.3	mg/kg	3.5	ND	3.2	ND	2.8	ND	3.2	ND	2.7	ND	2.6	ND
Arsenic	0.062	5.5	mg/kg	0.29	**5.2**	0.27	**5**	0.23	**5**	0.27	**4.2**	0.23	**4.9**	0.21	**4.2**
Barium	5,400	750	mg/kg	0.58	110	0.53	95	0.46	110	0.54	190	0.45	120	0.43	100
Beryllium	150	4	mg/kg	0.12	0.52	0.11	0.4	0.093	0.44	0.11	0.33	0.091	0.41	0.085	0.34
Cadmium	37	1.7	mg/kg	0.29	0.4	0.27	ND	0.23	0.35	0.27	ND	0.23	0.35	0.21	0.3
Chromium	210	58	mg/kg	0.58	38	0.53	17	0.46	35	0.54	17	0.45	32	0.43	23
Cobalt	900	40	mg/kg	1.2	10	1.1	6.7	0.93	11	1.1	8.1	0.91	9.7	0.85	8
Copper	3,100	230	mg/kg	0.58	20	0.53	16	0.46	19	0.54	14	0.45	20	0.43	16
Lead	150	200	mg/kg	0.17	5	0.16	4.7	0.14	5.2	0.16	4.7	0.14	5.2	0.13	4.5
Mercury	23	2.5	mg/kg	0.027	ND	0.022	ND	0.022	ND	0.024	ND	0.021	ND	0.019	ND
Molybdenum	390	40	mg/kg	1.2	ND	1.1	ND	0.93	ND	1.1	ND	0.91	ND	0.85	ND
Nickel	1,600	150	mg/kg	1.2	59	1.1	17	0.93	36	1.1	20	0.91	30	0.85	24
Selenium	390	10	mg/kg	0.29	ND	0.27	0.45	0.23	0.29	0.27	0.42	0.23	0.5	0.21	0.42
Silver	390	20	mg/kg	0.29	ND	0.27	ND	0.23	ND	0.27	ND	0.23	ND	0.21	ND
Thallium	5.2	1	mg/kg	0.29	ND	0.27	ND	0.23	ND	0.27	ND	0.23	ND	0.21	ND
Vanadium		110	mg/kg	0.58	58	0.53	37	0.46	54	0.54	40	0.45	55	0.43	45
Zinc	23,000	600	mg/kg	1.2	49	1.1	44	0.93	49	1.1	43	0.91	49	0.85	45

Notes

* Residential land use

** Residential land use, less than 3 meters, non-potable

Results with highlights indicate above lowest criteria for PRG or ESL.

TABLE 2E
TOTAL METALS
SUPPLEMENTAL SOILS CHARACTERIZATION
JOHNS MANVILLE PLANT
420 EAST THIRD STREET
PITTSBURG, CALIFORNIA

Sample ID				SB04-03		SB04-08		SB05-02		SB05-08		SB06-03		SB06-08	
Location				SB-04		SB-04		SB-05		SB-05		SB-06		SB-06	
Sample Date				11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005	
Matrix				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
METALS	US EPA REGION IX PRGs*	RWQCB ESLs**	Units	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result
Antimony	31	6.3	mg/kg	3.6	ND	2.7	ND	3.2	ND	3.5	ND	3.7	ND	2.8	ND
Arsenic	0.062	5.5	mg/kg	0.3	**5.2**	0.22	**4**	0.27	**5**	0.29	**5**	0.3	**6.2**	0.23	**4.4**
Barium	5,400	750	mg/kg	0.59	110	0.44	85	0.54	110	0.58	120	0.61	190	0.46	69
Beryllium	150	4	mg/kg	0.12	0.43	0.089	0.34	0.11	0.39	0.12	0.47	0.12	0.63	0.093	0.44
Cadmium	37	1.7	mg/kg	0.3	0.34	0.22	0.41	0.27	0.5	0.29	0.55	0.3	0.6	0.23	0.56
Chromium	210	58	mg/kg	0.59	35	0.44	26	0.54	29	0.58	36	0.61	37	0.46	24
Cobalt	900	40	mg/kg	1.2	15	0.89	9.4	1.1	11	1.2	11	1.2	10	0.93	9
Copper	3,100	230	mg/kg	0.59	20	0.44	18	0.54	20	0.58	19	0.61	24	0.46	21
Lead	150	200	mg/kg	0.18	6.6	0.13	7.1	0.16	11	0.18	5.2	0.18	7.2	0.14	5.1
Mercury	23	2.5	mg/kg	0.021	0.2	0.022	ND	0.024	ND	0.024	ND	0.02	ND	0.018	ND
Molybdenum	390	40	mg/kg	1.2	ND	0.89	ND	1.1	ND	1.2	ND	1.2	ND	0.93	ND
Nickel	1,600	150	mg/kg	1.2	29	0.89	25	1.1	30	1.2	33	1.2	35	0.93	22
Selenium	390	10	mg/kg	0.3	0.5	0.22	ND	0.27	ND	0.29	ND	0.3	0.35	0.23	ND
Silver	390	20	mg/kg	0.3	ND	0.22	ND	0.27	ND	0.29	ND	0.3	ND	0.23	ND
Thallium	5.2	1	mg/kg	0.3	ND	0.22	ND	0.27	ND	0.29	ND	0.3	ND	0.23	ND
Vanadium		110	mg/kg	0.59	60	0.44	39	0.54	49	0.58	55	0.61	60	0.46	41
Zinc	23,000	600	mg/kg	1.2	47	0.89	32	1.1	45	1.2	49	1.2	66	0.93	54

Notes

* Residential land use

** Residential land use, less than 3 meters, non-potable

Results with highlights indicate above lowest criteria for PRG or ESL.

TABLE 2E
TOTAL METALS
SUPPLEMENTAL SOILS CHARACTERIZATION
JOHNS MANVILLE PLANT
420 EAST THIRD STREET
PITTSBURG, CALIFORNIA

Sample ID				SB07-03		SB07-08		SB08-03		SB08-08		SB09-03		SB09-08	
Location				SB-07		SB-07		SB-08		SB-08		SB-09		SB-09	
Sample Date				11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005	
Matrix				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
METALS	US EPA REGION IX PRGs*	RWQCB ESLs**	Units	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result
Antimony	31	6.3	mg/kg	2.3	ND	2.9	ND	2.6	ND	2.6	ND	2.9	ND	3.1	ND
Arsenic	0.062	5.5	mg/kg	0.19	**6.7**	0.24	**5.8**	0.22	**6.2**	0.22	**4.9**	0.24	**6.1**	0.26	**7.2**
Barium	5,400	750	mg/kg	3.8	**1,300**	0.48	64	0.44	240	0.43	84	0.48	210	0.52	82
Beryllium	150	4	mg/kg	0.077	0.5	0.096	0.64	0.088	0.52	0.086	0.5	0.095	0.55	0.1	0.62
Cadmium	37	1.7	mg/kg	0.19	0.76	0.24	0.63	0.22	0.64	0.22	0.63	0.24	0.57	0.26	0.62
Chromium	210	58	mg/kg	0.38	22	0.48	35	0.44	37	0.43	33	0.48	29	0.52	25
Cobalt	900	40	mg/kg	0.77	7	0.96	11	0.88	11	0.86	12	0.95	9.4	1	10
Copper	3,100	230	mg/kg	0.38	21	0.48	23	0.44	24	0.43	23	0.48	18	0.52	5.4
Lead	150	200	mg/kg	0.12	5.8	0.14	25	0.13	8.4	0.13	8	0.14	5.8	0.16	6.3
Mercury	23	2.5	mg/kg	0.023	0.26	0.023	ND	0.021	0.021	0.026	0.035	0.022	0.024	0.021	ND
Molybdenum	390	40	mg/kg	0.77	0.88	0.96	ND	0.88	ND	0.86	ND	0.95	ND	1	ND
Nickel	1,600	150	mg/kg	0.77	21	0.96	37	0.88	42	0.86	26	0.95	43	1	27
Selenium	390	10	mg/kg	0.19	ND	0.24	ND	0.22	0.33	0.22	ND	0.24	ND	0.26	0.35
Silver	390	20	mg/kg	0.19	ND	0.24	ND	0.22	ND	0.22	ND	0.24	ND	0.26	ND
Thallium	5.2	1	mg/kg	0.19	ND	0.24	ND	0.22	ND	0.22	ND	0.24	ND	0.26	**8.1**
Vanadium		110	mg/kg	0.38	40	0.48	57	0.44	57	0.43	54	0.48	52	0.52	48
Zinc	23,000	600	mg/kg	0.77	53	0.96	59	0.88	57	8.6	270	0.95	54	1	67

Notes

* Residential land use

** Residential land use, less than 3 meters, non-potable

Results with highlights indicate above lowest criteria for PRG or ESL.

TABLE 2E
TOTAL METALS
SUPPLEMENTAL SOILS CHARACTERIZATION
JOHNS MANVILLE PLANT
420 EAST THIRD STREET
PITTSBURG, CALIFORNIA

Sample ID				SB10-03		SB10-08		SB11-03		SB11-08		SB12-03		SB12-08	
Location				SB-10		SB-10		SB-11		SB-11		SB-12		SB-12	
Sample Date				11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005	
Matrix				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
METALS	US EPA REGION IX PRGs*	RWQCB ESLs**	Units	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result
Antimony	31	6.3	mg/kg	3.9	ND	4.2	ND	3.5	ND	2.6	ND	3	ND	3.6	ND
Arsenic	0.062	5.5	mg/kg	0.33	4	0.35	**6.6**	0.3	**5.8**	0.22	**11**	0.25	**3.6**	0.3	**2**
Barium	5,400	750	mg/kg	0.65	160	0.7	240	0.59	49	0.43	220	0.51	60	0.6	58
Beryllium	150	4	mg/kg	0.13	0.48	0.14	0.67	0.12	ND	0.086	0.59	0.1	0.17	0.12	ND
Cadmium	37	1.7	mg/kg	0.33	ND	0.35	ND	0.3	4.8	0.22	0.42	0.25	1	0.3	0.93
Chromium	210	58	mg/kg	0.65	29	0.7	25	0.59	49	0.43	**95**	0.51	52	0.6	**370**
Cobalt	900	40	mg/kg	1.3	11	1.4	9.3	1.2	13	0.86	20	1	9.4	1.2	**49**
Copper	3,100	230	mg/kg	0.65	30	0.7	25	0.59	63	0.43	35	0.51	160	0.6	8.2
Lead	150	200	mg/kg	0.2	6.4	0.21	6.9	0.18	50	0.13	11	0.15	45	0.18	6.2
Mercury	23	2.5	mg/kg	0.023	0.063	0.019	0.04	0.021	0.91	0.027	0.03	0.02	0.66	0.027	0.15
Molybdenum	390	40	mg/kg	1.3	ND	1.4	2	1.2	ND	0.86	1.2	1	1.5	1.2	ND
Nickel	1,600	150	mg/kg	1.3	31	1.4	28	1.2	63	0.86	**150**	1	120	6	**1,100**
Selenium	390	10	mg/kg	0.33	ND	0.35	ND	0.3	ND	0.22	ND	0.25	ND	0.3	ND
Silver	390	20	mg/kg	0.33	ND	0.35	ND	0.3	ND	0.22	ND	0.25	ND	0.3	ND
Thallium	5.2	1	mg/kg	0.33	ND	0.35	ND	0.3	ND	0.22	ND	0.25	ND	0.3	0.46
Vanadium		110	mg/kg	0.65	62	0.7	46	0.59	36	0.43	41	0.51	54	0.6	100
Zinc	23,000	600	mg/kg	1.3	44	1.4	61	12	**960**	0.86	67	10	**700**	1.2	31

Notes

* Residential land use

** Residential land use, less than 3 meters, non-potable

Results with highlights indicate above lowest criteria for PRG or ESL.

TABLE 2E
TOTAL METALS
SUPPLEMENTAL SOILS CHARACTERIZATION
JOHNS MANVILLE PLANT
420 EAST THIRD STREET
PITTSBURG, CALIFORNIA

Sample ID				SB13-03		SB13-08		SB14-03		SB14-08		SB15-03		SB15-08	
Location				SB-13		SB-13		SB-14		SB-14		SB-15		SB-15	
Sample Date				11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005	
Matrix				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
METALS	US EPA REGION IX PRGs*	RWQCB ESLs**	Units	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result
Antimony	31	6.3	mg/kg	3.2	ND	3.5	ND	3.5	ND	2.8	21	3.2	ND	2.2	ND
Arsenic	0.062	5.5	mg/kg	0.27	**4.1**	0.29	**2.8**	0.3	**4.7**	0.23	**10**	0.27	**6.9**	0.18	**4.7**
Barium	5,400	750	mg/kg	0.53	180	0.58	40	0.59	110	0.47	190	0.54	82	0.37	63
Beryllium	150	4	mg/kg	0.11	0.21	0.12	0.12	0.12	0.42	0.094	0.19	0.11	0.28	0.074	0.4
Cadmium	37	1.7	mg/kg	0.27	0.73	0.29	1.2	0.3	0.34	0.23	**13**	0.27	0.92	0.18	0.91
Chromium	210	58	mg/kg	0.53	**96**	0.58	25	0.59	42	0.47	**82**	0.54	37	0.37	29
Cobalt	900	40	mg/kg	1.1	11	1.2	10	1.2	11	0.94	13	1.1	11	0.74	9.8
Copper	3,100	230	mg/kg	0.53	55	0.58	50	0.59	31	47	**40,000**	0.54	43	0.37	21
Lead	150	200	mg/kg	0.16	13	0.17	31	0.18	26	14	**2,600**	0.16	25	0.11	5.6
Mercury	23	2.5	mg/kg	0.024	0.29	0.022	0.32	0.021	0.12	0.02	0.052	0.023	0.31	0.024	ND
Molybdenum	390	40	mg/kg	1.1	ND	1.2	1.4	1.2	ND	0.94	2.6	1.1	ND	0.74	ND
Nickel	1,600	150	mg/kg	1.1	**150**	1.2	62	1.2	85	0.94	**290**	1.1	51	0.74	28
Selenium	390	10	mg/kg	0.27	ND	0.29	ND	0.3	ND	0.23	ND	0.27	ND	0.18	ND
Silver	390	20	mg/kg	0.27	ND	0.29	ND	0.3	ND	0.23	14	0.27	ND	0.18	ND
Thallium	5.2	1	mg/kg	0.27	0.99	0.29	0.73	0.3	ND	0.23	ND	0.27	0.83	0.18	0.31
Vanadium		110	mg/kg	0.53	33	0.58	70	0.59	51	0.47	70	0.54	48	0.37	55
Zinc	23,000	600	mg/kg	1.1	92	12	**850**	1.2	120	94	**6,900**	1.1	180	0.74	52

Notes

* Residential land use

** Residential land use, less than 3 meters, non-potable

Results with highlights indicate above lowest criteria for PRG or ESL.

TABLE 2E
TOTAL METALS
SUPPLEMENTAL SOILS CHARACTERIZATION
JOHNS MANVILLE PLANT
420 EAST THIRD STREET
PITTSBURG, CALIFORNIA

Sample ID				SB16-03		SB16-08		SB-17-15		SB-17-3		SB18-03		SB19-08	
Location				SB-16		SB-16		SB-17		SB-17		Dup of SB12-03		Dup of SB03-08	
Sample Date				11/11/2005		11/11/2005		11/15/2005		11/15/2005		11/11/2005		11/11/2005	
Matrix				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
METALS	US EPA REGION IX PRGs*	RWQCB ESLs**	Units	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result
Antimony	31	6.3	mg/kg		ND	3	ND		ND		ND		ND	3.5	ND
Arsenic	0.062	5.5	mg/kg	0.22	**3.9**	0.25	**4.4**	0.28	**3.5**	0.25	**5.2**	0.25	**4.9**	0.29	**6.7**
Barium	5,400	750	mg/kg	0.44	76	0.5	73	0.56	53	0.5	110	0.51	25	0.58	160
Beryllium	150	4	mg/kg	0.088	0.19	0.1	0.38	0.11	0.21	0.1	0.65	0.1	ND	0.12	0.53
Cadmium	37	1.7	mg/kg	0.22	1.3	0.25	0.79	0.28	0.47	0.25	0.94	0.25	0.38	0.29	1.1
Chromium	210	58	mg/kg	0.44	38	0.5	25	0.56	9.5	0.5	30	0.51	11	0.58	34
Cobalt	900	40	mg/kg	0.88	11	1	8.5	1.1	5.6	1	11	1	2.1	1.2	11
Copper	3,100	230	mg/kg	0.44	**240**	0.5	17	0.56	7.9	0.5	21	0.51	16	0.58	21
Lead	150	200	mg/kg	0.13	60	0.15	4.8	0.17	3.3	0.15	7.3	0.15	13	0.17	6.7
Mercury	23	2.5	mg/kg	0.019	0.72	0.026	ND	0.022	ND	0.028	ND	0.02	0.21	0.021	ND
Molybdenum	390	40	mg/kg	0.88	1.3	1	ND	1.1	ND	1	ND	1	1.4	1.2	ND
Nickel	1,600	150	mg/kg	0.88	89	1	35	1.1	11	1	30	1	16	1.2	45
Selenium	390	10	mg/kg	0.22	ND	0.24	ND	0.28	ND	0.25	ND	0.25	ND	0.29	ND
Silver	390	20	mg/kg	0.22	ND	0.25	ND	0.28	ND	0.25	ND	0.25	ND	0.29	ND
Thallium	5.2	1	mg/kg	0.22	0.75	0.25	0.6	0.28	ND	0.25	0.32	0.25	0.85	0.29	ND
Vanadium		110	mg/kg	0.44	75	0.5	53	0.56	34	0.5	58	0.51	92	0.58	64
Zinc	23,000	600	mg/kg	0.88	320	1	42	1.1	29	1	44	1	110	1.2	57

Notes

* Residential land use

** Residential land use, less than 3 meters, non-potable

Results with highlights indicate above lowest criteria for PRG or ESL.

TABLE 2E
TOTAL METALS
SUPPLEMENTAL SOILS CHARACTERIZATION
JOHNS MANVILLE PLANT
420 EAST THIRD STREET
PITTSBURG, CALIFORNIA

Sample ID				SB20-08		SB21-03		SB21-08		SAMPLE PILE EAST		SAMPLE PILE WEST	
Location				Dup of SB02-08		Dup of SB09-03		Dup of SB09-08		SAMPLE		SAMPLE	
Sample Date				11/11/2005		11/11/2005		11/11/2005		11/15/2005		11/15/2005	
Matrix				SOIL		SOIL		SOIL		SOIL		SOIL	
METALS	US EPA REGION IX PRGs*	RWQCB ESLs**	Units	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result
Antimony	31	6.3	mg/kg	3.2	ND	3.7	ND	3.3	ND	2.5	ND	2.2	ND
Arsenic	0.062	5.5	mg/kg	0.27	**4**	0.31	4.4	0.27	7.5	0.21	0.53	0.18	**0.64**
Barium	5,400	750	mg/kg	0.53	83	0.62	91	0.55	290	0.41	5.9	0.36	6.7
Beryllium	150	4	mg/kg	0.11	0.31	0.12	0.5	0.11	0.57	0.083	ND	0.072	ND
Cadmium	37	1.7	mg/kg	0.27	0.59	0.31	0.79	0.27	0.94	0.21	0.22	0.18	ND
Chromium	210	58	mg/kg	0.53	13	0.62	31	0.55	23	0.41	9.7	0.36	6.8
Cobalt	900	40	mg/kg	1.1	6.6	1.2	8	1.1	9.2	0.83	2.4	0.72	1.3
Copper	3,100	230	mg/kg	0.53	11	0.62	17	0.55	25	0.41	5.9	0.36	2.9
Lead	150	200	mg/kg	0.16	4	0.19	7.1	0.16	6.6	0.12	1.8	0.11	2.6
Mercury	23	2.5	mg/kg	0.024	ND	0.026	0.19	0.026	ND	0.019	ND	0.11	ND
Molybdenum	390	40	mg/kg	1.1	ND	1.2	ND	1.1	ND	0.83	ND	0.017	ND
Nickel	1,600	150	mg/kg	1.1	19	1.2	33	1.1	25	0.83	4.1	0.72	2.6
Selenium	390	10	mg/kg	0.27	ND	0.31	ND	0.27	ND	0.21	ND	0.18	ND
Silver	390	20	mg/kg	0.27	ND	0.31	ND	0.27	ND	0.21	ND	0.18	ND
Thallium	5.2	1	mg/kg	0.27	0.28	0.31	0.79	0.27	**1.1**	0.21	0.48	0.18	0.29
Vanadium		110	mg/kg	0.53	39	0.62	46	0.55	49	0.41	12	0.36	6.6
Zinc	23,000	600	mg/kg	1.1	34	1.2	39	1.1	59	0.83	24	0.72	20

Notes

* Residential land use

** Residential land use, less than 3 meters, non-potable

Results with highlights indicate above lowest criteria for PRG or ESL.

TABLE 2F
TPH
SUPPLEMENTAL SOILS CHARACTERIZATION
JOHNS MANVILLE PLANT
420 EAST THIRD STREET
PITTSBURG, CALIFORNIA

Sample ID				SB04-03		SB05-02		SB06-03		SB07-03		SB08-03		SB09-03	
Location				SB-04		SB-05		SB-06		SB-07		SB-08		SB-09	
Sample Date				11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005		11/11/2005	
Matrix				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
TPH	US EPA REGION IX PRGs*	RWQCB ESLs**	Units	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result
Diesel C10-C28		100	mg/kg	12	420	1.2	65	1.2	1.9	12	2,000	12	1,000	1.2	23
Gasoline C6-C10		500	mg/kg												
Motor Oil C28-C40		500	mg/kg	61	2,700	6	210	6.1	ND	59	2,100	61	2,600	5.9	110

Notes

*. Residential land use

** Residential land use, less than 3 meters, non-potable

Results with highlights indicate above lowest criteria for PRG or ESL.

TABLE 2F
TPH
SUPPLEMENTAL SOILS CHARACTERIZATION
JOHNS MANVILLE PLANT
420 EAST THIRD STREET
PITTSBURG, CALIFORNIA

Sample ID				SB10-03		SB11-03		SB-17-15		SB-17-3		SAMPLE PILE EAST		SAMPLE PILE WEST	
Location				SB-10		SB-11		SB-17		SB-17		SAMPLE		SAMPLE	
Sample Date				11/11/2005		11/11/2005		11/15/2005		11/15/2005		11/15/2005		11/15/2005	
Matrix				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
TPH	US EPA REGION IX PRGs*	RWQCB ESLs**	Units	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result
Diesel C10-C28		100	mg/kg	12	780	880	3,500	1.2	2.7	12	1,200	5	160	3	82
Gasoline C6-C10		500	mg/kg					1.2	ND	1.2	ND				
Motor Oil C28-C40		500	mg/kg	59	2,200	4,400	25,000	6	ND	58	1,100	25	650	15	320

Notes

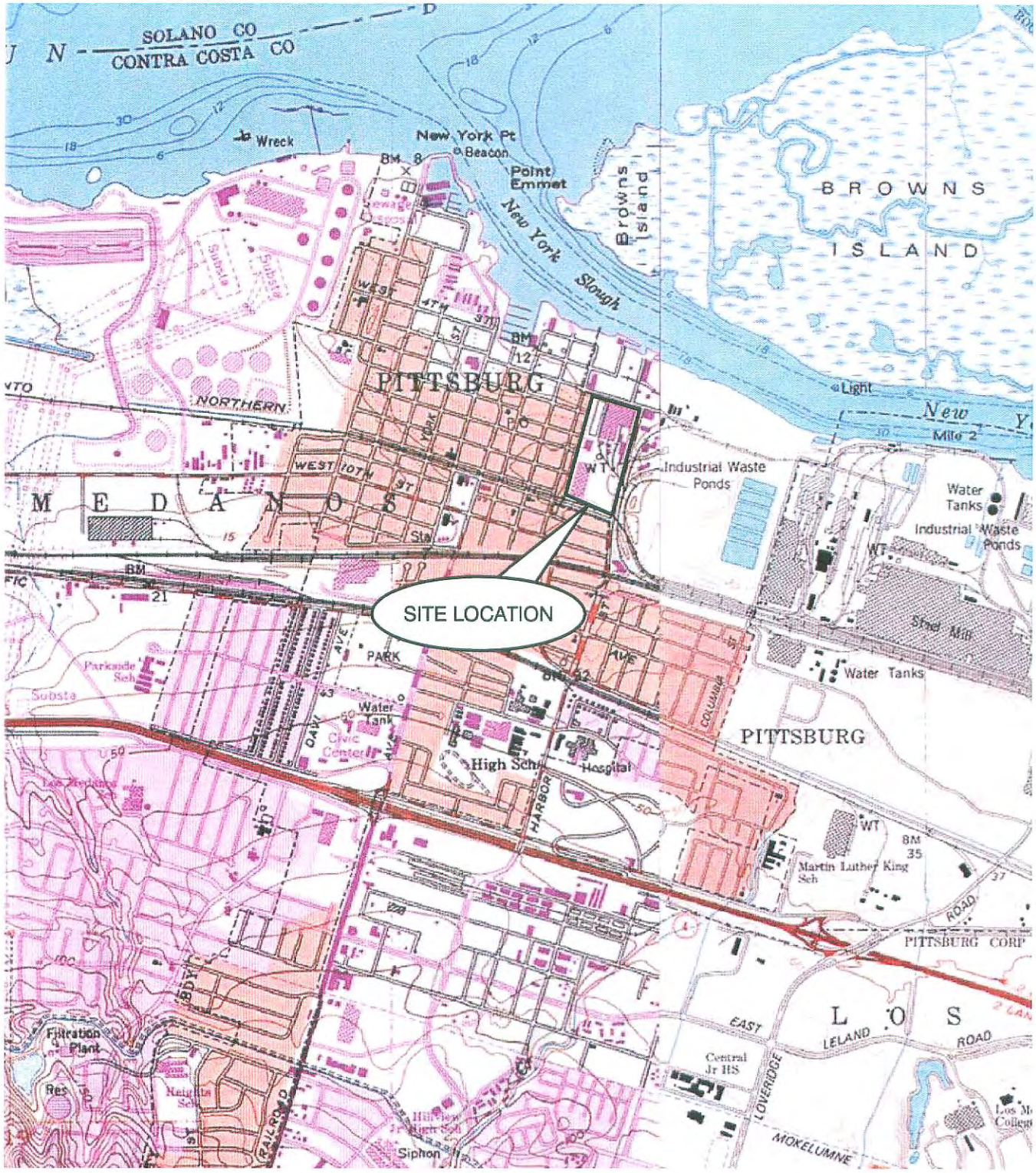
*. Residential land use

** Residential land use, less than 3 meters, non-potable

Results with highlights indicate above lowest criteria for PRG or ESL.

TABLE 3
ASBESTOS ANALYSIS RESULTS
SUPPLEMENTAL SOILS CHARACTERIZATION
JOHNS MANVILLE PLANT
420 EAST THIRD STREET
PITTSBURG, CALIFORNIA

Sample ID	Sample Depth	Asbestos Information Quantity (Area %), Type	Lithology
SB-01-3	3 feet	None Detected	Native
SB-01-8	8 feet	None Detected	Native
SB-02-3	3 feet	<1% Chrysotile	Native
SB-02-8	8 feet	None Detected	Native
SB-03-3	3 feet	None Detected	Native
SB-04-3	3 feet	None Detected	Fill
SB-04-8	8 feet	None Detected	Native
SB-05-2	2 feet	<1% Chrysotile	Fill
SB-05-8	8 feet	None Detected	Native
SB-06-3	3 feet	None Detected	Native
SB-06-8	8 feet	None Detected	Native
SB-07-3	3 feet	None Detected	Native
SB-07-8	8 feet	None Detected	Native
SB-08-3	3 feet	None Detected	Native
SB-08-8	8 feet	None Detected	Native
SB-09-3	3 feet	2% Chrysotile	Native
SB-09-8	8 feet	None Detected	Native
SB-10-3	3 feet	None Detected	Fill
SB-10-8	8 feet	None Detected	Native
SB-11-3	3 feet	<1% Chrysotile	Fill
SB-11-8	8 feet	None Detected	Native
SB-12-3	3 feet	None Detected	Fill
SB-12-8	8 feet	2% Chrysotile	Fill
SB-13-3	3 feet	2% Chrysotile	Fill
SB-13-8	8 feet	2% Chrysotile	Fill
SB-14-3	3 feet	3% Chrysotile	Fill
SB-14-8	8 feet	3% Chrysotile	Fill
SB-15-3	3 feet	None Detected	Fill
SB-15-8	8 feet	<1% Chrysotile	Native
SB-16-3	3 feet	3% Chrysotile	Fill
SB-16-8	8 feet	None Detected	Native
SB-17-1N	1 foot	<1% Chrysotile	Fill
SB-17-3N	3 feet	None Detected	Native
SB-17-15N	15 feet	None Detected	Native
SB-17-19N	19 feet	None Detected	Native



SCALE 1:24,000

1 1/2 0 1 MILE

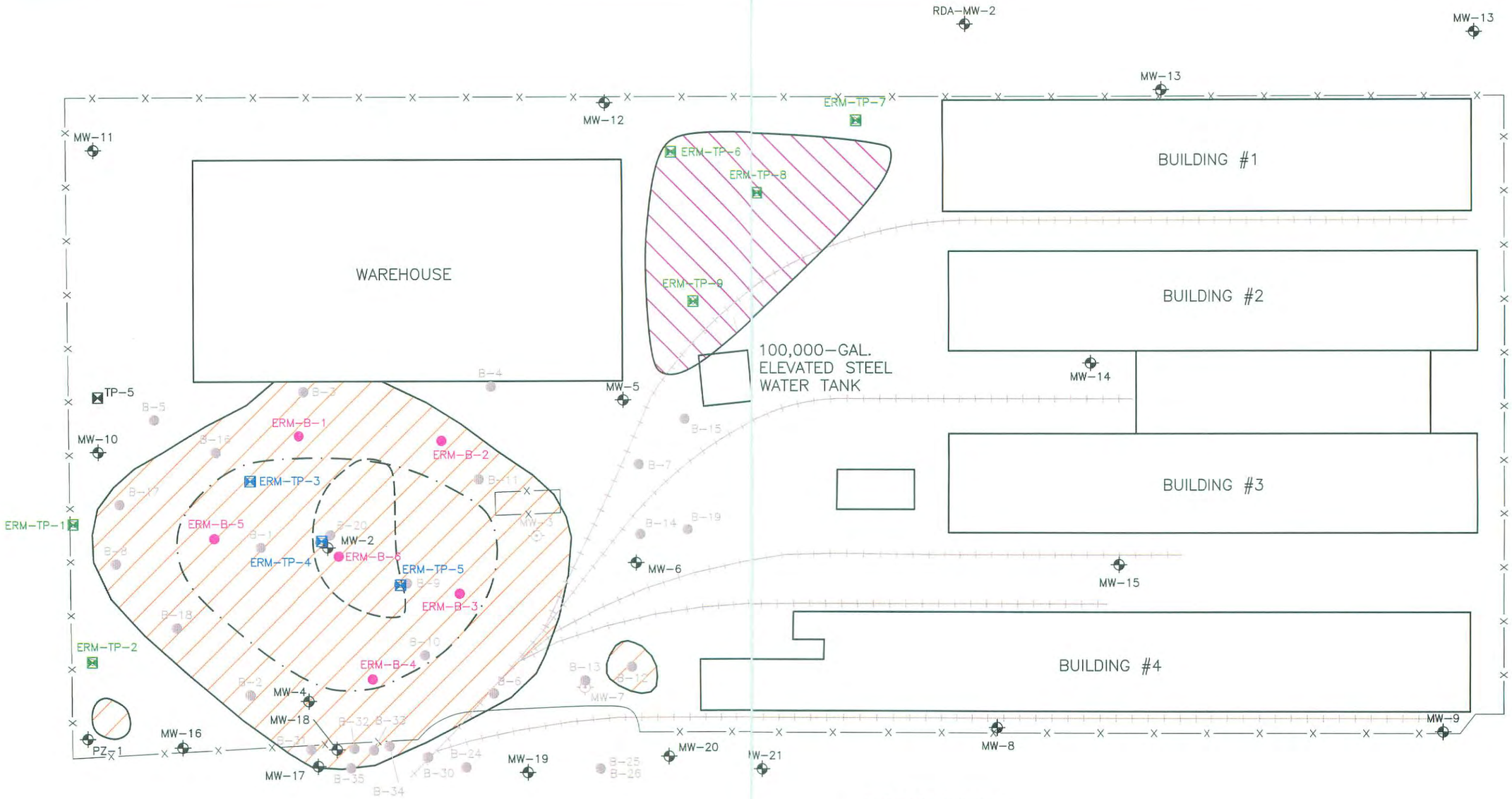
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

References:
U.S.G.S. 7.5 Minute Series (Topographic) Quadrangle,
Honker Bay, California
Dated: 1980

Source: Conceptual Design Documen
for On-Site Waste Consolidation (ERM August 2005)

URS	26815155	Site Location Map	Figure
	Pittsburg River Park	Pittsburg River Park, LLC	1

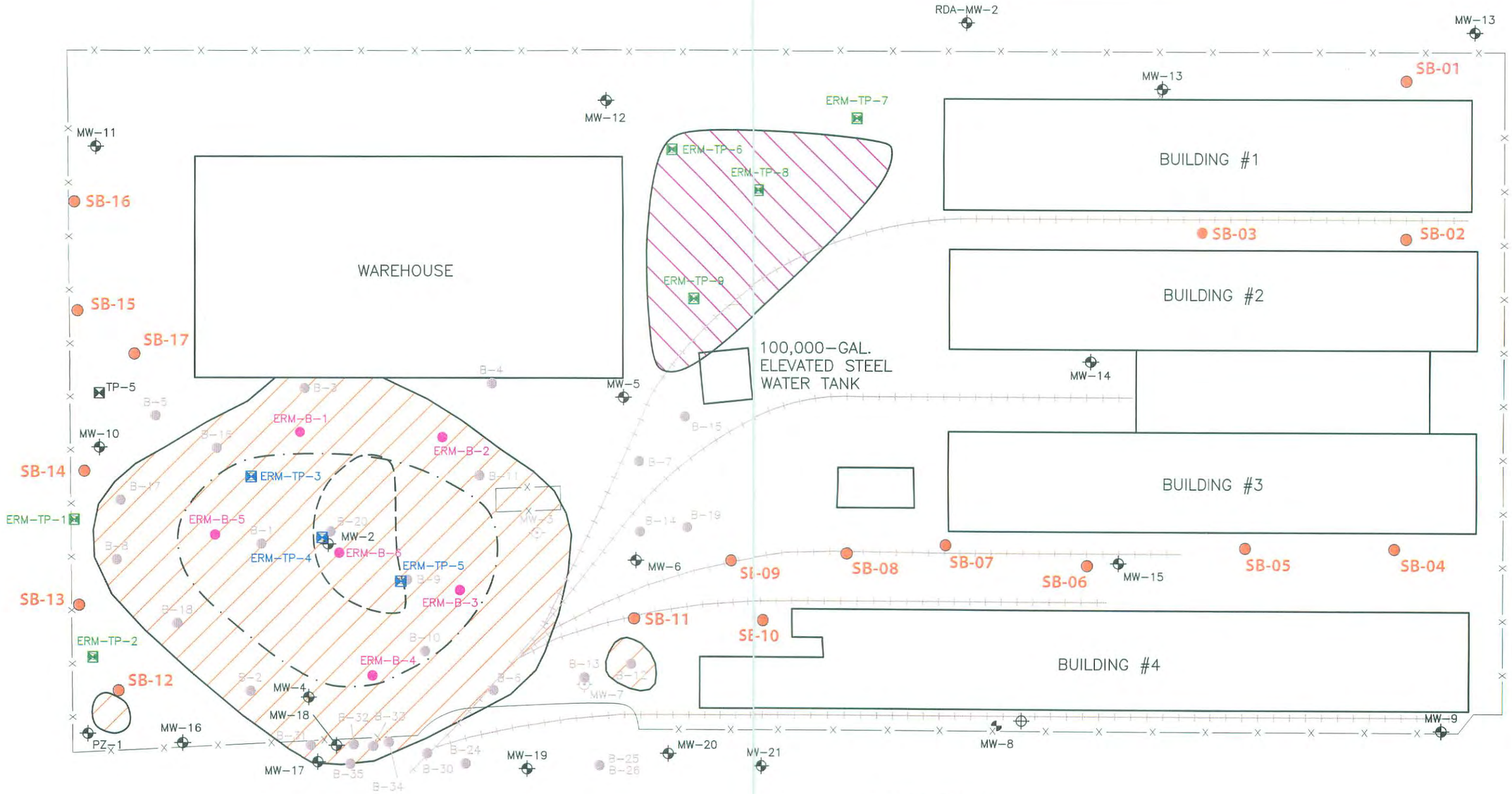


LEGEND

- Monitoring Well (HLA and ROUX)
- Monitoring Well, Abandoned
- Soil Boring (ROUX)
- Soil Boring (ERM)
- Test Pit (ERM), Shallow, 2'–3' Deep (5'x5')
- Test Pit (ERM), Deep, 8'–10' Deep (5'x15')
- Approximate Areal Extent of Hydrocarbons (Harding ESE, 2002)
- Former Evaporation Pond
- Approximate Fill Material Location, 8.0–10.0' Deep
- Surficial Asbestos Impacts from Former Laydown Area

Source: Conceptual Design Documen for On-Site Waste Consolidation (ERM August 2005)

URS	26815155 Pittsburg River Park	Historic Investigation Sample Locations	Figure 2



LEGEND

- 2005 Soil Borings (URS)
- Monitoring Well (HLA and ROUX)
- Monitoring Well, Abandoned
- Soil Boring (ROUX)
- Soil Boring (ERM)
- Test Pit (ERM), Shallow, 2'–3' Deep (5'x5')
- Test Pit (ERM), Deep, 8'–10' Deep (5'x15')
- Approximate Areal Extent of Hydrocarbons (Harding ESE, 2002)
- Former Evaporation Pond
- Approximate Fill Material Location, 8.0–10.0' Deep
- Surficial Asbestos Impacts from Former Laydown Area

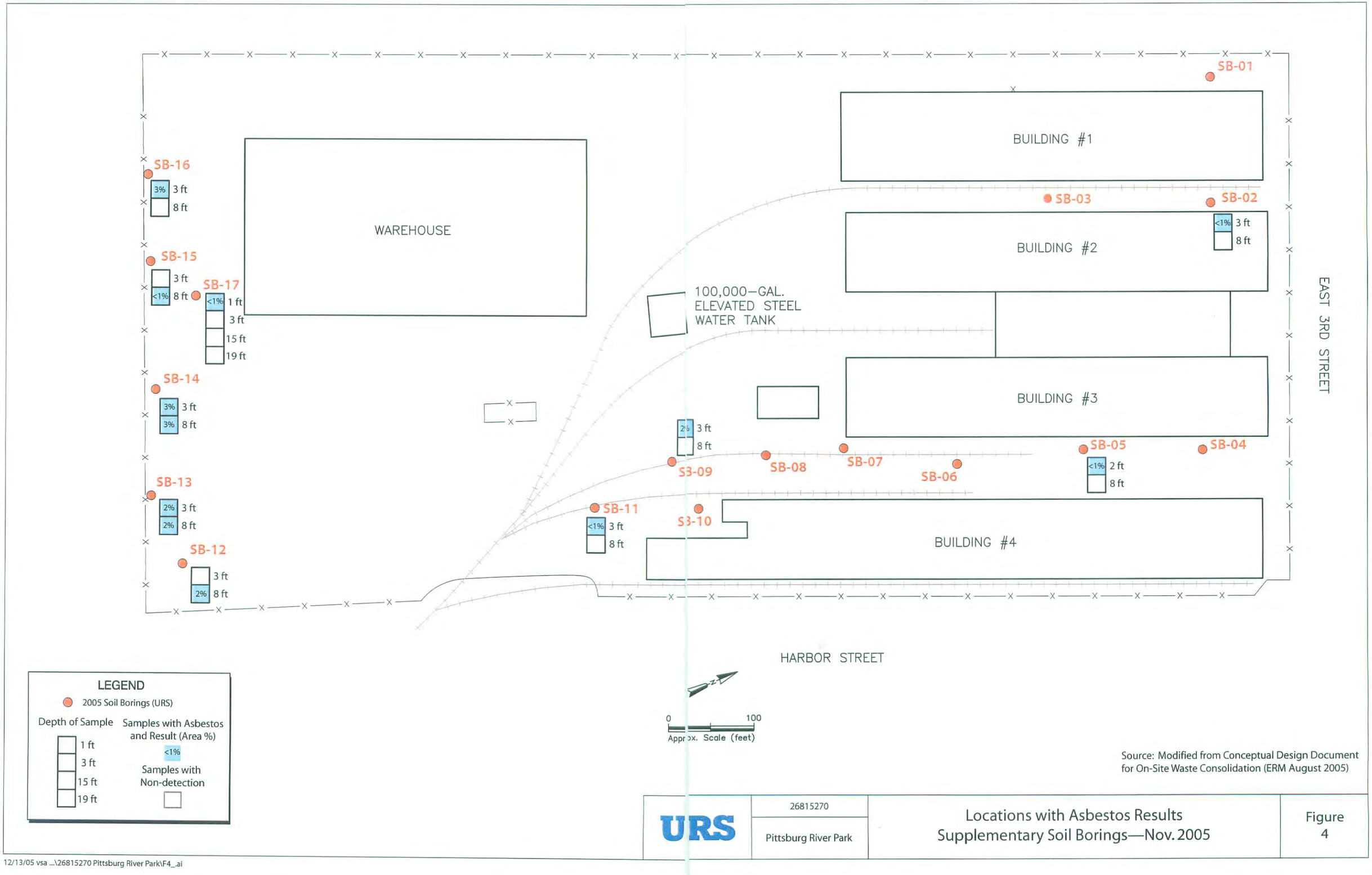
0 100

Approx. Scale (feet)

Source: Modified from Conceptual Design Document for On-Site Waste Consolidation (ERM August 2005)

URS	26815270	Site Sample Location Supplementary Soil Borings—Nov. 2005	Figure 3
	Pittsburg River Park		

11/30/05 vsa ...\26815270 Pittsburg River Park\F3_ssl.ai



LEGEND

2005 Soil Borings (URS)

Depth of Sample

1 ft
3 ft
15 ft
19 ft

Samples with Asbestos and Result (Area %)

<1%

Samples with Non-detection

Source: Modified from Conceptual Design Document for On-Site Waste Consolidation (ERM August 2005)

URS	26815270 Pittsburg River Park	Locations with Asbestos Results Supplementary Soil Borings—Nov. 2005	Figure 4

12/13/05 vsa ...\26815270 Pittsburg River Park\F4_.ai

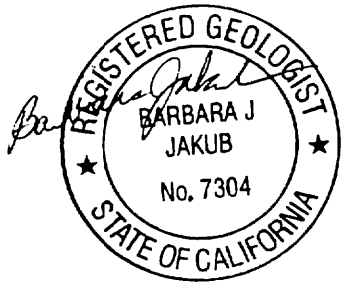
APPENDIX A
SOIL BORING LOGS

BORING SB-1

DEPTH IN FEET	SAMPLING: TYPE OF SAMPLER	SAMPLING: INCHES DRIVEN / RECOVERED	SAMPLING: MOISTURE CONTENT (%)	SAMPLES	SYMBOL	DESCRIPTION
0						**8" CONCRETE SLAB**
					CL	**SANDY CLAY (CL) [FILL]** brown, stiff, moist, mottled gray, fine sand, trace rootlets
2	DPT		17		CL	**SANDY CLAY (CL) [ALLUVIUM]** yellowish brown, moist, stiff to very stiff, fine sand, gypsum nodules, 1.1 ppm
4						
6						
	DPT		13		SC	**CLAYEY SAND (SC)** yellowish brown, moist, dense, fine, 0.8 ppm
8						
10						
12						
14						

Notes:

1. Boring terminated at a depth of 8 feet on November 15, 2005.
2. Coordinates recorded in degrees, minutes, seconds.
3. See Figure 18 for general log notes and explanation of symbols.



Job No: 26815270 Pt. ID: PITS.GPJ / SB-1	URS	Log of Boring
Date Completed: 11/15/05 Boring Depth: 8.0 ft.	Drill Rig: Direct Push Technology Coordinates: 38.015538 / 121.524507 Logged By: GAR	Location: Pittsburg River Park, Pittsburg, CA

Log Template: 11B

November 30, 2005

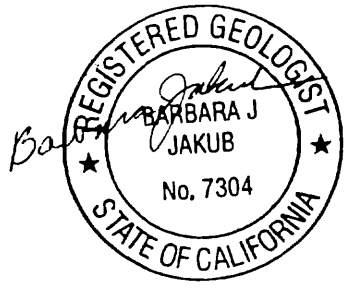
FIGURE 1

BORING SB-2

DEPTH IN FEET	SAMPLING: TYPE OF SAMPLER	SAMPLING: INCHES DRIVEN / RECOVERED	SAMPLING: MOISTURE CONTENT (%)	SAMPLES	SYMBOL	DESCRIPTION
0						**8" CONCRETE SLAB**
						SAND (SP) [FILL] yellowish brown, moist, loose
						GRAVELLY SAND (SP) brown, moist, loose, fine subangular gravel, fine to medium sand, concrete fragments, rootlets
2	DPT		15		CL	**SANDY CLAY (CL) [ALLUVIUM]** yellowish brown (10YR-5/8), moist, very stiff, fine to medium sand, 0.4 ppm
4					SP	**SAND (SP)** brown, moist, medium dense, fine
6					SC	**CLAYEY SAND (SC)** brownish yellow, moist, dense, fine to medium, 0.8ppm
	DPT		11			
8						
10						
12						
14						

Notes:

1. Boring terminated at a depth of 8 feet on November 11, 2005.
2. Coordinates recorded in degrees, minutes, seconds.
3. See Figure 18 for general log notes and explanation of symbols.



Job No: 26815270 Pt. ID: PITS.GPJ / SB-2	**URS**	**Log of Boring**
Date Completed: 11/11/05 Boring Depth: 8.0 ft.	Drill Rig: Direct Push Technology Coordinates: 38.015498 / 121.524329 Logged By: GAR	Location: Pittsburg River Park, Pittsburg, CA

Log Template: 11B | November 30, 2005 | PAGE 1 of 1

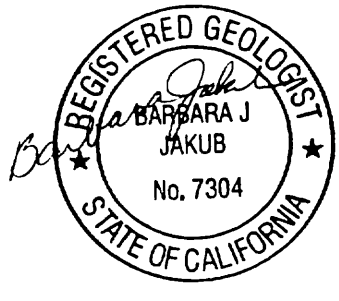
FIGURE 2

BORING SB-3

DEPTH IN FEET	SAMPLING: TYPE OF SAMPLER	SAMPLING: INCHES DRIVEN / RECOVERED	SAMPLING: MOISTURE CONTENT (%)	SAMPLES	SYMBOL	DESCRIPTION
0						**6" CONCRETE SLAB**
						SAND (SP) [FILL] brown, moist, loose, fine to medium
					CL	**SANDY CLAY (CL) [ALLUVIUM]** moist, yellowish brown (10YR-3/4), soft to medium stiff, mottled brown, vertical oxidized root traces, trace gravel, fine sand
2	DPT		16			
					ML	**CLAYEY SILT (ML)** yellowish brown, moist, very stiff, some fine sand, vertical root traces
4						
6					SC	**CLAYEY SAND (SC)** brownish yellow (10YR-6/8), moist, dense, fine
	DPT		16			
8						
10						
12						
14						

Notes:

1. Boring terminated at a depth of 8 feet on November 11, 2005.
2. Coordinates recorded in degrees, minutes, seconds.
3. See Figure 18 for general log notes and explanation of symbols.



Job No: 26815270 Pt. ID: PITS.GPJ / SB-3	URS	Log of Boring
Date Completed: 11/11/05 Boring Depth: 8.0 ft.	Drill Rig: Direct Push Technology Coordinates: 38.01538 / 121.524382 Logged By: GAR	Location: Pittsburg River Park, Pittsburg, CA

Log Template: 11B

November 30, 2005

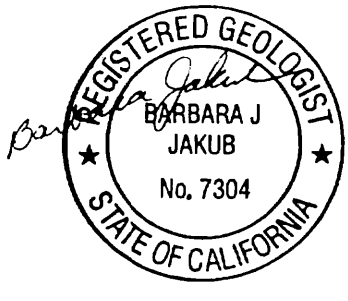
FIGURE 3

BORING SB-4

DEPTH IN FEET	SAMPLING: TYPE OF SAMPLER	SAMPLING: INCHES DRIVEN / RECOVERED	SAMPLING: MOISTURE CONTENT (%)	SAMPLES	SYMBOL	DESCRIPTION
0						**8" CONCRETE SLAB**
						SAND (SP) [FILL] reddish to yellowish bronw, loose, moist
2	DPT		18			**SANDY CLAY (CL)** dark greenish gray (1-4/1), stiff, moist, some gravel clasts to 1-inch diameter, some organics and rootlets, mottled bluish gray
4						
6					CL	**SANDY CLAY (CL)** dark brown, soft, moist, fine sand
	DPT		12			
8					CL	**LEAN CLAY (CL) [ALLUVIUM]** dark brown, stiff, moist, trace fine sand, trace fine gravel, 0.8 ppm
10						
12						
14						

Notes:

1. Boring terminated at a depth of 8 feet on November 11, 2005.
2. Coordinates recorded in degrees, minutes, seconds.
3. See Figure 18 for general log notes and explanation of symbols.



Job No: 26815270 Pt ID: PITS.GPJ / SB-4	URS	Log of Boring
Date Completed: 11/11/05 Boring Depth: 8.0 ft.	Drill Rig: Direct Push Technology Coordinates: 38.015395 / 121.524009 Logged By: GAR	Location: Pittsburg River Park, Pittsburg, CA

Log Template: 11B

November 30, 2005

FIGURE 4

BORING SB-5

DEPTH IN FEET	SAMPLING: TYPE OF SAMPLER	SAMPLING: INCHES DRIVEN / RECOVERED	SAMPLING: MOISTURE CONTENT (%)	SAMPLES	SYMBOL	DESCRIPTION
0						**6" CONCRETE SLAB**
	DPT		16		GW	**SANDY GRAVEL WITH CLAY (GW) [FILL]** brown, moist, loose to medium dense, gravel clasts to 2-inches in diameter, coarse serpentinite clasts, fine to coarse sand, some sand is colored blue and red, 0.5 ppm
2					CL	**SANDY CLAY (CL)** brown, moist, stiff, fine to medium sand, some fine gravel, mottled gray
4						
6					GC	**CLAYEY GRAVEL WITH SAND (GC)** brown to reddish brown, moist, serpentinite clasts to 1/2-inch in diameter, angular red brick fragments, fine to coarse sand
	DPT		17			
8					CL	**LEAN CLAY (CL) [ALLUVIUM]** gray (2-4/1), stiff to very stiff, moist, some fine sand
10						
12						
14						

Notes:

1. Boring terminated at a depth of 8 feet on November 11, 2005.
2. Coordinates recorded in degrees, minutes, seconds.
3. See Figure 18 for general log notes and explanation of symbols.

REGISTERED GEOLOGIST
BARBARA J JAKUB
No. 7304
STATE OF CALIFORNIA

Job No: 26815270 Pt. ID: PITS.GPJ / SB-5	URS	Log of Boring
Date Completed: 11/11/05 Boring Depth: 8.0 ft.	Drill Rig: Direct Push Technology Coordinates: 38.015285 / 121.524056 Logged By: GAR	Location: Pittsburg River Park, Pittsburg, CA

Log Template: 11B

November 30, 2005

FIGURE 5

BORING SB-6

DEPTH IN FEET	SAMPLING: TYPE OF SAMPLER	SAMPLING: INCHES DRIVEN / RECOVERED	SAMPLING: MOISTURE CONTENT (%)	SAMPLES	SYMBOL	DESCRIPTION
0						6" CONCRETE SLAB
					GW	CLAYEY GRAVEL (GW) [FILL]
					CL	brown, loose, moist, some sand
					ML	LEAN CLAY (CL)
						reddish brown (5YR-4/3), moist, medium stiff, some fine sand
						CLAYEY SILT (ML) [ALLUVIUM]
2	DPT		18			yellowish brown (7.5YR-5/6), moist, soft to medium stiff, some fine sand, 0.6 ppm
4						
6						
	DPT		15		SC	CLAYEY SAND (SC)
8						yellowish brown (7.5YR-5/6), dense, moist, fine, 0.1 ppm
10						
12						
14						

Notes:

1. Boring terminated at a depth of 8 feet on November 11, 2005.
2. Coordinates recorded in degrees, minutes, seconds.
3. See Figure 18 for general log notes and explanation of symbols.

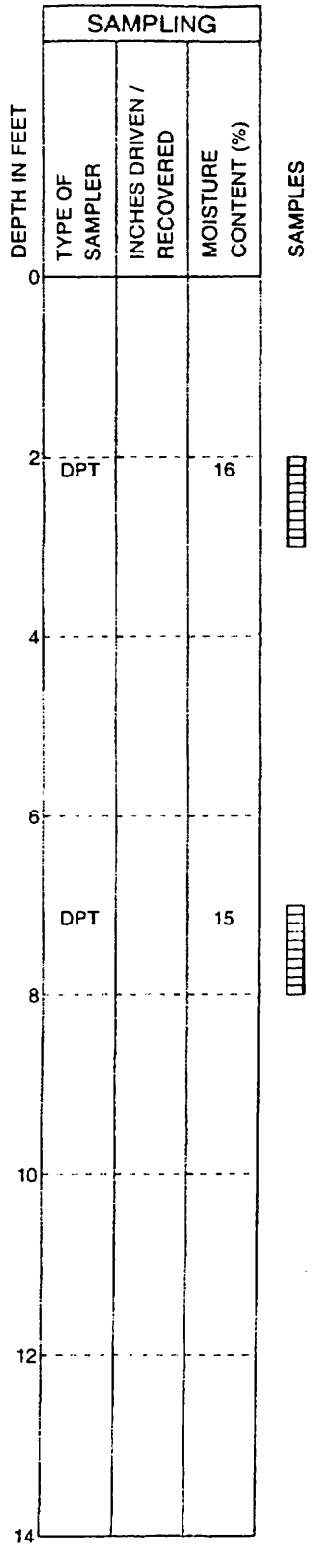
REGISTERED GEOLOGIST
BARBARA JAKUB
No. 7304
STATE OF CALIFORNIA

Job No: 26815270 Pt. ID: PITS.GPJ / SB-6	URS	Log of Boring
Date Completed: 11/11/05 Boring Depth: 8.0 ft.	Drill Rig: Direct Push Technology Coordinates: 38.015144 / 121.524079 Logged By: GAR	Location: Pittsburg River Park, Pittsburg, CA

Log Template: 11B | November 30, 2005 | PAGE 1 of 1

FIGURE 6

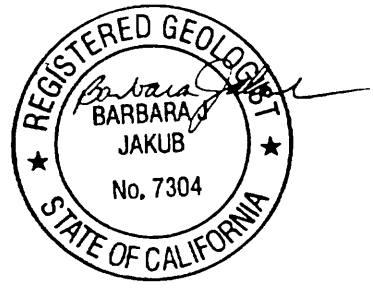
BORING SB-7



SYMBOL	DESCRIPTION
GC	**GRAVELLY CLAY (GC) [FILL]** yellowish brown (7.5YR-5/6), stiff, moist, some fine to coarse sand, angular coarse serpentinite clasts, some 1-inch void spaces, 0.7 ppm
CL	**SANDY CLAY (CL) [ALLUVIUM]** yellowish brown, soft to stiff, moist, mottled gray, fine sand, heavy iron-oxide staining
ML	**CLAYEY SILT (ML)** yellowish brown (10YR-5/4), soft to medium stiff, moist, some fine sand, thin zones of caleche, 0.5 ppm

Notes:

1. Boring terminated at a depth of 8 feet on November 11, 2005.
2. Coordinates recorded in degrees, minutes, seconds.
3. See Figure 18 for general log notes and explanation of symbols.



Job No: 26815270 Pt. ID: PITS.GPJ / SB-7	URS	Log of Boring
Date Completed: 11/11/05 Boring Depth: 8.0 ft.	Drill Rig: Direct Push Technology Coordinates: 38.014977 / 121.524179 Logged By: GAR	Location: Pittsburg River Park, Pittsburg, CA

Log Template: 11B November 30, 2005 PAGE 1 of 1

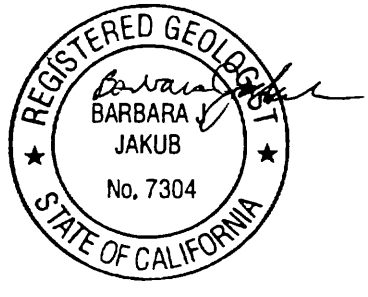
FIGURE 7

BORING SB-8

DEPTH IN FEET	SAMPLING: TYPE OF SAMPLER	SAMPLING: INCHES DRIVEN / RECOVERED	SAMPLING: MOISTURE CONTENT (%)	SAMPLES	SYMBOL	DESCRIPTION
0					GC	**CLAYEY GRAVEL (GC) [FILL]** brown, medium dense, moist, subangular gravel to 1-inch in diameter, metal debris
2	DPT		18		CL	**SANDY CLAY (CL) [ALLUVIUM]** yellowish brown, stiff, moist, fine sand, 0.8 ppm
4						
6	DPT		17		ML	**CLAYEY SILT (ML)** yellowish brown (10YR-7/6), very stiff, moist, mottled white (10YR-8/2), thin zones of caleche
8						
10						
12						
14						

Notes:

1. Boring terminated at a depth of 8 feet on November 11, 2005.
2. Coordinates recorded in degrees, minutes, seconds.
3. See Figure 18 for general log notes and explanation of symbols.



Job No: 26815270 Pt. ID: PITS.GPJ / SB-8	URS	Log of Boring
Date Completed: 11/11/05 Boring Depth: 8.0 ft.	Drill Rig: Direct Push Technology Coordinates: 38.014879 / 121.524219 Logged By: GAR	Location: Pittsburg River Park, Pittsburg, CA

Log Template: 11B November 30, 2005 PAGE 1 of 1

FIGURE 8

BORING SB-9

DEPTH IN FEET	SAMPLING: TYPE OF SAMPLER	SAMPLING: INCHES DRIVEN / RECOVERED	SAMPLING: MOISTURE CONTENT (%)	SAMPLES	SYMBOL	DESCRIPTION
0					GC	**SANDY GRAVEL WITH CLAY (GC) [FILL]** brown, dense, dry to moist, fine to coarse sand, subangular gravel to 1-inch in diameter
2	DPT		16		CL	**SANDY CLAY (CL) [ALLUVIUM]** yellowish brown (10YR-5/6), very stiff, moist, near vertical thin caleche veins, 0.2 ppm
4						
6	DPT		19		CL	**SANDY CLAY (CL)** brown to brownish yellow (7.5YR-5/8 to 10YR-6/8), very stiff, moist, very fine to fine sand, caleche nodules, 0.1 ppm
8						
10						
12						
14						

Notes:

1. Boring terminated at a depth of 8 feet on November 11, 2005.
2. Coordinates recorded in degrees, minutes, seconds.
3. See Figure 18 for general log notes and explanation of symbols.

REGISTERED GEOLOGIST
BARBARA J JAKUB
No. 7304
STATE OF CALIFORNIA

Job No: 26815270 Pt ID: PITS.GPJ / SB-9	URS	Log of Boring
Date Completed: 11/11/05 Boring Depth: 8.0 ft.	Drill Rig: Direct Push Technology Coordinates: 38.014775 / 121.524281 Logged By: GAR	Location: Pittsburg River Park, Pittsburg, CA

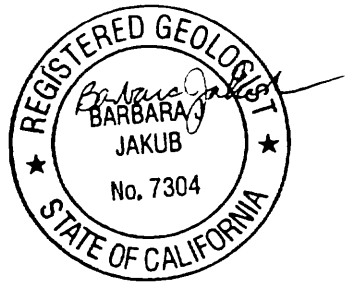
FIGURE 9

BORING SB-10

DEPTH IN FEET	SAMPLING: TYPE OF SAMPLER	SAMPLING: INCHES DRIVEN / RECOVERED	SAMPLING: MOISTURE CONTENT (%)	SAMPLES	SYMBOL	DESCRIPTION
0					AS	2" ASPHALTIC CONCRETE
					GW	**GRAVEL (GW) [FILL]** gray (2.5Y-6/1), loose, dry, subangular, fine
					CL	**SANDY CLAY WITH GRAVEL(CL)** dark olive brown (2.5Y-3/3), medium stiff, moist, glass fragments, tar fragments, 0.8 ppm
2	DPT		15			
4					GC	**CLAYEY GRAVEL (GC)**brown, medium dense, moist, fine
6					CL	**SANDY CLAY (CL) [ALLUVIUM]** yellowish brown, medium stiff, moist, rootlets
	DPT		22		CL	**LEAN CLAY (CL)** yellowish brown, stiff, moist, some fine sand, some fine subangular gravel, moderate plasticity
8						
10						
12						
14						

Notes:

1. Boring terminated at a depth of 8 feet on November 11, 2005.
2. Coordinates recorded in degrees, minutes, seconds.
3. See Figure 18 for general log notes and explanation of symbols.



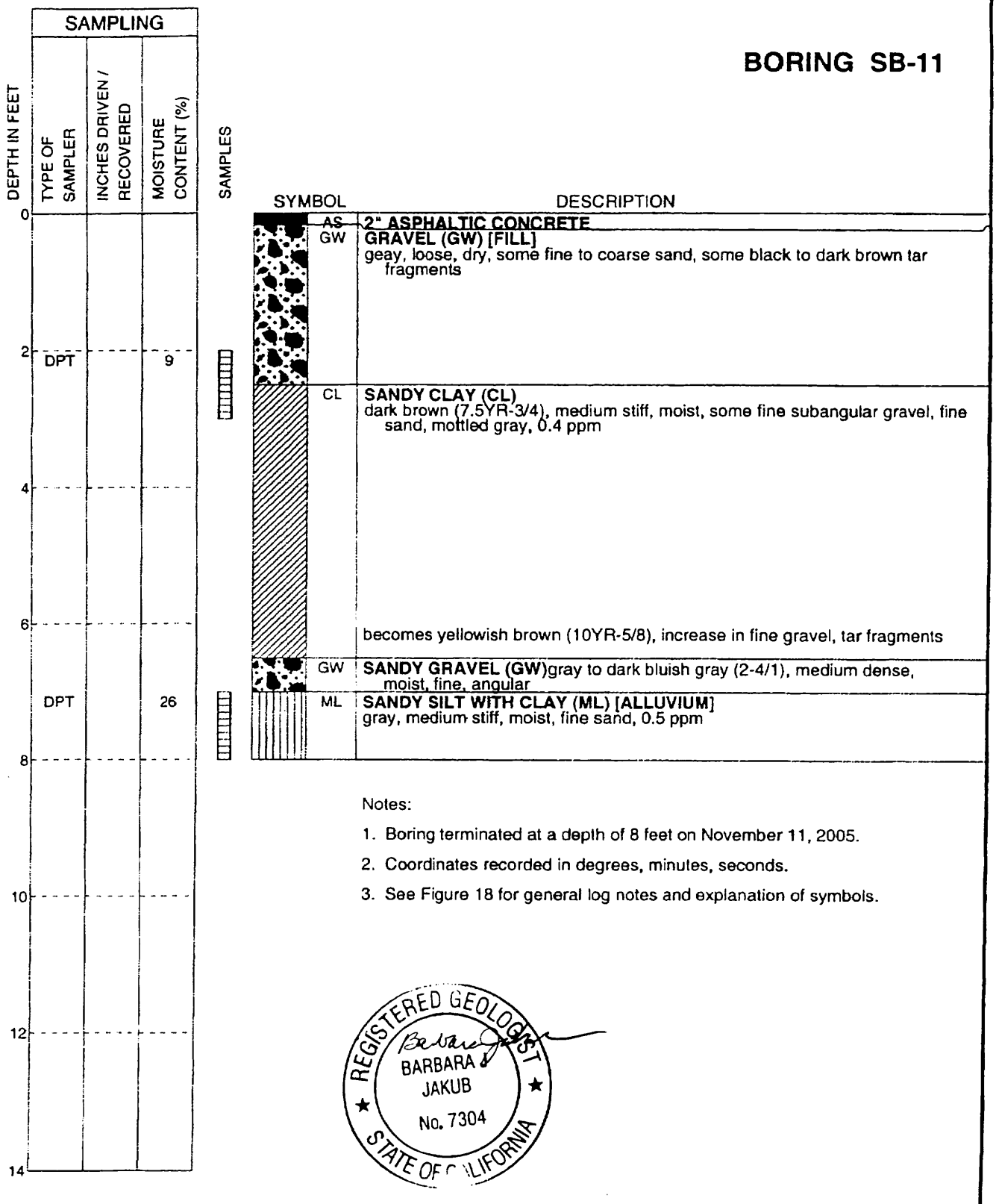
Job No: 26815270 Pt. ID: PITS.GPJ / SB-10	URS	Log of Boring
Date Completed: 11/11/05 Boring Depth: 8.0 ft.	Drill Rig: Direct Push Technology Coordinates: 38.014754 / 121.524159 Logged By: GAR	Location: Pittsburg River Park, Pittsburg, CA

Log Template: 11B

November 30, 2005

FIGURE 10

BORING SB-11



Notes:

1. Boring terminated at a depth of 8 feet on November 11, 2005.
2. Coordinates recorded in degrees, minutes, seconds.
3. See Figure 18 for general log notes and explanation of symbols.

Job No: 26815270 Pt. ID: PITS.GPJ / SB-11	URS	Log of Boring
Date Completed: 11/11/05 Boring Depth: 8.0 ft.	Drill Rig: Direct Push Technology Coordinates: 38.014655 / 121.524199 Logged By: GAR	Location: Pittsburg River Park, Pittsburg, CA

Log Template: 11B

November 30, 2005

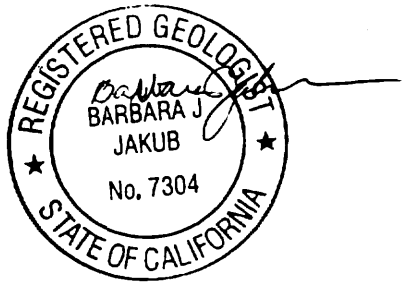
FIGURE 11

BORING SB-12

DEPTH IN FEET	SAMPLING: TYPE OF SAMPLER	SAMPLING: INCHES DRIVEN / RECOVERED	SAMPLING: MOISTURE CONTENT (%)	SAMPLES	SYMBOL	DESCRIPTION
0					AS	2" ASPHALTIC CONCRETE
					GW	SANDY GRAVEL (GW) [FILL] brown to black, loose, dry, fine to coarse, subangular clasts, fine to coarse sand
2	DPT		6		CL	SANDY CLAY (CL) dark brown to black, soft to medium stiff, moist, odor, 1-inch thick layer of black tar, some fine sand colored red
4					SC	CLAYEY SAND (SC) green and red, loose, moist, fine to medium wood fragment, brown, moist, odor, 2.5 ppm
6					SP	SAND (SP) white, loose, moist, some green fine to medium sand
	DPT		30			
8					CL	SANDY CLAY (CL dark brown, soft to stiff, moist, some black tar, some fine sand colored red, odor, 1.9 ppm
10						
12						
14						

Notes:

1. Boring terminated at a depth of 8 feet on November 11, 2005.
2. Coordinates recorded in degrees, minutes, seconds.
3. See Figure 18 for general log notes and explanation of symbols.



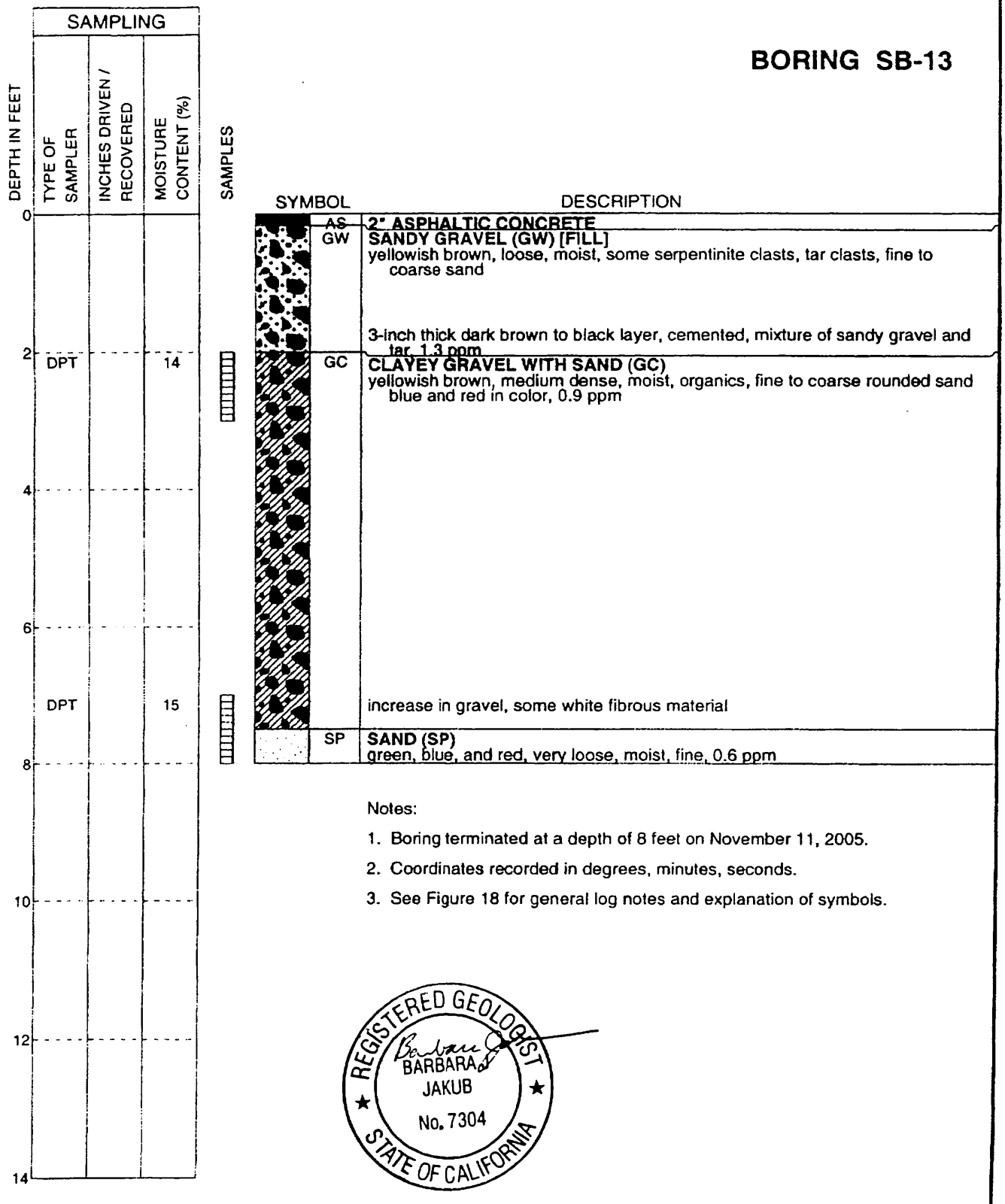
Job No: 26815270 Pt. ID: PITS.GPJ / SB-12	URS	Log of Boring
Date Completed: 11/11/05 Boring Depth: 8.0 ft.	Drill Rig: Direct Push Technology Coordinates: 38.014183 / 121.524309 Logged By: GAR	Location: Pittsburg River Park, Pittsburg, CA

Log Template: 11B

November 30, 2005

FIGURE 12

BORING SB-13



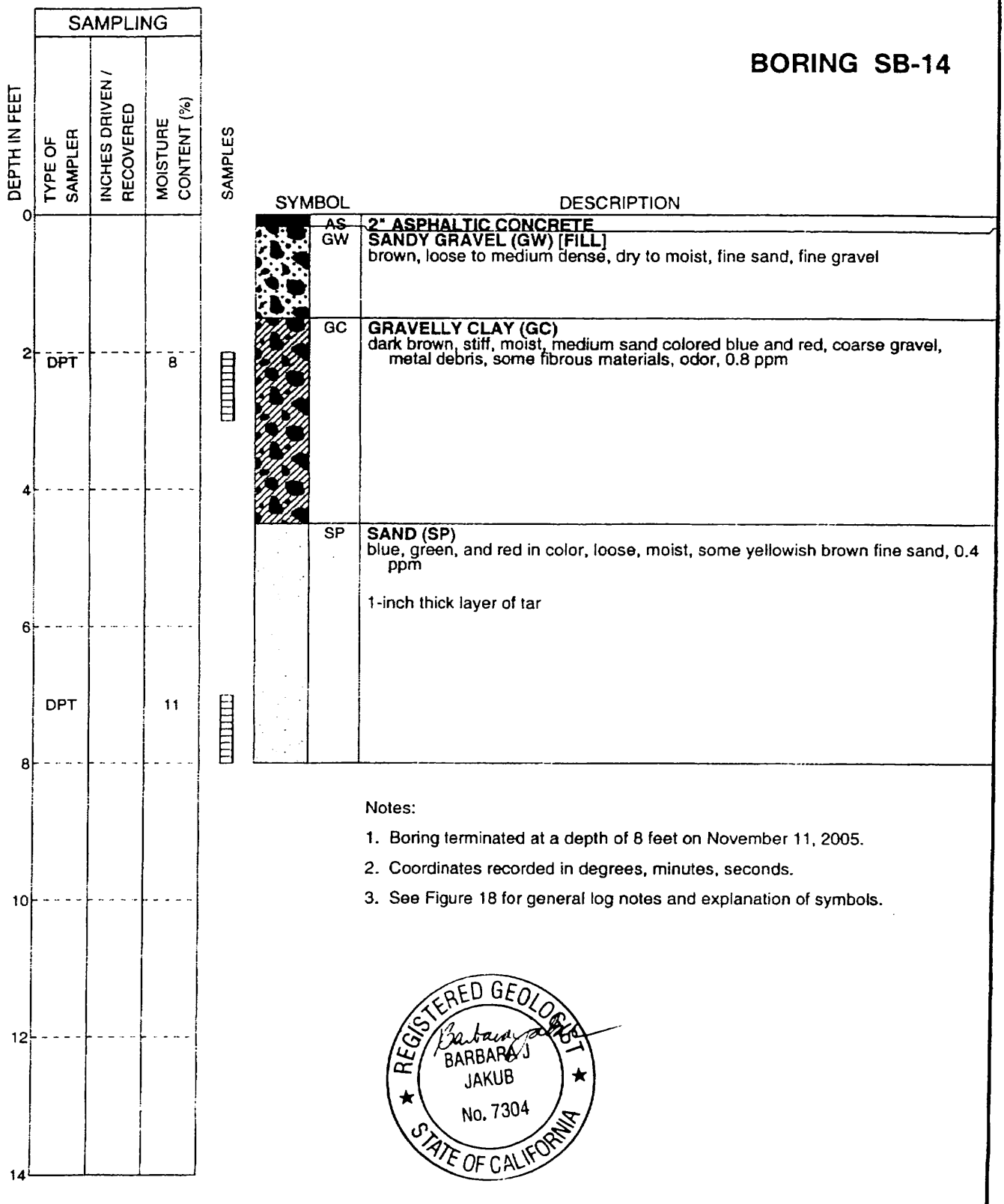
Notes:

1. Boring terminated at a depth of 8 feet on November 11, 2005.
2. Coordinates recorded in degrees, minutes, seconds.
3. See Figure 18 for general log notes and explanation of symbols.

Job No: 26815270 Pt. ID: PITS.GPJ / SB-13	**URS**	**Log of Boring**
Date Completed: 11/11/05 Boring Depth: 8.0 ft.	Drill Rig: Direct Push Technology Coordinates: 38.014169 / 121.524425 Logged By: GAR	Location: Pittsburg River Park, Pittsburg, CA

FIGURE 13

BORING SB-14



Notes:

1. Boring terminated at a depth of 8 feet on November 11, 2005.
2. Coordinates recorded in degrees, minutes, seconds.
3. See Figure 18 for general log notes and explanation of symbols.

Job No: 26815270 Pt. ID: PITS.GPJ / SB-14	URS		Log of Boring
Date Completed: 11/11/05 Boring Depth: 8.0 ft.	Drill Rig: Direct Push Technology Coordinates: 38.014202 / 121.524588 Logged By: GAR		Location: Pittsburg River Park, Pittsburg, CA

Log Template: 11B November 30, 2005 PAGE 1 of 1

FIGURE 14

BORING SB-15

DEPTH IN FEET	SAMPLES	TYPE OF SAMPLER	INCHES DRIVEN / RECOVERED	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION
0					AS	**2" ASPHALTIC CONCRETE**
					GP	**SANDY GRAVEL (GP) [FILL]** brown, loose, dry to moist, fine to coarse, some medium to coarse sand, trace rootlets, some fine tar clasts, wood fragments, 1.0 ppm
2		DPT		11		
					GC	**CLAYEY GRAVEL (GC)** dark brown, medium dense, moist, serpentinite clasts to 1/2-inch in diameter, medium to coarse sand, odor, 0.8 ppm
4					CL	**SANDY CLAY (CL)** brown, stiff, moist, some fine gravel, fine sand
					GC	**CLAYEY GRAVEL (GC)** dark brown to black, medium dense, moist, fine to coarse gravel, some fine to coarse sand, organics, wood fragments, odor, 0.9 ppm
6					CL	**LEAN CLAY (CL) [ALLUVIUM]** yellowish brown, stiff, moist, some fine sand, mottled brown, caleche nodules, 0.8 ppm
		DPT		19		
8						
10						
12						
14						

Notes:

1. Boring terminated at a depth of 8 feet on November 11, 2005.
2. Coordinates recorded in degrees, minutes, seconds.
3. See Figure 18 for general log notes and explanation of symbols.

REGISTERED GEOLOGIST
BARBARA G JAKUB
No. 7304
STATE OF CALIFORNIA

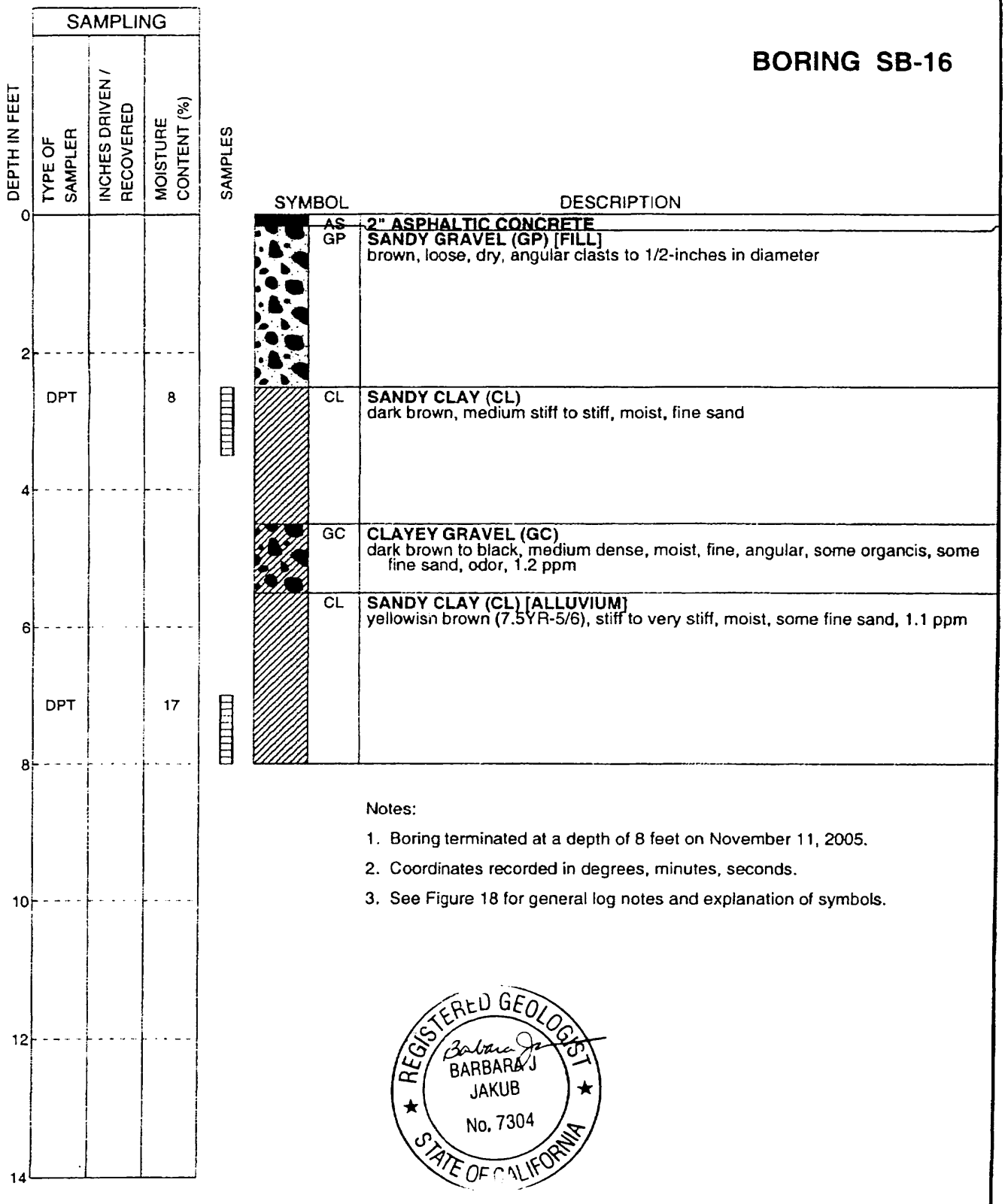
Job No: 26815270 Pt. ID: PITS.GPJ / SB-15	**URS**	**Log of Boring**
Date Completed: 11/11/05 Boring Depth: 8.0 ft.	Drill Rig: Direct Push Technology Coordinates: 38.014236 / 121.524712 Logged By: GAR	Location: Pittsburg River Park, Pittsburg, CA

Log Template: 11B

November 30, 2005

FIGURE 15

BORING SB-16



Notes:

1. Boring terminated at a depth of 8 feet on November 11, 2005.
2. Coordinates recorded in degrees, minutes, seconds.
3. See Figure 18 for general log notes and explanation of symbols.

Job No: 26815270 Pt. ID: PITS.GPJ / SB-16	**URS**	**Log of Boring**
Date Completed: 11/11/05 Boring Depth: 8.0 ft.	Drill Rig: Direct Push Technology Coordinates: 38.014287 / 121.524901 Logged By: GAR	Location: Pittsburg River Park, Pittsburg, CA

Log Template: 11B

November 30, 2005

FIGURE 16

BORING SB-17

DEPTH IN FEET	SAMPLING: INCHES DRIVEN / RECOVERED	SAMPLING: RESISTANCE (blows per foot)	SAMPLING: PID READING (parts per million)	SAMPLES	SYMBOL	DESCRIPTION
14	DPT	48/4	16			
16						**SILTY SAND WITH CLAY (SM)** brown, medium dense, moist, fine
18					SP	**SAND** yellowish brown, dense, moist, fine to medium, thin cemented zones, iron oxide staining
20						
22						
24						
26						
28						

Notes:

1. Boring terminated at a depth of 20 feet on November 15, 2005.
2. Coordinates recorded in degrees, minutes, seconds.
3. See Figure 18 for general log notes and explanation of symbols.

REGISTERED GEOLOGIST
BARBARA JAKUB
No. 7304
STATE OF CALIFORNIA

Job No: 26815270 Pt. ID: PITS.GPJ / SB-17	URS	Log of Boring

Log Template: 11B | November 30, 2005 | PAGE 2 of 2

PLATE 17 (Cont.)

INDEXED SOIL AND ROCK CLASSIFICATIONS

GRAPHIC	SYMBOL	DESCRIPTION	MAJOR DIVISIONS			
	GW	WELL-GRADED GRAVELS OR GRAVEL-SAND MIXTURES, LITTLE OR NO FINES	CLEAN GRAVELS (LITTLE OR NO FINES)	GRAVELS MORE THAN HALF OF COARSE FRACTION IS LARGER THAN NO.4 SIEVE SIZE	FOR VISUAL CLASSIFICATION, THE 1/4" SIZE MAY BE USED AS EQUIVALENT TO THE NO.4 SIEVE SIZE	COARSE-GRAINED SOILS MORE THAN HALF OF MATERIAL IS LARGER THAN NO.200 SIEVE SIZE
	GP	POORLY-GRADED GRAVELS OR GRAVEL-SAND MIXTURES, LITTLE OR NO FINES				
	GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES	GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)			
	GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES				
	SW	WELL-GRADED SANDS OR GRAVELLY SANDS, LITTLE OR NO FINES	CLEAN SANDS (LITTLE OR NO FINES)	SANDS MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN NO.4 SIEVE SIZE		
	SP	POORLY-GRADED SANDS OR GRAVELLY SANDS, LITTLE OR NO FINES				
	SM	SILTY SANDS, SAND-SILT MIXTURES	SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)			
	SC	CLAYEY SANDS, SAND-CLAY MIXTURES				
	ML	INORGANIC SILTS, VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY	SILTS & CLAYS LIQUID LIMIT LESS THAN 50			FINE-GRAINED SOILS MORE THAN HALF OF MATERIAL IS SMALLER THAN NO.200 SIEVE SIZE
	CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS				
	OL	ORGANIC SILTS AND ORGANIC SILT-CLAYS OF LOW PLASTICITY				
	MH	ORGANIC SILTS AND ORGANIC SILT-CLAYS OF HIGH PLASTICITY	SILTS & CLAYS LIQUID LIMIT GREATER THAN 50			
	CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS				
	OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS				
	PT	PEAT AND OTHER HIGHLY ORGANIC SOILS	HIGHLY ORGANIC SOILS			

THE NO.200 U.S. STANDARD SIEVE IS ABOUT THE SMALLEST PARTICLE VISIBLE TO THE NAKED EYE

SILT/CLAY CONSISTENCY

Consistency	Thumb Penetration
Very Soft	Easily penetrated several inches by thumb. Exudes between thumb and fingers when squeezed in hand
Soft	Easily penetrated one inch by thumb. Molded by light pressure.
Medium Stiff	Can be penetrated over 1/4 inch by thumb with moderate effort. Molded by strong finger pressure.
Stiff	Indented about 1/2 inch by thumb but penetrated only with great effort.
Hard	Readily indented by thumbnail
Very Stiff	Indented with difficulty by thumbnail

GRAIN SIZE

Classification	Range of Grain Sizes	
	U.S. Standard Sieve Size	Grain Size in Millimeters
Boulders	Above 12"	Above 305
Cobbles	12" to 3"	305 to 76.2
Gravel	3" to No.4	76.2 to 4.76
coarse	3" to 3/4"	76.2 to 19.1
fine	3/4" to No. 4	19.1 to 4.76
Sand	No. 4 to No. 200	4.76 to 0.074
coarse	No. 4 to No. 10	4.76 to 2.00
medium	No. 10 to No. 40	2.00 to 0.420
fine	No. 40 to No. 200	0.420 to 0.074
Silt and Clay	Below No. 200	Below 0.074

SAND/GRAVEL CONSISTENCY

Consistency	Field Test
Very loose	Easily penetrated with 1/2-in reinforcing rod pushed by hand
Loose	Easily penetrated with 1/2-in reinforcing rod pushed by hand
Medium dense	Penetrated a foot with 1/2-in reinforcing rod driven with 5-lb hammer
Dense sand	Penetrated a foot with 1/2-in reinforcing rod driven with 5-lb hammer
Very dense	Penetrated only a few inches with a 1/2-in reinforcing rod driven with a 5-lb hammer

URS

SOIL CLASSIFICATION CHART AND KEY TO TEST DATA

FIGURE

APPENDIX C
DATA QUALITY MEMORANDUM

URS

Memorandum

Date: December 5, 2005

To: Susan Flakus

From: Michelle Wood

Subject: QA/QC Analysis for November 2005 Pittsburg River Sampling Events
SDGs 183158 and 183191

I have completed a quality assurance evaluation of data collected for the Pittsburg River project during November of 2005. Upon receipt of laboratory reports, the following steps were taken in accordance with the EPA guidance for data validation. Sample custody documents were cross-checked with the laboratory report for sampling dates and required analyses. Holding times were calculated using analysis date, preparation date, and/or test date in relation to sampling date. The results were reviewed for QA/QC elements of precision, accuracy, reporting limits, and contamination. The following QA/QC parameters were reviewed during data evaluation.

- Chains of Custody – Verify that requested analyses were performed and sampling dates are accurately noted in lab reports.
- Holding Times – Check for holding times in excess of EPA guidelines.
- Method Blanks – Review blank analyses for evidence of potential contamination.
- Matrix Spikes – Review spike and spike duplicate recoveries and relative percent differences (RPDs) as a check for analytical precision and accuracy.
- Laboratory Control Samples– Review recoveries and relative percent differences (RPDs) as a check for analytical accuracy and precision.
- Surrogates – Review surrogate recoveries as a check for sample specific accuracy.
- Field Duplicates – Review field duplicates for sample homogeneity.

Chains of Custody

All samples were adequately accounted for throughout the transfer from field to lab.

Holding Times

All samples were analyzed within the prescribed method holding times.

Method Blanks

Method blanks consist of clean laboratory matrix that is carried through each step of the analysis with the environmental samples for each parameter. Method blanks were non-detect in all cases.

Matrix Spikes

MS/MSD samples are analyzed to evaluate matrix interference for an analytical batch and to assess accuracy and precision. MS/MSD recoveries were outside control limits for several SVOCs in QC batch 107739, for TPH-d, -mo in QC batch 107845, and for metals in QC batch 107886. However, the sample spiked was not a project sample and is not representative of project samples. Therefore no data were qualified as a result of these discrepancies.

The MS/MSD recoveries for phenol (SVOCs) in QC batch 107764 were outside control limits and the sample analyzed was a project sample. However, in accordance with EPA guidelines, organic data are not qualified based on MS/MSD results alone. No other quality control elements were outside control limits for this QC batch and therefore no qualifiers were assigned.

The MS/MSD recoveries were outside control limits for copper, nickel, and zinc in QC batch 107839. The copper and zinc concentrations in the original sample (SB11-03) were more than four times the concentrations spiked which renders the resulting recoveries not meaningful in accordance with EPA guidelines. The low nickel recoveries (-10% and – 13%) were meaningful and necessitated qualification of similar samples in the SDG. A review of the boring logs indicated that samples SB12-03, SB16-03, and SB18-03 were similar to SB11-03. Therefore, nickel results for these samples were qualified as estimated and flagged with a J.

All other MS/MSD recoveries and RPDs were within control limits.

Laboratory Control Samples

LCSs are well-characterized, laboratory-generated samples used to monitor the laboratory's day-to-day performance for analyses and assess the accuracy of the analytical process independent of matrix effects. All LCS recoveries were within control limits.

Surrogates

Surrogates are spiked into blanks, samples, and quality control samples for organic analyses to evaluate accuracy on a sample-specific basis. Surrogate recoveries were low in two of the PCB samples (SB12-03 and SB13-03). The associated results were qualified as estimated and flagged with a J if detected or a UJ if undetected. All other surrogate recoveries were within control limits.

Field Duplicates

Five sets of field duplicates were analyzed. In general there was good agreement between the duplicate samples indicating that the sample matrix is homogeneous relative to contamination.

Summary

The data reviewed are of acceptable precision and accuracy with the qualifications noted.

- PCBs for SB12-03 were qualified as estimated and flagged UJ
- PCBs for SB13-03 were qualified as estimated and flagged J if detected and UJ if undetected
- Nickel results for SB11-03, SB12-03, SB16-03, and SB18-03 were qualified as estimated and flagged J

APPENDIX D
ASBESTOS ANALYTICAL RESULTS

MICRO ANALYTICAL LABORATORIES, INC.

BULK ASBESTOS ANALYSIS - PLM SOIL

1022

URS Corporation
221 Main Street, Suite 600
San Francisco, CA 94105

PROJECT:
PITTSBURG RIVER PARK
JOB NO. 26815155
(Total number of samples changed. Additional analyses are on p. 8. Report amended 11/21/2005, replaces report of 11/17/2005).

Micro Log In **76255**
Total Samples 40
Date Sampled 11/11/2005
Date Received 11/15/2005
Date Analyzed 11/16/2005

SAMPLE INFORMATION	ASBESTOS INFORMATION QUANTITY (AREA %) / TYPES / LAYERS / DISTINCT SAMPLES	DOMINANT OTHER MATERIALS
Client: SB-14-8 Micro: 76255-01 Analyst: AF DARK BROWN / BLACK SAND	3% CHRYSOTILE	CARBONATE ROCK FRAGMENTS OPAQUES
Client: SB-10-8 Micro: 76255-02 Analyst: AF YELLOW BROWN LEAN CLAY	NONE DETECTED	ROCK FRAGMENTS CLAY
Client: SB-10-3 Micro: 76255-03 Analyst: AF OLIVE SANDY GRAVEL	NONE DETECTED	CARBONATE ROCK FRAGMENTS CLAY
Client: SB-11-3 Micro: 76255-04 Analyst: AF BK REDDISH BROWN CLAY	<1% CHRYSOTILE	ROCK FRAGMENTS CLAY QC*A2
Client: SB-4-8 Micro: 76255-05 Analyst: AF BROWN CLAY	NONE DETECTED	ROCK FRAGMENTS CLAY

Technical Supervisor: _____ 11/21/2005
for Baojia Ke, Ph. D. Date Reported

NOTES: Weight % cannot be determined by PLM estimation or point counts. Asbestos fibers with diameter below ~1 µm may not be detected by PLM. The absence of asbestos in dust or debris (including wipe or microvacuum), and in some compact materials, including floor tiles, cannot be conclusively established by PLM, and should be confirmed by Transmission Electron Microscopy (TEM). Only dominant non-asbestos materials are indicated. This report must not be interpreted as a conclusive identification of non-asbestos (fibrous or not). Preparation (all samples): grinding, milling; teasing bundles apart; drying, if needed, by hotplate. Acid dissolution, ashing, or other matrix reduction techniques may be applied to some samples; residue asbestos % is corrected for amount of matrix removed. Various sample interferences may prevent detection of small asbestos fibers, and hinder determination of some optical properties. Notes are made if point counting is used, otherwise, asbestos is quantified by calibrated visual estimation. Detection limit is material dependent. Detection of asbestos traces (<<1%) may not be reliable or reproducible by PLM. Lower quantitation limit (reporting limit) of PLM estimation is 1%. The 95% UCL and LCL (Upper and Lower Confidence Limits) represent the highest and lowest expected concentrations for an asbestos point count, based on reported concentration and Poisson statistics. The Cal-OSHA definition of asbestos-containing construction material is 0.1% asbestos by weight; however, reliable determination of asbestos weight percent at this level cannot be done by PLM, and TEM is recommended. Layers of heterogeneous samples are analyzed separately; asbestos percentages are reported for individual layers. Interlayer contamination is possible among any layers in a sample. Composite asbestos percentages on multilayered samples are applicable only to layered wall systems (wallboard, joint compound, and related materials); compositing is based on clients' descriptions of a material as "joint compound". Clients are solely responsible for identification and description of bulk materials listed on field forms. Laboratory sample descriptions may differ from descriptions given by the client. *Quality Control (QC) Codes: A1/A2 = results Within acceptance limits; B = no asbestos detected in lab blank (SRM 1866a Fibrous Glass or equivalent); R = all materials confirmed after multiple result resolutions. NIST / NVLAP Accreditation Lab Code: #101872-0, California ELAP Certification #1037. EPA test method is based on the EPA Interim Method (1982), with several improvements in analytical techniques. Unless otherwise stated in this report, all samples were received in acceptable condition for analysis. This report must not be used to claim product endorsement by NIST or any U.S. Government agency. This report pertains only to the samples tested and must not be reproduced except in full, with approval of Micro Analytical Laboratories.

MICRO ANALYTICAL LABORATORIES, INC.

BULK ASBESTOS ANALYSIS - PLM SOIL

1022

URS Corporation
221 Main Street, Suite 600
San Francisco, CA 94105

PROJECT:
PITTSBURG RIVER PARK
JOB NO. 26815155
(Total number of samples changed. Additional analyses are on p. 8. Report amended 11/21/2005, replaces report of 11/17/2005).

Micro Log In **76255**
Total Samples 40
Date Sampled 11/11/2005
Date Received 11/15/2005
Date Analyzed 11/16/2005

SAMPLE INFORMATION	ASBESTOS INFORMATION QUANTITY (AREA %) / TYPES / LAYERS / DISTINCT SAMPLES	DOMINANT OTHER MATERIALS
Client: SB-15-3 Micro: 76255-06 Analyst: AF **OLIVE SANDY GRAVEL**	**NONE DETECTED**	CARBONATE ROCK FRAGMENTS CLAY
Client: SB-05-2 Micro: 76255-07 Analyst: AF **BROWN CLAYEY GRAVEL**	**<1% CHRYSOTILE**	ROCK FRAGMENTS CLAY
Client: SB-11-8 Micro: 76255-08 Analyst: AF **BROWN CLAYEY GRAVEL WITH SAND**	**NONE DETECTED**	ROCK FRAGMENTS CLAY
Client: SB-04-3 Micro: 76255-09 Analyst: AF **BROWN SANDY CLAY**	**NONE DETECTED**	ROCK FRAGMENTS CLAY
Client: SB-13-8 Micro: 76255-10 Analyst: AF **BROWN SAND**	**2% CHRYSOTILE**	CARBONATE ROCK FRAGMENTS OPAQUES

Technical Supervisor: for Baojia Ke, Ph. D. 11/21/2005 Date Reported

NOTES: Weight % cannot be determined by PLM estimation or point counts. Asbestos fibers with diameter below ~1 µm may not be detected by PLM. The absence of asbestos in dust or debris (including wipe or microvacuum), and in some compact materials, including floor tiles, cannot be conclusively established by PLM, and should be confirmed by Transmission Electron Microscopy (TEM). Only dominant non-asbestos materials are indicated. This report must not be interpreted as a conclusive identification of non-asbestos (fibrous or not). Preparation (all samples): grinding, milling; teasing bundles apart; drying, if needed, by hotplate. Acid dissolution, ashing, or other matrix reduction techniques may be applied to some samples; residue asbestos % is corrected for amount of matrix removed. Various sample interferences may prevent detection of small asbestos fibers, and hinder determination of some optical properties. Notes are made if point counting is used; otherwise, asbestos is quantified by calibrated visual estimation. Detection limit is material dependent. Detection of asbestos traces (<<1%) may not be reliable or reproducible by PLM. Lower quantitation limit (reporting limit) of PLM estimation is 1%. The 95% UCL and LCL (Upper and Lower Confidence Limits) represent the highest and lowest expected concentrations for an asbestos point count, based on reported concentration and Poisson statistics. The Cal-OSHA definition of asbestos-containing construction material is 0.1% asbestos by weight; however, reliable determination of asbestos weight percent at this level cannot be done by PLM, and TEM is recommended. Layers of heterogeneous samples are analyzed separately; asbestos percentages are reported for individual layers. Interlayer contamination is possible among any layers in a sample. Composite asbestos percentages on multilayered samples are applicable only to layered wall systems (wallboard, joint compound, and related materials); compositing is based on clients' descriptions of a material as "joint compound". Clients are solely responsible for identification and description of bulk materials listed on field forms. Laboratory sample descriptions may differ from descriptions given by the client. "Quality Control (QC) Codes: A1/A2 = results within acceptance limits; B = no asbestos detected in lab blank (SRM 1866a Fibrous Glass or equivalent); R = all materials confirmed after multiple result resolutions. NIST / NVLAP Accreditation Lab Code: #101872-0. California ELAP Certification #1037. EPA test method is based on the EPA Interim Method (1982), with several improvements in analytical techniques. Unless otherwise stated in this report, all samples were received in acceptable condition for analysis. This report must not be used to claim product endorsement by NIST or any U.S. Government agency. This report pertains only to the samples tested and must not be reproduced except in full, with approval of Micro Analytical Laboratories.

MICRO ANALYTICAL LABORATORIES, INC.

BULK ASBESTOS ANALYSIS - PLM SOIL

1022

URS Corporation
221 Main Street, Suite 600
San Francisco, CA 94105

PROJECT:
PITTSBURG RIVER PARK
JOB NO. 26815155
(Total number of samples changed. Additional analyses are on p. 8. Report amended 11/21/2005, replaces report of 11/17/2005).

Micro Log In **76255**
Total Samples 40
Date Sampled 11/11/2005
Date Received 11/15/2005
Date Analyzed 11/16/2005

SAMPLE INFORMATION	ASBESTOS INFORMATION QUANTITY (AREA %) / TYPES / LAYERS / DISTINCT SAMPLES	DOMINANT OTHER MATERIALS
Client: SB-01-3 Micro: 76255-11 Analyst: AF **BROWN SANDY CLAY**	**NONE DETECTED**	ROCK FRAGMENTS CLAY
Client: SB-16-3 Micro: 76255-12 Analyst: AF **BROWN / BLACK SANDY GRAVEL**	**3% CHRYSOTILE**	TAR ROCK FRAGMENTS MICA OPAQUES
Client: SB-02-3 Micro: 76255-13 Analyst: AF **BROWN SANDY CLAY**	**<1% CHRYSOTILE**	ROCK FRAGMENTS CLAY
Client: SB-15-8 Micro: 76255-14 Analyst: AF BK **YELLOW BROWN CLAY**	**<1% CHRYSOTILE**	ROCK FRAGMENTS CLAY QC*: R
Client: SB-12-3 Micro: 76255-15 Analyst: AF **OLIVE GRAVELLY SAND**	**NONE DETECTED**	ROCK FRAGMENTS CLAY

Technical Supervisor: for Baojia Ke, Ph. D. 11/21/2005 Date Reported

NOTES: Weight % cannot be determined by PLM estimation or point counts. Asbestos fibers with diameter below ~1 µm may not be detected by PLM. The absence of asbestos in dust or debris (including wipe or microvacuum), and in some compact materials, including floor tiles, cannot be conclusively established by PLM, and should be confirmed by Transmission Electron Microscopy (TEM). Only dominant non-asbestos materials are indicated. This report must not be interpreted as a conclusive identification of non-asbestos (fibrous or not). Preparation (all samples): grinding, milling; teasing bundles apart; drying, if needed, by hotplate. Acid dissolution, ashing, or other matrix reduction techniques may be applied to some samples; residue asbestos % is corrected for amount of matrix removed. Various sample interferences may prevent detection of small asbestos fibers, and hinder determination of some optical properties. Notes are made if point counting is used; otherwise, asbestos is quantified by calibrated visual estimation. Detection limit is material dependent. Detection of asbestos traces (<<1%) may not be reliable or reproducible by PLM. Lower quantitation limit (reporting limit) of PLM estimation is 1%. The 95% UCL and LCL (Upper and Lower Confidence Limits) represent the highest and lowest expected concentrations for an asbestos point count, based on reported concentration and Poisson statistics. The Cal-OSHA definition of asbestos-containing construction material is 0.1% asbestos by weight; however, reliable determination of asbestos weight percent at this level cannot be done by PLM, and TEM is recommended. Layers of heterogeneous samples are analyzed separately; asbestos percentages are reported for individual layers. Interlayer contamination is possible among any layers in a sample. Composite asbestos percentages on multilayered samples are applicable only to layered wall systems (wallboard, joint compound, and related materials); compositing is based on clients' descriptions of a material as "joint compound". Clients are solely responsible for identification and description of bulk materials listed on field forms. Laboratory sample descriptions may differ from descriptions given by the client. *Quality Control (QC) Codes: A1/A2 = results within acceptance limits; B = no asbestos detected in lab blank (SRM 1866a Fibrous Glass or equivalent); R = all materials confirmed after multiple result resolutions. NIST / NVLAP Accreditation Lab Code: #101872-0. California ELAP Certification #1037. EPA test method is based on the EPA Interim Method (1982), with several improvements in analytical techniques. Unless otherwise stated in this report, all samples were received in acceptable condition for analysis. This report must not be used to claim product endorsement by NIST or any U.S. Government agency. This report pertains only to the samples tested and must not be reproduced except in full, with approval of Micro Analytical Laboratories.

MICRO ANALYTICAL LABORATORIES, INC.

BULK ASBESTOS ANALYSIS - PLM SOIL

1022

URS Corporation
221 Main Street, Suite 600
San Francisco, CA 94105

PROJECT:

PITTSBURG RIVER PARK
JOB NO. 26815155

(Total number of samples changed. Additional analyses are on p. 8. Report amended 11/21/2005, replaces report of 11/17/2005).

Micro Log In **76255**

Total Samples 40

Date Sampled 11/11/2005

Date Received 11/15/2005

Date Analyzed 11/16/2005

SAMPLE INFORMATION	ASBESTOS INFORMATION QUANTITY (AREA %) / TYPES / LAYERS / DISTINCT SAMPLES	DOMINANT OTHER MATERIALS
Client: **SB-12-8** Micro: 76255-16 Analyst: AF **OLIVE SAND**	**2% CHRYSOTILE**	ROCK FRAGMENTS CLAY MICA CARBONATE
Client: **SB-16-8** Micro: 76255-17 Analyst: AF **YELLOW BROWN SANDY CLAY**	**NONE DETECTED**	ROCK FRAGMENTS CLAY
Client: **SB-01-8** Micro: 76255-18 Analyst: AF **YELLOW BROWN CLAYEY SAND**	**NONE DETECTED**	ROCK FRAGMENTS CLAY
Client: **SB-20-08** Micro: 76255-19 Analyst: AF **YELLOW BROWN CLAY & SAND**	**NONE DETECTED**	ROCK FRAGMENTS CLAY
Client: **SB-18-3** Micro: 76255-20 Analyst: AF **OLIVE SANDY GRAVEL**	**NONE DETECTED**	ROCK FRAGMENTS CARBONATE CLAY

Technical Supervisor: for Baojia Ke, Ph. D. 11/21/2005 Date Reported

NOTES: Weight % cannot be determined by PLM estimation or point counts. Asbestos fibers with diameter below ~1 µm may not be detected by PLM. The absence of asbestos in dust or debris (including wipe or microvacuum), and in some compact materials, including floor tiles, cannot be conclusively established by PLM, and should be confirmed by Transmission Electron Microscopy (TEM). Only dominant non-asbestos materials are indicated. This report must not be interpreted as a conclusive identification of non-asbestos (fibrous or not). Preparation (all samples): grinding, milling; teasing bundles apart; drying, if needed, by hotplate. Acid dissolution, ashing, or other matrix reduction techniques may be applied to some samples; residue asbestos % is corrected for amount of matrix removed. Various sample interferences may prevent detection of small asbestos fibers, and hinder determination of some optical properties. Notes are made if point counting is used; otherwise, asbestos is quantified by calibrated visual estimation. Detection limit is material dependent. Detection of asbestos traces (<<1%) may not be reliable or reproducible by PLM. Lower quantitation limit (reporting limit) of PLM estimation is 1%. The 95% UCL and LCL (Upper and Lower Confidence Limits) represent the highest and lowest expected concentrations for an asbestos point count, based on reported concentration and Poisson statistics. The Cal-OSHA definition of asbestos-containing construction material is 0.1% asbestos by weight; however, reliable determination of asbestos weight percent at this level cannot be done by PLM, and TEM is recommended. Layers of heterogeneous samples are analyzed separately; asbestos percentages are reported for individual layers. Interlayer contamination is possible among any layers in a sample. Composite asbestos percentages on multilayered samples are applicable only to layered wall systems (wallboard, joint compound, and related materials); compositing is based on clients' descriptions of a material as "joint compound". Clients are solely responsible for identification and description of bulk materials listed on field forms. Laboratory sample descriptions may differ from descriptions given by the client. *Quality Control (QC) Codes: A1/A2 = results Within acceptance limits; B = no asbestos detected in lab blank (SRM 1866a Fibrous Glass or equivalent); R = all materials confirmed after multiple result resolutions. NIST / NVLAP Accreditation Lab Code: #101872-0. California ELAP Certification #1037. EPA test method is based on the EPA Interim Method (1982), with several improvements in analytical techniques. Unless otherwise stated in this report, all samples were received in acceptable condition for analysis. This report must not be used to claim product endorsement by NIST or any U.S. Government agency. This report pertains only to the samples tested and must not be reproduced except in full, with approval of Micro Analytical Laboratories.

MICRO ANALYTICAL LABORATORIES, INC.

BULK ASBESTOS ANALYSIS - PLM SOIL

1022

URS Corporation
221 Main Street, Suite 600
San Francisco, CA 94105

PROJECT:
PITTSBURG RIVER PARK
JOB NO. 26815155
(Total number of samples changed. Additional analyses are on p. 8. Report amended 11/21/2005, replaces report of 11/17/2005).

Micro Log In **76255**
Total Samples 40
Date Sampled 11/11/2005
Date Received 11/15/2005
Date Analyzed 11/17/2005

SAMPLE INFORMATION	ASBESTOS INFORMATION QUANTITY (AREA %) / TYPES / LAYERS / DISTINCT SAMPLES	DOMINANT OTHER MATERIALS
Client: **SB-07-3** Micro: 76255-21 Analyst: AF **YELLOW BROWN SANDY GRAVEL**	**NONE DETECTED**	ROCK FRAGMENTS CLAY
Client: **SB-13-3** Micro: 76255-22 Analyst: AF **BROWN SAND**	**2% CHRYSOTILE**	ROCK FRAGMENTS OPAQUES
Client: **SB-14-3** Micro: 76255-23 Analyst: AF BK **OLIVE SANDY GRAVEL**	**3% CHRYSOTILE**	ROCK FRAGMENTS OPAQUES QC*A2
Client: **SB-08-3** Micro: 76255-24 Analyst: AF **YELLOW BROWN SANDY CLAY**	**NONE DETECTED**	ROCK FRAGMENTS CLAY
Client: **SB-03-3** Micro: 76255-25 Analyst: AF **BROWN CLAY**	**NONE DETECTED**	ROCK FRAGMENTS CLAY

Technical Supervisor: _____ 11/21/2005
for Baojia Ke, Ph. D. Date Reported

NOTES: Weight % cannot be determined by PLM estimation or point counts. Asbestos fibers with diameter below ~1 µm may not be detected by PLM. The absence of asbestos in dust or debris (including wipe or microvacuum), and in some compact materials, including floor tiles, cannot be conclusively established by PLM, and should be confirmed by Transmission Electron Microscopy (TEM). Only dominant non-asbestos materials are indicated. This report must not be interpreted as a conclusive identification of non-asbestos (fibrous or not). Preparation (all samples): grinding, milling; teasing bundles apart; drying, if needed, by hotplate. Acid dissolution, ashing, or other matrix reduction techniques may be applied to some samples; residue asbestos % is corrected for amount of matrix removed. Various sample interferences may prevent detection of small asbestos fibers, and hinder determination of some optical properties. Notes are made if point counting is used; otherwise, asbestos is quantified by calibrated visual estimation. Detection limit is material dependent. Detection of asbestos traces (<<1%) may not be reliable or reproducible by PLM. Lower quantitation limit (reporting limit) of PLM estimation is 1%. The 95% UCL and LCL (Upper and Lower Confidence Limits) represent the highest and lowest expected concentrations for an asbestos point count, based on reported concentration and Poisson statistics. The Cal-OSHA definition of asbestos-containing construction material is 0.1% asbestos by weight; however, reliable determination of asbestos weight percent at this level cannot be done by PLM, and TEM is recommended. Layers of heterogeneous samples are analyzed separately; asbestos percentages are reported for individual layers. Interlayer contamination is possible among any layers in a sample. Composite asbestos percentages on multilayered samples are applicable only to layered wall systems (wallboard, joint compound, and related materials); compositing is based on clients' descriptions of a material as "joint compound". Clients are solely responsible for identification and description of bulk materials listed on field forms. Laboratory sample descriptions may differ from descriptions given by the client. "Quality Control (QC) Codes: A1/A2 = results within acceptance limits; B = no asbestos detected in lab blank (SRM 1866a Fibrous Glass or equivalent); R = all materials confirmed after multiple result resolutions. NIST / NVLAP Accreditation Lab Code: #101872-0. California ELAP Certification #1037. EPA test method is based on the EPA Interim Method (1982), with several improvements in analytical techniques. Unless otherwise stated in this report, all samples were received in acceptable condition for analysis. This report must not be used to claim product endorsement by NIST or any U.S. Government agency. This report pertains only to the samples tested and must not be reproduced except in full, with approval of Micro Analytical Laboratories.

MICRO ANALYTICAL LABORATORIES, INC.

BULK ASBESTOS ANALYSIS - PLM SOIL

1022

URS Corporation
221 Main Street, Suite 600
San Francisco, CA 94105

PROJECT:
PITTSBURG RIVER PARK
JOB NO. 26815155
(Total number of samples changed. Additional analyses are on p. 8. Report amended 11/21/2005, replaces report of 11/17/2005).

Micro Log In **76255**
Total Samples 40
Date Sampled 11/11/2005
Date Received 11/15/2005
Date Analyzed 11/17/2005

SAMPLE INFORMATION	ASBESTOS INFORMATION QUANTITY (AREA %) / TYPES / LAYERS / DISTINCT SAMPLES	DOMINANT OTHER MATERIALS
Client: SB-02-8 Micro: 76255-26 Analyst: AF BROWN SANDY CLAY / CLAYEY SAND	NONE DETECTED	ROCK FRAGMENTS CLAY
Client: SB-19-08 Micro: 76255-27 Analyst: AF YELLOW BROWN SANDY CLAY	NONE DETECTED	ROCK FRAGMENTS CLAY
Client: SB-05-8 Micro: 76255-28 Analyst: AF BROWN CLAYEY GRAVEL	NONE DETECTED	ROCK FRAGMENTS CLAY
Client: SB-06-3 Micro: 76255-29 Analyst: AF YELLOW BROWN SANDY CLAY	NONE DETECTED	ROCK FRAGMENTS CLAY
Client: SB-07-8 Micro: 76255-30 Analyst: AF YELLOW BROWN SANDY CLAY	NONE DETECTED	ROCK FRAGMENTS CLAY

Technical Supervisor: for Baojia Ke, Ph. D. 11/21/2005 Date Reported

NOTES: Weight % cannot be determined by PLM estimation or point counts. Asbestos fibers with diameter below ~1 µm may not be detected by PLM. The absence of asbestos in dust or debris (including wipe or microvacuum), and in some compact materials, including floor tiles, cannot be conclusively established by PLM, and should be confirmed by Transmission Electron Microscopy (TEM). Only dominant non-asbestos materials are indicated. This report must not be interpreted as a conclusive identification of non-asbestos (fibrous or not). Preparation (all samples): grinding, milling; teasing bundles apart; drying, if needed, by hotplate. Acid dissolution, ashing, or other matrix reduction techniques may be applied to some samples; residue asbestos % is corrected for amount of matrix removed. Various sample interferences may prevent detection of small asbestos fibers, and hinder determination of some optical properties. Notes are made if point counting is used; otherwise, asbestos is quantified by calibrated visual estimation. Detection limit is material dependent. Detection of asbestos traces (<<1%) may not be reliable or reproducible by PLM. Lower quantitation limit (reporting limit) of PLM estimation is 1%. The 95% UCL and LCL (Upper and Lower Confidence Limits) represent the highest and lowest expected concentrations for an asbestos point count, based on reported concentration and Poisson statistics. The Cal-OSHA definition of asbestos-containing construction material is 0.1% asbestos by weight; however, reliable determination of asbestos weight percent at this level cannot be done by PLM, and TEM is recommended. Layers of heterogeneous samples are analyzed separately; asbestos percentages are reported for individual layers. Interlayer contamination is possible among any layers in a sample. Composite asbestos percentages on multilayered samples are applicable only to layered wall systems (wallboard, joint compound, and related materials); compositing is based on clients' descriptions of a material as "joint compound". Clients are solely responsible for identification and description of bulk materials listed on field forms. Laboratory sample descriptions may differ from descriptions given by the client. "Quality Control (QC) Codes: A1/A2 = results within acceptance limits; B = no asbestos detected in lab blank (SRM 1866a Fibrous Glass or equivalent); R = all materials confirmed after multiple result resolutions. NIST / NVLAP Accreditation Lab Code: #101872-0. California ELAP Certification #1037. EPA test method is based on the EPA Interim Method (1982), with several improvements in analytical techniques. Unless otherwise stated in this report, all samples were received in acceptable condition for analysis. This report must not be used to claim product endorsement by NIST or any U.S. Government agency. This report pertains only to the samples tested and must not be reproduced except in full, with approval of Micro Analytical Laboratories.

MICRO ANALYTICAL LABORATORIES, INC.

BULK ASBESTOS ANALYSIS - PLM SOIL

1022

URS Corporation
221 Main Street, Suite 600
San Francisco, CA 94105

PROJECT:
PITTSBURG RIVER PARK
JOB NO. 26815155
(Total number of samples changed. Additional analyses are on p. 8. Report amended 11/21/2005, replaces report of 11/17/2005).

Micro Log In **76255**
Total Samples 40
Date Sampled 11/11/2005
Date Received 11/15/2005
Date Analyzed 11/17/2005

SAMPLE INFORMATION	ASBESTOS INFORMATION QUANTITY (AREA %) / TYPES / LAYERS / DISTINCT SAMPLES	DOMINANT OTHER MATERIALS
Client: **SB-21-08** Micro: 76255-31 Analyst: AF **YELLOW BROWN SANDY CLAY**	**NONE DETECTED**	ROCK FRAGMENTS CLAY
Client: **SB-21-03** Micro: 76255-32 Analyst: AF **CLAYEY GRAVEL & SAND** **BROWN**	**<1% CHRYSOTILE**	ROCK FRAGMENTS CLAY
Client: **SB-06-8** Micro: 76255-33 Analyst: AF **CLAYEY SAND**	**NONE DETECTED**	ROCK FRAGMENTS CLAY
Client: **SB-08-8** Micro: 76255-34 Analyst: AF BK **YELLOW BROWN SANDY CLAY**	**NONE DETECTED**	ROCK FRAGMENTS CLAY QC*A2
Client: **SB-09-36** Micro: 76255-35 Analyst: AF **SANDY CLAY** **BROWN**	**2% CHRYSOTILE**	ROCK FRAGMENTS CLAY OPAQUES

Technical Supervisor: _____ 11/21/2005
for Baojia Ke, Ph. D. Date Reported

NOTES: Weight % cannot be determined by PLM estimation or point counts. Asbestos fibers with diameter below ~1 µm may not be detected by PLM. The absence of asbestos in dust or debris (including wipe or microvacuum), and in some compact materials, including floor tiles, cannot be conclusively established by PLM, and should be confirmed by Transmission Electron Microscopy (TEM). Only dominant non-asbestos materials are indicated. This report must not be interpreted as a conclusive identification of non-asbestos (fibrous or not). Preparation (all samples): grinding, milling; teasing bundles apart; drying, if needed, by hotplate. Acid dissolution, ashing, or other matrix reduction techniques may be applied to some samples; residue asbestos % is corrected for amount of matrix removed. Various sample interferences may prevent detection of small asbestos fibers, and hinder determination of some optical properties. Notes are made if point counting is used; otherwise, asbestos is quantified by calibrated visual estimation. Detection limit is material dependent. Detection of asbestos traces (<<1%) may not be reliable or reproducible by PLM. Lower quantitation limit (reporting limit) of PLM estimation is 1%. The 95% UCL and LCL (Upper and Lower Confidence Limits) represent the highest and lowest expected concentrations for an asbestos point count, based on reported concentration and Poisson statistics. The Cal-OSHA definition of asbestos-containing construction material is 0.1% asbestos by weight; however, reliable determination of asbestos weight percent at this level cannot be done by PLM, and TEM is recommended. Layers of heterogeneous samples are analyzed separately; asbestos percentages are reported for individual layers. Interlayer contamination is possible among any layers in a sample. Composite asbestos percentages on multilayered samples are applicable only to layered wall systems (wallboard, joint compound, and related materials); compositing is based on clients' descriptions of a material as "joint compound". Clients are solely responsible for identification and description of bulk materials listed on field forms. Laboratory sample descriptions may differ from descriptions given by the client. "Quality Control (QC) Codes: A1/A2 = results within acceptance limits; B = no asbestos detected in lab blank (SRM 1866a Fibrous Glass or equivalent); R = all materials confirmed after multiple result resolutions. NIST / NVLAP Accreditation Lab Code: #101872-0. California ELAP Certification #1037. EPA test method is based on the EPA Interim Method (1982), with several improvements in analytical techniques. Unless otherwise stated in this report, all samples were received in acceptable condition for analysis. This report must not be used to claim product endorsement by NIST or any U.S. Government agency. This report pertains only to the samples tested and must not be reproduced except in full, with approval of Micro Analytical Laboratories.

MICRO ANALYTICAL LABORATORIES, INC.

BULK ASBESTOS ANALYSIS - PLM SOIL

1022

URS Corporation
221 Main Street, Suite 600
San Francisco, CA 94105

PROJECT:
PITTSBURG RIVER PARK
JOB NO. 26815155
(Total number of samples changed. Additional analyses are on p. 8. Report amended 11/21/2005, replaces report of 11/17/2005).

Micro Log In **76255**
Total Samples 40
Date Sampled 11/11/2005
Date Received 11/21/2005
Date Analyzed 11/21/2005

SAMPLE INFORMATION	ASBESTOS INFORMATION QUANTITY (AREA %) / TYPES / LAYERS / DISTINCT SAMPLES	DOMINANT OTHER MATERIALS
Client: SB-09-8 Micro: 76255-36 Analyst: AF YELLOW BROWN SANDY CLAY	NONE DETECTED	ROCK FRAGMENTS CLAY
Client: SB-17-3N Micro: 76255-37 Analyst: AF BROWN SANDY CLAY	NONE DETECTED	ROCK FRAGMENTS CLAY
Client: SB-17-15N Micro: 76255-38 Analyst: AF YELLOWISH BROWN SILTY SAND WITH CLAY	NONE DETECTED	CARBONATE ROCK FRAGMENTS CLAY
Client: SB-17-1N Micro: 76255-39 Analyst: AF GREY SAND	<1% CHRYSOTILE	CARBONATE ROCK FRAGMENTS CLAY
Client: SB-17-19N Micro: 76255-40 Analyst: AF YELLOW - BROWN SAND	NONE DETECTED	CARBONATE ROCK FRAGMENTS CLAY

Technical Supervisor: for Baojia Ke, Ph. D. 11/21/2005 Date Reported

NOTES: Weight % cannot be determined by PLM estimation or point counts. Asbestos fibers with diameter below ~1 μm may not be detected by PLM. The absence of asbestos in dust or debris (including wipe or microvacuum), and in some compact materials, including floor tiles, cannot be conclusively established by PLM, and should be confirmed by Transmission Electron Microscopy (TEM). Only dominant non-asbestos materials are indicated. This report must not be interpreted as a conclusive identification of non-asbestos (fibrous or not). Preparation (all samples): grinding, milling; teasing bundles apart; drying, if needed, by hotplate. Acid dissolution, ashing, or other matrix reduction techniques may be applied to some samples; residue asbestos % is corrected for amount of matrix removed. Various sample interferences may prevent detection of small asbestos fibers, and hinder determination of some optical properties. Notes are made if point counting is used; otherwise, asbestos is quantified by calibrated visual estimation. Detection limit is material dependent. Detection of asbestos traces (<<1%) may not be reliable or reproducible by PLM. Lower quantitation limit (reporting limit) of PLM estimation is 1%. The 95% UCL and LCL (Upper and Lower Confidence Limits) represent the highest and lowest expected concentrations for an asbestos point count, based on reported concentration and Poisson statistics. The Cal-OSHA definition of asbestos-containing construction material is 0.1% asbestos by weight; however, reliable determination of asbestos weight percent at this level cannot be done by PLM, and TEM is recommended. Layers of heterogeneous samples are analyzed separately; asbestos percentages are reported for individual layers. Interlayer contamination is possible among any layers in a sample. Composite asbestos percentages on multilayered samples are applicable only to layered wall systems (wallboard, joint compound, and related materials); compositing is based on clients' descriptions of a material as "joint compound". Clients are solely responsible for identification and description of bulk materials listed on field forms. Laboratory sample descriptions may differ from descriptions given by the client. *Quality Control (QC) Codes: A1/A2 = results within acceptance limits; B = no asbestos detected in lab blank (SRM 1866a Fibrous Glass or equivalent); R = all materials confirmed after multiple result resolutions. NIST / NVLAP Accreditation Lab Code: #101872-0. California ELAP Certification #1037. EPA test method is based on the EPA Interim Method (1982), with several improvements in analytical techniques. Unless otherwise stated in this report, all samples were received in acceptable condition for analysis. This report must not be used to claim product endorsement by NIST or any U.S. Government agency. This report pertains only to the samples tested and must not be reproduced except in full, with approval of Micro Analytical Laboratories.

Client ID #

MICRO ANALYTICAL LABORATORIES, INC.

5900 Hollis St. Suite M, Emeryville, CA 94608
(510) 653-0824 - FAX (510) 653-1361 - www.jobmicro.com
Chain of Custody 8/24/2005

Log in # 76255

p __ of __

Name / Client / Address:

Gus Raggambi
URS Corporation
221 Main Street Suite 600
San Francisco, CA 94105
Tel. 415.243.3715
Fax 415.882.9261
E-mail gustav_raggambi@urscorp.com

Project
Pittsburg River Park

Job No. 26815155

Number of Samples: 10
Turn-Around Time: reg.

Asbestos (TEM) AHERA Yamate II NIOSH 7402 OTHER
Asbestos PLM PCM
Lead / Metals (Specify) Total (TTLC) STLC TCLP
Mold (Noniculturable Fungi) Air (Spore Trap) Tape Lift Bulk
Mold (Culturable Fungi) Air (Spore Trap) Swab Bulk
Other (Specify)

Matrix Type: Air Bulk Paint Soil Wipe Swab Tape Lift Water Culture Medium / Correction Factor

Micro ID # (For Lab Use Only)	Client Sample ID#	Description	Date Sampled	Time Sampled Start / Stop / Total Minutes	Average LPM	Total Liters	Wipe / Swab Sample Area
76255-01	SB-14-8	dk brn/blk sand	11/11/05	:19.05 GAR			
02	SB-10-8	yellow brown lean clay		:08.35			
03	SB-10-3	olive sandy gravel		:08:30			
04	SB-11-3	reddish brown clay		08.00			
05	SB-4-8	brown clay		:12.10			
06	SB-15-3	olive sandy gravel		09.25			
07	SB-05-2	brown clayey gravel		:11.00:			
08	SB-11-8	brn. clayey gravel w/sand		08.15			
09	SB-04-3	brown sandy clay		12.00:			
10	SB-13-8	brown sand	↓	12:45:			

Instructions / Comments: Fax [X] E-mail To: gustav_raggambi@urscorp.com
susan_flakus@urscorp.com

Sample Return: YES (NO) If "YES" is checked, samples will be returned to the client or archived at Micro Analytical if required.
If "NO" is checked, solid samples may be disposed of within three months (one week for liquid samples, lab suspensions, and digestates).

Sampler's Signature / Name: GUS RAGGAMBI

Note to Lab: If any samples are not acceptable, record reasons for rejection.

Relinquished By	Date / Time	Drop Box / Courier	Received By	Date / Time
	11/14/05 330pm	[ ] [X]	11.15.05	11:00
		[ ] [ ]		

Client ID #

MICRO ANALYTICAL LABORATORIES, INC.

5900 Hollis St. Suite M, Emeryville, CA 94608
(510) 653-4324 - FAX (510) 653-1361 - www.asbestos.com
Chain of Custody 8/24/2005

Log in # 76255

p __ of __

Name / Client / Address:

Gus Raggambi
URS Corporation
221 Main Street Suite 600
San Francisco, CA 94105
Tel. 415.243.3715
Fax 415.882.9261
E-mail gustav_raggambi@urscorp.com

Project
Pittsburg River Park

Job No. 26815155

Number of Samples: 10
Turn-Around Time: reg.

Asbestos (TEM): AHERA Yamate II NIOSH 7402 OTHER
Asbestos: PLM PCM
Lead / Metals (Specify): Total (TTLC) STLC TCLP
Mold (Noncultureable Fungi): Air (Spore Trap) Tape Lift Bulk
Mold (Culturable Fungi): Air (Spore Trap) Swab Bulk
Other (Specify):

Matrix Type: Air Bulk Paint Soil Wipe Swab Tape Lift Water Culture Medium / Correction Factor

Micro ID # (For Lab Use Only)	Client Sample ID#	Description	Date Sampled	Time Sampled Start / Stop / Total Minutes	Average LPM	Total Liters	Wipe / Swab Sample Area
76255-11	SB-01-3	brown sandy clay	11/11/05	10:30			
12	SB-16-3	sandy brown/blk gravelly clay		:09:00			
13	SB-02-3	brown sandy clay		13:50:			
14	SB-15-8	yellow brown clay		:09:40			
15	SB-12-3	olive gravelly sand		13:00			
16	SB-12-8	olive sand		13:15:			
17	SB-16-8	yellow brown sandy clay		09:10:			
18	SB-01-8	yellow brown clayey sand		:10:40			
19	SB-20-08	yellow brown clay & sand		:14:05			
20	SB-18-3	olive sandy gravel		13:10:			

Instructions / Comments: Fax [X] E-mail To: gustav_raggambi@urscorp.com
susan_hakus@urscorp.com

Sample Return: YES (NO) If "YES" is checked, samples will be returned to the client or archived at Micro Analytical if required.
If "NO" is checked, solid samples may be disposed of within three months (one week for liquid samples, lab suspensions, and digestates).

Sampler's Signature / Name: GUS RAGGAMBI

Note to Lab: If any samples are not acceptable, record reasons for rejection.

Relinquished By	Date / Time	Drop Box / Courier	Received By	Date / Time
	11/14/05 330 pm			
Relinquished By	Date / Time		Received By	Date / Time
				11/15/05 11:00

Client ID #

MICRO ANALYTICAL LABORATORIES, INC.

5900 Hollis St., Suite M, Emeryville, CA 94608
(510) 882-0234 - FAX (510) 655-1361 - www.asbestos.com
Chain of Custody 9/24/2005

Log in # 76255

p __ of __

Name / Client / Address:

Gus Raggambi
URS Corporation
221 Main Street Suite 600
San Francisco, CA 94105
Tel. 415.243.3715
Fax 415.882.9261
E-mail gustav_raggambi@ursorp.com

Project
Pittsburg River Park

Job No. 26815155

Number of Samples: 10
Turn-Around Time: reg.

Asbestos (TEM) AHERA Yamate II NIOSH 7402 OTHER
Asbestos PLM PCM
Lead / Metals (Specify) Total (TTLC) STLC TCLP
Mold (Nonculturable Fungi) Air (Spore Trap) Tape Lift Bulk
Mold (Culturable Fungi) Air (Spore Trap) Swab Bulk
Other (Specify)

Matrix Type: Air Bulk Paint Soil Wipe Swab Tape Lift Water Culture Medium / Correction Factor

Micro ID # (For Lab Use Only)	Client Sample ID#	Description	Date Sampled	Time Sampled Start / Stop / Total Minutes	Average LPM	Total Liters	Wipe / Swab Sample Area
76255-21	SB-07-3	yellow brown sandy gravel	11/11/05	10:00:			
22	SB-13-3	brown sand		12:35:			
23	SB-14-3	olive sandy gravel		09:55:			
24	SB-08-3	yellow brown sandy clay		15:45:			
25	SB-03-3	brown clay		13:35:			
26	SB-02-B	brown sandy clay/clayey sand		14:00:			
27	SB-19-08	yellow brown sandy clay		:13:50			
28	SB-05-B	brown clayey gravel		:11:10:			
29	SB-06-3	yellow brown sandy clay		:16:10			
30	SB-07-B	yellow brown sandy clay		16:05			

Instructions / Comments: Fax [X] E-mail To: gustav_raggambi@ursorp.com
susan_hakus@ursorp.com

Sample Return: YES (NO) If "YES" is checked, samples will be returned to the client or archived at Micro Analytical if required.
If "NO" is checked, solid samples may be disposed of within three months (one week for liquid samples, lab suspensions, and digestates).

Sampler's Signature / Name: GUS RAGGAMBI

Note to Lab: If any samples are not acceptable, record reasons for rejection.

Relinquished By: 11/14/05 3:30 pm Drop Box / Courier — Date / Time

Received By: 11.15.05 11:00 — Date / Time

Relinquished By — Date / Time

Received By — Date / Time

Client ID #

MICRO ANALYTICAL LABORATORIES, INC.

5900 Hollis St. Suite M, Emeryville, CA 94608
(510) 653-0324 - FAX (510) 653-1361 - www.microlab.com
Chain of Custody 9/24/2005

Log in # 76255

p __ of __

Name / Client / Address:

Gus Raggambi
URS Corporation
221 Main Street Suite 600
San Francisco, CA 94105
Tel. 415.243.3715
Fax 415.882.9261
E-mail gustav_raggambi@ursorp.com

Project
Pittsburg River Park

Job No. 26815155

Number of Samples: 6
Turn-Around Time: reg.

Asbestos (TEM) AHERA Yamate II NIOSH 7402 OTHER
Asbestos PLM PCM
Lead / Metals (Specify) Total (TTLC; STLC YCLP
Mold (Nonculturable Fungi) Air (Spore Trap) Tape Lift Bulk
Mold (Culturable Fungi) Air (Spore Trap) Swab Bulk
Other (Specify)

Matrix Type: Air Bulk Paint Soil Wipe Swab Tape Lift Water Culture Medium / Correction Factor

Micro ID # (For Lab Use Only)	Client Sample ID#	Description	Date Sampled	Time Sampled Start / Stop / Total Minutes	Average LPM	Total Liters	Wipe / Swab Sample Area
76255-31	SB-21-08	yellow brown sandy clay	11/11/05	:16 20			
32	SB-21-03	clayey gravel & sand, brown	11/11/05	16 09			
33	SB-06-8	clayey sand ~~GAR~~	11/11/05	16 :15			
34	SB-08-8	yellow brown sandy clay	11/11/05	15.50			
35	SB-09-3	sandy clay brown	11/11/05	16.05			
36	SB-09-8	yellow brown sandy clay	11/11/05	:16 1:5			
				: :			
				: :			
				: :			
				: :			

Instructions / Comments: ☐ Fax ☒ E-mail To: gustav_raggambi@ursorp.com
susan_hakus@ursorp.com

Sample Return: YES (NO) If "YES" is checked, samples will be returned to the client or archived at Micro Analytical if required.
If "NO" is checked, solid samples may be disposed of within three months (one week for liquid samples, lab suspensions, and digestates).

Sampler's Signature / Name: GUS RAGGAMBI

Note to Lab: If any samples are not acceptable, record reasons for rejection.

Relinquished By	Date / Time		Received By	Date / Time
	11/14/05 330 pm	Drop Box / Courier	11.15.05	11:00
Relinquished By	Date / Time		Received By	Date / Time

CLEAR FORM | SAVE FORM | E-MAIL

Client ID #

MICRO ANALYTICAL LABORATORIES, INC.

5900 Hollis St., Suite M, Emeryville, CA 94608
(510) 653-0824 - (510) 653-1361 - FAX

Log in # 76255

Name / Client / Address:
URS Corporation
Gus Raggambi
221 Main Street, Suite 600 SF, CA 94108

Tel. (415) 243-3715
Fax (415) 882-9261
E-mail gustav_raggambi@urscorp.com

Project
Pittsburg River Park

Job No. 26815155.00001

Asbestos (TEM)
Asbestos PLM SOIL
Lead Only
Metals (Specify)
Mold, Non-Viable
Other (Specify)

Number of Samples: 4
Turn-Around Time: 3-5 DAYS

* Attach samples to 76255

Micro ID # (For Lab Use Only)	Client Sample ID#	Description	Date Sampled	Time Sampled Start / Stop / Total Minutes	Average LPM	Total Liters	Filter Pore Size
76255-37	SB-17-3N	Brown sandy clay	11/15/2005	8:55 : ~~585~~		0.00	
38	SB-17-15N	Yellowish Brown Silty Sand with clay	11/15/2005	9:15 : ~~355~~		0.00	
39	SB-17-3N	Grey sand	11/15/2005	9:20 : ~~560~~		0.00	
40	SB-17-19N	Yellow-brown sand	11/15/2005	9:20 : ~~500~~		0.00	
				: : 0		0.00	
				: : 0		0.00	
				: : 0		0.00	
				: : 0		0.00	
				: : 0		0.00	
				: : 0		0.00	

Instructions / Comments: ☑ Fax ☑ E-mail To: gustav_raggambi@urscorp.com

Sample Return: YES ☐ NO ☑ If "YES" is checked, samples will be returned to the client or archived at Micro Analytical if required.
If "NO" is checked, solid samples may be disposed of within three months (one week for liquid samples, lab suspensions, and digestates).

Sampler's Signature / Name: Gus Raggambi

Note to Lab: If any samples are not acceptable, record reasons for rejection.

Relinquished By: [signature] 11/18/05 12:05 pm Drop Box (Courier) Kao Saelee 11/21/05 07:55 AM
Date / Time — Received By — Date / Time

Relinquished By — Date/Time — Received By — Date / Time

Page ☐ of ☐

PHASE I ENVIRONMENTAL SITE ASSESSMENT
FORMER JOHNS MANVILLE PLANT SITE
420 EAST 3RD STREET
PITTSBURG, CALIFORNIA

Integral Communities

Appendix H

Agency File Requests and Resources

Est. 1988

Environmental Support Services

Environmental Research & Due Diligence Compliance
30251 Golden Lantern, #E-305, Laguna Niguel, CA 92677
P) 949.429.3564 | F) 949.429.3563 | E) Shannon@EnvironmentalSupportServices.com
www.EnvironmentalSupportServices.com | EIN# 83-0533710

March 4, 2021

Project Name: Pittsburg

GSI Environmental
155 Grand Avenue, Suite 704
Oakland, CA 94612

Attention: Kalin Howell

Dear Ms. Howell,

Attached is the Environmental (Hazardous/Toxic Waste) Records Search Summary of the 420 East 3rd Street ("Pittsburg") site located in Pittsburg, California. Environmental Support Services ("**ESS**") received the request on February 22, 2021 (See Appendix A). Should you have any questions regarding the summary, please call.

Sincerely,
Environmental Support Services

Shannon Castagno
Project Manager
Shannon@EnvironmentalSupportServices.com

Records Search Summary

Company:	GSI Environmental
Project Name:	Pittsburg
Attention:	Kalin Howell
Street Address of Property:	420 East 3rd Street Pittsburg, CA 94565

Contra Costa County Environmental Health Department

E-mailed request: 2-22-21, Contact: Public Records Section

ESS submitted a request for a records search concerning the Pittsburg site to the Public Records Section, with the Contra Costa County Environmental Health Department (See Appendix B). **ESS** requested information concerning the utilization, manufacture, storage and/or discharge of hazardous materials/waste, and any information concerning previous or on-going site investigations/remediations pertaining to hazardous materials/waste. Alexandra McMullen, with that department informed **ESS** February 23, 2021 that her department did have records for 420 East 3rd Street, Pittsburg, CA (See Appendix B).

Department of Toxic Substances Control (DTSC) – Region 2

E-mailed request: 2-22-21, Contact: Public Records Section

Previous contacts with the DTSC have disclosed that this office only collects and stores information (such as treatment, storage and disposal of hazardous waste) concerning sites which have existing businesses, industries, etc. present. **ESS** requested that the Public Records Section, with the DTSC, check the file room records for any files/information concerning 420 East 3rd Street, Pittsburg, CA (See Appendix C). Carl Rose, with that department informed **ESS** on March 3, 2021 that his department had no records for 420 East 3rd Street, Pittsburg, CA (See Appendix C).

Contra Costa County Fire Protection District

E-mailed request: 2-22-21, Contact: Public Records Section

ESS requested that the Public Records Section, with the Contra Costa County Fire Protection District, check their records concerning the storage of hazardous materials/waste and underground storage tanks with regards to the following: 420 East 3rd Street, Pittsburg, CA (See Appendix D). They informed **ESS** February 23, 2021 due to the Contra Costa Health Order the Contra Costa County Fire Department will be unable to process file review requests for an undetermined amount of time (See Appendix D).

Cal Fire - Office of the State Fire Marshal

On-line request: 2-22-21, Contact: Pubic Records Section

ESS requested that the Public Records Section, with Cal Fire - Office of the State Fire Marshal, check their records concerning the storage of hazardous materials/waste, pipelines and underground storage tanks with regards to the following: 420 East 3rd Street, Pittsburg, CA (See Appendix E). Anne Henigan, with that department informed **ESS** on March 4, 2021 that her department had no records for 420 East 3rd Street, Pittsburg, CA (See Appendix E).

City of Pittsburg Public Works Department

E-mailed request: 2-22-21, Contact: Public Records Section

ESS requested that the Public Records Section, with the City of Pittsburg Public Works Department, check their records for any information concerning industrial waste discharge permits or violations for 420 East 3rd Street, Pittsburg, CA (See Appendix F). Shelby Rose, with that department informed **ESS** on February 26, 2021 that her department had no records for 420 East 3rd Street, Pittsburg, CA (See Appendix F).

City of Pittsburg Building Department

E-mailed request: 2-22-21, Contact: Public Records Section

ESS requested that the Public Records Section, with the City of Pittsburg Building Department, provide the building records (all permits and certificates of occupancy) for 420 East 3rd Street, Pittsburg, CA (See Appendix G). Cathleen Slaga, with that department provided **ESS** February 23, 2021 with all the available records for the address (See Appendix G). No further information was obtained from the building department at the time of the investigation.

Bay Area Air Quality Management District (BAAQMD)

On-line request: 2-22-21, Contact: Public Records Section

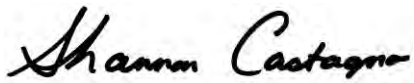
ESS submitted a search request concerning active, inactive and sold files concerning 420 East 3rd Street, Pittsburg, CA to the Public Records Section at the BAAQMD. As of March 4, 2021, the Public Records Section had not completed **ESS'** request. Should any information concerning the site surface, **ESS** will immediately forward it to Ms. Howell at the GSI Environmental office.

Regional Water Quality Control Board (RWQCB) – Bay Area Region

E-mailed request: 2-22-21, Contact: Melinda Wong

ESS requested that Ms Wong, with the RWQCB, provide the files for 420 East 3rd Street, Pittsburg, CA (See Appendix H). She informed **ESS** on March 3, 2021 that her department did have stormwater records for 420 East 3rd Street, Pittsburg, CA (See Appendix H). She also informed **ESS** March 3, 2021 that all other available records for the 420 East 3rd Street, Pittsburg, CA should be on GeoTraker (See Appendix H). No further information was obtained from the RWQCB at the time of the investigation.

Records Search completed by:



Shannon Castagno
Project Manager
Environmental Support Services

The information provided in this report was obtained by a comprehensive examination of public records, public information and public servant communications. The degree of care performed by **ESS** is equivalent to that exercised by environmental companies performing similar records searches.

Appendix A

Environmental (Hazardous/Toxic Waste) Records Search
Order Form

Shannon Castagno

From: Kalin Howell <kjhowell@gsi-net.com>
Sent: Monday, February 22, 2021 4:50 PM
To: Shannon Castagno
Cc: Jennifer P Duffield
Subject: ESS Report for 420 East 3rd Street

Hi Shannon,

I would like to request full agency records for the following property: 420 East 3rd Street, Pittsburgh, California 94565

If it is possible to report available records by March 5, that would be very helpful.

Thanks!

-Kalin

Kalin J. Howell, GIT | Staff Geologist | GSI Environmental Inc.
155 Grand Avenue | Suite 704 | Oakland, CA 94612
Office 510.463.8484 | Cell 815.735.0110
kjhowell@gsi-net.com | www.gsi-net.com

Appendix B

Request for Records Search to the
Contra Costa County Environmental Health Department and
Response and Photocopies Obtained from that Agency

ANNA M. ROTH, RN, MS, MPH
HEALTH SERVICES DIRECTOR

RANDALL L. SAWYER
DEPUTY HEALTH DIRECTOR

MATTHEW S. KAUFMANN
DIRECTOR OF HAZARDOUS MATERIALS PROGRAMS

CONTRA COSTA
HEALTH SERVICES

CONTRA COSTA
HAZARDOUS
MATERIALS PROGRAMS

4585 Pacheco Boulevard, Suite 100
Martinez, California 94553

Ph (925) 655-3200
Fax (925) 646-2073

ccchazmat@cchealth.org
www.cchealth.org/hazmat/

Public Records Request Form

SR#_____
(office use only)

Date: 2/22/21

Name: Shannon Castagno **Business Name:** Environmental Support Services

Address: 30251 Golden Lantern, #E305 **Phone #:** 949-419-3564

Laguna Niguel, CA 92677 **E-mail:** Shannon@EnvironmentalSupportServices.com

I am requesting the following public record(s) from Contra Costa Health Services Hazardous Materials Programs.

RECORD(S) REQUESTED: (Use additional form (s) if more space is needed)

Site: 420 East 3rd Street, Pittsburgh, CA 94565. ESS requests the following information concerning the subject address which your agency may have on file: 1. utilization, manufacture, storage, or discharge of hazardous materials/waste. 2. previous or on-going site investigations/remediations pertaining to hazardous materials/waste. 3. hazardous materials disclosures concerning the site. 4. information regarding underground storage tank present or previously found at the site.

Our records are available electronically. We will send the requested records via email. If PDF files are too large to send via email, we will place the files on a disc or thumbdrive and ask you to choose one of the following methods below.

☑ Please copy the record(s) and send FedEx to the above mailing address.
The cost is $15.00 and is payable by check or credit card (Visa, Discover or M/C).

☐ Please copy the record(s) and notify me when ready for pick up.
The cost is $3.00 and is payable by check or cash (**MUST BE EXACT**).

You may email the completed form to ccchazmat@cchealth.org, or mail or hand deliver to Contra Costa Health Services Hazardous Materials Programs at 4585 Pacheco Blvd., Suite 100, Martinez, CA 94553; or FAX to (925) 646-2073.

Office Use Only:

Date Received_____ Completed_____ ☐No records exist responsive to this request.

Picked Up_____ or FedEx_____ XR_____ Time Spent_____

Rev. August 2020

Shannon Castagno

From: ccchazmat <ccchazmat@cchealth.org>
Sent: Tuesday, February 23, 2021 7:33 AM
To: Shannon Castagno
Subject: Re: New Public Records Request
Attachments: Site #721540 420 E 3rd St.pdf

Good Morning:

Please find the attached requested records for 420 E. 3rd St., Pittsburg.

Our records go back to approximately 1986, anything prior to this would be the jurisdiction of the local fire department.

FYI: CalEPA has a new website that combines data about environmentally regulated sites and facilities in California into a single, searchable database and interactive map. By combining data from a variety of state and federal databases, the portal provides an overview of regulated activities across the spectrum of environmental programs for any given location in California.

The link to the CalEPA Regulated Site Portal is: https://siteportal.calepa.ca.gov/nsite/

Be well, stay healthy,

Alex McMullen, Clerical Supervisor
Contra Costa Health Services
Hazardous Materials Programs
4585 Pacheco Blvd., Suite 100
Martinez, CA 94553

(925) 655-3200 Phone
(925) 646-2073 Fax
ccchazmat@cchealth.org

From: Shannon Castagno <shannon@environmentalsupportservices.com>
Sent: Monday, February 22, 2021 6:19 PM
To: ccchazmat <ccchazmat@cchealth.org>
Subject: New Public Records Request

Please see attached public records request.

Thank you, have a wonderful day and stay healthy 😊

Shannon Castagno
Project Manager
Environmental Support Services
Shannon@EnvironmentalSupportServices.com

(949) 429-3564 phone
(949) 429-3563 fax

Nº 1419

Contra Costa County

Health Services Department

ENVIRONMENTAL HEALTH DIVISION

HAZARDOUS WASTE GENERATOR INSPECTION AND COMPLIANCE REPORT

EPA I.D. # CAD009144577 DATE 9 May 85

GENERATOR NAME/ADDRESS

Manville Corp.
E 3rd & Harbor St.
Pittsburg Ca 94565

CONTACT PERSON Ed Pell

PHONE NUMBER (415) 432-6426

PERSONS PRESENT Ed Pell

AVERAGE GENERATION RATE (MONTHLY) 1000 l/mo waste oil

OBSERVATIONS:

- Manifests OK
- Storage area OK; sign needed as per handout
- IT hauls wastes
- Coolant water wasted to sewer; ~~NPDES~~ Sewer agency monitored
- MSDS library OK
- Employee training & spill contingency plans in place

Samples Taken[1]: Yes [] No [X] Plan of correction necessary: Yes [] Due Date _____ No [X]

Authorized Representative of Firm:

Name Ed Pell
Title Supv. Ind. Engineer
Signature Ed Pell
Date 5/9/85

Authorized Representative of Contra Costa Co.:

Name J.D Obermiller
Phone Number (415) 372-2286
Signature J.D Obermiller
Date 9 May 85

[1] All samples will be taken in accordance with Section 25185, California Administrative Code, Division 20, Chapter 6.5

PLEASE REPLY OR CALL:
[] ADMINISTRATIVE OFFICES
1111 WARD STREET
MARTINEZ, CALIFORNIA 94553
(415) 372-2521

Manville Building Materials Group
East Third and Harbor Streets
Post Office Box 591
Pittsburg, California 94565
415 432-6426

Manville

RECEIVED
NOV 21 1985
CONTRA COSTA COUNTY
ENVIRONMENTAL HEALTH

Contra Costa County
Occupational Health
1111 Ward Street
Martinez, Ca. 94553

Attention: B. Benike

Dear Bruce:

It is our intention to retire a 7500 gallon solvent storage tank in place. This tank is located under a loading dock and can not be removed. This tank has been pressure tested for several years and found not to leak. The most recent test results and a MSDS sheet for the solvent are attached. A decline in our business has made the use of this solvent obsolete.

We will comply with all provisions outlined in Section 2672, Paragraph C, Subsections 1-4.

We will begin triple rinsing and filling the tank with sand upon your concurrence that we have complied to the underground regulations. Should you require any further information please contact me at 427-2427.

Sincerely,

Edward Pell
Supervisor Industrial Engineering

Attach: (1) Tank Registration
(2) MSDS
(3) Pressure Test Results

Official Registration Form

California Water Resources Control Board

Hazardous Substance Storage Statement

Who Must File: Each person storing hazardous substances in any underground container must file this form no later than July 1, 1984 (After October 1, 1984 and no later than January 1, 1985 for tanks used on farms)

Definition of Underground Containers: The law applies to "concrete sumps, nonvaulted buried tanks or other underground containers." (Water Code section 13173) All containers including earthen walled pits, ponds, lagoons and sumps, that are below the normal ground surface level must register. A tank sitting on the ground is not included. Containers partially beneath the surface are included. Lined or unlined pits, ponds and lagoons are covered if earth has been removed from the storage area to construct the facility. Normal [illegible] not considered construction below ground level.

Definition of Hazardous Substance: Any substance listed in Section 6382 of the Labor Code or in Section 25316 of the Health and Safety Code. This includes gasoline, diesel fuel, all industrial solvents, pesticides, herbicides and fumigants. If the material must be carried by a registered hauler disposed of at a hazardous waste site, is explosive, generates pressure due to heat or decomposition or would harm humans or wildlife you must register the tank. Wastes are included.

Fee: For each tank registered a $10 fee must be paid except that retail gasoline stations pay $5 per tank.

Penalties: For failure to file the penalty is $500-$5,000 per day. If you falsify information you can be fined up to $20,000 for each day the information is incorrect and has not been corrected.

Confidentiality: If you have information protected by trade secret laws please attach a list of the information on this form that is confidential and the justification for confidentiality including specific citations of relevant statutory and case law.

Multiple Containers: Fill I and II on one form and leave it blank on all the remaining forms. Attach all forms together securely. If you own more than 50 tanks you can file information on computer tape. Call 916 324-1262 for information.

This is not a Permit Application. All Underground Tanks will be subject to local regulation. Some jurisdictions have already begun programs. Check with your local county government for further information.

NOTE: ALL UNDERGROUND CONTAINERS MUST REGISTER EVEN IF STATE AND/OR LOCAL PERMITS ARE IN FORCE.

I Owner

Name (Corporation, Individual or Public Agency): Manville Corporation

Street Address	City	State	ZIP
E 3rd & Harbor	Pittsburg	Ca.	94509

II Facility

Facility Name	Owner's Full Time Supervisor
Johns-Manville - Roofing Systems	A. W. Macrae - Plant Manager

Street Address	Nearest Cross Street
E 3rd & Harbor Street	Harbor

City	County	ZIP
Pittsburg	Contra Costa	94565

Mailing Address	City	State	ZIP
P.O. Box 591	Pittsburg	Ca.	94565

Phone (Area Code)	Type of Business
(415) 432-6426	☐ 1 Motor Vehicle Fuel Station ☒ 99 Other: Roofing-Manufacture

Number of Tanks at this Facility	Rural Areas Only:	Section	Range	Section
3				

III 24 Hour Emergency Contact Person

Name, Title and Phone (Area Code)	Name, Title and Phone (Area Code)
G. Parsons (415) 432-6426	E. A. Pell (415) 754-1036

COMPLETE THE FOLLOWING ON A SEPARATE FORM FOR EACH CONTAINER

IV Description

A ☒ 1 Tank ☐ 2 Sump ☐ 3 Lagoon Pit or Pond ☐ 4 Other _____ Container Number (Operator's Assigned Number): 0003

B Manufacturer (if appropriate) _____ Year of Mfg _____ C Year Installed: 1956 ☐ Unknown

D Container Capacity 7.5K gallons ☐ Unknown E Container Repairs ☐ 0 None ☒ 2 Unknown ☐ 3 Yes Year _____

F Is Container currently used? ☒ 1 Yes ☐ 2 No If No, year of last use _____ ☐ 3 Unknown

G Does the Container Store (Check One) ☐ 1 Waste ☒ 2 Product

H Does the Container Store Motor Vehicle Fuel or Waste Oil? ☐ 1 Yes ☒ 2 No If Yes Check appropriate box(es)

☐ 1 Unleaded ☐ 2 Regular ☐ 3 Premium ☐ 4 Diesel ☐ 5 Waste Oil ☐ 6 Other (List) _____

V Container Construction

A Thickness of Primary Containment _____ ☐ Gauge ☐ Inches ☐ cm ☒ Unknown

B ☐ 1 Vaulted (Located in an underground Vault) ☐ 2 Non-vaulted ☒ 3 Unknown

C ☐ 1 Double Walled ☐ 2 Single Walled ☐ 3 Lined ☐ 4 Wrapped ☒ 5 Unknown ☐ 6 None

D ☐ 1 Carbon Steel ☐ 2 Stainless Steel ☐ 3 Fiberglass ☐ 4 Polyvinyl Chloride ☐ 5 Concrete ☐ 6 Aluminum

☐ 7 Steel Clad ☐ 8 Bronze ☐ 9 Composite ☐ 10 Non-metallic ☐ 11 Earthen Walls

☒ 12 Unknown ☐ 13 Other _____

E ☐ 1 Rubber Lined ☐ 2 Alkyd Lining ☐ 3 Epoxy Lining ☐ 4 Phenolic Lining ☐ 5 Glass Lining ☐ 6 Clay Lining

☐ 7 Unlined ☒ 8 Unknown ☐ 9 Other _____

F ☐ 1 Polyethlene Wrap ☐ 2 Vinyl Wrapping ☐ 3 Cathodic Protection ☒ 4 Unknown ☐ 5 None ☐ 6 Other _____

VI Piping

A Associated Piping	☒ Above Ground	☒ Underground	☐ Vaulted
B Underground Piping	☒ Gravity	☐ Pressure	☐ Suction ☐ Unknown
C Piping Repairs	☐ None	☒ Unknown	☐ Yes Year of most recent repair: _____

VII Leak Detection

☒ Visual ☐ Stock Inventory ☐ Tile Drain ☐ Vapor Sniff Wells ☐ Sensor Instrument

☐ Ground Water Monitoring Wells ☒ Pressure Test ☐ Internal Inspection ☐ None

☒ Other Pressure test and H_2O intrusion performed by professional service on a yearly basis

VIII Chemical Composition of Materials *Currently* or *Previously* Stored in Underground Containers

If you checked yes to IV-H you are not required to complete this section

currently	previously	CAS # (if known)	Chemical (Attach additional paper for more room)
☒	☐	9 1 2 0 3	65% - Naphthenes & Di-Naphthenes
☐	☐		32% - In. & Iso Parrafins
☐	☐		(Chevron 350B Thinner)
☐	☐		
☐	☐		
☐	☐		
☐	☐		
	☐		
	☐		
☐	☐		
☐	☐		
☐	☐		
☐	☐		

Is Container located on an Agricultural Farm? ☐ Yes ☒ No

IX IMPORTANT! Read instructions before signing

Signature: This form must be signed by 1) a principal executive officer of the firm or vice president or by an authorized representative. The representative must be responsible for the overall operation of the facility where the tanks are located 2) a general partner proprietor or 3) a principal executive officer ranking elected official or authorized representative of a public agency.

This form has been completed under the penalty of perjury and to the best of my knowledge is true and correct.

Signature		Date
Name (Type or Print) A. W. Macrae	Title Plant Manager	Telephone Number (415) 432-6426

Send check to: Hazardous Substance Storage Statement State Water Resources Control Board P.O. Box 100 Sacramento CA 95801-0100

For additional forms or more information call 916/324-1262

FOR STATE USE ONLY

84 31697

ROBERT J. MILLER CO.

Service Station and Industrial Equipment

3260 [illegible]
OAKLAND, CA. 94608
(415) 655-5469

INVOICE #: 10254
DATE : May 22, 1985
P.O. # : R72-16577
TERMS : Net due on receipt

PLEASE NOTE OUR NEW ADDRESS:
631 Marina Way South
Richmond, CA 94804
415) 233-9000

JOHNS-MANSFIELD
East 3rd & Harbor Streets
Pittsburg, CA 94565

RENTAL: 1 Compressor $ 28.50

LABOR: Pressure tested a 7500 gallon Oleum tank, product level 44 5/8, PSI 4 3/4. Visual inspection on 2 diesel tanks, no leaks, no water infiltration. Lubed and adjusted register on diesel pump as needed. Removed test, product level 44 5/8 and PSI 4 1/4. Tank tests are good, needs bennett meter for diesel pump - weeping at top seal. $385.00

Total labor	$385.00
Total rental	28.50
Total due	$413.50

Data Chart for Tank System Tightness Test

petro tite
TANK TESTER

PLEASE PRINT

1. OWNER Property ✓ Tank(s) ✓
Name: Johns Manv Co Address: 3rd & Harbor St Pittsburg Representative: Ed Roll Telephone:
Name: Address: Representative: Telephone:

2. OPERATOR
Name: Same Address: Telephone:

3. REASON FOR TEST (Explain Fully)
test for Leaks

4. WHO REQUESTED TEST AND WHEN
Name: Ed Roll Title: Company or Affiliation: Johns Manv Co Date:
Address: Telephone:

5. WHO IS PAYING FOR THIS TEST?
Company, Agency or Individual: Person Authorizing: Title: Telephone:
Billing Address: City: State: Zip:
Attention of: Order No: Other Instructions:

6. TANK(S) INVOLVED

Identify by Dwg/Location	Capacity	Brand/Supplier	Grade	Approx. Age	Steel/Fiberglass
South rail loading dock	7500			25 yrs	Steel

7. INSTALLATION DATA

Location (North inside driveway, Rear of station, etc.)	Cover (Concrete, Black Top, Earth, etc.)	Fills (Size, Thetil make, Drop tubes, Remote Fills)	Vents (Size, Manifolded)	Siphones (Which tanks?)	Pumps (Suction, Remote Make if known)
rail car Loading dock	Concrete	3½"	3"	0	Suction

8. UNDERGROUND WATER
Depth to the Water table: Unknown "
Is the water over the tank? ☐ Yes ☐ No

9. FILL-UP ARRANGEMENTS
Tanks to be filled On hr. arrival Date Arranged by: Ed Roll Name Telephone
Extra product to "top off" and run TSTT. How and who to provide? Consider NO Lead.
Terminal or other contact for notice or inquiry: Company Name Telephone

10. CONTRACTOR, MECHANICS, any other contractor involved
Paradiso Const Co.
Gary D Standish

11. OTHER INFORMATION OR REMARKS
test entire system with water
Additional information on any items above. Officials or others to be advised when testing is in progress or completed. Visitors or observers present during test etc.

12. TEST RESULTS
Tests were made on the above tank systems in accordance with test procedures prescribed for petro tite as detailed on attached test charts with results as follows:

Tank Identification	Tight	Leakage Indicated	Date Tested
South mineral spirits	yes	no signs	11/21/86

13. CERTIFICATION
This is to certify that these tank systems were tested on the date(s) shown. Those indicated as "Tight" meet the criteria established by the National Fire Protection Association Pamphlet 329.

11/21/86 Date
627
Gary Testing Contractor or Company: Paradiso Const Co. By Signature:

14. Tobias Mart | 3.1 4 Harbor St | Pittsburg | Ca | 11/20/15
Name of Supplier Owner or Dealer | Address No and Street(s) | City | State | Date of Test

Petro Tite TANK TESTED

15. TANK TO TEST
South
Identify by position
Mineral Spirits
Brand and Grade

16. CAPACITY
Nominal Capacity 75000 Gallons
By most accurate capacity chart available 75000 Gallons
Is there doubt as to True Capacity? ☐
See Section "DETERMINING TANK CAPACITY"
From
☒ Station Chart
☐ Tank Manufacturer's Chart
☒ Company Engineering Data
☐ Charts supplied with Petro Tite
☐ Other

17. FILL-UP FOR TEST

	Stick Readings to ⅛ in.	Gallons	Total Gallons ex. Reading
Stick Water Bottom before Fill-up 0 to ⅛ in. 0 Gallons			
Inventory			75000
Fill up. STICK BEFORE AND AFTER EACH COMPARTMENT DROP OR EACH METERED DELIVERY QUANTITY			
Tank Diameter 96"			
Product in fill tank (up to fill pipe)			75000

18. SPECIAL CONDITIONS AND PROCEDURES TO TEST THIS TANK
See manual sections applicable. Check below and record procedure in log (28).
☐ Water in tank ☐ High water table in tank excavation ☐ Line(s) being tested with LVLLT

VAPOR RECOVERY SYSTEM
☐ Stage I
☐ Stage II

19. TANK MEASUREMENTS FOR TSTT ASSEMBLY
Bottom of tank to Grade* ..... 151 "
Add 30" for 4" L ..... "
Add 24" for 3" L or air seal ..... "
Total tubing to assemble Approximate ..... 184 "

20. EXTENSION HOSE SETTING
Tank top to grade* ..... 57 "
Extend hose on suction tube 6" or more below tank top ..... 10 "
*If Fill pipe extends above grade, use top of fill.

21. TEMPERATURE/VOLUME FACTOR (a) TO TEST THIS TANK
Is Today Warmer? ☐ Colder? ☐ ___° F Product in Tank ___° F Fill-up Product on Truck ___° F Expected Change (+ or −)

22. Thermal-Sensor reading after circulation 10335 digits 53/54 Nearest °F

23. Digits per °F in range of expected change 308 digits

24. 7500 (total quantity in full tank (19 or 17)) × .000115 (coefficient of expansion for tested product) = .8625 (volume change in this tank per °F) gallons

25. .8625 (volume change per °F (24)) ÷ 308 (Digits per °F in test Range (23)) = .0028 (Volume change per digit. Compute to 4 decimal places.) This is test factor (a)

LOG OF TEST PROCEDURES			30. HYDROSTATIC PRESSURE CONTROL		31. VOLUME MEASUREMENTS (V) RECORD TO 3RD DEC.			34 TEMPERATURE COMPENSATION USE FACTOR (a)			36. NET VOLUME CHANGES EACH READING	39. ACCUMULATED CHANGE
27. Shift / Start	28. Record details of setting up and running test. (Use full length of line if needed.)	29. Reading No.	Standpipe Level in Inches: Beginning of Reading	Level to which Restored	32. Product in Graduate: Before Reading	After Reading	Product Replaced (−) / Product Recovered (+)	35. Thermal Sensor Reading	36. Change Higher + Lower − (b)	37. Computation (c) = (a) = Expansion + Contraction −	Temperature Adjustment / Volume Minus Expansion (+) or Contraction (−) (c)(b)(a) = (d)(b)	(d) Net Level Accepted Total Test Indication / (e) Net Level accepted Change per Hour (Diff. between)

	Set up upon - Chan. 8 Sp. 5				Key							
1230	begin circle to low											
					A=.0028							
2:0	1st sensor reading	1		42				10335				
045	begin high level key	2	43.0	42	.730	.760	+.030	10338	+3	+.008	+.022	
100	continue " " "	3	42.5	42	.760	.780	+.020	10341	+3	+.008	+.012	
115	" " " "	4	42.2	42	.780	.790	+.010	10345	+4	+.011	+.001	
130	" " " "	5	42.2	42	.790	.790	+.000	10348	+3	+.008	+.008	
145	" " "	6	41.5	42	.790	.730	+.060	10351	+3	+.008	+.068	
200	" " " "	7	41.8	42	.730	.710	+.020	10354	+3	+.008	+.028	
215	" " "	8	41.9	42	.700	.690	+.020	10356	12	+.005	+.025	
	drop to low level											
230	begin low level key	9	16.2	12	.000	.460	+.460	10359	+3	+.008	+.452	
245	continue " " "	10	12.2	12	.000	.020	+.020	10363	+4	+.011	+.009	+.009
300	" " " "	11	12.0	12	.020	.020	+.000	10366	+3	+.008	+.008	+.001
315	" " " "	12	12.0	12	.020	.020	+.000	10369	+3	+.008	+.008	+.007
330	" " " "	13	12.0	12	.020	.020	+.000	10372	+3	+.008	+.008	+.015
								Tight		+.015	g.p.h.	

PLEASE PRINT

petro Tite
TANK TESTER

1. OWNER Property ☐ Tank(s) ☐
Name: Johns Manville — Address: 3rd + Harbor St — Representative: Ed Pell — Telephone:
Name: — Address: Pittsburg Ca. — Representative: — Telephone:

2. OPERATOR
Name: Same — Address: — Telephone:

3. REASON FOR TEST (Explain Fully)
test for leaks

4. WHO REQUESTED TEST AND WHEN
Name: Ed Pell — Title: — Company or Affiliation: Johns Manville — Date:
Address: — Telephone:

5. WHO IS PAYING FOR THIS TEST?
Company, Agency or Individual: — Person Authorizing: — Title: — Telephone:
Billing Address: — City: — State: — Zip:
Attention of: — Order No: — Other Instructions:

6. TANK(S) INVOLVED

Identify by Direction	Capacity	Brand/Supplier	Grade	Approx Age	Steel Fiberglass
south rail loading dock	7500			2yrs	steel

7. INSTALLATION DATA

Location (North inside driveway, Rear of station, etc.)	Cover (Concrete, Block Top, Earth, etc.)	Fills (Size, Theft/ vents, Drop tubes, Remote Fills)	Vents (Size, Manifolded)	Siphones (Which tanks?)	Pumps (Suction, Remote, Make & Model)
rail car Loading dock	Concrete	3½"	3"	0	Suction

8. UNDERGROUND WATER
Depth to the Water table: Unknown" — Is the water over the tank? ☐ Yes ☐ No

9. FILL-UP ARRANGEMENTS
Tanks to be filled On hr. arrival Date — Arranged by: Ed Pell (Name) (Telephone)
Extra product to "top off" and run TSTT. How and who to provide? Consider NO Lead.
Terminal or other contact for notice or inquiry: (Company) (Name) (Telephone)

10. CONTRACTOR, MECHANICS, any other contractor involved
Paradiso Const Co.
Gary D Standish

11. OTHER INFORMATION OR REMARKS
test entire system with water
Additional information on any items above. Officials or others to be advised when testing is in progress or completed. Visitors or observers present during test etc.

12. TEST RESULTS
Tests were made on the above tank systems in accordance with test procedures prescribed for petro tite as detailed on attached test charts with results as follows:

Tank Identification	Tight	Leakage Indicated	Date Tested
South mineral spirits	yes	- ols o.p.t.	1/21/86

13. CERTIFICATION
This is to certify that these tank systems were tested on the date(s) shown. Those indicated as "Tight" meet the criteria established by the National Fire Protection Association Pamphlet 329.

1/21/86 (Date)
623 (Serial No. of Thermal Sensor)

Gary (Technicians)

Paradiso Const Co. Gary D. Standish (Testing Contractor or Company. By: Signature)
9220 Gst Oakland Ca. (Address)

14. John's Marine | 1 & 4 Harbor St | Pittsburg | Ca | 4/21/05
Name of Supplier Owner or Dealer | Address No and Street(s) | City | State | Date of Test

Petro Tite TEAK TESTER

15. TANK TO TEST
South
Identify by position
Unleaded Super 12
Brand and Grade

16. CAPACITY
Nominal Capacity 75000 Gallons
By most accurate capacity chart available 75000 Gallons
Is there doubt as to True Capacity? ☐
See Section "DETERMINING TANK CAPACITY"
From
☒ Station Chart
☐ Tank Manufacturer's Chart
☒ Company Engineering Data
☐ Charts supplied with Petro Tite
☐ Other

17. FILL-UP FOR TEST
Stick Water Bottom before Fill-up 0 to ⅛ in. - 0 Gallons
Inventory

Stick Readings to ⅛ in.	Gallons	Total Gallons ea. Reading
		25000
		25000

Fill up STICK BEFORE AND AFTER EACH COMPARTMENT DROP OR EACH METERED DELIVERY QUANTITY

Tank Diameter 96"
Product in full tank (up to fill pipe)

18. SPECIAL CONDITIONS AND PROCEDURES TO TEST THIS TANK
See manual sections applicable. Check below and record procedure in log (26).
☐ Water in tank ☐ High water table in tank excavation ☐ Line(s) being tested with LVLLT

VAPOR RECOVERY SYSTEM
☐ Stage I
☐ Stage II

19. TANK MEASUREMENTS FOR TSTT ASSEMBLY
Bottom of tank to Grade* 151"
Add 30" for 4" L "
Add 24" for 3" L or air seal "
Total tubing to assemble Approximate 154"

20. EXTENSION HOSE SETTING
Tank top to grade* 57"
Extend hose on suction tube 8" or more below tank top 10"
*If Fill pipe extends above grade, use top of fill.

21. TEMPERATURE/VOLUME FACTOR (a) TO TEST THIS TANK
Is Today Warmer? ( ) Colder? ( ) ___° F Product in Tank ___° F Fill up Product on Truck ___° F Expected Change (+ or -)

22. Thermal-Sensor reading after circulation 10335 digits 53/54 Nearest °F

23. Digits per °F in range of expected change 308 digits

24. 2500 (total quantity in full tank (18 or 17)) × .00115 (coefficient of expansion for involved product) = .8625 volume change in this tank per °F gallons

25. .8625 (volume change per °F (24)) ÷ 308 (Digits per °F in test Range (23)) = .0028 Volume change per digit. Compute to 4 decimal places. This is test factor (a)

26. LOG OF TEST PROCEDURES			30. INTERSTATIC PRESSURE CONTROL		31. VOLUME MEASUREMENTS (V) RECORD IN 100 GAL			34 TEMPERATURE CORRECTIONS USE FACTOR (a)			36. NET VOLUME CHANGES EACH READING	39. ACCUMULATED CHANGES
27. Date	28. Record details of setting up and running test. (Use full length of line if needed.)	29. Reading No.	Standpipe Level in Inches: Beginning of Reading	Standpipe Level in Inches: Level to which Restored	32. Product in Stations: Before Reading	Product in Stations: After Reading	Product Replaced (-) / Product Recovered (+)	35. Thermal Sensor Reading	36. Change Higher + Lower - (b)	37. Computation (b) = (a) = Expansion + Contraction -	Temperature Adjustment	
											Volume Minus Expansion (+) or Contraction (-) of 35(37) — of 32(33)	Net Gain or Loss Compare Prior Net (36) with prior

100 TOSCA DRIVE
P.O. BOX CS-200
STOUGHTON, MA 02072-1591

0830	arrive on test site		Survey area								
	set up equip - change SJS		Lens								
0930	begin circ loop										
				A=.0028							
1020	1st sensor reading	1	42				10335				
1045	begin high level/test	2	43.0 42	.730	.760	+.030	10338	±3	±.008	±.022	
1100	continue " " "	3	42.5 42	.760	.780	+.020	10341	±3	±.008	±.012	
1115	" " " "	4	42.2 42	.780	.790	+.010	10345	±4	±.011	±.001	
1130	" " " "	5	42.2 42	.790	.790	+.000	10348	±3	±.008	±.008	
1145	" " "	6	41.5 42	.790	.730	+.060	10351	±3	±.008	±.066	
1200	" " " "	7	41.8 42	.730	.710	+.020	10354	±3	±.008	±.028	
1215	" " "	8	41.4 42	.710	.690	+.020	10356	±2	±.005	±.025	
	drop to low level										
1230	begin low level/test	9	16.2 12	.000	.460	+.460	10359	±3	±.008	±.452	
1245	continue " " "	10	12.2 12	.000	.020	+.020	10363	±4	±.011	±.009	±.009
1300	" " " "	11	12.0 12	.020	.020	+.000	10366	±3	±.008	±.008	±.001
1315	" " " "	12	12.0 12	.020	.020	+.000	10369	±3	±.008	±.008	±.007
1330	" " " "	13	12.0 12	.020	.020	+.000	10372	±3	±.008	±.008	±.015
							Tight		±.015	g.p.h.	

Manville Building Materials Group
East Third and Harbor Streets
Post Office Box 591
Pittsburg, California 94565
415 432-6426

RECEIVED
FEB 03 1986
RIVERVIEW FIRE
PROTECTION DISTRICT

Manville

received from
Riverview FPD

RECEIVED
FEB 13 1986
CONTRA COSTA COUNTY
ENVIRONMENTAL HEALTH

inspected
2-5-86
10:30 AM

January 22, 1986

Riverview Fire District
1500 West 4th Street
Antioch, Ca. 94509

Attention: Chief Vince Aiello

Dear Vince:

It is our intention to retire in place a 7500 gallon underground solvent storage tank. This tank is located under a loading dock and can not be removed.

Upon conferring with county officials we must comply to three conditions to retire our tank: 1. Petro-Tight Testing for tank integrity, 2. Triple Rinse, 3. Fire District notification and approval. We have completed items 1 and 2. The pressure test (Petro-Tight Test) results show no leakage has occured, these results are attached. Also, the solvent's material safety data sheet is attached. We have also triple rinsed and tested for organic vapors to assure ourselves that no residue and/or fire hazard remains.

Therefore, we are requesting district approval to proceed on retirement of this underground tank. This retirement will include filling the tank with sand and noting the existence of the tank on our property deed. The above procedure complies to "Underground Tank Regulations" California Administrative Code, Title 23 Waters, Subchapter 16, Article 7. This approval must be in a letter that we can have on file.

Should you want to discuss this matter with me, please feel free to come by the Plant at your convenience. My telephone number is 427-2401.

Sincerely,

Richard A. Togni
Plant Manager

CONTRA COSTA COUNTY
HEALTH SERVICES DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
OCCUPATIONAL HEALTH/HAZARDOUS MATERIALS

UNDERGROUND HAZARDOUS SUBSTANCE STORAGE TANK ABANDONMENT INFORMATION FORM

Type of Facility Roofing Manufacturer Date April 22, 1986

Facility Owner Manville Corporation

Address 7901 Stoneridge Drive, Ste. 202 Pleasanton, Ca. 94566

Phone Number 415-427-2470

Facility Location (incl. cross-street) 3rd & E. Harbor Streets, Pittsburg, CA 94565

INSPECTION FEE ($100/TANK): Total Fee Paid $200.00

Storage Use History: Used from 1979 to Recent

Material(s) stored in tank(s) Diesel

Composition of tank (s) Steel

No. of Tanks/Capacity 1-10,000 gallon, 1-2,500 gallon

Are inventory records available? No

Has there been an indication of leakage? No

(Explain)

Have tanks been tested prior to removal? No

Tanks tested by (Name/Address)

Test Method

Tank Removal: Name/Address of Contractor WD Construction, Inc.

1860 C. Alum Rock Avenue

San Jose, Ca. 95116 Phone No. 408-258-8700

EXPECTED DATE OF REMOVAL 4/28/86

Contact Person Dean A. Dorsa or Jeff Weaver Phone No. 408-258-8700

(over)

Name/Address of Authorized Waste Hauler H & H Ship Service

220 China Basin, San Francisco,CA 94107 Waste Hauler # if hazardous CAD-004771168

Name/Address of New Tank Owner (Re-use Only)

Destination of Tank Bob Andreo 4455 S. Lone Tree Rd., Merced, CA 95340

Nature of Re-Use Fire Prevention

All tanks will be considered as hazardous waste unless they are thoroughly cleaned and purged of all product and residue.

CCCHSD staff will inspect all tanks prior to removal from the site.

Copies of manifests for any hazardous waste generated on site during tank removal operations, including tanks disposed of as hazardous waste, must be sent to the CCCHSD.

Note: All associated tank piping must be removed; piping that may cause damage to structures if removed may be capped.

Owners of underground storage tanks must contact the local fire district prior to tank removal.

Contra Costa County Health Services Department
1111 Ward St., Martinez, CA 94517 (415) 372-2286

Manville Building Materials Group
East Third and Harbor Streets
Post Office Box 591
Pittsburg, California 94565
415 432-6426

Manville

February 10, 1986

County of Contra Costa
Occupational Health
1111 Ward Street
Martinez, Ca. 94553

Attention: B. Benike

Dear Bruce:

Per our conversation of late December 1985, we discussed the steps needed to retire our underground solvent storage tank in place. These steps included:

1. Petro-Tight Testing for Tank Integrity
2. Triple Rinse
3. Riverview Fire District Approval

Attached are the Petro-Tight Test results and written approval from the Fire District. We have also triple rinsed the tank.

Therefore, we are requesting written concurrence that we may continue the retirement of this tank. This retirement will include filling the tank with sand and noting the tank's existence on our property deed.

Should you want any additional information please contact me at 427-2427.

Sincerely,

Ed Pell
Manager of Engineering Services

RECEIVED
FEB 12 1986
CONTRA COSTA COUNTY
ENVIRONMENTAL HEALTH

Riverview
FIRE PROTECTION DISTRICT

Chief
VINCENT J. AIELLO

Fire Commissioners:

RICHARD A. CRUMPLER, Chairman
LAVONIA J. ALLEN
TAYLOR DAVIS
HORACE A. ENEA
EDWARD L. HOOPS
SIG LANSTROM
FRANK STONE

February 7, 1986

Manville Bldg. Materials Group
E. 3rd & Harbor Street
Pittsburg, CA 94565

ATTN: Edward Pell

SUBJECT: 7500 Gallon Underground Solvent Tank

Dear Mr. Pell:

Upon conferring with County Officials and the inspection of the tank loading dock area, we feel that your tank can be abandoned in place. Please feel free to continue the project.

I am sending you a permit application to abandon the tank in place. Please fill it out and return it to me for our records.

If you have any more questions, please contact me at this office, 757-1303.

Very truly yours,

VINCENT J. AIELLO
Fire Chief

By: Sammy Enea
SAMMY ENEA
Fire Inspector

VJA:SE:jw

PARADISO CONSTRUCTION CO.

GENERAL & PETROLEUM CONTRACTORS

P.O. BOX 6397
9220 'G' STREET • OAKLAND • CA 94603
(415) 562-5511

LICENSE NO. 259820

Send - File - Manville
in place Abandonment

FEB 03 1986

RIVERVIEW FIRE PROTECTION DISTRICT

DATE: January 30, 1986

P.O. NO: R72-16784

LOCATION: E 3rd & Harbor Street
Pittsburg, CA

Manville Building Materials Group
East Third & Harbor Streets
Pittsburg, CA 94565

Attention: Mr. Edward Pell

INVOICE NO: 073-00

FURNISHED LABOR AND MATERIAL TO PETRO TITE TEST ONE 7,500 GALLON MINERAL SPIRIT TANK SYSTEM, FOUND SYSTEM TIGHT @ -.015 G.P.H.

To bill the above work done 100% complete per our verbal quotation:

TOTAL AMOUNT DUE THIS INVOICE: $650.00

CONTRA COSTA COUNTY
HEALTH SERVICES DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
OCCUPATIONAL HEALTH/HAZARDOUS MATERIALS

UNDERGROUND HAZARDOUS SUBSTANCE STORAGE TANK ABANDONMENT INFORMATION FORM

Type of Facility Roofing Manufacturer Date April 22, 1986

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Composition of tank (s) Steel

No. of Tanks/Capacity 1-10,000 gallon, 1-2,500 gallon

Are inventory records available? No

Has there been an indication of leakage? No

(Explain)

Have tanks been tested prior to removal? No

Tanks tested by (Name/Address)

Test Method

Tank Removal: Name/Address of Contractor WD Construction, Inc.

1860 C. Alum Rock Avenue

San Jose, Ca. 95116 Phone No. 408-258-8700

EXPECTED DATE OF REMOVAL 4/28/86

Contact Person Dean A. Dorsa or Jeff Weaver Phone No. 408-258-8700

(over)

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Contra Costa County Health Services Department
1111 Ward St., Martinez, CA 94517 (415) 372-2286

Manville Building Materials Group
East Third and Harbor Streets
Post Office Box 591
Pittsburg, California 94565
415 432-6426

Manville

February 10, 1986

County of Contra Costa
Occupational Health
1111 Ward Street
Martinez, Ca. 94553

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Therefore, we are requesting written concurrence that we may continue the retirement of this tank. This retirement will include filling the tank with sand and noting the tank's existence on our property deed.

Should you want any additional information please contact me at 427-2427.

Sincerely,

Ed Pell
Manager of Engineering Services

RECEIVED
FEB 12 1986
CONTRA COSTA COUNTY
ENVIRONMENTAL HEALTH

Riverview
FIRE PROTECTION DISTRICT

Chief
VINCENT J. AIELLO

Fire Commissioners:

RICHARD A. CRUMPLER, Chairman
LAVONIA J. ALLEN
TAYLOR DAVIS
HORACE A. ENEA
EDWARD L. HOOPS
SIG LANSTROM
FRANK STONE

February 7, 1986

Manville Bldg. Materials Group
E. 3rd & Harbor Street
Pittsburg, CA 94565

ATTN: Edward Pell

SUBJECT: 7500 Gallon Underground Solvent Tank

Dear Mr. Pell:

Upon conferring with County Officials and the inspection of the tank loading dock area, we feel that your tank can be abandoned in place. Please feel free to continue the project.

I am sending you a permit application to abandon the tank in place. Please fill it out and return it to me for our records.

If you have any more questions, please contact me at this office, 757-1303.

Very truly yours,

VINCENT J. AIELLO
Fire Chief

By: Sammy Enea
SAMMY ENEA
Fire Inspector

VJA:SE:jw

PARADISO CONSTRUCTION CO.

GENERAL & PETROLEUM CONTRACTORS

P.O. BOX 6397
9220 'G' STREET • OAKLAND • CA 94603
(415) 562-5511

LICENSE NO. 259820

Send - File - Manville
in place Abandonment

FEB 03 1986

RIVERVIEW FIRE PROTECTION DISTRICT

DATE: January 30, 1986

P.O. NO: R72-16784

LOCATION: E 3rd & Harbor Street
Pittsburg, CA

Manville Building Materials Group
East Third & Harbor Streets
Pittsburg, CA 94565

Attention: Mr. Edward Pell

INVOICE NO: 073-00

FURNISHED LABOR AND MATERIAL TO PETRO TITE TEST ONE 7,500 GALLON MINERAL SPIRIT TANK SYSTEM, FOUND SYSTEM TIGHT @ -.015 G.P.H.

To bill the above work done 100% complete per our verbal quotation:

TOTAL AMOUNT DUE THIS INVOICE: $650.00

CONTRA COSTA COUNTY
HEALTH SERVICES DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
OCCUPATIONAL HEALTH/HAZARDOUS MATERIALS

RECEIVED
MAY 2 1986
CONTRA COSTA COUNTY
ENVIRONMENTAL HEALTH

UNDERGROUND HAZARDOUS SUBSTANCE STORAGE TANK ABANDONMENT INFORMATION FORM

Type of Facility MANUFACTURING Date 4-24-86

Facility Owner MANVILLE CORPORATION

Address 12999 DEER CREEK CANYON ROAD, LITTLETON, CO. 80127

Phone Number (303) 978-2000

Facility Location (incl. cross-street) EAST THIRD & HARBOR STREETS
PITTSBURG, CA. 94565

INSPECTION FEE ($100/TANK): Total Fee Paid $100.00

Storage Use History: Used from 1960 to 3/86

Material(s) stored in tank(s) MINERAL SPIRITS

Composition of tank (s) STEEL

No. of Tanks/Capacity 7500 GALLONS

Are inventory records available? YES

Has there been an indication of leakage? NONE

(Explain)

Have tanks been tested prior to removal? PETRO-TIGHT TESTING

Tanks tested by (Name/Address) PARADISCO CONSTRUCTION
P. O. BOX 0397, 9220 "G" STREET, OAKLAND, CA. 04603

Test Method PETRO-TIGHT TESTING - TANK IS TIGHT

Tank Removal: Name/Address of Contractor
ABANDONED IN PLACE - INSPECTED AND APPROVED BY RIVERVIEW
FIRE DISTRICT Phone No.

EXPECTED DATE OF REMOVAL

Contact Person E. A. PELL Phone No. (415) 427-2427

(over)

Name/Address of Authorized Waste Hauler _____

_____ Waste Hauler # if hazardous _____

Name/Address of New Tank Owner (Re-use Only) _____

_____

Destination of Tank _____

Nature of Re-Use _____

All tanks will be considered as hazardous waste unless they are thoroughly cleaned and purged of all product and residue.

CCCHSD staff will inspect all tanks prior to removal from the site.

Copies of manifests for any hazardous waste generated on site during tank removal operations, including tanks disposed of as hazardous waste, must be sent to the CCCHSD.

Note: All associated tank piping must be removed; piping that may cause damage to structures if removed may be capped.

Owners of underground storage tanks must contact the local fire district prior to tank removal.

TANK HAS BEEN TRIPLED RINSED - TANK IS DRY

SOIL SAMPLES TAKEN BY

BLAINE TECH SERVICES
P. O. BOX 5745
SAN JOSE, CA. 95150
(408) 723-3974

RESULTS FORTHCOMING

Contra Costa County Health Services Department
1111 Ward St., Martinez, CA 94517 (415) 372-2286

UNDERGROUND TANK PROGRAM

Facility Name: MANVILLE CO. 3rd & Harbor, Pitts

DATE	ACTIVITY	TIME
4/28/86	REMOVAL of 10K TANK witnessed by FIRE Dist. - Reports Tank in Very Good Condition w/ TAR WRAPPING - 2500 GL. Steel Tank Shows breaks in Leather Weld Seam at bottom one three inch - one two inch. Soil Samples (4) Taken by Blaine Tech of San Jose - Small Tank was out of Service for many years and Contained no product. 10,000 GL Tank Hauled by Bob Aldre for Relocation at 4455 Lost Tree Lane, Welded Cap for fire protection above Ground Storage. - 2500 GL Tank Hauled by Skip Lichtfoot To 1475 Wats Rd Modesto Hill for Reuse as fire protection Water Storage	3:20
6/23/86	Barbara Talked to Ed Bell - he had received Jun 2 letter, Closed file. All is in order. JR	
7-10-90	Site Assessment JR.	
11-13-90	Site Assessment JR.	
6-18-91	File Review JR	

Manville Building Materials Group
East Third and Harbor Streets
Post Office Box 591
Pittsburg, California 94565
415 432-6426

Manville

RECEIVED
MAY 29 1986
CONTRA COSTA COUNTY
ENVIRONMENTAL HEALTH

May 28, 1986

Contra Costa County Health
1111 Ward Street
Martinez, Ca. 94553

Attention: Hank Bunczewski

Dear Hank:

Attached are the soil test results for compliance to remove our underground diesel tanks. Also attached are the soil test results you requested for compliance to retire (in place) our underground mineral spirits storage tank. All test results show to be within allowable limits. The Pittsburg plant does not have any underground storage of hazardous materials.

Thank you for your help and advise on removal of our underground tanks.

Sincerely,

Ed Pell
Plant Engineer.

WD CONSTRUCTION INC.
License #A487238

Petroleum Tank: Installation ▪ Removal ▪ Monitoring

1860 Alum Rock Avenue
Suite C
San Jose, CA 95116

(408) 258-8700

May 24, 1986

Mr. Ed Pell
Manville Western Region
P.O. Box 591
Pittsburg, CA 94565

Dear Mr. Pell:

Please find copy of your soil test results enclosed. Make a special note of "Reportage" section. Even though your report came out clean you still have the responsibility to send copies to three persons on page three.

We are happy for you that these reports are all under the allowable limits.

If you have any further questions, please give me a call, and thank you for trusting us to do your work.

Sincerely,

WD Construction Inc.

Dean A. Dorsa
CFO

DAD/gb

BLAINE
TECH SERVICES

P.O. BOX 5745
SAN JOSE, CA 95150
(408) 723-3974

May 6, 1986

W.D. Construction
1860 Alum Rock Ave., Suite C
San Jose, CA 95116

Attention: Jeff Weaver

Re: Field sampling at East Third & Harbor
Pittsburg, CA
on
April 28, 1986

SAMPLING REPORT

Sampling was performed in accordance with approved methodology at the locations shown on the accompanying site diagram. The lab numbers assigned to the samples are given on the site diagram. Samples were collected in appropriate containers, which were sealed, chilled and transported to the laboratory for analysis. Analytical services were provided by Sequoia Analytical Laboratory with a separate report referencing their lab numbers.

Tanks

age — unspecified

type — one 2,500 gallon diesel
one 10,000 gallon diesel

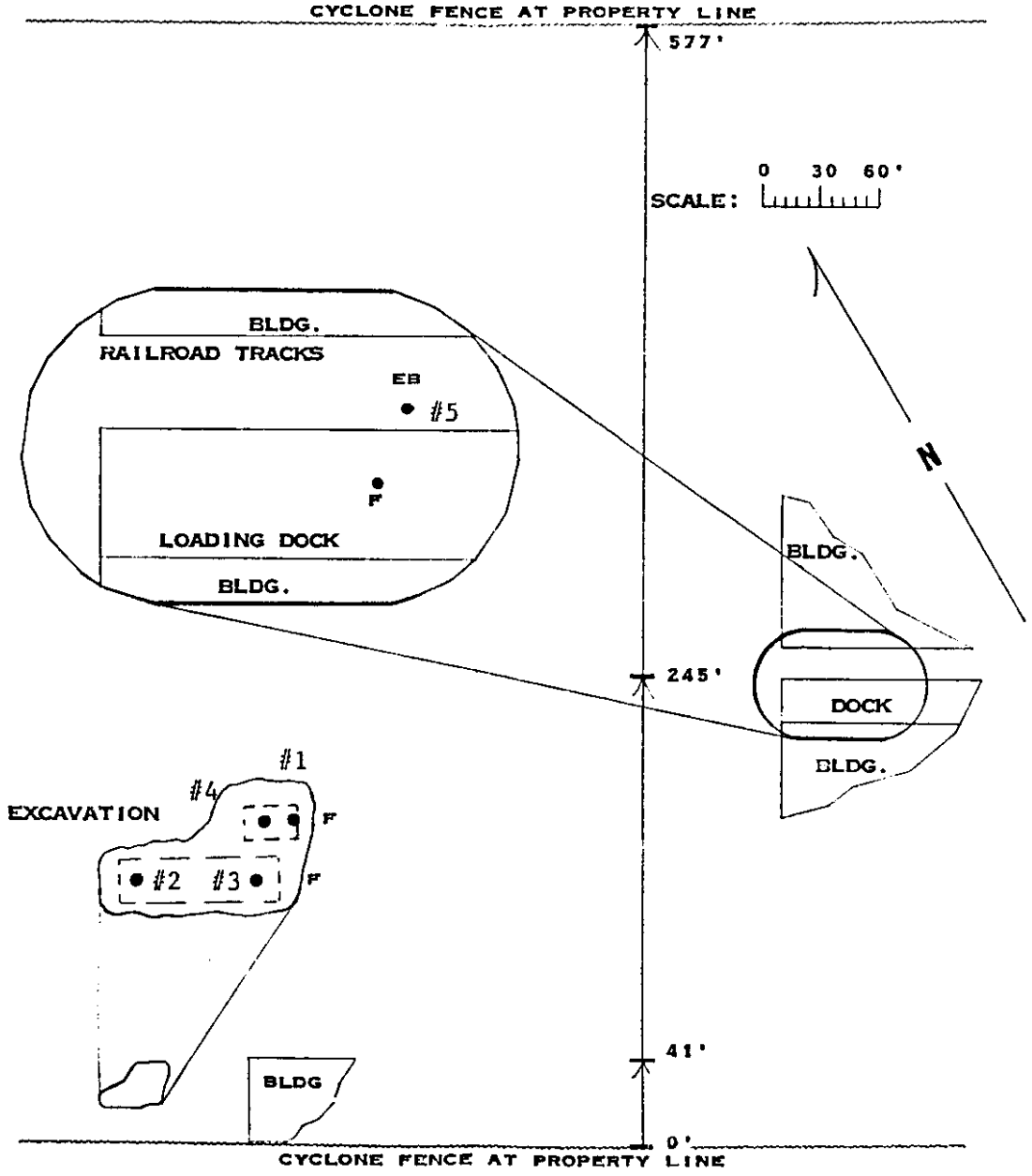
reason for removal — discontinuation of on site storage

Reportage

Submission to the Regional Water Quality Control Board and the Fire Department should include copies of both the sampling report and the laboratory report. The property owner should attach a cover letter and submit all documents together in a package.

BLAINE
TECH SERVICES

SAMPLING REPORT 86118A1 4-28-86 W.D. CONSTRUCTION, EAST THIRD & HARBOR ST., PITTSBURG, CA



MAP REF: THOMAS BROS. CONTRA COSTA COUNTY P. 16 E-6

LEGEND: F = FILL PIPE
EB = EXPLORATORY BORE

#1 SOIL FROM 11'
ANALYSIS FOR SEMI-VOLATILE HYDROCARBONS DUE TO DIESEL
AT SEQUOIA ANALYTICAL LABORATORY
SEQUOIA LAB NO. 6041232

#2 SOIL FROM 16'
ANALYSIS FOR DIESEL
SEQUOIA LAB NO. 6041233

#3 SOIL FROM 16'
ANALYSIS FOR DIESEL
SEQUOIA LAB NO. 6041234

#4 SOIL FROM 15'
ANALYSIS FOR DIESEL
SAMPLE PLACED ON 'HOLD'

#5 SOIL FROM EXPLORATORY BORING AT 14'
ANALYSIS FOR MINERAL SPIRITS AND NAPTHENES
SEQUOIA LAB NO. 6041235

SAMPLING PERFORMED BY
BRENT ADAMS

DIAGRAM PREPARED BY
TAMMIE STALLINGS

Tammie Stallings

The following addresses have been listed here for your convenience:

Water Quality Control Board
San Francisco Bay Region
1111 Jackson Street
Room 6040
Oakland, CA 94607
ATTN: Dale Bowyer

Contra Costa County Health
1111 Ward Street
Martinez, CA 94553
ATTN: Hank Bunczewski

Pittsburg Fire Dept.
P.O. 951
Pittsburg, CA 94569
ATTN: Fire Marshall Sam Enea

If I can be of any further assistance, please call.

Richard C. Blaine

RCB/tls

BLAINE TECH SERVICES

P.O. BOX 5745
SAN JOSE, CA 95150
(408) 723-3974

Include ALL of the following designation in lab reports and invoices

86118A1 WD CONSTRUCTION AT E. THIRD & HARBOR PITTSBURG, CALIFORNIA

EVERYTHING written above this line is the project designation

Field sampling completed 16:30 hrs. 1-28-86 performed by [illegible]

RELEASED BY		ACCEPTED BY	
18:00 hrs. 4-28-86	[illegible]	: hrs. - -86	BLAINE TECH SERVICE
7:30 hrs. 4-29-86	[illegible]	7:30 hrs. 1-29-86	[illegible]
12:00 hrs. 1-29-86	[illegible]	12:00 hrs. 1-29-86	[illegible]
: hrs. - -86		: hrs. - -86	

LAB	TYPE	ANALYSIS	SAMPLE #	PRELIM	FINAL
	SOIL	DIESEL	601232		
			601233		
			601234		
		(MINERAL SPIRITS & NAPHTHENES)	601235		

LOCKING

RELEASED BY	RECEIVED BY
[illegible]	[illegible]
DATE	TIME
	Verbal/Written:

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Blaine Tech Services
P.O. Box 5745
San Jose, CA 95150
Attn: Richard Blaine

Date Sampled: 04/28/86
Date Received: 04/30/86
Date Reported: 05/23/86

Sample Number	Sample Description
6041232	BTS #86118A1, Soil W.D. Construction at E. Third & Harbor in Pittsburg, CA #1

ANALYSIS	
Common Solvents, ppm	
Diesel	< 1

NOTE: Analysis was performed using EPA method 8020.

SEQUOIA ANALYTICAL LABORATORY

Gary Stuba for

Arthur G. Burton
Laboratory Director

sls

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Blaine Tech Services
P.O. Box 5745
San Jose, CA 95150
Attn: Richard Blaine

Date Sampled: 04/28/86
Date Received: 04/30/86
Date Reported: 05/23/86

Sample Number	ANALYSIS	Sample Description
6041233		BTS #86118A1, Soil W.D. Construction at E. Third & Harbor in Pittsburg, CA #2
	Common Solvents, ppm	
	Diesel	< 1

NOTE: Analysis was performed using EPA method 8020.

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

sls

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Blaine Tech Services
P.O. Box 5745
San Jose, CA 95150
Attn: Richard Blaine

Date Sampled: 04/28/86
Date Received: 04/30/86
Date Reported: 05/23/86

Sample Number	Sample Description
6041234	BTS #86118A1, Soil W.D. Construction at E. Third & Harbor in Pittsburg, CA #3

ANALYSIS	
Common Solvents, ppm	
Diesel	< 1

NOTE: Analysis was performed using EPA method 8020.

SEQUOIA ANALYTICAL LABORATORY

Gary Stuhr for

Arthur G. Burton
Laboratory Director

sls

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Blaine Tech Services
P.O. Box 5745
San Jose, CA 95150
Attn: Richard Blaine

Date Sampled: 04/28/86
Date Received: 04/30/86
Date Reported: 05/23/86

Sample Number	Sample Description
6041235	BTS #86118A1, Soil W.D. Construction at E. Third & Harbor in Pittsburg, CA #5

ANALYSIS	
Common Solvents, ppm	
Mineral Spirits	75
Napthenes	< 1

NOTE: Analysis was performed using EPA method 8020.

SEQUOIA ANALYTICAL LABORATORY

Gary Stenke for
Arthur G. Burton
Laboratory Director

sls

Manville Service Corporation
Ken-Caryl Ranch
Denver, Colorado 80217
303 978-2000

Ken Ake for Beck

Manville

January 29, 1987

17880,005.02

California Department of Health Services
Site Mitigation Unit
North Coast California Section
Toxic Substances Control Division
2151 Berkeley Way
Berkeley, California 94704

Attention: Mr. H.K. Hatayama, Chief

Gentlemen:

Manville Sales Corporation
Pittsburg Plant North Parcel
Pittsburg, California

Manville is in receipt of your letter of December 11, 1986 regarding the above referenced property, in which the Department of Health Services has granted approval of the planned remedial action. The remediation involves placing a 9-inch-minimum soil cover over the site. The soil cover was described in the Harding Lawson Associates (HLA) report entitled "Remedial Investigation/ Feasibility Study, North Parcel, Pittsburg, California" dated September 26, 1986.

Manville has authorized HLA to commence with the design phase of the project. It is anticipated that the design will be completed within the next few weeks and the soil cover will be constructed during the Spring of 1987. At the completion of the soil cover construction, we will provide a report documenting that the cover was constructed in accordance with the design plans and specifications and the approved remediation plan. The report will also present the results of quality control tests performed during construction and discuss future site maintenance. The proposed deed restriction language will either be included as an attachment to the report, or sent directly under separate cover.

Please feel free to call us if you have any questions regarding this project.

Yours very truly,

Juris Laipenieks

J. Laipenieks
Director, Project Engineering

cc: Daniel Bergman - Contra Costa County Environmental Health
Robert S. Creps - Harding Lawson Associates

RECEIVED
FEB - 6 1987
CONTRA COSTA COUNTY
HEALTH SERVICES ADMINISTRATION

STATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY GEORGE DEUKMEJIAN, *Governor*

DEPARTMENT OF HEALTH SERVICES
2151 BERKELEY WAY
BERKELEY, CA 94704

December 11, 1986

RECEIVED
DEC 2[illegible]
CONTRA
EN[illegible]

Manville Sales Corporation
Post Office Box 5108
Denver, Colorado 80217

Attention: Mr. Marvin Clumphs

Gentlemen:

Remedial Investigation/Feasibility Study
North Parcel Manville Sales Corporation Plant
Pittsburgh, California

This letter contains our response on proposed remediation activities for the 4.3-acre parcel owned by the Manville Sales Corporation (MSC) adjacent to your Pittsburg, California plant. Our response is based on the presentation made by MSC and their consultant Harding Lawson Associates (HLA), and the report "Remedial Investigation/Feasibility Study, North Parcel, Pittsburg, California" dated September 26, 1986 prepared by HLA. It is our understanding that this investigation and subsequent proposed remedial activities address solely the presence of asbestos fibers and asbestos product waste on the subject parcel.

Our review of the remedial investigation program and results indicate it is adequate for characterization of the asbestos problem.

The feasibility study analyzes four mitigation alternatives which consist of removal or three different cover options. The recommended alternative was the soil cover based on its ability to prevent airborne asbestos exposures and it being the most cost effective of all the alternatives. The Department concurs with your contention of the soil cover being adequate to mitigate potential airborne exposures so long as this alternative is properly implemented.

Upon completion of the cover, please provide a report documenting the following for our review:

1) Grading specifications
2) Quality Control/Quality Assurance during implementation
3) Maintenance Plan
4) Proposed Deed Restriction Language

If you have any questions, please call Andy Burow, of my staff, at (415)540-3401.

Sincerely,

Andrew M. Burow for

H. K. Hatayama, Chief
Site Mitigation Unit
North Coast California Section
Toxic Substances Control Division

HKH:ab:tmk

cc: Daniel Bergman
Contra Costa Co. Environmental Health

Bill Frizzell
Harding Lawson Associates

CONTRA COSTA COUNTY
HEALTH SERVICES DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
OCCUPATIONAL HEALTH/HAZARDOUS MATERIALS

ETA 721540

HAZARDOUS MATERIAL INCIDENT INFORMATION SHEET

REPORTED BY: Cheryl Young (Name) 2461 (Phone Number)

Agency / Citizen: CCCo. Sheriff / Riverview FD.

Date of Call: 1/11/90 Time of Call: _____ (24 HRS)

CONTACT PERSON: above (Name) _____ (Phone Number)

Agency: _____

INCIDENT LOCATION: 600 (420) E. 3RD ST Pittsburg/ John Mansfield Corp. JOHNS MANVILLE

Thomas Bros Map Page: 16 Coordinates: D6 Incorporated? (Y) / N

INCIDENT DESCRIPTION: (Include responsible party, if known)

Date Incident Occurred: 1/11/90 Time: 8:10 (8:40) Stat/Mobile/Aban

Explosion tank - fuel involved in flames. Unknown contents. Possible Toxic Chemical (ASPHALT)

TANK: "T400 WORK TANK"

ED PELL 427-2427 (432-6426)

ENV/PLANT ENGINEER

~2' ASPHALT IN TANK

PERSON RECEIVING CALL: Kelly ER STAFF: Ken A/Elaine

OTHER AGENCIES NOTIFIED (N) OR ON SCENE (O/S):

( )	C H P	( )	R W Q C B	( )	COAST GUARD
(O/S)	CITY POLICE	( )	B A A Q M D	( )	FISH & GAME
( )	SHERIFF	( )	STATE OES	( )	NAT RESP CTR
(O/S)	FIRE (RIVERVIEW)	( )	D O H S	( )	_____

EMERGENCY?: (YES) / NO INCIDENT TYPE: R / A / N

TIME: ENROUTE: 9:15 (HOME) ENROUTE: 8:15 (VAN) ARRIVAL: 8:45 DEPARTED: 9:05

CHEMICAL ID NECESSARY?: YES / NO AHM INVOLVED?: YES / NO

01-22-90

HAZARDOUS MATERIAL INCIDENT REPORT LOG

DATE	TIME (24hr)	NOTES (Information, Subject, Details, Etc.)
		2'1 ASPHALT FLASH POINT ~500°F
		~~W~~ NORMALLY (ELECTRICALLY) HEATED
		TO ~450°F TO TRANSFER.
	→	RUNOFF CLEAN (WATER APPLIED TO
		OUTSIDE OF TANK ONLY).
		SOME ASPHALT LEAKED FROM PIPING
		WHEN ROOF BLEW OFF — ALREADY
		SOLIDIFIED IN PLACE.
		NO INJURIES

5/11/90 [redacted] is Forest Products)

Manville Corporation

EPA I.D. #

Recycling Solvents through Safety-Kleen.
Waste Oil — recycled thro' Refineries
Service

Asbestos One-time abatement work — 1987?
No record ~~of~~ from B of E.

List Soda Ash - 800 - 1,000 bags.
on standby - Also include 55-gal. tank of Diesel fuel used for the fire Pump.
Revision being made to the Spill Prevention plan as a result of the Jan. '90 site explosion.

Check Amide?
Employee Training records - Documentation of training is inadequate.

Radioactive Isotope - Cesium?
Storage label accumulation date not filled in.
Include Vinyl Acetate
Heat Transfer Oil

Post Office Box 591
Pittsburg, California 94565
415 432-6426

RECEIVED
MAY 25 1990
Contra Costa Health
Environmental Health

Manville

5-23-90

Contra Costa County
4333 Pacheco Boulevard
Martinez , CA. 94553
Attention: Environmental Health Division

SUBJECT:Response - Audit Of AB 2185 Business Plan / Hazardous Waste
(Inspection Date 5-11-90,Correspondence Dated 5-16-90)

Please find attached the revised "Chemical Inventory Documentation" indicating chemicals which are present at the Pittsburg Plant. A copy of this response and your correspondence is being furnished to Delta Diablo Sanitation District and the Riverview Fire District.

The following actions are being taken to correct discrepancies noted in the audit.

1. "Labeling Violation - Accumulation Date for used motor oil"

The plant has operated with a single person in charge of waste oil handling. However this person's duties have not included the labeling of drums, this was done by the environmental coordinator. This system resulted in labeled drums but out of date accumulation dates. We have now revised the labeling process to have the single person in charge of waste oil be responsible for labeling and dating. This person has been trained in complying to Section 66508,Title 22 ,CCR.

2. " Waste Activity - Biennial Report to DHS "

Plant has not submitted form to the state because threshold limits were not met.

3. " Spill Prevention Plan "

We are presently having Stone and Webster Engineering develope this plan. Stone and Webster specialize in refinery spill plans. The estimated time for completion is August 1990.

Should you need any further information , please feel free to contact me at (415)- 427-2427.

Sincerely,

Ed Pell - Plant Engineer

C/C : District 7a
Riverview
R.A.Togni - Plt.Mgr.

Post Office Box 591
Pittsburg, California 94565
415 432-6426

RECEIVED
MAY 13 1991
Contra Costa Health
Environmental Health

Manville

5-09-91

Riverview Fire District
1500 West Fourth Street
Antioch , CA. 94509

Subject: Plant Evacuation Drill - May 16, 1991

Gentlemen,

Manville's Pittsburg Plant will be conducting a plant evacuation drill on May 16,1991 at 1:45 PM. This drill is necessary to identify any problems in our emergency action business plan as submitted to Contra Costa County's Department of Health Services. We will simulate an earthquake with structural damage to the Roofing Department. You need to be aware that the Plant's horn will be sounding and as in the past the Fire Station in Pittsburg has responded to this horn. Therefore, the horn on Thursday will not be a real emergency , but a test.

Manville will provide the District with the findings of this test drill. Manville will publish a notice in the Pittsburg Dispatch on Wednesday to make the general public aware of the test drill. Should you need to discuss this matter further please feel free to call me at 427-2427.

Sincerely,

Ed Pell

Ed Pell - Plant Engineer

Copies:

Pittsburg Police
55 Civic Av.
Pittsburg, CA. 94565

Health Services Department
Environmental Health
4333 Pacheco Blvd.
Martinez , CA. 94553

City of Pittsburg
Bay Harbor Park Home Owners Association
Hess Forest Products
Cal-Indo Truss
Auto-Marine
Diablo Services
Atlas Pallet

CONTRA COSTA COUNTY • HAZARDOUS MATERIALS SECTION

4333 Pacheco Boulevard, Martinez, CA. 94553 (415) 646-2286

Hazardous Waste Management Program Inspection and Compliance Report

Facility Name: Manville Corporation	Inspect. Type: (I) F C Date: 6/5/91
Address: E. Third and Harbor Sts. Pitts.	Facility ID #: 21540
Contact Person: Ed Pell	Gen ID # CAD: 009 144 577
Phone Number: 415 · 427-2410 zip code 94565-0591	Handler Type: (G) EH R T SIC Code: 2952

HAZARDOUS WASTE VIOLATIONS (CAL. Code of Regulations)

GENERAL	Title 22 Section #
1____Waste determination	66471
2____EPA ID number	66472 (a), (d)
3____> 90 day storage	66508 (b)
4____Biennial report	66493
5____Records (eg, manifests)	66492
6____Treatment	66371(a)
7____On-site disposal	66371(a)
8____Ext. haz waste	66570,66645
MANIFEST	
9____Correct information	66481,66482
10____Copies sent	66484(f)
11____Exception Report	66484(g)
CONTINGENCY PLAN	
12____Content	67141
13____Copies sent	67142
14____Emergency Coord.	67144
15____Notification	67145

PREVENTION	Title 22 Section #
16____Equipt (eg, communication)	67123
17____Equipt maintenance	67122
18____Aisle space	67124
19____Local E.R. agencies	67126
20____Training	67105
CONTAINERS	
21____Labels	66508
22____Condition	67241
23____Compatibility w/ container	67242
24____Management	67243
25____Inspection	67244
26____Buffer zone	67246
27____Incompatibles	67247
TANKS	
28____Labels	66508
29____Freeboard	67257(c)
30____Inspections	67259
OTHER	
31____Specify:_____	_____

COMPLIANCE SCHEDULE: Submit written documentation of corrections within 30 days.

NO VIOLATIONS OBSERVED ☒

Waste Stream (Manifest Code)	Quantity (Units per mo. / G,P,T)	Handling Method (Manifest Code)
cleaning solvent. (213)	30 gal. / month.	recycle (01)
asphault oil (221)	200 gal. / month.	recycle (01)
( )		( )

HAZARDOUS WASTE MINIMIZATION

1. Written Plan (Y) N in process. 2. Quality of plan 1 2 3 (0) 3. Additional assistance requested Y (N)

Techniques Employed

4. Material substitution	1 (2) 3 0	9. Recycling	(1) 2 3 0
5. Process modification	(1) 2 3 0	10. Administrative	(1) 2 3 0
6. Waste segregation	(1) 2 3 0	11. Water / chemical conserv.	1 (2) 3 0
7. Inventory control	1 2 3 (0)	12. Employee training	(1) 2 3 0
8. Leak / spill control	(1) 2 3 0	13. Management committment	(1) 2 3 0
		14. Other:_____	1 2 3 0

KEY
1 = Maximum
2 = Some
3 = None
0 = Not Applic.

Facility Rep. / Title PLANT ENGINEER

Signature / Date Edward Pell 6/5/91

Inspector ELAINE WILSON

Signature / Date Elaine C. Wilson 6/5/91

INSPECTION CONTINUATION SHEET

UGT ☐ AB 2185 ☒ H.W. GEN ☒ WASTE MIN. ☐

Persons Present: Ed Pell - Manville, Larry Thude - Riverview Env., Elaine Wilson - Contra Costa County.

INSPECTION COMMENTS

Manville Corporation makes roofing products. asphault / fiberglass sheeting + shingles.

Generator Fee - has been paid

Labels - hazardous waste labels should have the following (for containers):
physical state
hazard characteristics
(note "waste oil" is not a waste - used as pump primer)

Notification: for Contra Costa use 646-1112
for O.E.S. use - 1-800-852-7550.

Evacuation: Include equipment shutdown information.

Training: Document additional training for E.R. Team - containment + shutdown.
all employees - Respiratory protection.

Additional notes:
Manville has had two explosions in the last 4 yrs. As a result they now have a steam blanket on their tanks of asphault.

Manville recently conducted a disaster drill, and noticed the following:
The facility has no doors on Harbor Street.
Having two staging areas caused confusion. Ed Pell would rather have just one.
They had too many "head counters."

FACILITY NAME Manville Corporation

SITE ID # 08788 DATE 6/5/91 FACILITY INITIALS _____ HEALTH DEPT. REP. INITIALS E.C.W.

GAS
MVL

RECEIVED
JAN 06 1993
Contra Costa Health
Environmental Health

SCHULLER

January 5, 1993

Mr. Andrew R. Parsons
Hazardous Materials Specialist
Contra Costa County
Health Services Department
4333 Pacheco Boulevard
Martinez, CA 94553

Dear Mr. Parsons:

I am writing you to follow-up on your inspection of our facility on December 7, 1992. In your follow-up letter, you requested that several corrections be made immediately. This purpose of this letter is to document that the following changes have been made:

The open 5-gallon containers of waste oil were emptied in to the waste oil stream.

The waste oil drum near the waste oil tank has been covered.

The initial accumulation date on the waste oil drum in the truck shop has been labeled clearly.

The initial accumulation date on the waste oil tank has been clearly labeled and is visible for inspection.

The final change, updating the site map with respect to the 100K tank, will be made when the 1993 Business Plan is submitted.

I will be in contact with you shortly to schedule a follow-up inspection to ensure compliance. If you have any questions please contact me at (510) 427-2427.

Sincerely,

Joseph G. Duszka

Joseph G. Duszka
Sr. Industrial Engineer

cc: R. Togni

Manville Roofing Systems
East Third and Harbor Streets
P.O. Box 591
Pittsburg, CA 94565
Tel 510 432-6426
Fax 510 427-2409

A Division of Schuller International, Inc.

City of Pittsburg

Civic Center • P.O. Box 1518 • Pittsburg, California 94565

file

Inactive

RECEIVED

JUN 30 1994

Contra Costa Health
Hazardous Materials

MEMO: June 28, 1994

TO: Building Division Staff

FROM: J. Little, Chief Building Official JPL

Manville Roofing
E 3rd & Harbor
E. 3rd St., Pitts

SUBJECT: SCHULLER-MANVILLE REPLACEMENT OF COLLAPSED 50,000 GALLON ASPHALT TANK.

At a meeting with Mark Wilemon (Plant Manager) here in my office on this date I informed Mr. Wilemon that the following would be required for the installation of this tank and its subsidiary system.

1. Seismic stabilization plans by a licensed California professional.
2. Certification of the tank by an approved fabricator to required specifications and standards.
3. Detail process piping and electrical.
4. Plot plan showing location of tank with dimensions.
5. Planning Department approval.
6. Engineering approval and NPDES permit.
7. Engineers cost of construction.
8. BAAQMD approval.
9. Riverview Fire District approval.
10. Contra Costa County Environmental Health - Hazardous Materials approval.

JPL:sl

schuller.mmo

cc: Nasser Shirazi, Community Development Director
Wally Girard, Assistant City Engineer
Alfredo Hurtado, Development Engineer
Larry Thude, Riverview Fire District
✓Rosemary Walsh, Hazardous Materials
John Joseph, BAAQMD

Internal Correspondence

SCHULLER
Leaders in Insulation, Reinforcements, Filtration and Building Products

file
E. 3rd St.
Pitts.

RECEIVED
JUN 11 1993
Contra Costa County
Hazardous Materials

c/u
Rosemary,
Can you
pls handle
corres regarding
& Mundle?
Thx,

June 8, 1993

Mr. Andrew R. Parsons
Hazardous Material Specialist
Contra Costa County
Health Services Department
4333 Pacheco Boulevard
Martinez, CA 94553

Dear Mr. Parsons:

I am writing to you about your inspections of our Pittsburg facility on July 22 and December 7, 1992.

I am a Staff Environmental Engineer at Schuller Corporate Headquarters in Denver who provides environmental assistance to the Pittsburg plant. In order to have a better understanding of local regulations relative to two of the findings resulting from your inspections on July 22, 1992 and December 7, 1992, I've summarized below a proposed method for handling our used oil that I think will ensure regulatory compliance. Your views regarding this proposal will be appreciated.

The findings of concern were #3 in the 7/22/92 inspection report and #3 in your inspection report dated 12/7/92.

Agency Finding

#3 - Dated 7/22/92

The waste oil tank was not labeled as hazardous waste nor was its accumulation date indicated (66262.34).

Schuller Comment

We have test results dated 7/10/91 (attached) which lead us to believe that the oil in question meets the standards set in 25250.1(c). This being the case, we would like, with your assistance, to consider an exemption under 25250.1(e). The exemption would classify the oil in question as nonhazardous. As a condition for exemption, we realize that we would have to comply with 25250.19 in regard to testing, certification and record keeping.

Would you please advise whether the attached tests results meet the conditions set in 25250.1(c) and, if not, what additional tests would be required. We would also appreciate any comments you might have regarding the time and cost involved in obtaining the exemption, considering the benefits of exempt status.

Agency Finding

#3 - Dated 12/7/92

The initial accumulation date on a waste oil drum by the truck shop was illegible (66262.34).

Schuller Comment

The oil in question is used crankcase and hydraulic oil which is reused to clean equipment parts in the roofing manufacturing line. It is not a waste. The on-site demand for this used oil is greater than the generation rate. The oil is not hazardous (test results attached) and is totally consumed in the process along with asphalt and flux materials. We believe this was not mentioned at the time of the inspection.

We request that this oil be exempt from classification as a waste under 25143.2(b)(2), since the oil is reused as a safe and effective substitute for other commercial products and is not being reclaimed. It is understood that the used oil must be managed in accordance with 25143.9. We would, therefore, mark the used oil accumulation container with the words "Excluded Recyclable Material" and include emergency procedures, etc.,in our business plan to meet the requirements of 25504.

Since you were absent from your office when I called on 4/29/93, Ms. R. Walsh was kind enough to discuss this matter with me. She agreed that the above proposal represents a viable means of addressing county concerns. To avoid any misunderstanding in future inspections, however, we would like to obtain your concurrence before implementing the above change.

Your prompt response to the above will be greatly appreciated. We also appreciate your efforts to encourage recycling and to improve environmental controls and procedures so as to benefit all concerned.

Ronald J. Sabin

Ronald J. Sabin, P.E.
Mountain Technical Center
P.O. Box 625005
Littleton, CO 80162-5005
303 978-3690

cc: R. Walsh Martinez, CA
R. Togni Pittsburg, CA
J. Duszka Pittsburg, CA
R. Lupe Denver, CO

ENVIRONMENTAL TESTING AND CERTIFICATION CORP.
320 TESCONI CIRCLE, SUITE G, SANTA ROSA, CA. 95401 (707) 544-5570

JULY 10, 1991

CLIENT: MANVILLE SALES CORPORATION
EAST 3RD & HARBOR STREET
P.O. BOX 591
PITTSBURG, CA 94565

ATTN: ED PELL

ANALYSIS: TTLC METALS, TOTAL HALOGENS AS CL, EPA METHOD 8080 - POLYCHLORINATED BIPHENYLS (PCB'S)
JOBLINK NUMBER: 805106
MATRIX TYPE: ORGANIC LIQUID
COLLECTED BY: CLIENT

SAMPLE NO.	SAMPLE POINT	SAMPLE DATE	DATE IN LAB
MC1551	MOTOR OIL - TRUCK SHOP	NONE SPECIFIED	06-19-91
MC1552	B-D OIL - OXIDIZER	NONE SPECIFIED	06-19-91

This report is "PROPRIETARY AND CONFIDENTIAL" and delivered to, and intended for the exclusive use of the above named client only. Environmental Testing and Certification Corp. assumes no responsibility or liability for the reliance hereon or use hereof by anyone other than the above named client.

Environmental Testing and Certification Corporation.

Lisa Busch for
Thomas E. Gran, Ph.D., Vice President, General Manager
ETC Santa Rosa

910710
Date

TABLE 1: QUANTITATIVE RESULTS DATA

CCR TITLE 22 TTLC METALS (SR33)

JUN 26, 1991

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Joblink
MC1551	MANVILLE SALES CORP.	MSCPITTHZW	L TRUCKSTOP		805106

Compound	Results			
	Sample Concen. mg/kg	Report DL mg/kg	Blank Concen. mg/kg	Batch #
Antimony, Total	ND	5.00	ND	QI11044
Arsenic, Total	ND	5.00	ND	QG11044
Barium, Total	ND	4.00	ND	QI11044
Beryllium, Total	ND	1.00	ND	QI11044
Cadmium, Total	ND	1.00	ND	QI11044
Chromium, Total	ND	3.00	ND	QI11044
Cobalt, Total	ND	1.00	ND	QI11044
Copper, Total	3.97	3.00	ND	QI11044
Lead, Total	ND	5.00	ND	QI11044
Mercury, Total	ND	.100	ND	QV11044
Molybdenum, Total	ND	2.00	ND	QI11044
Nickel, Total	ND	3.00	ND	QI11044
Selenium, Total	ND	5.00	ND	QG11044
Silver, Total	ND	1.00	ND	QI11044
Thallium, Total	ND	7.50	ND	QI11044
Vanadium, Total	8.82	1.00	ND	QI11044
Zinc, Total	ND	2.00	ND	QI11044

TABLE 1: QUANTITATIVE RESULTS DATA

JUN 27, 1991

CONVENTIONALS (SR55)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Joblink
MC1551	MANVILLE SALES CORP.	MSCPITTHZW L TRUCKSTOP			805106

Compound	Results			
	Sample Concen. mg/kg	Report DL mg/kg	Blank Concen. mg/kg	Batch #
Halogens, Total as CL	594 /	50	ND	QRZ01775

TABLE 1: QUANTITATIVE RESULTS DATA

JUL 9, 1991

EPA METHOD 8080 - POLYCHLORINATED BIPHENYLS (PCBs) (OR99)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Joblink
MC1551	MANVILLE SALES CORP.	MSCPITTHZW	L TRUCKSTOP		805106

Compound	Results			
	Sample Concen. mg/kg	Report DL mg/kg	Blank Concen. mg/kg	Batch #
PCB-1016	ND	1	ND	QB11059
PCB-1221	ND	2	ND	QB11059
PCB-1232	ND	2	ND	QB11059
PCB-1242	ND	1	ND	QB11059
PCB-1248	ND	1	ND	QB11059
PCB-1254	ND	1	ND	QB11059
PCB-1260	ND	1	ND	QB11059

TABLE 1: QUANTITATIVE RESULTS DATA

CCR TITLE 22 TTLC METALS (SR33)

JUN 26, 1991

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Joblink
MC1552	MANVILLE SALES CORP.	MSCPITTHZW	L OXIDIZER		805106

Compound	Results			
	Sample Concen. mg/kg	Report DL: mg/kg	Blank Concen. mg/kg	Batch #
Antimony, Total	ND	5.00	ND	QI11044
Arsenic, Total	ND	5.00	ND	QG11044
Barium, Total	ND	4.00	ND	QI11044
Beryllium, Total	ND	1.00	ND	QI11044
Cadmium, Total	ND	1.00	ND	QI11044
Chromium, Total	ND	3.00	ND	QI11044
Cobalt, Total	ND	1.00	ND	QI11044
Copper, Total	13.2	3.00	ND	QI11044
Lead, Total	ND	5.00	ND	QI11044
Mercury, Total	ND	.100	ND	QV11044
Molybdenum, Total	ND	2.00	ND	QI11044
Nickel, Total	ND	3.00	ND	QI11044
Selenium, Total	ND	5.00	ND	QG11044
Silver, Total	ND	1.00	ND	QI11044
Thallium, Total	ND	7.50	ND	QI11044
Vanadium, Total	ND	1.00	ND	QI11044
Zinc, Total	101	2.00	ND	QI11044

TABLE 1: QUANTITATIVE RESULTS DATA

CONVENTIONALS (SR55)

JUN 27, 1991

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Joblink
MC1552	MANVILLE SALES CORP.	MSCPITTHZW	L OXIDIZER		805106

Compound	Results				
	Sample Concen. mg/kg	Report DL mg/kg	Blank Concen. mg/kg	Batch #	
Halogens, Total as CL	975	50	ND	QRZ01775	

TABLE 1: QUANTITATIVE RESULTS DATA

JUL 9, 1991

EPA METHOD 8080 - POLYCHLORINATED BIPHENYLS (PCBs) (OR99)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Joblink
MC1552	MANVILLE SALES CORP.	MSCPITTHZW	L OXIDIZER		805106

Compound	Results			
	Sample Concen. mg/kg	Report DL mg/kg	Blank Concen. mg/kg	Batch #
PCB-1016	ND	1	ND	QB11059
PCB-1221	ND	2	ND	QB11059
PCB-1232	ND	2	ND	QB11059
PCB-1242	ND	1	ND	QB11059
PCB-1248	ND	1	ND	QB11059
PCB-1254	ND	1	ND	QB11059
PCB-1260	ND	1	ND	QB11059

RCRA Contingency Plan
(Resource Conservation and Recovery Act)

Part I: General Information

Name of Facility: Schuller International roofing Systems Division

Type of Facility: Asphalt Based Roofing Materials Manufacturer

Name and Address of Owner or Operator: Schuller International
P.O. Box 5108
Denver, CO 80217

Name and Address of Facility: Schuller Internatioanl (Roofing Systems Division)
P.O. Box 591
(East 3d and Harbor Sts.)
Pittsburg, CA 94565-0591

Designated Primary Emergency Coordinator: Ken Koop
Environmental Coordinator

Purpose and Implementation of Contingency Plan: 40 CFR Subpart D 265.51

A. Each owner or operator must have a contingency plan for his facility. The contingency plan must be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water.

B. The provisions of the plan must be carried out immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.

Management Approval: This RCRA Plan will be implemented as herein

Signature: Mark Prochaska

Name: Mark Prochaska

Title: Plant Manager

Date: 11-13-95

Part II: RCRA Emergency Alert Procedure

Actions to be taken:

1) Immediately notify the Environmental Coordinator (if on duty) or your immediate supervisor. The first supervisor on site will be the initial emergency coordinator, until relieved by the Environmental Coordinator or the Plant Manager. If your supervisor is unavailable, page the EC at 510-246-8946.

2) If contact can not be made with the EC, contact the next person on the emergency contact list.

3) Plant Personnel Emergency Contact List:

NAME	POSITION	OFFICE	PAGER	HOME
Ken Koop	Environmental Coordinator	427-2439	246-8946	706-2326
Mark McKenna	Plant Engineer	427-2427	753-8894	935-2354
Joe Duszka	Production Superintendent	427-2437	473-7420	754-7830
Mark Prochaska	Plant Manager	427-2401	473-7418	516-7457
Ed Lopez	Oxidizer Supervisor	427-2425	246-9271	
Mike Hoffman	Electrician	autocall	n/a	827-3948
Jeff Easely	Mechanic	autocall	n/a	439-8173

4) The emergency response coordinator will assign duties to shift personnel to respond to the incident. Major fires, explosions and spills are emergencies, with the supervisor in charge directing plant personnel as needed.

5) In the event that any RCRA material reaches the sanitary sewers, it must be reported to Delta Diablo Sanitation District at 778-4040. Depending upon the type of material and amount spilled, additional calls may be required. The sanitary sewer line should be plugged immediately north of the area between buildings #2 and #3. Check with the EC for the exact location.

6) In the event a fire occurs, it should be extinguished using the closest proper type fire extinguisher. If the fire can not be promptly contained, the employee should immediately contact the supervisor in charge. The supervisor will determine what personnel and equipment are required and if the fire department should be called.

7) External Emergency Contacts

During an emergency, the following numbers may be needed:

Contra Costa Fire Department	757-1313 or 911
Pittsburg Police Department	228-8282 or 911
Delta Memorial Hospital	779-7200
Delta Diablo Sanitation	778-4040

Local Haz Mat Emergency Response	646-1112
State Office of Emergency Services	646-5908
National Response Center (US Coast Guard)	800-424-8802

When reporting:

A. State our name, address, and EPA identification number

Schuller International Roofing Systems Division
East 3rd and Harbor Streets
Pittsburg, CA 94565
EPA ID #: CAR000010074

B. Date, time and type of incident

C. The quantity and type of waste involved

D. The extent of injuries, if any

E. The estimated quantity and disposition of any recovered material

F. Make sure the party can call back into the plant on the following numbers before you hang up:

510-427-2444 Asphalt Dept. (24 hours)
Other numbers, as appropriate (Roofing Office [427-2438], Plant Manager's Office [427-2401], etc.)

8) Arrangements with External Contacts

Contra Costa Fire Department - Must be called in the event of large fires. Plant personnel must coordinate with RFD to meet at a specified gate for directions and assistance with the type and nature of problem.

Pittsburg Police Department - For assistance with crowd control, traffic control and other actions required by the type of incident.

Delta Memorial Hospital - No prior arrangements made. In an emergency, MSDS, test results, and other pertinent information need to be provided to hospital personnel so that proper care can be given. A complete set of MSDS sheets can be found in the engineering office and the Roofing Production Office.

Delta Diablo Sanitation District - Since sanitary sewers lead directly to the sanitation district facility, it is necessary to contact Delta Diablo Sanitary District in the event of a spill into the sanitary sewer.

9) For emergency spills, absorbent materials are located in the areas where hazardous wastes are stored. There are absorbent pads located in the maintenance/stores area. Additional absorbent is located in several areas in the plant, with the largest amount stored in the HEAF unit area.

10) For clean-up of a spill reference the SPCC Plan, Part 3.

11) Fire control equipment in the plant consists primarily of automatic sprinkler systems in buildings 1, 2, 3, and 4. This system is capable of dousing large fires. Hand-held and wheeled fire extinguishers are also located around the plant. These extinguishers are for use on small fires. Extinguishers are located near the #1 Coater, the Oxidizer Control Room, the Maintenance Shop, and the #5 Coater. An automatic fire alarm is installed in the main buildings; it is audible throughout the plant.

12) Emergency communications are primarily by telephone. If the telephone system is not working, the backup system is portable Motorola radios from the shipping department.

Part III: Description of Hazardous Waste

Material: Safety Kleen, Waste Petroleum Naphtha, Combustible Liquid

Volume on Site: 400#

Monthly Volume: 400#

DOT ID#: UN1255

DOT Emergency Guide: 27

EPA Code: D001

1. What is this waste stream?

This waste stream is from the three Safety Kleen parts washers located in the maintenance and truck servicing departments. This waste is recycled and returned to us by Safety Kleen and is stored in self-contained parts washer stations.

2. Why is it hazardous?

The liquid has a flash point below 140°F, which fits the description of an ignitable waste and is thus listed a hazardous waste.

3. Do solvents threaten human health?

Petroleum distillates are considered poisons due to their effect on the human body. Depending on the route of entry, headaches, nausea, central nervous system depression, vomiting and changes in pulmonary function may be attributed to exposures to solvents. Minimizing contact with solvents is important in protecting the human body.

4. Special fire fighting techniques?

The parts washer stations are self-contained. If a fire were to begin inside a parts washing station, the lid on the station is fused and designed to close automatically, thus snuffing out the fire.

Part IV: Personnel

A) Employee Training

Employee training is to be conducted and documented annually at the same time as SPCC training.

B) Personal Protective Equipment

In regular usage, the only PPE for Safety Kleen use is impervious gloves. Fumes are generally not a problem with Safety Kleen units.

During a spill or any other time the fumes become too strong, immediately evacuate and ventilate the area. Remember, minimize skin contact and avoid breathing vapors.

In the event of a fire or oxygen deficient atmosphere, call for help and stay out of the area.

In general, minimize skin contact, avoid breathing fumes and do not eat or smoke around Safety Kleen chemicals.

Part V: Handling Precautions

Since the Safety Kleen liquid is maintained by Safety Kleen and changed on a periodic basis, there is no accumulation procedure and no handling by Schuller personnel required.

Part VI: Inspection Activities

Since the Safety Kleen liquid is maintained by Safety Kleen, there is no inspection log maintained for this waste stream. Safety Kleen removes this material on a monthly basis and reports any discrepancies at that time. Also, all employees are instructed to report spills, hazards, or unusual situations to their supervisor immediately so that corrective action may be taken. Since Safety Kleen solvents have a low flash point, it is very important that the cleaning sink lid be closed when not in use.

Date: 2/25/97
Cancels: 11/9/95

EMERGENCY CALL LIST

STATE OFFICE OF EMERGENCY SERVICES (OES)	800-852-7550
COUNTY HEALTH SERVICES	646-2286 or 800-258-6942
FIRE/POLICE/AMBULANCE	911
LOS MEDANOS HOSPITAL	432-2200
INDUSTRIAL MEDICINE CLINIC	777-9194
U.S. COAST GUARD	437-3073
POISON CONTROL CENTER	800-523-2222 or 476-6600
HAZARDOUS MATERIAL SPILL RESPONSE COMPANIES:	
PESCO (Norbert Colomb)	228-7333 (Res. 825-0107)
IT Corporation	800-262-1900
PLANT PERSONNEL:	
Mark Prochaska, Plant Manager	516-7457 (HOME) 427-2401 (PLANT)
Mark McKenna, Plant Engineer	935-2354 (HOME) 427-2427 (PLANT)
Joe Duszka, Production Superintendent	754-7830 (HOME) 427-2437 (PLANT)
Ken Koop, Environmental Coordinator	706-2326 (HOME) 427-2439 (PLANT)
Terry Faas, Manager of Services	706-9657 (HOME) 427-2416 (PLANT)
CORPORATE ENVIRONMENTAL:	
Angela Jankousky (Director, HS&E)	(303) 978-2479 (WORK)
Glenn Bauman (Roofing Division HS&E Liaison)	(303) 978-4735 (WORK)
NEIGHBORS	
DIABLO SERVICES, Steve Walker	432-3588
ATLAS PALLET, Raul Ugarte	432-6261
AUTO-MARINE, John Rosseni	432-7917
ABC FRAME & PALLET, Gene Samuelson	432-3660

Contra Costa County
Health Services Department

ENVIRONMENTAL HEALTH DIVISION

HAZARDOUS MATERIALS / OCCUPATIONAL HEALTH

CASE #: I (N) C (circle one)

96031403

OES #

Date 3/14/96 **Time of Call** (24 hr. clock) 0945 **Received by** LJ **ER staff** Bruce

Relayed by Comm1 ☐ 800# NPDES referal ☐ other:

Reported by: Joe Douglas (name, phone #, comp.)

Contact Person, phone # (on site):

Incident Location 2nd x Harbor - Pitts

Facility Name Schuller site ID# 21540

west county ☐ central county ☐ east county ☐ south ☐ city: Pitt

Incident Description **Date of Incident** 3/13/96 **Time of Incident**

notification only ☐ facility ☐ pipeline ☐ disposal/abandonment ☐

highway/vehicle ☐ drug lab ☐ rail road ☐ tank truck ☐ other:

Details: 2 transformers removed
leak discovered - 27 ppm PCB
clean up work being done at
present - full report to be
mailed to Rosemary W.

Hazardous Materials Involved Toxic ☐ Corrosive ☐ Flammable ☐ Reactive ☐

Description:

Physical State: solid ☐ liquid ☐ gas ☐ material brought back? ☐

Reported Quantity: Actual Quantity:

Response accept notification ☐ advise ☐ emergency ☐ complaint ☐

Referral to: (agency, name, phone number)

Other Agencies Notified (N) or On-scene (O)

CHP	☐	Fire	☐	Coast Guard	☐	CAL-EPA	☐
City Police	☐	Fish and Game	☐	RWQCB	☐	Public Works	☐
Sheriff	☐	State OES	☐	BAAQMD	☐		

Other:

Time Responded Time Arrived Time Departed Scene

4333 Pacheco Boulevard • Martinez, California 94553 • (510) 646-2286

line 1

Contra Costa County
Health Services Department

ENVIRONMENTAL HEALTH DIVISION

HAZARDOUS MATERIALS / OCCUPATIONAL HEALTH

CASE #: I N C (circle one)

96 05 17 01

OES #

Date 5/17 Time of Call (24 hr. clock) 10:05 Received by jrl ER staff ~~Sotacy~~ Rosemary

Relayed by Comm1 ☐ 800# NPDES referal ☐ other:

Reported by: (name, phone #, comp.)

Contact Person, phone # (on site): Jeff Easley (510) 439-8173

Incident Location E 3rd & Harbor Pittsburg

Facility Name ~~Toba~~ Schuller Intern'l site ID#

west county ☐ central county ☐ east county ☐ south ☐ city: Pittsburg

Incident Description Date of Incident 5/15 Time of Incident 5:30 pm

notification only ☒ facility ☐ pipeline ☐ disposal/abandonment ☐

highway/vehicle ☐ drug lab ☐ rail road ☐ tank truck ☐ other:

Details: Please call Mr. Easley about this before doing inspection
Boss told him to do it (Mark McKenna)

Pump water (oil ontop) out of drain ditch
to the ~~River~~ Railroad tracks oil got on trucks
Now BOSS is writing him up. He tired of this

Hazardous Materials Involved Toxic ☐ Corrosive ☐ Flammable ☐ Reactive ☐

Description:

Physical State: solid ☐ liquid ☐ gas ☐ material brought back? ☐

Reported Quantity: Actual Quantity:

Response accept notification ☐ advise ☐ emergency ☐ complaint ☐

Referral to: (agency, name, phone number)

Other Agencies Notified (N) or On-scene (O)

CHP	☐	Fire	☐	Coast Guard	☐	CAL-EPA	☐
City Police	☐	Fish and Game	☐	RWQCB	☐	Public Works	☐
Sheriff	☐	State OES	☐	BAAQMD	☐	Other:	

Time Responded Time Arrived Time Departed Scene

Responsible Party and Property Owner: _____

Case # INC

Hazardous Materials Incident Report Log

date	time		initials

AB-2185/89 SARA TITLE III BUSINESS PLAN INSPECTION AND VALIDATION REPORT

FACILITY NAME : Schuller International Inc. SITE ID#: 21540

FACILITY ADDRESS : East 3rd & Harbor Sts.

PHONE # 427-2460 CONTACT PERSON Joseph Duszka

The requirements in this check sheet are contained in the following laws and regulations:

1) Superfund Amendments and Reauthorization Act of 1986, (SARA Title III)
2) Title 42 of the U.S. Government Code, Section 11001 et. seq.
3) 40 CFR parts 300, 350, 355, 370, and 372
4) California Health and Safety Code ,Chptr. 6.95, Section 25500 et seq.
5) California Code of Regulations, Title 19, Section 2620 et. seq.

I BUSINESS INFORMATION

H&S 25518,25504,25503; CCR 2729, 2730; SARA 312

		Not O.K.	Comment
1	Business Name	☐	OK
2	Site Street	☐	
3	City, State, Zip	☐	
4	Business Type	☐	
5	Telephone	☐	
6	Date of Ownership	☐	
7	Owner/Operator	☐	
8	SIC code	☐	
9	Dun & Bradstreet #	☐	
10	Number of Employess	☐	
11	Invoice Street	☐	OK
12	Telephone	☐	
13	City State Zip	☐	
14	Invoice Contact	☐	
15	Parent Company	☐	
16	Parent Street	☐	
17	Telephone	☐	
18	City State Zip	☐	
19	Reporting Period	☐	

II INVENTORY INFORMATION

H&S 25504, 25509; SARA 312 ; CCR 2729

		Not O.K.	Comment
1	Maximum Amount	☐	OK
2	Average Daily Amount	☐	
3	# Days on Site	☐	
4	Law	☐	
5	Chemical Name/Mixture	☐	
6	Common Name	☐	
7	Mixture Waste Composition	☐	
8	California Waste Category	☐	
9	CAS Numbers	☐	
10	DOT I.D. Numbers	☐	
11	Pure/Mix	☐	OK
12	Physical State	☐	
13	Physical/Health Characteristics	☐	
14	Storage Type Code	☐	
15	Pressure Code	☐	
16	Temperature Code	☐	
17	Location Code	☐	
18	Location Description	☐	
19	Estimated annual Amt. Waste	☐	

III SITE LAYOUT & FACILITY DIAGRAM

H&S 25517.5, 25518; CCR 2730

		Not O.K.	Comment
1	Scale of Map or Drawing	☐	OK
2	Orientation (NSEW)	☐	
3	Loading Areas	☐	
4	Parking Lots	☐	
5	Internal Roads	☐	
6	Storm and Sewer Systems	☐	
7	Adjacent Property Uses	☐	
8	Adjacent Street ID	☐	OK
9	Exit and Entry Points	☐	
10	Spill Containment Systems	☐	
11	Hazardous Material Handling/Storage	☐	
12	Material Storage Type and ID	☐	
13	Diagram/layout Clear & Readable	☐	
14	Diagram/layout storeable to 9x12	☐	

IV EMERGENCY RESPONSE and EVACUATION PLAN

H&S 25504; CCR 2732 ☐ See attached. (see separate check sheet)

V EMPLOYEE TRAINING PROGRAM

H&S 25504; CCR 2732 ☐ see attached. (see separate check sheet)

VI SUBMITTAL and CERTIFICATION INFORMATION

H&S 25518 ☐ OK

SUBMIT WRITTEN CORRECTIONS WITHIN 30 DAYS

Facility Rep. / Title Joe Duszka / Prod. Supt. Inspector / Title Sonny Khoo / Rosemary Walsh Hazmat Specialists

Signature / Date Joe Duszka 5/29/96 Signature / Date Rosemary Walsh

☐ RECORD ☒ INITIAL ☐ FOLLOW-UP 5/29/96 Page 1 of 3

E. 3rd + Harbor St.
5/29/96

INSPECTION CONTINUATION SHEET

UGT ☐ AB 2185 ☑ H.W. GEN ☑ WASTE MIN. ☐

INSPECTION COMMENTS

2185/HWG inspection — Schuller International Inc.
R. Walsh + S. Khoo — met w/ Joseph Duszka, Production Superintendant
→ Following was noted during inspection:

2185 — Please add CCCHSD to Emergency contact list (in event of haz mat/waste release).

→ An employee Training Plan (a general, formal introduction to the plant) should be developed. This plan should introduce employees to the plant, hazards on the job, plant Emergency Response procedures and evacuation, and employee-Right-to-Know. The trainer needs to document the training, and the employee should sign it. Regular safety meetings should be held w/ all employees — these also should be documented and placed in each employees' file.
HWG — please remove Waste oils w/in 90 days of generation.

→ Do not discharge water from oil pump to the ground unless it has been properly characterized by a certified lab as non-hazardous.

Haz Waste cont.

37. ~~water~~ tank integrity and tank level, etc..

Schuller may remove water from shop oil and discharge to the sanitary sewer — . So-902 water. The proper permits will be obtained.

FACILITY NAME Schuller International Inc.
SITE ID # 2540 DATE 5/29/96 FACILITY INITIALS JD HEALTH DEPT. REP. INITIALS RW
for Duszka 5/29/96
PAGE 2 OF 3

Schuller International
3rd + Harbor
5/29/96
pg-2

INSPECTION CONTINUATION SHEET

UGT ☐ AB 2185 ☐ H.W. GEN ☒ WASTE MIN. ☐

INSPECTION COMMENTS

An oily water drain in the the 'hot oil' room was pumped onto soil next to the building. Oily soil was excavated and put into drums. J. Dueszlen said that an operator was told to pump only the water out onto the ~~soil~~ oily ~~x~~ area, but that the operator also pumped the oil out. Area was cleaned up.

FACILITY NAME Schuller International, Inc

SITE ID # 21540 DATE 5-29-96 FACILITY INITIALS [illegible] HEALTH DEPT. REP. INITIALS [illegible]

Joe Dueszka 5/29/96

PAGE 3 OF 3

Contra Costa County
Health Services Department
Environmental Health Division
Hazardous Materials Programs

Hazardous Waste Management Program Inspection Compliance Report

Facility Name Schuller International Inc.	**Facility #** 21540 **Date** 5/29/96
Address East 3rd + Harbor St.	**Program Status Code** (A1) A2 I1 I2
Contact Person Joseph Duszka	**Generator ID#** CA: D009 1145 77
Title Production Superintendant	**Inspection Type** (Normal) Follow-Up **SIC** 2952
Phone Number 427 2460	**RCRA Wastes** (Yes) No **TSD Facility** Yes (No)

Hazardous Waste Violations - California Code of Regulation Title 22

		General Requirements			**Facility Operation**	
01	___	Treatment, Storage, Disposal	66262.10, 66270.1	22 ___	Maintenance and Operation of Facility	66265.31
02	___	Hazardous Waste Determination	66262.11	23 ___	Required Equipment	66265.32
03	___	EPA Identification Number	66262.12	24 ___	Equipment Maintenance And Testing	66265.33
04	X	Accumulation Time	66262.34	25 ___	Communication or Alarm Systems	66265.34
05	___	Extremely Hazardous Waste	67430.1, 67430.4	26 ___	Required Aisle Space	66265.35
				27 ___	Local Emergency Response Agencies	66265.37
		Hazardous Waste Manifest				
06	___	Applicable Sections Completed	66262.20		**Use & Management of Containers**	
07	___	Manifest Copies Sent	66262.23	28 ___	Hazardous Waste Labels	66262.34
				29 ___	Container Condition	66265.171
		Recordkeeping & Reporting		30 ___	Container Compatibility	66265.172
08	___	Manifests on File	66262.40	31 ___	Container Management	66265.173
09	___	TSDF Signed Manifests on File	66262.40	32 ___	Area Weekly Inspections	66265.174
10	___	Biennial Report on File	66262.40	33 ___	Buffer Zone for Ignitable or Reactive Wastes	66265.176
11	___	Waste Analysis on File	66262.40	34 ___	Proper Separation of Incompatibles	66265.177
12	___	Biennial Report Submitted	66262.41			
13	___	Exception Report	66262.42		**Hazardous Waste Storage Tanks**	
		Env. Coord. has 40hr		35 ___	Secondary Containment	66265.193
		Personnel Training		36 ___	Spill Prevention	66265.194
14	___	Content	66265.16 training	37 X	Daily Inspections Documented	66265.195
15	___	Initial/Annual Training	66265.16	38 ___	Procedures for Leaking or Unfit Tanks Systems	66265.196
16	___	Proper Documentation	66265.16	39 ___	Ignitable or Reactive Wastes	66265.198
		Contingency Plan		40 ___	Waste Minimization Required	66520-26
17	___	Content	66265.52	41 ___	Business Plan Required	Co. Ord. No. 87-5
18	___	Contingency Plan Copies	66265.53	42 ___	UGT Permit Required	Co. Ord. No. 90-122
19	___	Plan Amendment	66265.54	43 ___	Outstanding HWG Invoice	Co. Ord. No. 89-56
20	___	Emergency Coordinator	66265.55			
21	___	County Notification	66265.56	50 ___	Other: _____	

☐ No Violation Observed

Comments/Referrals Violations: 04. Waste oil had not been removed from 6/95 - 12/95. Waste oil needs to be removed at least once every 90 days. 37. Waste oil tank (6000 gal total capacity) needs to be inspected daily. The daily check by an operator needs to be documented in writing including

Hazardous Waste Stream	Manifest Waste Code	Monthly Qty (units/mo)	Manifest Handling Code	Transporter
Waste Oil	221	~1500	01	Gibson Environmental
Safety Kleen	213	~30	01	Safety Kleen
Asbestos	151	~40P	03	Enviropur Waste Corp.

Hazardous Waste Minimization Survey

01	Written Plan	(Y) N			03	Additional Information Requested	Y	N		
02	Quality of Plan	1	2	3 (0)						
Techniques Employed					09	Recycling	1	(2)	3	0
04	Material Substitution	1	(2)	3 0	10	Administrative	1	(2)	3	0
05	Process Modification	1	(2)	3 0	11	Water/Chemical Conservation	1	(2)	3	0
06	Waste Segregation	1	(2)	3 0	12	Employee Training	1	(2)	3	0
07	Inventory Control	1	(2)	3 0	13	Management Committment	1	(2)	3	0
08	Leak/Spill Control	1	(2)	3 0	14	Other	1	(2)	3	0

Key: 1 = Maximum; 2 = Some; 3 = None; 0 = Not Applic.

Facility Rep. Joe Duszka **Inspector** Rosemary Walsh / Sonny Khoo

Title production superintendant **Title** HMS

Signature Joe Duszka **Date** 5/29/96 **Signature** Rosemary Walsh Sonny Khoo 5/29/96

4333 Pacheco Boulevard • Martinez, California 94553 • (510) 646-2286

Contra Costa County
Health Services Department

ENVIRONMENTAL HEALTH DIVISION

HAZARDOUS MATERIALS / OCCUPATIONAL HEALTH

CASE # (circle one) N C

97032202

OES #

Date 3-22-97 Time of Call (24 hr. clock) 2337 Received by C. Nicholson ER staff CD/BB/GL

Relayed by Comm1 ☒ 800# NPDES referal ☐ other:

Reported by: (name, phone #, comp.)

Contact Person, phone # (on site): B.C. - Don Hooper

Incident Location 3rd and Harbor St.

Facility Name Schuller International Inc. site ID# 21540

west county ☐ central county ☐ east county ☒ south ☐ city: Pittsburg

Incident Description Date of Incident Time of Incident

notification only ☐ facility ☒ pipeline ☐ disposal/abandonment ☐

highway/vehicle ☐ drug lab ☐ rail road ☐ tank truck ☐ other:

Details: Asphalt Fire in processing unit. (originally reported as a tanker fire with blevie potential)

Hazardous Materials Involved Toxic ☐ Corrosive ☐ Flammable ☒ Reactive ☐

Description: Asphalt

Physical State: solid ☐ liquid ☒ gas ☐ material brought back? ☐

Reported Quantity: ? Actual Quantity: ?

Response accept notification ☐ advise ☐ emergency ☒ complaint ☐

Referral to: (agency, name, phone number)

4/10/97 10

Other Agencies Notified (N) or On-scene (O)

CHP		Fire	O	Coast Guard		CALEPA	
City Police		Fish and Game		RWQCB		Public Works	
Sheriff		State OES		BAAQMD		Other:	

Time Responded 0001 Time Arrived 0035 Time Departed Scene 0145

I.C. - Officer Du Pont

Responsible Party and Property Owner: Mark Proctor (Plant Mgr)
P.O. Box 591
Pittsburg 94565

Case # INC

date	time	Hazardous Materials Incident Report Log	initials
		- No apparent structural damage to tank involved with fire. Plant manager believes there was an electrical short that caused fire damaging sidewall insulation.	
		- Runoff contained on site, in secured / soil surface impoundment area. Contamination appeared to be removed & now although water will be allowed to percolate / evaporate from catch basin.	
3-25		Advised Lee this may need excavation for stormwater purposes	

Recommendations:

Inspected by:

Names (organizations) /phone numbers/ titles of person(s) involved:

CALIFORNIA HAZARDOUS MATERIAL INCIDENT REPORT OES 1/91

CHANGE 1 ☐ DELETE 2 ☐

A

AGENCY NAME	AGENCY ID NO.	AGENCY INCIDENT NO.	AGENCY PHONE NO.	OES CONTROL NO.
CONTRA COSTA CO HSD	0 7 7 4 1	I97-03202	(510) 646 - 2286	

B

INCIDENT DATE (MO DAY YEAR)	TIME NOTIFIED	TIME COMPLETED	DATE COMPLETED (IF DIFFERENT) (MO DAY YEAR)
03 22 97	2330	0114	03 23 97

C

INCIDENT ADDRESS/LOCATION	CITY/COMMUNITY	COUNTY	ZIP
3rd and Harbor St.	Pittsburg	CONTRA COSTA	94565

D

WEATHER (CHECK BEST DESCRIPTOR/S)

1 X CLEAR 5 HAIL, SLEET 8 HIGH WIND
3 RAIN 6 ELECTRICAL STORM 9 OTHER
4 SNOW 7 FOG 0 UNKNOWN

ESTIMATED TEMPERATURE 65 (Deg. F)

PROPERTY USE (USE CODES ON REVERSE)

PROPERTY USE 600 SURROUNDING AREA 600

PROPERTY MANAGEMENT FEDERAL STATE COUNTY X CITY PRIVATE UNKNOWN

E

RELEASE FACTORS (CHECK BEST DESCRIPTOR/S)

11 INTENTIONAL ACT
12 SUSPICIOUS ACT
30 FAILURE TO CONTROL HAZMAT
31 ABANDONED
40 MISUSE OF HAZMAT
50 MECHANICAL FAILURE
60 DESIGN, CONSTRUCTION, INSTALLATION DEFICIENCY
70 OPERATIONAL DEFICIENCY
71 COLLISION/OVERTURN
80 NATURAL CONDITION
94 X FIRE/EXPLOSION
98 NO RELEASE
99 OTHER
00 UNDETERMINED

TYPE OF EQUIPMENT INVOLVED

10 X HEATING SYSTEMS
30 AIR CONDITION/REFRIG
77 CHEM PROCESSING EQUIP
78 WASTE RECOVERY EQUIP
96 HAZMAT TRANSFER EQUIP
97 VEHICULAR FUEL SYSTEM
98 NO EQUIP INVOLVED
99 OTHER
00 UNDETERMINED

MOBILE PROPERTY TYPE

10 PASSENGER VEH/ROAD
20 FREIGHT VEH/ROAD
30 RAIL TRANSPORT VEH
40 WATER TRANS VESSEL
50 AIR TRANSPORT VEH
60 HEAVY EQUIP-INDUST/AGRI
98 X NO MOBILE PROPERTY INVOLVED
99 OTHER
00 UNDETERMINED

F

ACTIONS TAKEN (CHECK BEST DESCRIPTOR/S)

31 RESCUE, REMOVE FROM HARM
32 EXTRICATION, DISENTANGLEMENT
33 EMERGENCY MEDICAL SERVICES
35 SEARCH
36 TRANSPORT
41 REMOVE HAZARD (NEUTRALIZE)
42 ID/ANALYSIS OF HAZMAT
43 EVACUATION
44 ESTABLISH SAFE AREA
45 MONITOR
46 DECON-PERSON/EQUIP
47 DECON-AREA (CLEANUP)
48 CONTAIN/CONTROL HAZMAT
61 CROWD CONTROL
62 TRAFFIC CONTROL
63 NOTIFY OTHER AGENCY
64 PROVIDE PUBLIC INFO
71 X INVESTIGATE
73 SHUT DOWN SYSTEM
82 SECURE PROPERTY
92 REFER TO PROPER AUTHORITY
98 NO ACTION TAKEN
97 HAZMAT RESPONSE, MATERIAL DETERMINED TO BE NONHAZARDOUS
99 X OTHER Environ. Assessment

G

CHEMICAL OR TRADE NAME (PRINT OR TYPE)	DOT ID NO.	DOT HAZARD CLASS	CAS NO.
Asphalt	1999		

PHYSICAL STATE STORED: 1 SOLID 2 X LIQUID 3 GAS
PHYSICAL STATE RELEASED: 1 SOLID 2 X LIQUID 3 GAS
QUANTITY RELEASED: 1 lbs. 2 gal. 3 cu.ft.
ENVIRONMENTAL CONTAMINATION: 1 X AIR 2 WATER 3 X GROUND 9 OTHER
(USE CODES ON REVERSE) EXTENT OF RELEASE 6

CONTAINER DESCRIPTION: 1 X FIXED 2 PORTABLE 3 MOBILE; 1 INSULATED 2 PRESSURIZED 3 ARMORED
(USE CODES ON REVERSE) CONTAINER TYPE 21 LEVEL OF CONTAINER 30 CONTAINER MATERIAL 01
CONTAINER CAPACITY 1 lbs. 2 X gal. 3 cu. ft. 5000

CHEMICAL OR TRADE NAME (PRINT OR TYPE)	DOT ID NO.	DOT HAZARD CLASS	CAS NO.

PHYSICAL STATE STORED: 1 SOLID 2 LIQUID 3 GAS
PHYSICAL STATE RELEASED: 1 SOLID 2 LIQUID 3 GAS
QUANTITY RELEASED: 1 lbs. 2 gal. 3 cu.ft.
ENVIRONMENTAL CONTAMINATION: 1 AIR 2 WATER 3 GROUND 9 OTHER
(USE CODES ON REVERSE) EXTENT OF RELEASE

CONTAINER DESCRIPTION: 1 FIXED 2 PORTABLE 3 MOBILE; 1 INSULATED 2 PRESSURIZED 3 ARMORED
(USE CODES ON REVERSE) CONTAINER TYPE LEVEL OF CONTAINER CONTAINER MATERIAL
CONTAINER CAPACITY 1 lbs. 2 gal. 3 cu. ft.

H

MORE THAN 2 SUBSTANCES INVOLVED? YES X NO (LIST ADDITIONAL INFORMATION ON REVERSE SIDE)

I

SPECIAL STUDIES LOCAL USE 1. A B C D 2. A B C D 3. A B C D 4. A B C D 5. A B C D 6. A B C D
STATE USE

J

HAZMAT IDENTIFICATION SOURCES (CHECK BEST DESCRIPTOR/S)

PERSONNEL
19 ON-SITE FIRE SERVICES
29 X OFF-SITE FIRE SERVICES
40 ON-SITE NON-FIRE SERVICES
60 OFF-SITE NON-FIRE SERVICES
54 CHEMIST
58 TOX CENTER
59 CHEMTREC
99 X OTHER Health/Hazmat

REFERENCE MATERIAL
21 X DOT MANUAL
23 MSDS
24 PLACARDS/SIGNS
25 PRIVATE INFO SOURCE
26 COMPUTER SOFTWARE
27 SHIPPING PAPERS
98 NO REFERENCE MATERIAL USED
99 OTHER

HAZMAT CASUALTIES

	NUMBER OF DECONTAMINATED	NUMBER OF INJURIES	NUMBER OF FATALITIES
RESPONDING AGENCY PERSONNEL			
OTHERS			

K

VEHICLE MAKE/YEAR	VEHICLE LICENSE NO.	STATE	VEHICLE ID NO. (VIN)	CA/DOT/PUC/ICC NO.	COMPANY NAME

L

REPORTING OFFICER NAME/ID NO. (PRINT OR TYPE)	DATE	COMMENTS ON BACK?
LEWIS G. PASCALLI		YES NO

CODES

PROPERTY USE and SURROUNDING AREA TYPE

100	Public Assembly	762	Hazmat Chem Mfg	950	Railroad
200	Educational	767	Petroleum Refinery	961	Freeway
300	Health Care	800	Storage	962	County/City Road
400	Residential	931	Open Land	963	Private Road
500	Mercantile, Business	936	Vacant Lot	965	Rest Stop/Vista Point
600	Industrial, Utility	941	Open Sea	966	Scale/Inspection Facility
650	Agricultural	942	Harbor/Port	099	Other - Explain in comments section
700	Manufacturing	946	Lake/Pond/River		

EXTENT OF RELEASE

1	Confined to Vehicle/Equipment
2	Confined to Room of Origin
3	Confined to Floor of Origin
4	Confined to Structure of Origin
6	Confined to Property Use of Origin
7	Release Beyond Property Use of Origin
8	NO RELEASE
9	Other - Explain in comments section
0	Undetermined

CONTAINER TYPE

11	Drum	31	Sump/Pit
12	Cylinder	32	Pond or Surface Impoundment
13	Can or Bottle	33	Well
14	Carboy	41	Vehicular Fuel Tank
15	Box or Carton	98	NO CONTAINER
16	Bag	99	Other - Explain in comments section
21	Tank or Silo (incl vehicle cargo tanks)	00	Undetermined
22	Pipe		
24	Machinery or Process Equipment		

LEVEL OF CONTAINER

11	Ground Level
30	Above Ground
40	Below Ground

CONTAINER MATERIAL

1	Iron, Steel & Other Iron Alloys
2	Aluminum & Aluminum Alloys
3	Copper, Brass, Bronze, & Other Copper Alloys
4	Plastic/Fiberglass, Rigid
5	Plastic, Flexible
6	Wood, Paper, Textile, & Cellulose Products
7	Glass, Pottery & Clay
8	NO CONTAINER
9	Other - Explain in comments section
0	Undetermined

COMMENTS:

IMPORTANT INSTRUCTIONS

Incidents that involve the following shall not be reported:
1. Petroleum spills of less than 42 gallons from vehicular fuel tanks.
2. Sewage overflows.
3. Leaks in low-pressure fuel lines to residential properties.

CHANGE: If the information on a previously submitted form needs to be changed mark the CHANGE box and submit form with the correct information.

DELETE: If a certain report needs to be deleted from the database mark the DELETE box, complete sections A, B, C, and L, and submit form.

NOTE: *IF ALL SECTIONS CONTAINING SHADED BOXES ▩ ARE NOT COMPLETED, THE FORM WILL BE RETURNED FOR COMPLETION*

SECTION

A OES Control No. is assigned when making phone notification to OES Warning Center. [Phone 1-800-852-7550 or (916) 427-4341].

B Enter the date (month, day and year), notification and completion time of the incident (use 2400 hr clock). Enter completion date, if different from incident date.

D Check the appropriate weather descriptor(s) at the time of the incident and indicate the approximate temperature in ° F.
Enter property use and surrounding area codes. Indicate the entity responsible for property management.

E Check the item(s) that describe(s) the cause of the incident, the type of equipment involved in the incident, and the mobile property type, if any.

F Check the item(s) that indicate(s) which action(s) you took as a responder to the incident.

G List the chemical or the trade name(s) of the hazardous material(s) involved in the incident. Include information required in the boxes.
Check the information in the box(es) that describe(s) the hazardous material. Use the appropriate codes for Extent of Release, Container Type, Level of Container, and Container Material.

H If more than two (2) hazardous materials were involved check YES and enter the information in the comments section.

I This section is used for special studies. The first three numbers are for your agency's use; the last three are for state use. Leave blank unless otherwise directed.

J Check item(s) describing who identified the material and how it was identified. Enter number of hazardous material casualties suffered by responding agency personnel and others (including the public) in spaces provided.

K If vehicle/mobile property was involved in the incident, enter information about that vehicle.

L Print your full name or your ID number and enter the date of report. Mark Yes or No to indicate whether there are additional comments.

AB-2185/89 SARA TITLE III BUSINESS PLAN INSPECTION AND VALIDATION REPORT

FACILITY NAME : Schuller International, Inc. SITE ID#: 21540

FACILITY ADDRESS : E. 3rd & Harbor Sts Pittsburg

PHONE # 427-2401 CONTACT PERSON Ken Koop, Env. Coord.

The requirements in this check sheet are contained in the following laws and regulations:

1) Superfund Amendments and Reauthorization Act of 1986, (SARA Title III)
2) Title 42 of the U.S. Government Code, Section 11001 et. seq.
3) 40 CFR parts 300, 350, 355, 370, and 372
4) California Health and Safety Code ,Chptr. 6.95, Section 25500 et. seq.
5) California Code of Regulations, Title 19, Section 2620 et. seq.

I BUSINESS INFORMATION

H&S 25518,25504,25503; CCR 2729, 2730; SARA 312

		Not O.K.	Comment
1	Business Name	☐	OK
2	Site Street	☐	
3	City, State, Zip	☐	
4	Business Type	☐	
5	Telephone	☐	
6	Date of Ownership	☐	
7	Owner/Operator	☐	
8	SIC code	☐	
9	Dun & Bradstreet #	☐	
10	Number of Employess	☐	
11	Invoice Street	☐	OK
12	Telephone	☐	
13	City State Zip	☐	
14	Invoice Contact	☐	
15	Parent Company	☐	
16	Parent Street	☐	
17	Telephone	☐	
18	City State Zip	☐	
19	Reporting Period	☐	

II INVENTORY INFORMATION

H&S 25504, 25509; SARA 312 ; CCR 2729

		Not O.K.	Comment
1	Maximum Amount	☐	OK
2	Average Daily Amount	☐	
3	# Days on Site	☐	
4	Law	☐	
5	Chemical Name/Mixture	☐	
6	Common Name	☐	
7	Mixture Waste Composition	☐	
8	California Waste Category	☐	
9	CAS Numbers	☐	
10	DOT I.D. Numbers	☐	
11	Pure/Mix	☐	dc
12	Physical State	☐	
13	Physical/Health Characteristics	☐	
14	Storage Type Code	☐	
15	Pressure Code	☐	
16	Temperature Code	☐	
17	Location Code	☐	
18	Location Description	☐	
19	Estimated annual Amt. Waste	☐	

III SITE LAYOUT & FACILITY DIAGRAM

H&S 25517.5, 25518; CCR 2730

		Not O.K.	Comment
1	Scale of Map or Drawing	☐	dc
2	Orientation (NSEW)	☐	
3	Loading Areas	☐	
4	Parking Lots	☐	
5	Internal Roads	☐	
6	Storm and Sewer Systems	☐	
7	Adjacent Property Uses	☐	
8	Adjacent Street ID	☐	dc
9	Exit and Entry Points	☐	
10	Spill Containment Systems	☐	
11	Hazardous Material Handling/Storage	☐	
12	Material Storage Type and ID	☐	
13	Diagram/layout Clear & Readable	☐	
14	Diagram/layout storeable to 9x12	☐	

IV EMERGENCY RESPONSE and EVACUATION PLAN

H&S 25504; CCR 2732 ☐ OK (see separate check sheet)

V EMPLOYEE TRAINING PROGRAM

H&S 25504; CCR 2732 ☐ dc (see separate check sheet)

VI SUBMITTAL and CERTIFICATION INFORMATION

H&S 25518 ☐ dc

SUBMIT WRITTEN CORRECTIONS WITHIN 30 DAYS

Facility Rep. / Title K Koop / Envro Coordinate Inspector / Title R Walsh / Haz Mat Spec.

Signature / Date K Koop 10CT97 Signature / Date Rosemary Walsh 10/10/97

☐ RECORD ☐ INITIAL ☐ FOLLOW-UP Page 1 of _____

CONTRA COSTA COUNTY HEALTH SERVICES DEPARTMENT - HAZARDOUS MATERIALS SECTION
4333 PACHECO BOULEVARD, MARTINEZ CA. 94553 (415) 646-2286

Contra Costa County
Health Services Department
Environmental Health Division
Hazardous Materials Programs

Hazardous Waste Management Program Inspection Compliance Report

Facility Name: Schuller International, Inc.	Facility #: 21540 Date: 10/16/97
Address: East 3rd + Harbor St. Pittsburg	Program Status Code: (A1) A2 I1 I2
Contact Person: Ken Koop	Generator ID#: CA: D 009 114 577
Title: ENV. Coord.	Inspection Type: (Normal) Follow-Up SIC: 2952
Phone Number: 427 2460	RCRA Wastes: (Yes) No TSD Facility: Yes (No)

Hazardous Waste Violations - California Code of Regulation Title 22

	General Requirements			**Facility Operation**	
01	Treatment, Storage, Disposal	66262.10, 66270.1	22	Maintenance and Operation of Facility	66265.31
02	Hazardous Waste Determination	66262.11	23	Required Equipment	66265.32
03	EPA Identification Number	66262.12	24	Equipment Maintenance And Testing	66265.33
04	Accumulation Time	66262.34	25	Communication or Alarm Systems	66265.34
05	Extremely Hazardous Waste	67430.1, 67430.4	26	Required Aisle Space	66265.35
			27	Local Emergency Response Agencies	66265.37
	Hazardous Waste Manifest				
06	Applicable Sections Completed	66262.20		**Use & Management of Containers**	
07	Manifest Copies Sent	66262.23	28	Hazardous Waste Labels	66262.34
			29	Container Condition	66265.171
	Recordkeeping & Reporting		30	Container Compatibility	66265.172
08	Manifests on File	66262.40	31	Container Management	66265.173
09	TSDF Signed Manifests on File	66262.40	32	Area Weekly Inspections	66265.174
10	Biennial Report on File	66262.40	33	Buffer Zone for Ignitable or Reactive Wastes	66265.176
11	Waste Analysis on File	66262.40	34	Proper Separation of Incompatibles	66265.177
12	Biennial Report Submitted	66262.41			
13	Exception Report	66262.42		**Hazardous Waste Storage Tanks**	
			35	Secondary Containment	66265.193
	Personnel Training		36	Spill Prevention	66265.194
14	Content	66265.16	37	Daily Inspections Documented	66265.195
15	Initial/Annual Training	66265.16	38	Procedures for Leaking or Unfit Tanks Systems	66265.196
16	Proper Documentation	66265.16	39	Ignitable or Reactive Wastes	66265.198
	Contingency Plan		40	Waste Minimization Required	66520-26
17	Content	66265.52	41	Business Plan Required	Co. Ord. No. 87-5
18	Contingency Plan Copies	66265.53	42	UGT Permit Required	Co. Ord. No. 90-122
19	Plan Amendment	66265.54	43	Outstanding HWG Invoice	Co. Ord. No. 89-56
20	Emergency Coordinator	66265.55			
21	County Notification	66265.56	50	Other:	

☒ No Violation Observed

Comments/Referrals: Facility has a SPCC/BMP Plan in place.

Hazardous Waste Stream	Manifest Waste Code	Monthly Qty (units/mo)	Manifest Handling Code	Transporter
Waste Oil	223	~1500g.	01	Americlean, Inc.
Safety Kleen	213	~30g.	01	Safety Kleen
Asbestos (Plant repair)	151	10 lbs.	03	Cal. Asbestos
PCB light ballasts	731	21 ballast	07	Ensco Inc.

Hazardous Waste Minimization Survey

01	Written Plan	(X)	N		03	Additional Information Requested	Y	(N)		
02	Quality of Plan	(1)	2	3	0					
	Techniques Employed					09 Recycling	(1)	2	3	0
04	Material Substitution	(0)	2	3	0	10 Administrative	(1)	2	3	0
05	Process Modification	(1)	2	3	0	11 Water/Chemical Conservation	(1)	2	3	0
06	Waste Segregation	(1)	2	3	0	12 Employee Training	(1)	(2)	3	0
07	Inventory Control	(1)	2	3	0	13 Management Committment	(1)	2	3	0
08	Leak/Spill Control	(1)	2	3	0	14 Other	1	2	3	0

Key: 1 = Maximum; 2 = Some; 3 = None; 0 = Not Applic.

Facility Rep.: KENNETH M. KOOP — Inspector: R Walsh

Title: ENVIRONMENTAL COORDINATOR — Title: Haz Mat Spec.

Signature: [signature] Date: 16 OCT 97 — Signature: Rosemary Walsh Date: 10/16/97

Page __ of __

CASE NUMBER: 98040903

Contra Costa County Health Services Department
Hazardous Materials Programs

Incident, Notification, and Complaint Report Form

Date: 4/9/98 **Type:** (C) N I **Received By:** Jerri **IR Staff:** Jim G

Time of Call: 1515 **Case Index:** 03 **Reported by:** Comm1 / Direct Page / Clean Water / Referral From ____ / Other: ____ **or Complaint Referred to:** ____

Initial Notification Source
Name: ANON
Phone Number: NONE

Incident Location
Facility/Other: John Manville
Address: 3rd + Harbour St
Pittsburg, CA

District: West / Central / (East) / South / Concord

City/Community: ☐ Incorporated ☐ Unincorporated

721540

Date of Incident: ____ **Time of Incident:** ____ **Ongoing** ☐

Category

- ☐ Facility
  - ☐ Toxic Gas Release
  - ☐ Flammable Non-toxic Hazardous Release
  - ☐ Spill or Various Plant Upset (Other)
  - ☐ Fire or Explosion
- ☐ Transportation Incident
  - ☐ Tank Truck
  - ☐ Railroad
  - ☐ On Water
  - ☐ Pipeline
- ☐ Storm Drain/Creek
- ☐ Drug Lab
- ☐ Disposal or Abandonment
- ☐ Other ____

Initial Description: removing abestos Panels
Tues night between 4-1200

Incident Details

CWS Level: C 0 1 2 3

☒ No Action Taken

Time Departed for Scene: ____ Time Arrived on Scene: ____ Time Departed Scene: ____

Wind Speed Direction: ____ Latitude: ____ Longitude: ____ Thomas Bros. Coordinates ____

Hazardous Materials

	Material	Quantity	Physical State
☐ Notify ☐ Fire ☐ Reactive ☐ Press ☐ Acute ☐ Chronic			S L G
☐ Notify ☐ Fire ☐ Reactive ☐ Press ☐ Acute ☐ Chronic			S L G
☐ Notify ☐ Fire ☐ Reactive ☐ Press ☐ Acute ☐ Chronic			S L G

Other Details: Referred to OSHA Jim G.

ENTERED APR 16 1998

Reponsible Party: ____
Address: ____ Phone Number: ____

Property Owner (LAN Parcel #): ____
Address: ____ Phone Number: ____

Referral To Agency ____

CASE NUMBER: I98110601

Contra Costa County Health Services Department
Hazardous Materials Programs

Incident, Notification, and Complaint Report Form

Date: 11-6-98 **Type:** C N (I) **Received By:** EJ **IR Staff:** EJ, SM, DH

Time of Call: 0530 **Case Index:** 1 **Reported by:** (Comm1) or Complaint Referred to:

Direct Page
Clean Water
Referral From
Other:

Initial Notification Source

Name: Comm 1

Phone Number: 646-2441

Incident Location

Facility/Other: Johns Manville

Address: 420 3rd Street
Pittsburg

District: West / Central / East / South / Concord

City/Community: Pittsburg
☒ Incorporated ☐ Unincorporated

121 540

Date of Incident: 11-6-98 **Time of Incident:** 0500 **Ongoing** ☐

Category

- ☒ Facility
  - ☐ Toxic Gas Release
  - ☐ Flammable Non-toxic Hazardous Release
  - ☒ Spill or Various Plant Upset (Other)
  - ☐ Fire or Explosion
- ☐ Transportation Incident
  - ☐ Tank Truck
  - ☐ Railroad
  - ☐ On Water
  - ☐ Pipeline
- ☐ Storm Drain/Creek
- ☐ Drug Lab
- ☐ Disposal or Abandonment
- ☐ Other

Initial Description: 3,000 Gallons of 450°F asphalt flux spilled — 4,000 gallons in storm drain

---

Incident Details

CWS Level: C 0 1 2 3 ☐ No Action Taken

Time Departed for Scene: 0550 Time Arrived on Scene: 0610 Time Departed Scene: 0710

Wind Speed Direction: Latitude: Longitude: Thomas Bros. Coordinates

Hazardous Materials

		Material	Quantity	Physical State
☐ Notify ☐ Fire ☐ Reactive ☐ Press ☐ Acute	☒ Chronic	Asphalt flux	3,000	S L (G)
☐ Notify ☐ Fire ☐ Reactive ☐ Press ☐ Acute	☐ Chronic			S L G
☐ Notify ☐ Fire ☐ Reactive ☐ Press ☐ Acute	☐ Chronic			S L G

Other Details: Asphalt flux

ENTERED per NOV 19 1998

Reponsible Party: Johns Manville

Address: PO Box 595, Pittsburg 94565 Phone Number: 427-2437

Property Owner (LAN Parcel #):

Address: Phone Number:

Referral To Agency

Reports Requested:

Report	Requested From:	When:
☐ 72-Hour Report		
☐ 30-day Report		
☐ Root Cause Analysis		

Attachments: ☒ MSDS

☒ CHMRS Form	☐ State Incident Report
☐ Inventory	☐ Contaminated Property Letter
☐ Bill of Lading	☐ Hazardous Waste Manifest
☐ Timeline	☐ State Clean Up Work Log
	☒ Request for Billing Form

Other Agencies On Scene Or Notified

Agency	O/N	Contact Person	Phone Number	Case Number
Fire Department	O			
Sheriff				
BAAMQD				
CHP				
Police	O			
Other Fish & Game	N			

Comments:

Date		Initials
11/6	1,000 gallons of the 3,000 gallons spilled (approx) are in the storm drain. Material quickly cools thickens and moves slowly, sheet-like. Facility to have contractor remove the material when sufficiently cooled. Only slight sheen expected to reach to the Bay.	
11/6	Spilled occurred during off-loading. Rail car off-loading at Johns Manville located in low point of facility, right next to a storm drain. Facility to consider installing shut-off valve to prevent any future spill reaching 48" main storm drain line.	

CALIFORNIA HAZARDOUS MATERIAL INCIDENT REPORT

OES 1/91 — CHANGE 1 ☐ DELETE 2 ☐

A

AGENCY NAME	AGENCY ID NO.	AGENCY INCIDENT NO.	AGENCY PHONE NO.	OES CONTROL NO.
CONTRA COSTA CO HSD	0 7 7 4 1	I9	(510) 646 – 2286	

B

INCIDENT DATE (MO DAY YEAR)	TIME NOTIFIED	TIME COMPLETED	DATE COMPLETED (IF DIFFERENT) (MO DAY YEAR)
12 11 96 91	1015	1017	91

C

INCIDENT ADDRESS/LOCATION	CITY/COMMUNITY	COUNTY	ZIP
420-3rd St,	Pittsburg	CONTRA COSTA	94565

D

WEATHER (CHECK BEST DESCRIPTOR/S)

1 X CLEAR — 5 HAIL, SLEET — 8 HIGH WIND
3 RAIN — 6 ELECTRICAL STORM — 9 OTHER
4 SNOW — 7 FOG — 0 UNKNOWN

ESTIMATED TEMPERATURE 52 (Deg. F)

PROPERTY USE (USE CODES ON REVERSE)

PROPERTY USE 600 — SURROUNDING AREA 600

PROPERTY MANAGEMENT FEDERAL STATE COUNTY CITY X PRIVATE UNKNOWN

E

RELEASE FACTORS (CHECK BEST DESCRIPTOR/S)

11 INTENTIONAL ACT
12 SUSPICIOUS ACT
30 X FAILURE TO CONTROL HAZMAT
31 ABANDONED
40 MISUSE OF HAZMAT
50 X MECHANICAL FAILURE
60 X DESIGN, CONSTRUCTION, INSTALLATION DEFICIENCY
70 OPERATIONAL DEFICIENCY
71 COLLISION/OVERTURN
80 NATURAL CONDITION
94 FIRE/EXPLOSION
98 NO RELEASE
99 OTHER
00 UNDETERMINED

TYPE OF EQUIPMENT INVOLVED

10 HEATING SYSTEMS
30 AIR CONDITION/REFRIG
77 CHEM PROCESSING EQUIP
78 WASTE RECOVERY EQUIP
96 X HAZMAT TRANSFER EQUIP
97 VEHICULAR FUEL SYSTEM
98 NO EQUIP INVOLVED
99 OTHER
00 UNDETERMINED

MOBILE PROPERTY TYPE

10 PASSENGER VEH/ROAD
20 FREIGHT VEH/ROAD
30 RAIL TRANSPORT VEH
40 WATER TRANS VESSEL
50 AIR TRANSPORT VEH
60 HEAVY EQUIP-INDUST/AGRI
98 X NO MOBILE PROPERTY INVOLVED
99 OTHER
00 UNDETERMINED

F

ACTIONS TAKEN (CHECK BEST DESCRIPTOR/S)

31 RESCUE, REMOVE FROM HARM
32 EXTRICATION, DISENTANGLEMENT
33 EMERGENCY MEDICAL SERVICES
35 SEARCH
36 TRANSPORT
41 REMOVE HAZARD (NEUTRALIZE)
42 X ID/ANALYSIS OF HAZMAT
43 EVACUATION
44 ESTABLISH SAFE AREA
45 MONITOR
46 DECON-PERSON/EQUIP
47 DECON-AREA (CLEANUP)
48 CONTAIN/CONTROL HAZMAT
61 CROWD CONTROL
62 TRAFFIC CONTROL
63 NOTIFY OTHER AGENCY
64 PROVIDE PUBLIC INFO
71 X INVESTIGATE
73 SHUT DOWN SYSTEM
82 SECURE PROPERTY
92 REFER TO PROPER AUTHORITY
98 NO ACTION TAKEN
97 HAZMAT RESPONSE, MATERIAL DETERMINED TO BE NONHAZARDOUS
99 OTHER

G

CHEMICAL OR TRADE NAME (PRINT OR TYPE)	DOT ID NO.	DOT HAZARD CLASS	CAS NO.
Residual Fuel Oil			68512-62-9

PHYSICAL STATE STORED (1 SOLID 2 X LIQUID 3 GAS)	PHYSICAL STATE RELEASED (1 X SOLID 2 LIQUID 3 GAS)	QUANTITY RELEASED (1 lbs. 2 X gal. 3 cu.ft.)	ENVIRONMENTAL CONTAMINATION (1 AIR 2 X WATER 3 GROUND 9 OTHER)	(USE CODES ON REVERSE) EXTENT OF RELEASE
		3000		7

CONTAINER DESCRIPTION: 1 FIXED, 2 PORTABLE, 3 X MOBILE; 1 INSULATED, 2 PRESSURIZED, 3 ARMORED

(USE CODES ON REVERSE)

CONTAINER TYPE	LEVEL OF CONTAINER	CONTAINER MATERIAL	CONTAINER CAPACITY (1 lbs. 2 X gal. 3 cu. ft.)
99	11	01	30000

CHEMICAL OR TRADE NAME (PRINT OR TYPE)	DOT ID NO.	DOT HAZARD CLASS	CAS NO.

PHYSICAL STATE STORED (1 SOLID 2 LIQUID 3 GAS)	PHYSICAL STATE RELEASED (1 SOLID 2 LIQUID 3 GAS)	QUANTITY RELEASED (1 lbs. 2 gal. 3 cu.ft.)	ENVIRONMENTAL CONTAMINATION (1 AIR 2 WATER 3 GROUND 9 OTHER)	(USE CODES ON REVERSE) EXTENT OF RELEASE

CONTAINER DESCRIPTION: 1 FIXED, 2 PORTABLE, 3 MOBILE; 1 INSULATED, 2 PRESSURIZED, 3 ARMORED

(USE CODES ON REVERSE)

CONTAINER TYPE	LEVEL OF CONTAINER	CONTAINER MATERIAL	CONTAINER CAPACITY (1 lbs. 2 gal. 3 cu. ft.)

H

MORE THAN 2 SUBSTANCES INVOLVED? ___ YES X NO (LIST ADDITIONAL INFORMATION ON REVERSE SIDE)

I

SPECIAL STUDIES LOCAL USE: 1. A B C D — 2. A B C D — 3. A B C D

STATE USE: 4. A B C D — 5. A B C D — 6. A B C D

J

HAZMAT IDENTIFICATION SOURCES (CHECK BEST DESCRIPTOR/S)

PERSONNEL
19 ON-SITE FIRE SERVICES
29 OFF-SITE FIRE SERVICES
40 ON-SITE NON-FIRE SERVICES
60 OFF-SITE NON-FIRE SERVICES
54 CHEMIST
58 TOX CENTER
59 CHEMTREC
99 OTHER

REFERENCE MATERIAL
21 DOT MANUAL
23 MSDS
24 PLACARDS/SIGNS
25 PRIVATE INFO SOURCE
26 COMPUTER SOFTWARE
27 SHIPPING PAPERS
98 NO REFERENCE MATERIAL USED
99 OTHER

HAZMAT CASUALTIES

	NUMBER OF DECONTAMINATED	NUMBER OF INJURIES	NUMBER OF FATALITIES
RESPONDING AGENCY PERSONNEL			
OTHERS			

K

VEHICLE MAKE/YEAR	VEHICLE LICENSE NO.	STATE	VEHICLE ID NO. (VIN)	CA/DOT/PUC/ICC NO.	COMPANY NAME

L

REPORTING OFFICER NAME/ID NO. (PRINT OR TYPE)	DATE	COMMENTS ON BACK?
LEWIS G. PASCALLI		___ YES ___ NO

CODES

PROPERTY USE and SURROUNDING AREA TYPE

100	Public Assembly	762	Hazmat Chem Mfg	950	Railroad
200	Educational	767	Petroleum Refinery	961	Freeway
300	Health Care	800	Storage	962	County/City Road
400	Residential	931	Open Land	963	Private Road
500	Mercantile, Business	936	Vacant Lot	965	Rest Stop/Vista Point
600	Industrial, Utility	941	Open Sea	966	Scale/Inspection Facility
650	Agricultural	942	Harbor/Port	099	Other - Explain in comments section
700	Manufacturing	946	Lake/Pond/River		

EXTENT OF RELEASE

1	Confined to Vehicle/Equipment
2	Confined to Room of Origin
3	Confined to Floor of Origin
4	Confined to Structure of Origin
6	Confined to Property Use of Origin
7	Release Beyond Property Use of Origin
8	NO RELEASE
9	Other - Explain in comments section
0	Undetermined

CONTAINER TYPE

11	Drum	31	Sump/Pit
12	Cylinder	32	Pond or Surface Impoundment
13	Can or Bottle	33	Well
14	Carboy	41	Vehicular Fuel Tank
15	Box or Carton	98	NO CONTAINER
16	Bag	99	Other - Explain in comments section
21	Tank or Silo (incl vehicle cargo tanks)	00	Undetermined
22	Pipe		
24	Machinery or Process Equipment		

LEVEL OF CONTAINER

11	Ground Level
30	Above Ground
40	Below Ground

CONTAINER MATERIAL

1	Iron, Steel & Other Iron Alloys
2	Aluminum & Aluminum Alloys
3	Copper, Brass, Bronze, & Other Copper Alloys
4	Plastic/Fiberglass, Rigid
5	Plastic, Flexible
6	Wood, Paper, Textile, & Cellulose Products
7	Glass, Pottery & Clay
8	NO CONTAINER
9	Other - Explain in comments section
0	Undetermined

COMMENTS: Container type 99 - Rail Car on industrial Property

IMPORTANT INSTRUCTIONS

Incidents that involve the following shall not be reported:
1. Petroleum spills of less than 42 gallons from vehicular fuel tanks.
2. Sewage overflows.
3. Leaks in low-pressure fuel lines to residential properties.

CHANGE: If the information on a previously submitted form needs to be changed mark the CHANGE box and submit form with the correct information.

DELETE: If a certain report needs to be deleted from the database mark the DELETE box, complete sections A, B, C, and L, and submit form.

NOTE: *IF ALL SECTIONS CONTAINING SHADED BOXES* ▒ *ARE NOT COMPLETED, THE FORM WILL BE RETURNED FOR COMPLETION*

SECTION

- **A** OES Control No. is assigned when making phone notification to OES Warning Center. [Phone 1-800-852-7550 or (916) 427-4341].
- **B** Enter the date (month, day and year), notification and completion time of the incident (use 2400 hr clock). Enter completion date, if different from incident date.
- **D** Check the appropriate weather descriptor(s) at the time of the incident and indicate the approximate temperature in ° F. Enter property use and surrounding area codes. Indicate the entity responsible for property management.
- **E** Check the item(s) that describe(s) the cause of the incident, the type of equipment involved in the incident, and the mobile property type, if any.
- **F** Check the item(s) that indicate(s) which action(s) you took as a responder to the incident.
- **G** List the chemical or the trade name(s) of the hazardous material(s) involved in the incident. Include information required in the boxes. Check the information in the box(es) that describe(s) the hazardous material. Use the appropriate codes for Extent of Release, Container Type, Level of Container, and Container Material.
- **H** If more than two (2) hazardous materials were involved check YES and enter the information in the comments section.
- **I** This section is used for special studies. The first three numbers are for your agency's use; the last three are for state use. Leave blank unless otherwise directed.
- **J** Check item(s) describing who identified the material and how it was identified. Enter number of hazardous material casualties suffered by responding agency personnel and others (including the public) in spaces provided.
- **K** If vehicle/mobile property was involved in the incident, enter information about that vehicle.
- **L** Print your full name or your ID number and enter the date of report. Mark Yes or No to indicate whether there are additional comments.

MATERIAL SAFETY DATA SHEET

MSDS NUMBER: M5227
MSDS DATE: 08-10-90
PRODUCT NAME: VACUUM BOTTOMS

Diamond Shamrock

24 HOUR EMERGENCY PHONE : (512) 641-8800

I. PRODUCT IDENTIFICATION

3 HEALTH, 2 FLAMMABILITY, 0 REACTIVITY & (Blank) INSTABILITY based on "Standard System for the Identification of the Fire Hazards of Materials, NFPA No. 704, 1985 Edition"

MANUFACTURER'S NAME AND ADDRESS : Diamond Shamrock Refining and Marketing Company, P.O. Box 696000, San Antonio, Texas 78269-6000

CHEMICAL NAME : Residual Fuel Oil CAS NUMBER: 68512-62-9

SYNONYMS/COMMON NAMES : Hydrocarbon Refined Oil Mixture

CHEMICAL FORMULA : C30 and Greater

DOT PROPER SHIPPING NAME : NA
DOT HAZARD CLASS : NA
DOT I.D. NUMBER : NA HAZARDOUS SUBSTANCE: NA

II. HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	HAZARD DATA	CAS NUMBER	Wt %
Residual Fuel Oil	PEL = None Established TLV = None Established	68512-62-9	100
Sulfur	PEL = None Established TLV = None Established	7704-34-9	(<1)

(SEE SECTION V.)

The materials in this product are listed in the TSCA Inventory.
Not listed as carcinogenic by OSHA, ACGIH.
Listed as carcinogenic by IARC, NTP.
SEE SECTION V.

III. PHYSICAL DATA

BOILING POINT @ 760 mm Hg: > 900° F VAPOR DENSITY (Air=1): N/A
EVAPORATION RATE (BuAc=1): N/A
POUR POINT: >40° F (Max) VAPOR PRESSURE: N/A
SPECIFIC GRAVITY (H_2O=1): .967 @ 16° C
SOLUBILITY IN H_2O % BY WT.: Trace pH: NA

APPEARANCE AND ODOR: Black liquid with pungent odor.

PAGE.003 AUG 3 '93 8:51

IV. FIRE AND EXPLOSION DATA

FLASH POINT: > 475° F COC AUTOIGNITION TEMPERATURE: N/A

FLAMMABLE LIMITS IN AIR, % BY VOLUME-UPPER: 5
LOWER: 1

EXTINGUISHING MEDIA: Use dry chemical, foam, carbon dioxide or water spray.

SPECIAL FIRE FIGHTING PROCEDURES: Protective clothing and pressure-demand, self contained, breathing apparatus should be provided for firefighters in buildings or confined areas where product is stored. Storage containers exposed to fire should be kept cool with water spray.

UNUSUAL FIRE AND EXPLOSION HAZARD: Clothing, rags or similar organic material contaminated with this product and stored in a closed space may undergo spontaneous combustion, transfer to and from commonly grounded containers. Vapor may explode if ignited in confined area.

V. HEALTH HAZARD INFORMATION

HEALTH HAZARD DATA: Prolonged or repeated contact with oils can produce skin lesions. IARC has determined the carcinogenic activity to be inversely proportional to the severity of processing base oils. Contaminants in this product are not known and may be active skin carcinogens.

MEDICAL CONDITION GENERALLY AGGRAVATED BY EXPOSURE: Conditions which have the same symptoms or effects as state below.

MEDICAL LIMITATION: Restrict contact by persons with acne, skin sensitivity or skin disease.

ROUTES OF EXPOSURE

INHALATION: Not sufficiently volatile to present a hazard from vapor inhalation under normal use. Oil mist generated by fast moving machinery and high temperatures may cause symptoms of respiratory tract irritation.

SKIN CONTACT: Prolonged or repeated exposure to liquid or mist may cause dry skin, irritation, and oil acne.

SKIN ABSORPTION: No data found.

EYE CONTACT: Causes eye irritation, severe burning if not removed.

INGESTION: Vomiting due to irritation of the digestive tract is common. Keep airway clear. Oils have low to moderate oral toxicity, residual oils are ill defined and may cause severe gastric upset and diarrhea.

EFFECTS OF OVEREXPOSURE

ACUTE: May cause irritation to skin and eyes. If ingested, can cause gastrointestinal irritation. Mist inhalation may cause irritation and lipid pneumonia.

CHRONIC: Prolonged or repeated inhalation of high concentration of mist may cause pulmonary fibrosis. Skin exposure may cause drying irritation of skin, oil acne, skin lesions and repeated contact may lead to skin cancer.

EMERGENCY AND FIRST AID PROCEDURES

EYES: Immediately flush eyes with large amount of water for at least 15 minutes holding lids apart to ensure flushing of the entire eye surface. Seek medical attention.

SKIN: Wash contaminated areas with plenty of soap and water. A soothing ointment may be applied to irritated skin after thoroughly cleansing. Remove contaminated clothing and footwear. Seek medical attention.

INHALATION: Get person out of contaminated area to fresh air. If breathing has stopped resuscitate and administer oxygen if readily available. SEEK MEDICAL ATTENTION IMMEDIATELY.

AUG-03-1993 10:43 FROM ROCKY MOUNTAIN TRANS. SVC TO 15104272409395 P.03

V. HEALTH HAZARD INFORMATION
continued...

INGESTION: Never give anything by mouth to an unconscious person. If swallowed, do not induce vomiting. If vomiting occurs spontaneously, keep airway clear. SEEK MEDICAL ATTENTION IMMEDIATELY.

NOTES TO PHYSICIAN: Aspiration of Vacuum Bottoms associated with vomiting may cause pulmonary irritation and pneumonitis. Evacuation of stomach contents should be done by careful gastric lavage only. If aspiration is suspected, respiratory effects should be evaluated. Suspicious skin lesions should be excised and examined histologically.

VI. REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY: Under normal conditions, the material is stable.
INCOMPATIBILITY: Avoid contact with strong oxidizers and sources of ignition.
HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition products include carbon monoxide, carbon dioxide, oxides of sulfur and hydrogen sulfide.
CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION: Material is not known to polymerize.

VII. ENVIRONMENTAL PROCEDURES

SPILLS OR RELEASES: If material is spilled or released to the atmosphere, steps should be taken to contain liquids and prevent discharges to streams or sewer systems, and control or stop the loss of volatile materials to the atmosphere. Spills or releases should be reported, if required to the appropriate local, state and federal regulatory agencies.

DISPOSAL: Clean-up action should be carefully planned and executed. Shipment, storage, and/or disposal of waste materials are regulated and action to handle or dispose of spilled or released materials must meet all applicable local, state and federal rules and regulations. If any question exists, the appropriate agencies should be contacted to assure proper action being taken. Waste product and contaminated material will be considered a hazardous waste if the flash point is less than 140° F requiring disposal at an approved hazardous waste facility.

STORAGE: Protect against physical damage. Outside or detached storage is preferred. Separate form oxidizing materials. Store in cool, well ventilated area of non-combustible construction away from possible sources of ignition.

VIII. INDUSTRIAL HYGIENE CONTROL MEASURES

VENTILATION REQUIREMENTS: Work in well ventilated areas; use good engineering to process, transfer and store; special ventilation is not required under normal use; good engineering controls are required in high volume uses.

VIII. INDUSTRIAL HYGIENE CONTROL MEASURES
continued...

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY: Respiratory protection is not required under normal use; use NIOSH/MSHA approved respiratory protection where spray, mist, or vapor may be generated; following manufacturer's recommendations. Supplied air respiratory protection is required for IDLH areas.

EYE: Face shield and goggles or chemical goggles should be worn where mist or spray may be generated.

GLOVES: Impermeable protective gloves should be worn during routine handling of this product.

OTHER CLOTHING AND EQUIPMENT: Standard work clothing. Shoes contaminated with this product that can not be decontaminated should be discarded. Clothing contaminated with this product should be removed, washed in soap and water and dried before reuse. Contaminated clothing should be stored in well ventilated areas. Shower and eyewash facilities should be accessible.

MONITORING EXPOSURE

BIOLOGICAL: No applicable procedure.

PERSONAL/AREA: The only applicable method is to determine oil mist; NIOSH Analytical Method No. 283 or S272. Use chemical specific Analytical method for PNA's.

IX. REGULATORY INFORMATION

SARA TITLE III (Superfund Amendments and Reauthorization Act of 1986)
Sect. 311 & 312: This product is subject to the reporting requirements of 40 CFR Part 370.
Sect. 313: This product does not contain a chemical identified as toxic by EPA under 40 CFR Part 372 and is not subject to the reporting requirements of this section.

This product is considered hazardous by EPA and is identified by the following EPA Hazardous Categories (40 CFR Part 370.2)

Acute Hazard	Chronic Hazard	Fire Hazard	Pressure Hazard	Reactive Hazard	Not Applicable
yes	no	no	no	no	

THE INFORMATION REQUIRED BY 40 CFR PART 372 IS INCLUDED
THIS MSDS IS EQUIVALENT TO US DOL OSHA'S NON-MANDATORY FORM

This Material Safety Data Sheet was prepared by Diamond Shamrock Refining and Marketing Company on behalf of the above manufacturer in accordance with 29 CFR 1910.1200. All information, recommendations and suggestions appearing herein concerning this product are based upon tests and data believed to be reliable, however, it is the user's responsibility to determine the safety, toxicity and suitability for his own use of the product described herein. Since the actual use by others is beyond our control, no guarantee expressed or implied is made by Diamond Shamrock as to the effects of such use, the results to be obtained or the safety and toxicity of the product nor does Diamond Shamrock assume any liability arising out of use by others of the product referred to herein. Nor is the information herein to be construed as absolutely complete since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or government regulations.

GOVERNOR'S OFFICE OF EMERGENCY SERVICES
Hazardous Materials Spill Report

944

DATE: 11/06/98 TIME: 0944	RECEIVED BY: OES - Ron Rosenow OSPR -	CONTROL#: 98-4998

1. PERSON NOTIFYING GOVERNOR'S OES:

a. NAME:	b. AGENCY:	c. PHONE#:	d. Ext:	e. PAG/CELL:
Jo Duszka	Johns Manville	925-427-2437		

2. SUBSTANCE TYPE:

2. a. SUBSTANCE:	b.QTY:>=<	*Amount*	*Measure*	c. TYPE:	d. OTHER:
1. Asphalt Flux	=	1000	Gal(s)	PETROLEUM	
2.	=				
3.	=				
4.	=				

c. DESCRIPTION: Hose ruptured during transfer from rail car to tank. Substance flowed into a storm drain and was contained there with sand bags.

f. CONTAINED:	g. WATER INVOLVED:	h. WATERWAY:
Yes	Yes	Storm Drian

3. a. INCIDENT LOCATION: 420 E. 3rd street

b. CITY:	c. COUNTY:	d. ZIP:
Pittsburg	Contra Costa County	94565

4. INCIDENT DESCRIPTION:

a. DATE:11/06/98 b. TIME *(Military)*: 0315 c. SITE: Industrial Plant

d. INJURIES#	e. FATALS #:	f. EVACS #:	g. CLEANUP BY:
0	0	0	Reporting Party

5. RESPONSIBLE PARTY:

a. NAME:	b. AGENCY:	c. PHONE#:	d. EXT.:
Jo Duszka	Johns Manville	925-427-2437	

e. MAIL ADDRESS:	f. CITY:	g. STATE:	h. ZIP:
PO Box 591	Pittsburg	CA	

6. NOTIFICATION INFORMATION:

a. NRC#: b. ON SCENE:

c. OTHER ON SCENE: d. OTHER NOTIFIED:

Co. Health, PD, FD, Public Works, USCG

e. ADMIN. AGENCY: f. SEC. AGENCY:

g. NOTIFICATION LIST: DOG Unit: RWQCB Unit: 2

☒ AA/CUPA	☒ DFG-OSPR	☐ EMSA	☐ OES PLANS UNIT	☒ RWQCB	☒ USFWS
☐ AIR RESOURCES BD	☐ DHS-D.O.	☐ FEMA	☐ OES REG	☐ SFM	☐ OTHER
☐ CALTRANS	☐ DOG	☐ FOOD & AG	☐ OSHA	☐ US EPA	
☐ CDF	☒ DTSC	☒ LANDS	☐ PARKS & REC	☐ USMMS	
☒ COASTAL COM	☒ EB PARKS	☐ OES HAZMAT UNIT	☐ PUC	☒ USCG	

CASE NUMBER: 99012202

Contra Costa County Health Services Department
Hazardous Materials Programs

Incident, Notification, and Complaint Report Form

Date: 1-22-99 Type: (N) I Received By: Jerri IR Staff: Greg

Time of Call: 1615 Case Index: 02 Reported by: (Comm1) Direct Page Clean Water Referral From Other: or Complaint Referred to:

Initial Notification Source

Name: Nancy Hugman

Phone Number: 432-6992

Incident Location

Facility/Other:

Address: 111 Edgewater Place Pittsburg, CA

District: West, Central, (East), South, Concord

City/Community: Pittsburg ☐ Incorporated ☐ Unincorporated

1/22/99

Date of Incident: 1-22 Time of Incident: 1550 Ongoing ☐

Category

- ☑ Facility
  - ☐ Toxic Gas Release
  - ☐ Flammable Non-toxic Hazardous Release
  - ☑ Spill or Various Plant Upset (Other)
  - ☐ Fire or Explosion
- ☐ Transportation Incident
  - ☐ Tank Truck
  - ☐ Railroad
  - ☐ On Water
  - ☐ Pipeline
- ☐ Storm Drain/Creek
- ☐ Drug Lab
- ☐ Disposal or Abandonment
- ☐ Other

Initial Description: Tar Smell, Lives near John Mansfield corp think it maybe coming from there 427 Johns Manville Inc ~~247-4210~~ 2410

Incident Details

CWS Level: (C) 0 1 2 3 ☑ No Action Taken

Time Departed for Scene: Time Arrived on Scene: Time Departed Scene:

Wind Speed Direction: Latitude: Longitude: Thomas Bros. Coordinates

Hazardous Materials

		Material	Quantity	Physical State
☐ Notify ☐ Fire ☐ Reactive ☐ Press ☐ Acute ☐ Chronic				S L G
☐ Notify ☐ Fire ☐ Reactive ☐ Press ☐ Acute ☐ Chronic				S L G
☐ Notify ☐ Fire ☐ Reactive ☐ Press ☐ Acute ☐ Chronic				S L G

Other Details: Called Johns Manville Inc @ 427-2410. Spoke w/ security guard.

Reponsible Party:

Address: Phone Number:

Property Owner (LAN Parcel #):

Address: Phone Number:

Referral To Agency

Reports Requested:

Report	Requested From:	When:
☐ 72-Hour Report		
☐ 30-day Report		
☐ Root Cause Analysis		

Attachments:

- ☐ CHMRS Form
- ☐ Inventory
- ☐ Bill of Lading
- ☐ Timeline
- ☐ State Incident Report
- ☐ Contaminated Property Letter
- ☐ Hazardous Waste Manifest
- ☐ State Clean Up Work Log
- ☐ Request for Billing Form

Other Agencies On Scene Or Notified

Agency	O/N	Contact Person	Phone Number	Case Number
Fire Department	☐			
Sheriff	☐			
BAAMQD	☐			
CHP	☐			
Police	☐			
Other	☐			
	☐			

Comments:

Date		Initials
1/22/99	According to Bill Webster, operator in control room, no unusual activity or emissions control problems @ Yoko Manilla Inc.	
	1643 Spoke w/ Nancy Hugmen @ 492-6992. The Jays smell has dissipated @ this time. Encouraged her to call our office for future complaints.	
	1653 Spoke w/ Joe Dutzka. Only 1 production line running & all abatement equipment OK. Said odor may have come from their asphalt tanks due to wind conditions (common @ this time of year, according to Mr. Dutzka)	

Contra Costa County Health Services Department
Contra Costa County Certified Unified Program Agency
Hazardous Materials Programs
California Accidental Release Prevention Program

REGULATED SUBSTANCES REGISTRATION
STATIONARY SOURCE INFORMATION

Stationary Source Name:	Facility ID #	U.S. EPA ID#	Phone:
JOHNS MANVILLE INTERNATIONAL, INC.	21540	CAR000010074	925-427-2400

Stationary Source Address:	City:		Zip Code:
420 E. 3RD ST.	PITTSBURG	CA	94565

Latitude:	Longitude:	Dun & Bradstreet:	SIC:	No. of Emp:
		00914577	2952	28

Owner/Operator:	Phone:
JOHNS MANVILLE INTERNATIONAL, INC.	925-427-2400

Mailing Address:	City:	State:	Zip Code:
P.O. BOX 591	PITTSBURG	CA	94565

Name of Parent Company:	Dun & Bradstreet:	Phone:
JOHNS MANVILLE INTERNATIONAL, INC.	00914577	925-427-2400

Person Responsible for RMP:	Title:	Phone:
TIGE JOHNSTON	PRODUCTION SUPERINTENDENT	925-427-2437

Emergency Contact:	Title:	Phone:	24 Hour Phone:
TIGE JOHNSTON	PRODUCTION SUPERINTENDENT	925-427-2437	925-427-2444

Is the Stationary Source Subject to Title 8 CCR §5189 (Process Safety Management)? ☐ Yes ☑ No

Is the Stationary Source Subject to Pjart 355 of Title 40 of CFR? ☑ Yes ☐ No

Is the Stationary Source Required to Have a CAA Title V Permit? ☑ Yes ☐ No

Last Safety Inspection:
Agency CCC HSD
Date _____

Regulated Substances/Flammable Mixture at Stationary Source:	Quantity of Regulated Substance in Largest Single Container (lbs.):	Distance From Largest Single Container to Public Receptor:
1. PROPANE	1. 37400	1. 600 M.
2.	2.	2.
3.	3.	3.
4.	4.	4.
5.	5.	5.
6.	6.	6.
7.	7.	7.
8.	8.	8.

Signature of Owner/Operator:	Printed Name:	Date:
Barry R. Bagley	BARRY R. BAGLEY	2/28/01

Contra Costa County Health Services Department
Contra Costa County Certified Unified Program Agency
Hazardous Materials Programs
California Accidental Release Prevention Program

REGULATED SUBSTANCES REGISTRATION
PROCESS/CHEMICAL INFORMATION

Name of Process:	Process SIC:	Program Level: ☐ 1 ☐ 2 ☐ 3	
PROPANE REFUELING			
Regulated Substance:		**CAS #**	**Maximum Quantity in Pounds:**
1. PROPANE		1. 74986	1. 37400
2.		2.	2.
3.		3.	3.
4.		4.	4.
Flammable Mixture (Common Name):		**NFPA:**	**Maximum Quantity in Pounds:**
PROPANE			
Maximum Storage Temperature:	**Maximum Storage Pressure:**	**Maximum Process Temperature:**	**Maximum Process Pressure:**
100°F	120 PSIG	80°F	120 PSIG

Name Of Process:	Process SIC:	Program Level: ☐ 1 ☐ 2 ☐ 3	
Regulated Substance:		**CAS #**	**Maximum Quantity in Pounds:**
1.		1.	1.
2.		2.	2.
3.		3.	3.
4.		4.	4.
Flammable Mixture (Common Name):		**NFPA:**	**Maximum Quantity in Pounds:**
Maximum Storage Temperature:	**Maximum Storage Pressure:**	**Maximum Process Temperature:**	**Maximum Process Pressure:**

Name of Process:	Process SIC:	Program Level: ☐ 1 ☐ 2 ☐ 3	
Regulated Substance:		**CAS #**	**Maximum Quantity in Pounds:**
1.		1.	1.
2.		2.	2.
3.		3.	3.
4.		4.	4.
Flammable Mixture (Common Name):		**NFPA:**	**Maximum Quantity in Pounds:**
Maximum Storage Temperature:	**Maximum Storage Pressure:**	**Maximum Process Temperature:**	**Maximum Process Pressure:**

William B. Walker, M. D.
Health Services Director
Lewis G. Pascale, Jr., Esq.
Director

CONTRA COSTA
HEALTH SERVICES

Hazardous Materials Programs
4333 Pacheco Boulevard
Martinez, California
94553-2229
Ph (925) 646-2286
Fax (925) 646-2073

HAZARDOUS WASTE GENERATOR INSPECTION

Generator Name: Johns Manville Site I.D. Number

Program Status: ☒Active ☐Inactive ☐RCRA-SQG ☐RCRA-LQG ☐Non-RCRA ☐None

Inspection Type: ☒Routine ☐Follow-up ☐Complaint ☐Joint ☐Multi-media ☐Referred to:

VIOLATIONS* (Title 22 California Code of Regulations/Chapter 6.5 California Health and Safety Code)

General Requirements

__	Treatment, Storage, Disposal	66262.10
__	Hazardous Waste Determination	66262.11
__	EPA Identification Number	66262.12
__	Accumulation Time	66262.34
__	Use of Hazardous Waste Manifests	66262.23

Record-Keeping & Reporting

__	Disposal Documentation on File	66262.40
__	Biennial Report on File/Submittal	66262.40-41
__	Waste Analysis on File	66262.40
__	Exception Reporting	66262.42

Hazardous Waste Handler Training

__	Employee Training Program	66265.16
__	Training Documentation	66265.16

__ **Contingency Plan** 66265.52-56

Facility Operation

__	Maintenance & Operation	66265.31
__	Required Equipment	66265.32
__	Equipment Maintenance & Testing	66265.33
__	Communications or Alarm System	66265.34
__	Required Aisle Space	66265.35
__	Emergency Response Agencies	66265.37

Use & Management of Containers

__	Hazardous Waste Labels	66262.34
__	Container Condition	66265.171
__	Container Compatibility	66265.172
__	Container Management	66265.173
__	Weekly Area Inspections	66265.174
__	Buffer zone for Special Wastes	66265.176
__	Separation of Incompatibles	66265.177

Enter 3/15/02 JR

Hazardous Waste Storage Tanks

X	Secondary Containment	66265.193
__	Spill Prevention	66265.194
__	Documented Daily Inspections	66265.195
__	Leaking or Unfit Tanks Systems	66265.196
__	Ignitable or Reactive Waste	66265.198

Miscellaneous

__ Source Reductions (SB 14)
__ On-site Recycling Notifications
__ On-site Recycling Activities

Other:

*See back of page for regulatory citations

☐Green Business Program candidate

Waste Code	Hazardous Waste Stream	Annual Quantity (Tons)
221	oil & water	~~~60,000 G (225 T)~~
		52,000 G (195 T)
~~213~~ 741/D001	Safety Klean	480 G (1.5 T)

Total Annual Tonnage of Hazardous Waste Generated ☐**No Violations Observed**

Violations/Corrections

Waste tank next to/ecclosure tank holding oil/water needs 2° containment. Johns Manville may begin reusing some water from this process making the material a non-waste. Product observed in 2° containment is waste (522) oil tank at north end of building #4. Please remove waste from this area, send proof of this cleanup.

Violations must be corrected by: **Violation Summary:** ☐Class I ☐Class II ☐Minor

Site Representative's Signature Date 3/12 Specialist's Signature Date 3/12/02

Total Time for Review and Inspection (in 15 minute increments): 5

CONTRA COSTA
HEALTH SERVICES

CERTIFIED UNIFIED PROGRAM AGENCY

Contra Costa Health Services - Hazardous Materials Programs

4333 Pacheco Blvd, Martinez, CA 94553

UNIFIED HAZARDOUS WASTE AND HAZARDOUS MATERIALS MANAGEMENT REGULATORY PROGRAM

Annual Business Authorization/Permit

Facility ID Number: 72-1540

JOHNS MANVILLE INC
JOE DUSEKA
420 E 3RD ST
PITTSBURG CA 94565

Facility Operator, Name, and Address

JOHNS MANVILLE INC
420 3RD ST E
PITTSBURG, CA 94565

This business is operating in the following CUPA Programs:

- ☑ Hazardous Material Business Plan/Hazardous Materials Management Plan (includes the Uniform Fire Code, Article 80)
- ☐ California Accidental Release Plan (CalARP)/Accidental Release Plan (ARP)
- ☑ Hazardous Waste Generator
- ☐ Hazardous Waste Treatment On-Site
- ☐ Storage of Hazardous Materials in Underground Tanks **(see attached permit)**
- ☐ Aboveground Petroleum Storage Tanks (SPCC Only)

☐ New ☑ Annual ☐ Other ☐ Renewal

AUTHORIZATION

This document is issued based on the condition that the applicant and the facility is in compliance with all applicable rules, regulations and laws pertaining to these CUPA programs. Failure to comply with all applicable codes and regulations will null and void this authorization/permit. See attached conditions of approval for each CUPA Program.

Signature: Lewis G. Pascalli, Jr.

Printed Name: Lewis G. Pascalli, Jr.

Title Director of Hazardous Materials Programs

Date Issued: 07/01/2001

Expiration Date: 06/30/2002

CONTRA COSTA
HEALTH SERVICES

CUPA AUTHORIZATION/PERMIT CONDITIONS

Permit No: 72-1540 Facility: JOHNS MANVILLE INC

In order to maintain the authorization/permit, the business must comply with the following, as applicable :

* Hazardous Materials Business Plan Program, Cal H&S Code Division 20, Chapter 6.95, Article 1 and Title19 CCR and Uniform Fire Code, Article 80.103 (b) and (c).

* Hazardous Waste Generator Program: Cal H&S Code Division 20, Chapter 6.5 Articles 1-13, Section 25100 et seq., and Title 22 CCR Div. 4.5 .

WILLIAM B. WALKER, M. D.
HEALTH SERVICES DIRECTOR
LEWIS G. PASCALLI, JR., ESQ.
DIRECTOR

CONTRA COSTA
HEALTH SERVICES

HAZARDOUS MATERIALS PROGRAMS

4333 Pacheco Boulevard
Martinez, California
94553-2229
Ph (925) 646-2286
Fax (925) 646-2073

INSPECTION COVER SHEET

Facility Name Johns Manville

Address 424 E. 3rd St.

City Pittsburg State CA Zip Code 94565

EPA I.D. Number CAR 000010074 Site I.D. No. —

Contact Brian Olson / Tige Johnston Title plant man / plant super.

Phone Number 925/427-2400 Inspection Date(s) 3/12/02

Program(s): (check all that apply)

- ✓ Hazardous Materials Release Response Plan
- ✓ Hazardous Waste Generator
- __ Underground Storage Tank (UST)
- __ Aboveground Petroleum Storage Tank (AST)
- __ Tiered Permitting
- __ Green Business
- __ Clean Water
- __ Cal/ARP

REPRESENTATIVES PRESENT:

Name	Title	Organization
Brian Olson	plant. man	Johns Man
Tige Johnston	plant super.	Johns Man
Sonny Khoo	HMS	cccHSD

Additional Comments: Raju Mundi - env. coord.
NOI filed for stormwater pollution prevention

This report may identify conditions observed this day that are alleged to be violations of one or more sections of the California Health and Safety Code (HSC) or the California Code of Regulations (CCR). The Violations may be described in more detail on an attached inspection sheet.

Failure to correct observed violations within the scheduled period provided may result in Contra Costa Health Services Hazardous Materials Programs (CCHSHMP) citing you for continuing and/or additional violations. Issuance of this Inspection Report does not preclude CCHSHMP from taking any administrative, civil, or criminal action as a result of the violations noted.

3/12/02 — Authorized Facility Representative — Date

3/12/02 — Hazardous Materials Specialist — Date

WILLIAM B. WALKER, M. D.
HEALTH SERVICES DIRECTOR
LEWIS G. PASCALLI, JR., ESQ.
DIRECTOR

CONTRA COSTA
HEALTH SERVICES

HAZARDOUS MATERIALS PROGRAMS
4333 Pacheco Boulevard
Martinez, California
94553-2229
Ph (925) 646-2286
Fax (925) 646-2073

HAZARDOUS MATERIALS RELEASE RESPONSE & INVENTORY PROGRAM
BUSINESS PLAN VALIDATION & SITE INSPECTION REPORT

Facility Name: Johns Manville Inc. Site I.D. Number _____

Program Status: ☑Active ☐Inactive ☐Referred to _____

Inspection Type: ☑Routine ☐Follow-up ☐Complaint ☐Joint ☐Multi-media

General Business Plan Requirements
(CCR Sect. 2729.1 & HSC Sect. 25503.5)
__Business Plan Submitted
__Business Plan by Due Date

Owner/Operator Identification Page
(CCR Sect. 2729.2(a)(1) & HSC Sect. 25503.3(a))
__Reporting Period
__Business Information
__Owner Information
__Emergency Contact Information
__Extremely Hazardous Materials
__Number of Employees
__Total Pounds of Hazardous Materials

Chemical Description Page
(CCR Sect. 2729.2(a)(2) & HSC Sect. 25503.3(a) & 25509)
__Chemical Location
__Fire Code Classes
__Type
__Physical State
__Federal Hazard Categories
__State Waste Code
__Days on Site
__Largest Container
__Units
__Maximum Daily Amount
__Annual Waste Amount
__Storage Container
__Storage Pressure
__Storage Temperature
__Hazardous Components
__Conversion to Pounds
__All Hazardous Materials, greater than threshold quantities, reported

Site Layout & Facility Diagrams
(CCR Sect. 2729.2(a)(3) & HSC Sect. 25517.5(a); Sect. 25518)
__Site Layout & Facility Diagram Submitted
__Details Complete and Accurate

entered 3/15/02 JR

Emergency Response & Evacuation Plan
(CCR Sect. 2731 & HSC Sect. 2550.4(b))
__Emergency Response/Evacuation Plan
__Notification & Alarm Procedures Submitted
__Evacuation Procedures
__Emergency Procedures
__Emergency Equipment
__Emergency Response Procedures
__Other

Employee Training Requirements
(CCR Sect. 2732 & HSC Sect. 25504(c))
__Training Plan Submitted
__Training Conducted & Documented
__Other

Enforcement Action (HSC Sect. 25514-25516.2)
☐Informal ☐Administrative ☐Civil ☐Criminal

Violations/Corrections

added to inventory: Slate granules, fiberglass mat product / sand, petroleum asphalt (stored below flash point), these are non-hazardous materials
minor corrections made to inventory

Violations Must Be Corrected By: _____ **No Violations Observed** ☒

Site Representative's Signature BFO Date 3/12 Specialist's Signature _____ Date 3/12/02

Total Time for Review and Inspection (in 15 minute increments): 3 Page 3 of 3

CONTRA COSTA HEALTH SERVICES

CERTIFIED UNIFIED PROGRAM AGENCY

Contra Costa Health Services - Hazardous Materials Programs

4333 Pacheco Blvd, Martinez, CA 94553

UNIFIED HAZARDOUS WASTE AND HAZARDOUS MATERIALS MANAGEMENT REGULATORY PROGRAM

Annual Business Authorization/Permit

Permit Number: 72-1540

Mailing Address	Facility Operator, Name, and Address
JOHNS MANVILLE INC BRIAN OLSON PO BOX 591 PITTSBURG CA 94565	JOHNS MANVILLE INC JOHNS MANVILLE INC 420 3RD ST E PITTSBURG, CA 94565

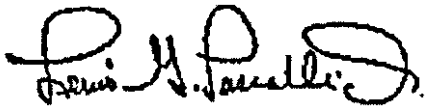
This business is permitted in the following CUPA Programs:

- ☑ Hazardous Material Business Plan/Hazardous Materials Management Plan (includes Uniform Fire Code, Article 80)
- ☐ California Accidental Release Plan (CalARP)/Accidental Release Plan (ARP)
- ☑ Hazardous Waste Generator.
- ☐ Hazardous Waste Treatment on site
- ☐ Storage of Hazardous Materials in Underground Tanks. (see attached permit)
- ☐ Aboveground Petroleum Storage Tanks(SPCC only).

☐ New ☑ Annual ☐ Other ☐ Renewal

AUTHORIZATION

This document is issued based on the condition that the applicant and the facility is in compliance with all applicable rules, regulations and laws pertaining to these CUPA programs. Failure to comply with all applicable codes and regulations will null and void this authorization/permit. See attached conditions of approval for each CUPA Program.

Signature  Title Director of Hazardous Materials Programs

Printed name Lewis G. Pascalli, Jr. Date Issued 07/01/2002

Expiration Date 06/30/2004

Retain a copy of the operating permit and all conditions and attachments, including monitoring plans, at the facility.

PERMIT CONDITIONS

Permit No: 72-1540 Facility: JOHNS MANVILLE INC

In order to maintain the operating permit, the permit holder must comply with all regulatory requirements, to include, but not all inclusive of the number items below:

* The unified program agency or CUPA fee shall be paid for per county or city ordinance and/or state law, whichever is the more strict.
* Hazardous Materials Business Plan Program, CHSC Division 20, Chapter 6.95, Article 1 and Title 19 CCR.
  1. Changes in the hazardous materials inventory which include the handling of a previously undisclosed or handling double the amount of a previously disclosed hazardous material must be reported to the CUPA or Participating Agency (PA) within thirty (30) days.
  2. Major changes in the business plan, including the change of name or phone number of 24 hour emergency contacts, must be reported to the CUPA or PA within thirty (30) days.

* Hazardous Waste Generator Program: CHSC Division 20, Chapter 6.5 Articles 1-13, Section 25100 et seq., and Title 22 CCR Chapter 20.

RECEIVED
JAN 12 2004
Contra Costa Health
Hazardous Materials

Johns Manville
Johns Manville Corporation
Roofing Systems Group
717 17th Street (80202)
P.O. Box 5108
Denver, CO 80217-5108
303 978 2000
303 978 3904 Fax

January 6, 2004

Lewis G. Pascalli, Jr.
Director of Hazardous Materials Programs
Contra Costa Health Services
Hazardous Materials Programs Division (CCHS-HMP)
4333 Pacheco Boulevard
Martinez, CA 94553-2229

RE: **Business Plan – Report of Changes**
Johns Manville Pittsburg Facility
Annual Business Authorization / Permit # 72-1540

Dear Mr. Pascalli;

The Johns Manville (JM) Pittsburg Facility located at 420 3rd Street East has discontinued manufacturing operations and is in the process of removing operating equipment and materials. Presently, there are **no JM employees** located at the facility. A 24-hour guard service will be used at the facility for the foreseeable future.

Herein is notice that **the amount of hazardous materials used and hazardous waste generated will greatly decrease** until such time as the facility has been fully decommissioned and no hazardous chemicals remain on site.

Also, herein is notice that the **Environmental Contact** has changed. The new contact is:

Diane Dudley, Environmental Manager
Johns Manville
P.O. Box 5108
Denver, Colorado 80217-5108
303-978-2722

Also, herein is notice that the **Emergency Contact** names and phone numbers have changed.

Primary Emergency Contact	**Secondary Emergency Contact**
Brian Olson	BJ Lemonier
Plant Manager	Group Plant Manager
Business Phone : 303-978-2218	Business Phone : 303-978-3153
24-Hour Phone: 720-289-7069	24-Hour Phone: 303-324-7052

The **Invoice Contact Name** remains Brian Olson, however, the new **Invoice Contact Address** is:

Johns Manville
P.O. Box 5108
Denver, CO 80217-5108
303-978-2218

Should you require any further information or have any questions, please contact me at the above address and phone number, or by e-mail at dudleyd@jm.com.

Best wishes,

Diane Dudley
Environmental Manager
Johns Manville

1/13/04 System updated

CC: Brian Olson JM 10-07
BJ Lemonier JM 10-07

CONTRA COSTA HEALTH SERVICES

CERTIFIED UNIFIED PROGRAM AGENCY

Contra Costa Health Services - Hazardous Materials Programs

4333 Pacheco Blvd, Martinez, CA 94553

UNIFIED HAZARDOUS WASTE AND HAZARDOUS MATERIALS MANAGEMENT REGULATORY PROGRAM

Annual Business Authorization/Permit

Permit Number: 72-1540

Mailing Address	Facility Operator, Name, and Address
JOHNS MANVILLE INC BRIAN OLSON PO BOX 5108 DENVER CO 80217-5108	JOHNS MANVILLE INC JOHNS MANVILLE INC 420 3RD ST E PITTSBURG, CA 94565

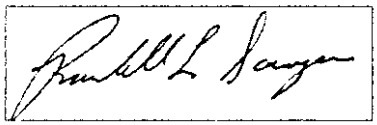
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- ☐ California Accidental Release Plan (CalARP)/Accidental Release Plan (ARP)
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- ☐ Hazardous Waste Treatment on site
- ☐ Storage of Hazardous Materials in Underground Tanks. (see attached permit)
- ☐ Aboveground Petroleum Storage Tanks(SPCC only).

☐ New ☑ Annual ☐ Other ☐ Renewal

AUTHORIZATION

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Signature 

Printed name Randall L. Sawyer

Title Dir of Hazardous Materials Programs

Date Issued 07/01/2004

Expiration Date 06/30/2005

Retain a copy of the operating permit and all conditions and attachments, including monitoring plans, at the facility.

PERMIT CONDITIONS

Permit No: 72-1540 Facility: JOHNS MANVILLE INC

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* Hazardous Waste Generator Program: CHSC Division 20, Chapter 6.5 Articles 1-13, Section 25100 et seq., and Title 22 CCR Chapter 20.

Johns Manville

A Berkshire Hathaway Company

717 17th Street (80202)
P.O. Box 5108
Denver, CO 80217-5108
303 978 2000

RECEIVED

FEB - 7 2005

Contra Costa Health
Hazardous Materials

CERTIFIED MAIL

February 3, 2005

Randall L. Sawyer
Director, Hazardous Materials Programs
Contra Costa Health Services
Hazardous Materials Programs Division
4333 Pacheco Boulevard
Martinez, CA 94553-2229

420 3rd St
Pitts

RE: 2004 CUPA Hazardous Materials Business Plan
Johns Manville Pittsburg, CA Location Permit # 72-1540

Dear Mr. Sawyer;

We are in receipt of the January 2005 CUPA Packet.

Please note that the manufacturing operations at this facility were discontinued in 2003 and the warehousing operations were discontinued in December 2003. No Business was performed at this facility in 2004, other than waste removal. Johns Manville is no longer the owner or operator of the facility as of October of 2004. Therefore; no 2005 Hazardous Materials Business Plan information is being submitted to you.

Enclosed please find 2 copies of the Hazardous Waste Generator Reporting Form for wastes generated in 2004.

Should you have any questions, please contact Diane Dudley @ 303-978-2722 or dudleyd@jm.com.

Best wishes,

Brian Olson
Previous Facility Manager
Johns Manville

Enclosures: Completed 2005 CUPA Packet Hazardous Waste Generator Reporting Form

CC: Diane Dudley

Johns Manville

A Berkshire Hathaway Company

717 17th Street (80202)
P.O. Box 5108
Denver, CO 80217-5108
303 978 2000

RECEIVED
FEB - 7 2005
Contra Costa Health
Hazardous Materials

CERTIFIED MAIL

February 3, 2005

Randall L. Sawyer
Director, Hazardous Materials Programs
Contra Costa Health Services
Hazardous Materials Programs Division
4333 Pacheco Boulevard
Martinez, CA 94553-2229

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Johns Manville Pittsburg, CA Location Permit # 72-1540

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Best wishes,

Brian Olson
Previous Facility Manager
Johns Manville

Enclosures: Completed 2005 CUPA Packet Hazardous Waste Generator Reporting Form

CC: Diane Dudley

CONTRA COSTA HEALTH SERVICES

CERTIFIED UNIFIED PROGRAM AGENCY

Contra Costa Health Services - Hazardous Materials Programs

4333 Pacheco Blvd, Martinez, CA 94553

UNIFIED HAZARDOUS WASTE AND HAZARDOUS MATERIALS MANAGEMENT REGULATORY PROGRAM

Annual Business Authorization/Permit

Permit Number: 72-1540

Mailing Address	Facility Operator, Name, and Address
JOHNS MANVILLE INC BRIAN OLSON PO BOX 5108 DENVER CO 80217-5108	JOHNS MANVILLE INC JOHNS MANVILLE INC 420 3RD ST E PITTSBURG, CA 94565

This business is permitted in the following CUPA Programs:

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Signature Randall L Sawyer Title Dir of Hazardous Materials Programs

Printed name Randall L. Sawyer Date Issued 07/01/2005

Expiration Date 06/30/2006

Retain a copy of the operating permit and all conditions and attachments, including monitoring plans, at the facility.

PERMIT CONDITIONS

Permit No: 72-1540 Facility: JOHNS MANVILLE INC

In order to maintain the operating permit, the permit holder must comply with all regulatory requirements, to include, but not all inclusive of the number items below:

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* Hazardous Waste Generator Program: CHSC Division 20, Chapter 6.5 Articles 1-13, Section 25100 et seq., and Title 22 CCR Chapter 20.

SR 110555

City of Pittsburg

Community Development Department – Planning Division
65 Civic Avenue, Pittsburg, CA 94565 | Tel: (925) 252-4920 | Fax: (925) 252-4814

RECEIVED
MAY 17 2018
Contra Costa Health
Hazardous Materials

1ST PROJECT REFERRAL & REQUEST FOR COMMENTS/CONDITIONS

Project Name:	**Making Waves Academy**
Project No: AP-18-1339	**Application Type:** DR
Project Description: The Making Waves Foundation is proposing to construct a new charter school campus on a 20-acre site located at 420 E. 3rd Street (former Johns Manville Plant). The campus would consist of seven, two-story buildings totaling just under 400,000 square feet and serve up to 2,000 students in grades K through 12. School buses would be used to transport at least 24% of the student population. As part of the project, the applicant would voluntarily remove a contaminated berm located along the eastern edge of the site. An initial study is currently being prepared to determine the level of environmental review required under the California Environmental Quality Act (CEQA). Refer to Attachment 2 for a more detail project description.	
Applicant:	Making Waves Foundation
Mailing Address:	3220 Blume Drive Richmond, CA 94806
Phone: (510) 243-5203	**E-mail:** sroth@making-waves.org

Instructions for the Referral Agency:

Enclosed are plans for the project identified above which is proposed in the City of Pittsburg. Please review these plans and provide this office with your feedback on availability of services/potential design or code conflicts/requirements for additional permits and recommended conditions of project approval.

Deadline for Comments:

Please submit your comments no later than Friday, June 1, 2018.

Comments should be sent to **Hector Rojas** at the mailing address noted above, through e-mail at: hrojas@ci.pittsburg.ca.us, or by fax at: (925) 252-4814. If you have any questions regarding this project, please call Hector Rojas at (925) 252-4043. A list of referral agencies for this project is provided on the back of this sheet.

List of Referral Agencies:

Federal/State/Regional	☐ Ambrose Recreation & Park District
☒ US Army Corps of Engineers	☐ Ambrose Recreation & Park District
☒ US Fish and Wildlife Service	☐ Bay Point Municipal Advisory Comm.
☒ Dept. of Fish and Game – Region 3	☒ City of Antioch Community Development Department
☒ State RWQCB	☐ City of Concord Planning Division
☒ US Postal Service – Pittsburg	☐ City of Concord Transportation Department
☒ Caltrans - District 4	☒ Antioch Unified School District
☒ Sonoma State - Historical/Archaeological	☒ Mt. Diablo Unified School District
☐ Association of Bay Area Governments	☒ Pittsburg Unified School District
☒ Bay Area Air Quality Management District	**City of Pittsburg**
☒ East Bay Regional Park District	☒ Planning Division
☐ Native American Heritage Commission	☒ Building Division
Contra Costa County	☒ Engineering Division
☒ Assessor's Office	☒ Transportation Division
☐ Community Development Department	☒ Public Works Division
☒ Environmental Health	☒ Waste Reduction Coordinator
☒ Fire Protection District	☒ Successor Agency
☒ Flood Control District	☒ Economic Development
☒ Health Services Department	☒ City Attorney
☒ Hazardous Materials Programs	☒ City Manager
☐ LAFCO	☒ Police Dept.
☐ Library (Pittsburg Branch)	☒ HCP Coordinator
☐ Public Works Dept. (Transportation Eng.)	☒ NPDES Coordinator
Transportation	**Utilities**
☐ BART Planning/Environmental Compliance Division	☒ Contra Costa Water District
☐ Central Contra Costa Transit Authority	☒ Delta Diablo Sanitation District
☐ Metropolitan Transportation Commission	☒ AT&T
☒ Tri-Delta Transit	☒ Pacific Gas and Electric
☒ TRANSPLAN	☒ Pittsburg Disposal Service
☒ Contra Costa Transportation Authority	☒ Comcast Cable Communications, Inc.
☐ TRANSPAC	☐ Other:
Local	☐ Other:
☒ Supervisor Federal Glover	☐ Other:

Project Referral - Making Waves Academy
Hector Rojas
to:
'marie.a.arzate@usps.gov', 'patricia.maurice@dot.ca.gov', 'jerry.cheung@dot.ca.gov', 'nwic@sonoma.edu', 'dvintze@baaqmd.gov', 'bholt@ebparks.org', 'louis.rivara@assr.cccounty.us', 'joe.doser@hsd.cccounty.us', 'eric.fung@hsd.cccounty.us', 'fire@cccfpd.org', 'teri.rie@pw.cccounty.us', 'ccchazmat@hsd.cccounty.us', 'tharais@eccta.org', smiller@ccta.net, 'district5@bos.cccounty.us', 'febbs@ci.antioch.ca.us', 'epalacios@pittsburg.k12.ca.us', Jordan Davis, Celina Palmer, Kent Kampton, Dick Abono, Devina Uribe, Fritz McKinley, Paul Reinders, Jason Moser, Hilario Mata, Laura Wright, Maria Aliotti, Kolette Simonton, Sara Aliotti, Joe Sbranti, Garrett Evans, Lester Galer, Jolan Longway, 'Allison Cloney', 'mseedall@ccwater.com', patriciac@deltadiablo.org, 'gg7254@att.com', 'MPL6@pge.com', Gary Lazdowski, Jim Nejedly, 'ddrum@sefnco.com', 'gwilliams@sefnco.com', 'jharvey@sefnco.com'
05/17/2018 01:43 PM
Cc:
Joan Lamphier, 'Doug Giffin'
Hide Details
From: Hector Rojas <HRojas@ci.pittsburg.ca.us> Sort List...
To: "'marie.a.arzate@usps.gov'" <marie.a.arzate@usps.gov>, "'patricia.maurice@dot.ca.gov'" <patricia.maurice@dot.ca.gov>, "'jerry.cheung@dot.ca.gov'" <jerry.cheung@dot.ca.gov>, "'nwic@sonoma.edu'" <nwic@sonoma.edu>, "'dvintze@baaqmd.gov'" <dvintze@baaqmd.gov>, "'bholt@ebparks.org'" <bholt@ebparks.org>, "'louis.rivara@assr.cccounty.us'" <louis.rivara@assr.cccounty.us>, "'joe.doser@hsd.cccounty.us'" <joe.doser@hsd.cccounty.us>, "'eric.fung@hsd.cccounty.us'" <eric.fung@hsd.cccounty.us>, "'fire@cccfpd.org'" <fire@cccfpd.org>, "'teri.rie@pw.cccounty.us'" <teri.rie@pw.cccounty.us>, "'ccchazmat@hsd.cccounty.us'" <ccchazmat@hsd.cccounty.us>, "'tharais@eccta.org'" <tharais@eccta.org>, "smiller@ccta.net" <smiller@ccta.net>, "'district5@bos.cccounty.us'" <district5@bos.cccounty.us>, "'febbs@ci.antioch.ca.us'" <febbs@ci.antioch.ca.us>, "'epalacios@pittsburg.k12.ca.us'" <epalacios@pittsburg.k12.ca.us>, Jordan Davis <jdavis@ci.pittsburg.ca.us>, Celina Palmer <CPalmer@ci.pittsburg.ca.us>, Kent Kampton <KKampton@ci.pittsburg.ca.us>, Dick Abono <rabono@ci.pittsburg.ca.us>, "Devina Uribe" <DUribe@ci.pittsburg.ca.us>, Fritz McKinley <FMckinley@ci.pittsburg.ca.us>, Paul Reinders <PReinders@ci.pittsburg.ca.us>, Jason Moser <jmoser@ci.pittsburg.ca.us>, Hilario Mata <HMata@ci.pittsburg.ca.us>, Laura Wright <LWright@ci.pittsburg.ca.us>, "Maria Aliotti" <maliotti@ci.pittsburg.ca.us>, Kolette Simonton <KSimonton@ci.pittsburg.ca.us>, "Sara Aliotti" <SAliotti@ci.pittsburg.ca.us>, Joe Sbranti <JSbranti@ci.pittsburg.ca.us>, Garrett Evans <GEvans@ci.pittsburg.ca.us>, Lester Galer <LGaler@ci.pittsburg.ca.us>, Jolan Longway <JLongway@ci.pittsburg.ca.us>, 'Allison Cloney' <Allison.Cloney@dcd.cccounty.us>, "'mseedall@ccwater.com'" <mseedall@ccwater.com>, "patriciac@deltadiablo.org" <patriciac@deltadiablo.org>, "'gg7254@att.com'" <gg7254@att.com>, "'MPL6@pge.com'" <MPL6@pge.com>, Gary Lazdowski <Gary.Lazdowski@garaventaent.com>, Jim Nejedly <Jim.Nejedly@garaventaent.com>, "'ddrum@sefnco.com'" <ddrum@sefnco.com>, "'gwilliams@sefnco.com'" <gwilliams@sefnco.com>, "'jharvey@sefnco.com'" <jharvey@sefnco.com>,
Cc: Joan Lamphier <egret4@gmail.com>, 'Doug Giffin' <doug@campusllc.com>

1ST PROJECT REFERRAL & REQUEST FOR COMMENTS/CONDITIONS

Project Name: Making Waves Academy

Project No: AP-18-1339
Application Types: Design Review

Project Description:
The Making Waves Foundation is proposing to construct a new charter school campus on a 20-acre site located at 420 E. 3rd Street in Pittsburg (former Johns Manville Plant). The campus would consist of seven, two-story buildings totaling just under 400,000 square feet and serve up to 2,000 students in grades K through 12. School buses would be used to transport at least 24% of the student population. As part of the project, the applicant would voluntarily remove a contaminated berm located along the eastern edge of the site. An initial study is currently being prepared to determine the level of environmental review required under the California Environmental Quality Act (CEQA).

Instructions for the Referral Agency:
The full project referral including plans and a more detailed project description can be viewed or downloaded at: http://bit.ly/WavesPitt

Please review these plans and provide us with your feedback on availability of services/potential design or code conflicts/requirements for additional permits and recommended conditions of project approval.

Deadline for Comments:
Please submit your comments no later than Friday, June 1, 2018. Comments should be sent to me at the mailing address noted below, through e-mail at hrojas@ci.pittsburg.ca.us, or by fax at: (925) 252-4814. If you have any questions regarding this project, please call me at (925) 252-4043.

Hector J. Rojas, AICP
Senior Planner
City of Pittsburg, Planning Division
65 Civic Avenue, Pittsburg, CA 94565
Tel: 925.252.4043 | Fax: 925.252.4814
Follow us: www.ci.pittsburg.ca.us/planning | eNews Sign Up | Facebook

Make us the home of your next business opportunity: www.thinkpittsburg.com

Appendix C

Request for Records Search to the
Department of Toxic Substances Control – Region 2 and
Response Obtained from that Agency

Est. 1988

Environmental Support Services

Environmental Research & Due Diligence Compliance
30251 Golden Lantern, #E-305, Laguna Niguel, CA 92677
P) 949.429.3564 | F) 949.429.3563 | E) Shannon@EnvironmentalSupportServices.com
www.EnvironmentalSupportServices.com | EIN# 83-0533710

February 22, 2021

Dept of Toxic Substances Control - Region 2
700 Heinz Ave., Ste 200
Berkeley, CA 94710

Attention: File Room

Dear File Room,

Please check for any files/information on the following site:

Site: 420 East 3rd Street
Pittsburgh, CA 94565

Sincerely,
Environmental Support Services

Shannon Castagno
Project Manager
Shannon@EnvironmentalSupportServices.com

Shannon Castagno

From: BerkeleyFileRoom@DTSC <BerkeleyFileRoom@dtsc.ca.gov>
Sent: Wednesday, March 3, 2021 11:38 AM
To: Shannon Castagno
Subject: RE: Checking on the Status of My Public Records Request

It looks like we have no files but I have not written the official “no records” letter yet. Thanks for your patience.

Carl

From: Shannon Castagno <shannon@environmentalsupportservices.com>
Sent: Tuesday, March 2, 2021 5:42 PM
To: BerkeleyFileRoom@DTSC <BerkeleyFileRoom@dtsc.ca.gov>
Subject: Checking on the Status of My Public Records Request

EXTERNAL:

Good Evening,

I was just checking on the status of the below public records request.

Thanks 😊

Sincerely,
Shannon Castagno
Project Manager
Tel) 949-429-3564
Fax) 949-429-3563
http://EnvironmentalSupportServices.com

From: Shannon Castagno <shannon@environmentalsupportservices.com>
Sent: Monday, February 22, 2021 6:01 PM
To: 'BerkeleyFileRoom@dtsc.ca.gov' <BerkeleyFileRoom@dtsc.ca.gov>
Subject: Public Records Request



Environmental Support Services
Environmental Research & Due Diligence Compliance
30251 Golden Lantern, #E-305, Laguna Niguel, CA 92677
Tel) 949-429-3564 • Fax) 949-429-3563
www.EnvironmentalSupportServices.com • Info@EnvironmentalSupportServices.com

February 22, 2021

Dept of Toxic Substances Control - Region 2
700 Heinz Ave., Ste 200
Berkeley, CA 94710

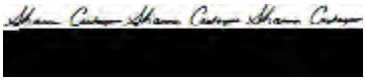
Attention: File Room

Dear File Room,

Please check for any files/information on the following site:

Site: 420 East 3rd Street
Pittsburgh, CA 94565

Sincerely,
Environmental Support Services



Shannon Castagno
Project Manager
Shannon@EnvironmentalSupportServices.com

Appendix D

Request for Records Search to the
Contra Costa County Fire Department and
Response Obtained from that Agency

Est. 1988

Environmental Support Services

Environmental Research & Due Diligence Compliance
30251 Golden Lantern, #E-305, Laguna Niguel, CA 92677
P) 949.429.3564 | F) 949.429.3563 | E) Shannon@EnvironmentalSupportServices.com
www.EnvironmentalSupportServices.com | EIN# 83-0533710

February 22, 2021

Contra Costa County Fire Protection District
4005 Port Chicago Highway, Suite 250
Concord, CA 94520-1180

Attention: Public Records Request

Subject: Records Search – Hazardous Materials/Waste/Underground Tanks

Site: 420 East 3rd Street
Pittsburgh, CA 94565

Dear Public Records,

Environmental Support Services (ESS) is in the process of conducting a records search for an environmental audit at a site in Pittsburgh, CA. This search includes researching the history of the site, especially as it pertains to hazardous materials/waste. With this in mind, **ESS** requests the following information concerning the subject address which your agency may have on file:

1. utilization, manufacture, storage, or discharge of hazardous materials/waste.
2. previous or on-going site investigations/remediations pertaining to hazardous materials/waste.
3. hazardous materials disclosures concerning the site.
4. information regarding underground storage tank present or previously found at the site.

Should you have any questions concerning this request for information, please call. Your expedient processing of this request is appreciated.

Sincerely,
Environmental Support Services

Shannon Castagno
Project Manager
Shannon@EnvironmentalSupportServices.com

Shannon Castagno

From: Fire_District.Info <Info@cccfpd.org>
Sent: Tuesday, February 23, 2021 8:02 AM
To: Shannon Castagno
Subject: RE: Public Records Request

Good morning, Shannon!

Due to the Contra Costa Health Order, we are unable to process archived file review requests until further notice. This includes sending any files electronically.

We apologize for any inconvenience.

Please be sure to check with Contra Costa County Hazmat at cchazmat@cchealth.org or (925) 655-3200 for hazardous materials plans.

Thank you!

Per the Order of the Health Officer of Contra Costa County, effective April 22, 2020, it is required to wear a face covering when working at or visiting an essential business. For more information on the County developments of COVID-19, please visit https://www.coronavirus.cchealth.org/.

Administration Office hours are Monday through Friday 8:00 AM – 5:00 PM.

Contra Costa County Fire Protection District
LMR
4005 Port Chicago Hwy, Suite 250
Concord, CA 94520
P: 925-941-3300
F: 925-941-3309
www.cccfpd.org

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From: Shannon Castagno [mailto:shannon@environmentalsupportservices.com]
Sent: Monday, February 22, 2021 5:56 PM
To: Fire_District.Info <Info@cccfpd.org>
Subject: Public Records Request

Est. 1988
Environmental Support Services
Environmental Research & Due Diligence Compliance
30251 Golden Lantern, #E-305, Laguna Niguel, CA 92677
P) 949.429.3564 | F) 949.429.3563 | E) Shannon@EnvironmentalSupportServices.com
www.EnvironmentalSupportServices.com | EIN# 83-0533710

February 22, 2021

Contra Costa County Fire Protection District
4005 Port Chicago Highway, Suite 250
Concord, CA 94520-1180

Attention: Public Records Request

Subject: Records Search – Hazardous Materials/Waste/Underground Tanks

Site: 420 East 3rd Street
Pittsburgh, CA 94565

Dear Public Records,

Environmental Support Services (ESS) is in the process of conducting a records search for an environmental audit at a site in Pittsburgh, CA. This search includes researching the history of the site, especially as it pertains to hazardous materials/waste. With this in mind, **ESS** requests the following information concerning the subject address which your agency may have on file:

1. utilization, manufacture, storage, or discharge of hazardous materials/waste.
2. previous or on-going site investigations/remediations pertaining to hazardous materials/waste.
3. hazardous materials disclosures concerning the site.
4. information regarding underground storage tank present or previously found at the site.

Should you have any questions concerning this request for information, please call. Your expedient processing of this request is appreciated.

Sincerely,
Environmental Support Services



Shannon Castagno
Project Manager
Shannon@EnvironmentalSupportServices.com

CONFIDENTIALITY NOTICE: This electronic mail transmission may contain privileged and/or confidential information only for use by the intended recipients. Unless you are the addressee (or authorized to receive messages for the addressee), you may not use, copy, disclose, or distribute this message (or any information contained in or attached to it) to anyone. You may be subject to civil action and/or criminal penalties for violation of this restriction. If you received this transmission in error, please notify the sender by reply e-mail or by telephone and delete the transmission. Thank you

---

Appendix E

Request for Records Search to the
Cal Fire – Office of the State Fire Marshal and
Response Obtained from that Agency

Shannon Castagno

From: CALFIRE PRA Records Center <calfire@govqa.us>
Sent: Monday, February 22, 2021 6:04 PM
To: shannon@environmentalsupportservices.com
Subject: Public Records Request :: R000511-022221

RE: PUBLIC RECORDS REQUEST of 2/22/2021, Reference # R000511-022221

Dear Shannon Castagno,
Thank you for your interest in public records of the CAL FIRE. Your request has been received and is being processed in accordance with the California Public Records Act, Government Code section 6250 et seq. Your request was received on February 22, 2021 and given the reference number R000511-022221 for tracking purposes.

Records Requested: Site: 420 East 3rd Street, Pittsburgh, CA 94565. ESS requests the following information concerning the subject site which your agency may have on file: 1. utilization, manufacture, storage, or discharge of hazardous materials/waste. 2. previous or on-going site investigations/remediations pertaining to hazardous materials/waste. 3. hazardous materials disclosures concerning the site. 4. pipelines. 5. information regarding underground storage tank present or previously found at the site.

Your request will be forwarded to the relevant CAL FIRE department(s) to locate the information you seek and to determine the volume and any costs that may be associated with satisfying your request. You will be contacted about the availability and/or provided with copies of the records in question. PLEASE NOTE: The California Public Records Act does not require a governmental body to create new information, to do legal research, or to answer questions.

You can monitor the progress of your request at the link below and you'll receive an email when your request has been completed.

CAL FIRE

To monitor the progress or update this request please log into the CAL FIRE Records Center

Shannon Castagno

From: CALFIRE PRA Records Center <calfire@govqa.us>
Sent: Thursday, March 4, 2021 3:57 PM
To: shannon@environmentalsupportservices.com
Subject: [Records Center] Public Records Request :: R000511-022221

--- Please respond above this line ---

RE: PUBLIC RECORDS REQUEST of February 22, 2021, Reference # R000511-022221

Dear Shannon Castagno,

The Department of Forestry and Fire Protection, CAL FIRE, received a public information request from you on February 22, 2021. Your request mentioned:

"Site: 420 East 3rd Street, Pittsburgh, CA 94565. ESS requests the following information concerning the subject site which your agency may have on file: 1. utilization, manufacture, storage, or discharge of hazardous materials/waste. 2. previous or on-going site investigations/remediations pertaining to hazardous materials/waste. 3. hazardous materials disclosures concerning the site. 4. pipelines. 5. information regarding underground storage tank present or previously found at the site."

CAL FIRE has reviewed its files and has determined there are no responsive documents to your request.

If you have any questions or wish to discuss this further, you may contact my office at (916) 584-6314.

Sincerely,
Anne Henigan

PRA Cordinator
Sacramento - HQ - Legal Office

To monitor the progress or update this request please log into the CALFIRE PRA Records Center

Powered by GovQA

Appendix F

Request for Records Search to the
City of Pittsburg Public Works Department and
Response Obtained from that Agency

CITY OF PITTSBURG
65 CIVIC AVENUE
PITTSBURG, CA 94565

PHONE (925) 252-4870
FAX (925) 252-4905
EMAIL aevenson@ci.pittsburg.ca.us

REQUEST FOR COPY OF PUBLIC RECORDS

CITY CLERK'S DEPARTMENT

I, the undersigned, hereby request: ___✓___ Copy of document
(or)
_____ Inspection of document

Description of Document	Date of Document	# of Copies
1. __ Site: 420 East 3rd Street Pittsburgh, CA 94565		_____
2. __ **ESS** requests the following information concerning the subject address which your agency may have on file:		_____
3. __ 1. copies of applications and permits for industrial waste discharge; and 2. copies of any and all violations concerning industrial waste discharge.		_____

I agree to pay the City of Pittsburg all fees incurred for this service, prior to receiving records, in accordance with the City's Fee Schedule and Government Code Section 6257. The estimated fee is $ _____.

Environmental Support Services

Shannon Castagno
30251 Golden Lantern, Suite #E-305
Laguna Niguel, CA 92677
Tel: 949-429-3564 - Fax: 949-429-3563
Shannon@EnvironmentalSupportServices.com

_____ 2/22/21
Date

_____ Shannon Castagno
Signature

_____ 949-429-3564
Contact Person/Phone #

Receipt of Document: ____ pick up @ City Clerk's Office, City of Pittsburg, 65 Civic Avenue, Pittsburg, CA 94565 or ____ mail document (additional postage fee)

Or ✓ email electronic files to: Shannon@EnvironmentalSupportServices.com

Pay total due below at the Payment Center window, first floor, Civic Center Building. Make check payable to **City of Pittsburg**.

for office use only

	Document	#of pages	fee	postage	total
1.					
2.					
3.					

Total fee due _____
(Revenue Code 110-40022-5547)

Date of request: _____ Date completed: _____ Completed by: _____
Request denied: _____ Reason for denial: _____ Receipt of fee: _____
Response sent: _____ Date responded to request: (within 10 days) _____

Form RM-6

Shannon Castagno

From: Shelby Rose <srose@ci.pittsburg.ca.us>
Sent: Friday, February 26, 2021 12:48 PM
To: 'Shannon@environmentalsupportservices.com'
Cc: Alice Evenson
Subject: FW: Two New Public Records Request
Attachments: Public Works Dept. Public Records Request.pdf

Good afternoon Shannon,

Thank you for your request for information. The City does not issue permits for industrial waste discharge; this is issued by the State Water Resources Control Board. Department of Toxic Substance Control is the lead agency for the onsite cleanup of contaminants of concern. Also, we do issue violations for the State's permit. We would only issue a Notice of Violation if it was an illicit discharge into our storm drain system, which we have never done for the site.

Thank you,

Shelby Rose
Administrative Coordinator
Community Development Department
65 Civic Avenue, Pittsburg, CA 94565
(925) 252-4906 srose@ci.pittsburg.ca.us

From: Alice Evenson <AEvenson@ci.pittsburg.ca.us>
Sent: Tuesday, February 23, 2021 7:43 AM
To: Shelby Rose <srose@ci.pittsburg.ca.us>
Subject: FW: Two New Public Records Request

Received today. A response is due by April 5.

Alice E. Evenson, MMC
City Clerk/Director of Records and Council Services
City of Pittsburg | 65 Civic Avenue | Pittsburg, CA 94565
☎ (925) 252-4870 | 🖷 (925) 252-4905 | ✉ aevenson@ci.pittsburg.ca.us
Website: www.ci.pittsburg.ca.us | eNews Sign-up | Agendas, Minutes and Streaming Media

Please note that email correspondence with the City of Pittsburg, along with attachments, may be subject to the California Public Records Act, and therefore may be subject to disclosure unless otherwise exempt.

From: Shannon Castagno <shannon@environmentalsupportservices.com>
Sent: Monday, February 22, 2021 6:35 PM

To: Alice Evenson <AEvenson@ci.pittsburg.ca.us>
Subject: Two New Public Records Request

External Sender: Use caution before opening links or attachments

Please see attached public records request. Please confirm receipt of this e-mail.

Thank you, have a wonderful day and stay healthy 😊

Shannon Castagno
Project Manager
Environmental Support Services
Shannon@EnvironmentalSupportServices.com
(949) 429-3564 phone
(949) 429-3563 fax

Appendix G

Request for Records Search to the
City of Pittsburg Building Department and
Response and Photocopies Obtained from that Agency

CITY OF PITTSBURG
65 CIVIC AVENUE
PITTSBURG, CA 94565

PHONE (925) 252-4870
FAX (925) 252-4905
EMAIL aevenson@ci.pittsburg.ca.us

REQUEST FOR COPY OF PUBLIC RECORDS
CITY CLERK'S DEPARTMENT

I, the undersigned, hereby request: ✓ Copy of document
(or)
____ Inspection of document

Description of Document	Date of Document	# of Copies
1. – I hereby request copies of all building permits and certificates of occupancy for the following address:		
2. – Site: 420 East 3rd Street Pittsburgh, CA 94565		
3.		

I agree to pay the City of Pittsburg all fees incurred for this service, prior to receiving records, in accordance with the City's Fee Schedule and Government Code Section 6257. The estimated fee is $ _____.

Environmental Support Services

Shannon Castagno
30251 Golden Lantern, Suite #E-305
Laguna Niguel, CA 92677
Tel: 949-429-3564 - Fax: 949-429-3563
Shannon@EnvironmentalSupportServices.com

2/22/21
Date
Shannon Castagno
Signature
949-429-3564
Contact Person/Phone #

Receipt of Document: ____ pick up @ City Clerk's Office, City of Pittsburg, 65 Civic Avenue, Pittsburg, CA 94565 or ____ mail document (additional postage fee)

Or ✓ email electronic files to: Shannon@EnvironmentalSupportServices.com

Pay total due below at the Payment Center window, first floor, Civic Center Building. Make check payable to **City of Pittsburg.**

for office use only

	Document	#of pages	fee	postage	total
1.					
2.					
3.					

Total fee due _____
(Revenue Code 110-40022-5547)

Date of request: _____
Request denied: _____
Response sent: _____

Date completed: _____
Reason for denial: _____
Date responded to request: (within 10 days) _____

Completed by: _____
Receipt of fee: _____

Form RM-6

Shannon Castagno ATT

From: Cathleen Slaga <CSlaga@ci.pittsburg.ca.us>
Sent: Tuesday, February 23, 2021 10:20 AM
To: 'shannoncastagno@att.net'
Subject: FW: 420 E 3rd Street - Permit History
Attachments: 420 E 3rd St - B0600136 - Water Meter.pdf; 420 E 3rd St - B9700360 - Reroof.pdf; 420 E 3rd St - B9800424 - Wall Signs.pdf; 420 E 3rd St - Demo Bldgs 1-6.pdf; 420 E 3rd St - Original Permits.pdf

Here you go.

Cathleen Slaga

City of Pittsburg, Community Development
Office Clerk
65 Civic Avenue, Pittsburg, CA 94565
Phone: 925-252-4062
Fax: 925-252-4814
Email: cslaga@ci.pittsburg.ca.us

www.THINKPITTSBURG.com

"New year is another opportunity of seeing life with little more caring, compassion, maturity and beauty"

From: Cathleen Slaga
Sent: Tuesday, February 23, 2021 10:15 AM
To: 'shannon@enviromentalsupportservices.com' <shannon@enviromentalsupportservices.com>
Cc: Alice Evenson <AEvenson@ci.pittsburg.ca.us>; Amanda McVey <AMcVey@ci.pittsburg.ca.us>
Subject: 420 E 3rd Street - Permit History

Good Morning Shannon,
Please find attached a copy of the permit history for 420 E 3rd Street, Pittsburg, CA. There is a Cert of Occupancy included in the original permits attachment.

Cathleen Slaga

City of Pittsburg, Community Development
Office Clerk
65 Civic Avenue, Pittsburg, CA 94565
Phone: 925-252-4062
Fax: 925-252-4814

Email: cslaga@ci.pittsburg.ca.us



"New year is another opportunity of seeing life with little more caring, compassion, maturity and beauty"

420 E.
Third
St.

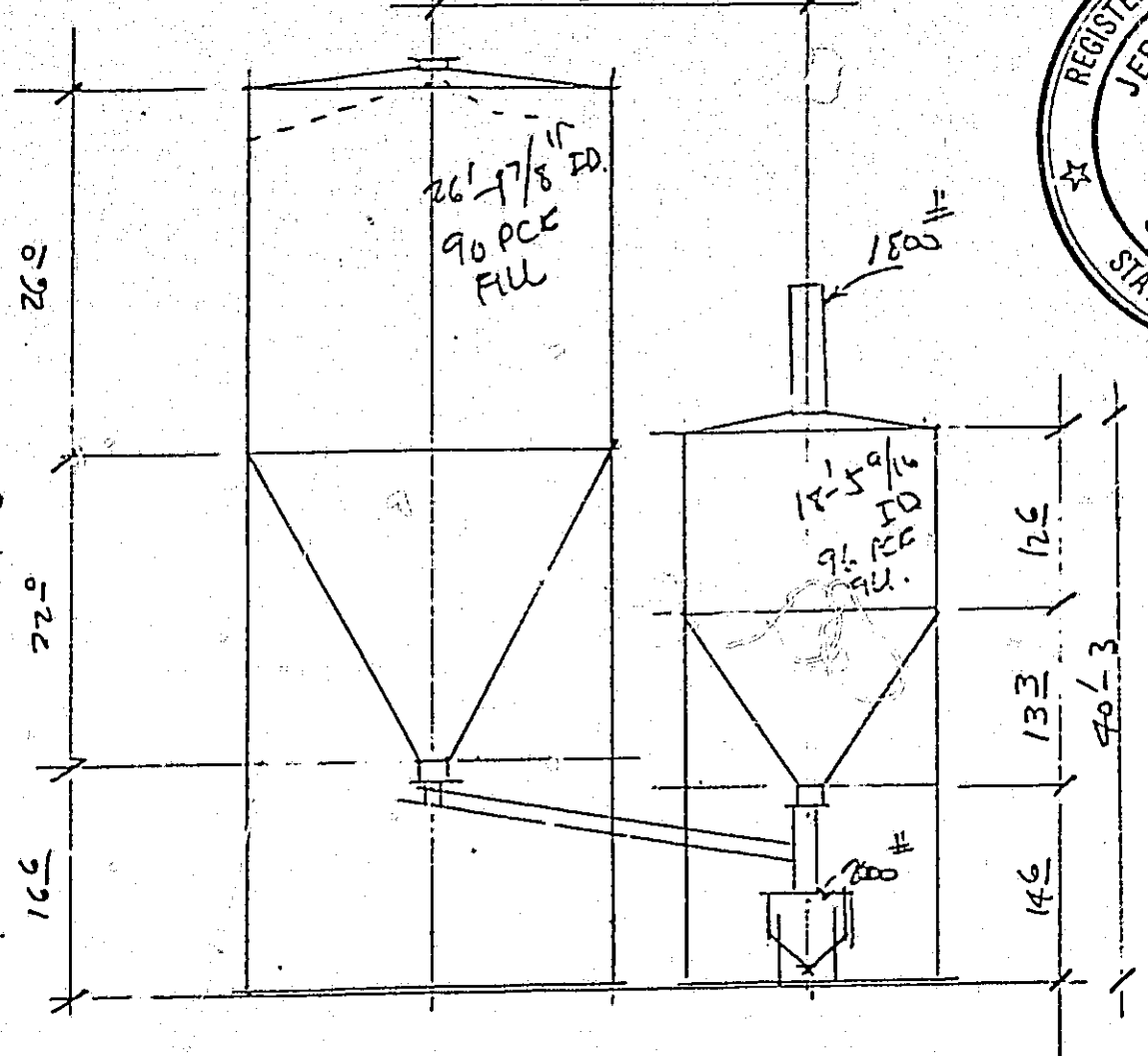
SOUTH DAKOTA, INC.

JOHNS-MANVILLE - PITTSBURG, CA.

JERROLD C. TURNER
STRUCTURAL ENGINEER
1528 N. MAIN ST. • WALNUT CREEK
CALIFORNIA 94595 • (415) 939-3491

1

BULK STORAGE SILO FOUNDATIONS.



REGISTERED PROFESSIONAL ENGINEER
JERROLD C. TURNER
No. 1423
STRUCTURAL
STATE OF CALIFORNIA

26'-7 7/8" I.D. TANK.

DL TANK = 86000#

VOL. CYL. = 537 x 26 = 13962 ft³

LESS REPOSE CONE = − 3930

10032 ft³ @ 90 = 902880#

VOL: CONE = 4057 ft³ 365130#

LL WT. = 1268000#

TOTAL WT. = 1354000# = 677 TONS.

OVERTURNING FACTOR.

5.0 K	x	32.5'	= 2773.50 K-I
902.9 K	x	51.6'	= 46499.35
235.1 K	x	33.0'	= 12048.30
1268.0 K			61321.15 K-I

X = 48.36'

JERROLD C. TURNER
STRUCTURAL ENGINEER
1528 N. MAIN ST. • WALNUT CREEK
CALIFORNIA 94596 • (415) 939-3491

15'-5 9/16" I.D TANK.

DL TANK = 27,400#
TOP TANK DL = 1800#
BOTT. " DL = 2000#
} 31205#

VOL. CYL. = 268 x 12 6/12 = 3350 ft³.
LESS REPOSE CONE = −768
2582 ft³ x 96 = 247,872#

VOL. CONE. = 1427 ft³ x 96 = 136,992#

TOTAL WEIGHT = 416064#
= 208 TONS.

OVERTURN. FACTOR

27.4	x	20 3/12	=	554.85	K'
1.8	x	46 6/12	=	83.70	
20	x	4 0/12	=	8.0	$\bar{X}$ = 29.86'
247.9	x	34 0/12	=	8428.60	
137.0	x	24 6/12	=	3347.94	K'
416.1				12423.10	K'

SEISMIC FORCES

$F_p = ZIC_pSW$
$F_p = .18W$ MIN.
→ USE $F = .12W$.

$Z = 1.0$
$I = 1.0$
$S = 1.5$
$C_p = .12$ (UBC '76 - TABLE #23.J.)

TANK	W	F	M_o	X	W_X	
26'ϕ	1354K	271K	12264 K'	13.16	17737.4	$\bar{X}$ = 19.41'
15'ϕ	416K	83.2K	2485 K'	39.95'	16619.2	
	1770K		14749 K'		34356.6	

JERROLD C. TURNER
STRUCTURAL ENGINEER
1528 N. MAIN ST. • WALNUT CREEK
CALIFORNIA 94596 • (415) 939-1131

SOILS - SEE "SOIL INVESTIGATION
HLA # 8259,001.03
DTD. 2/20/79
BY HARDING-LAWSON ASSOCIATES.

$S_{PTL} = 2000$ PSF
$S_{PTL+S} = 4000$ PSF (SHORT TERM LOADING)

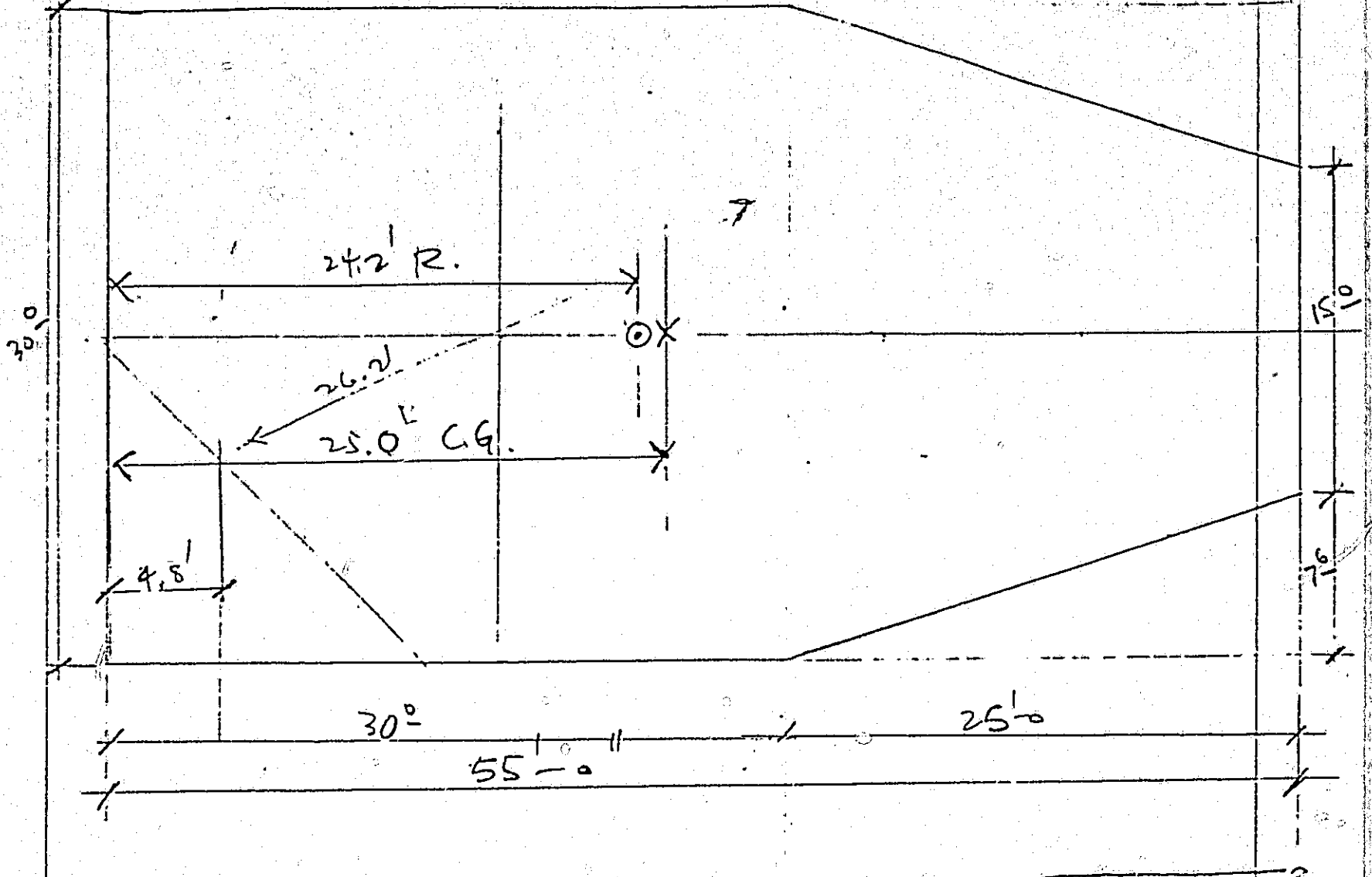
ASSUME 24" THK. PAD.

WT. SLAB = 150. PSF - (150 PCF-SOIL) = 50 PCF x (2')
= 100 PSF

USE NET $S_{PTL} = 2000 - 100 = 1900$ PSF

$A_P = 1770^K / 1.9 = 931.6$

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$$A = 55 \times 30 - 24 \times 7\tfrac{6}{12} = 1470\ ft^2$$

	A	x	Ax
30×31	$= 930$	$\times 31/2$	$= 14415$
30×24	$= 720$	$\times 43^{0}$	$= 30960$
$-(2)\ 24 \times 7\tfrac{6}{12}/2$	$= -180$	$\times 47^{0}$	$= -5460$
	1470		39915

$$\bar{x} = 25.1'$$

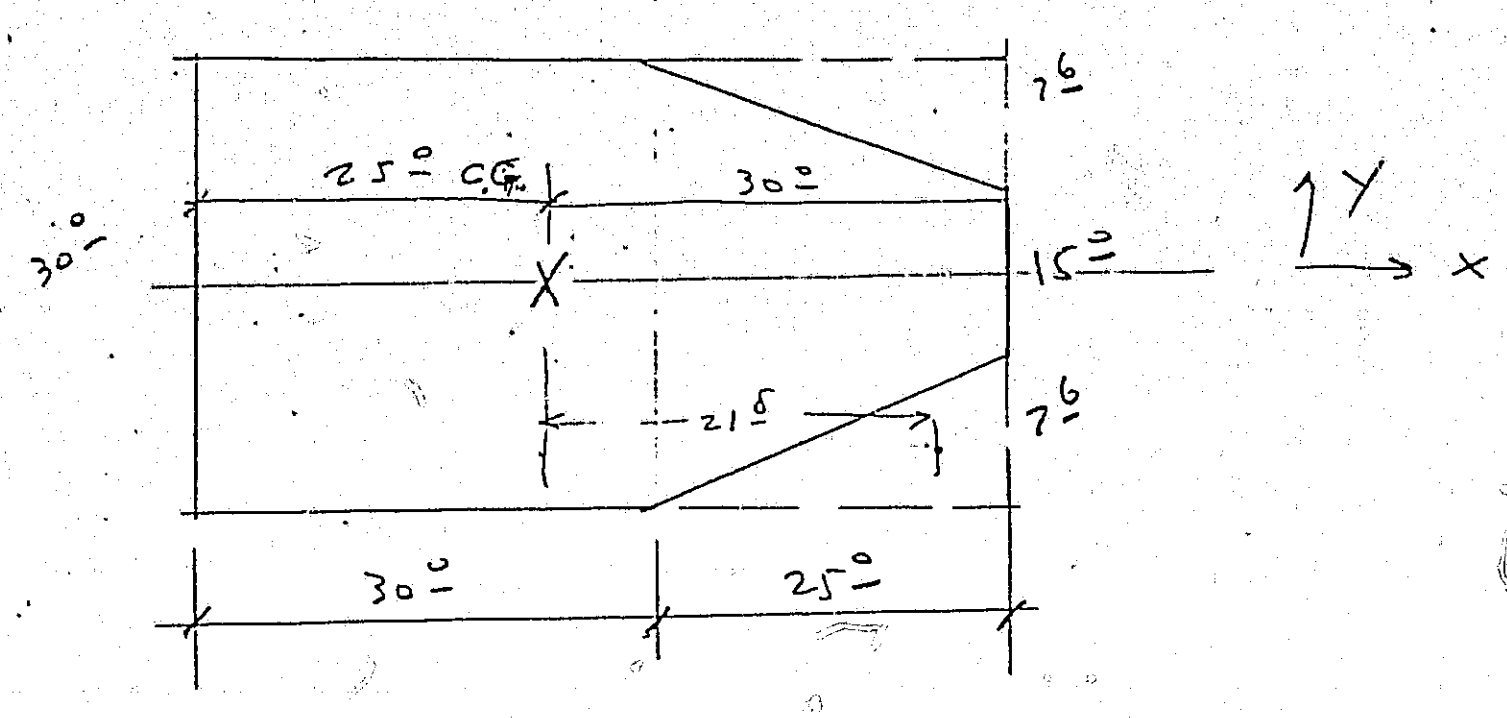
C.g. load = 24.2'

O.K.

$$e = 25.1 - 24.2 = 0.90'$$

$$Pe = 1770^{k} \times .90 = \underline{1593^{k'}}$$

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$30 \times 30 = 900 \times 15.0 = 13500$

$30 \times 25.0 = 750 \times 42.6 = 31875$

$-25.0 \times \frac{7.6}{2}(2) = -187.5 \times 46.8 = -8751$

$1462.5 \quad = 36624$

C.g. LOAD $= 24.2'$

$\bar{X} = 25.0'$

$e = 0.80'$

$\underline{Pe = 1416^{14}}$

$I_y = (30)^3 \times \frac{55}{12} - \frac{25 \times (7.6)^3}{36}(2) - \frac{25 \times 7.6}{2}(2) \times (15 - 2.6)^2$

$I_y = 123750 - 586 - 29297 = 93867\ ft^4$

$S_y = I/15 = \underline{6258\ ft^3}$

$A = 1462\ ft^2$

$P = 1770^{K} \quad \Sigma M_o = 14749^{k'}$

$f_a = -1770/1462 = -1.21\ KSF$

$f_b = \pm 14749/6258 = \pm 2.36\ KSF$ ← N.G. (UPLIFT)

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$$I_x = 55^3 \times \frac{30}{12} + (27\tfrac{6}{} - 25\tfrac{0}{})^2 \times 30 \times 55 - \frac{25 \times 7\tfrac{6}{}}{2}(2)(21\tfrac{8}{})^2 - \frac{(25)^3 \times 7\tfrac{6}{}}{36}(2)$$

$$I_x = 415938 + 10312 - 88048 - 6510 = 331.692 \text{ ft}^4$$

$$S_x = 13268 \text{ ft}^3, \; 11056 \text{ ft}^3$$

$$f_{bx} = \frac{1416}{5} = 0.13 \text{ KSF}, 0.11 \text{ KSF}$$

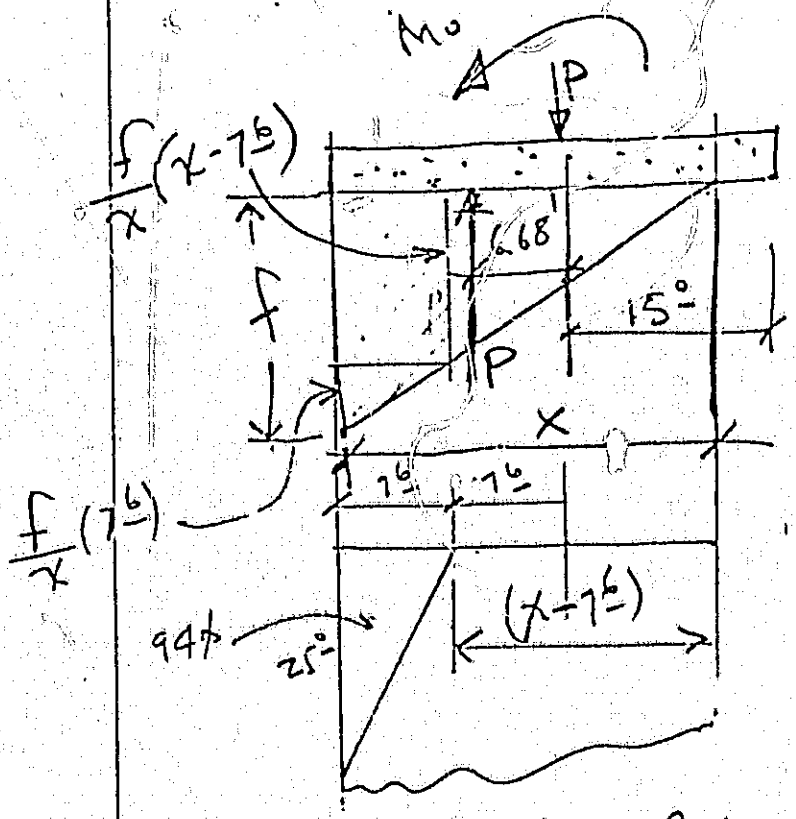
OVERTURNING ABOUT X–X — UPLIFT.

WT. SLAB = 300 PSF × 1462 = 438,600 #

EP = 1770 K + 438.6 K = 2208.6 K

$$e = \frac{M_o}{P} = \frac{14750}{2208.6} = 6.68'$$

$6e = 40.1' > 30'$ OUTSIDE MIDDLE 1/3'.



$$P = 55 f x/2 - \frac{f}{x}(x - 7\tfrac{6}{})94 - \frac{f}{x}(7\tfrac{6}{})94/3 =$$

① $P/f = 27.5x - 94 + 705/x - 235/x = 27.5x - 94 + 470/x$

$$\frac{M}{f} = 27.5x\,(15 - x/3) - (94 + \frac{705}{x})(15 - 12\tfrac{6}{}) - 235/x\,(15 - 13.13 - 7\tfrac{6}{}/4) =$$

② $M/f = 412.5x - 9.17x^2 - 1175 + \frac{8812}{x} - 3054/x = 412.5x - 9.17x^2 - 1175 + \frac{5728}{x}$

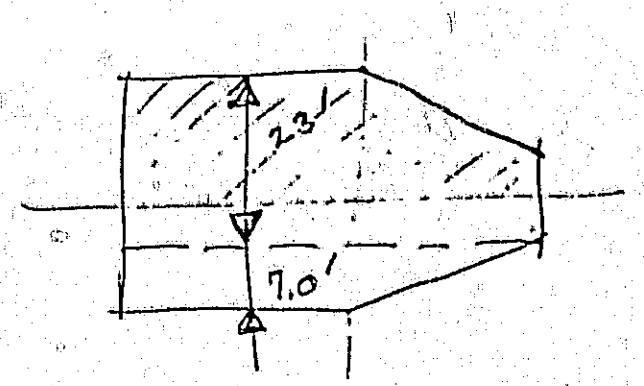
STRUCTURAL ENGINEER
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42 381 50 SHEETS 5 SQUARE
42 382 100 SHEETS 5 SQUARE
NATIONAL

(1) $P/f = 27.5x - 94 + 470/x = \frac{2208.6}{f}$

(2) $M_o/f = 42.5x - 9.17x^2 - 1175 + \frac{5728}{x} = \frac{14750}{f}$

x	(1)	(2)	
30	2.96	~~5.78~~	4.70
25	3.61	5.63	
20	4.61	5.25	3.99
15	6.31	6.24	
29	3.07	5.53	
28	3.19		
27	3.32		
26	3.46	5.10	
25	3.61	5.03	4.06
24	3.77	5.00	4.01
23	3.95	5.01	3.98
22	4.15	5.05	3.96
21	4.37	5.13	3.91
20	4.61	5.25	3.99
19		5.41	



SOLVING $x \cong 23'$

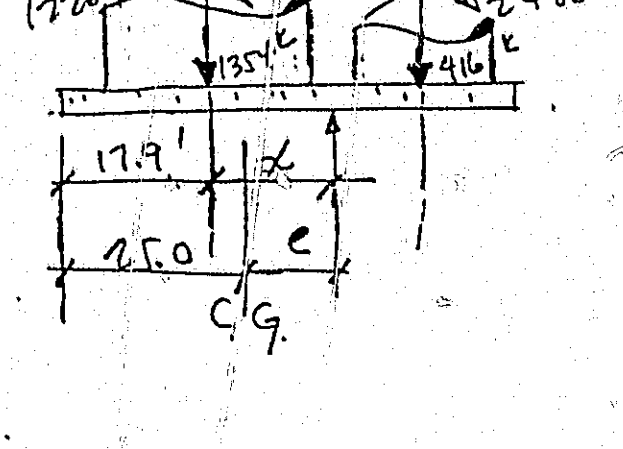
$f = 3.95$ KSF < 4.0 KSF O.K.

SINCE LOWER CUT-OUT IS OUTSIDE COMPRESSIN ZONE, O.K.

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NATIONAL 42 381 50 SHEETS 5 SQUARE
42 382 100 SHEETS 5 SQUARE
42 389 200 SHEETS 5 SQUARE

OVERT. - LONG LT.



NEGLECT. SLAB WT.

$1354 \times 0 = 0$ (Mo ↺)

$416 \times 26.8' = +11154$

$M_o = +14749$

1770 K .25903 KI

$x = 14.63'$

$e = 14.63 - 7.1 = 7.53'$ →

$Pe = 13328$ KI

$S_x = \begin{cases} 13268 \text{ ft}^3 \\ 11056 \end{cases}$

$f_{bx} = -1.0$ KSF, $+1.21$ KSF

$\Sigma f_{max} = -(1.01) - (1.21) = -2.34$ KSF.
$(-.13)$ 0.K.

(Mo ↺)

1354

$416 \times 26.8 = 11154$

$-M_o = -14749$

$1770 = -3595$

$x = -2.031'$

$e = 9.13'$ ← $Pe = 16160$ KI

$f_{bx} = +1.22$ KSF -1.46 KSI MAX.

$\Sigma f_{MAX.} = -(1.21) - (.13) - (1.46) = -2.80$ KSF 0.K. →

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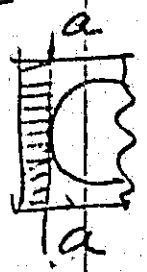
SLAB BENDING (TL)

$f_n = \frac{1770}{1462} = -1.21$ KSF

AT END 26'φ $L = 4.8'$

$M = 1.21 (4.8)^2/2 = 13.94$ K'/ft.

$V = 1.21 (4.8) = 5.8$ K/ft

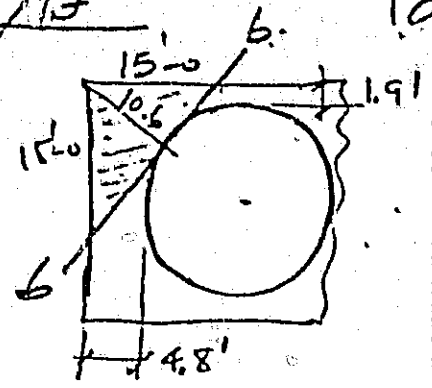


ON DIA 6. 26'φ

$P = 1.21 \times 15^2/2 = 136.1$ K

$M = 136.1 \times 10.6'/3 = 481.2$ K'

$m = \frac{481.2}{10.6 \times 2} = 22.70$ K'/ft

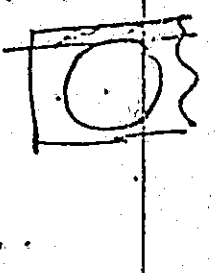


$V = 6.42$ K/'

LONG SIDE 26'-φ

$L = 1.9'$ $M = 1.21 (1.9)^2/2 = 2.18$ K'/ft.

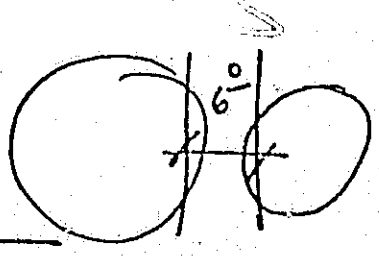
$V = 1.21 \times 1.9 = 2.3$ K/ft.



BETN. TANKS.

IF SPAN ≅ 6'-0

$M = 1.21 (6)^2/10 = 4.36$ K/ft



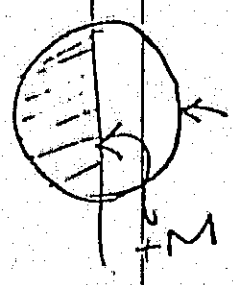
FF SPAN = 8'-0

$M = 1.21 (8)^2/10 = 7.74$ K'/ft

CTR. 26'φ TANK

$(TL) + M_S = .066\,W$ $W = 1.21 (26.2)^2 \frac{\pi}{4} = 652$ K

$\pm M_S = .066 \times 652 = +43$ K'/ft



FIXED EDGES $\begin{cases} -M = -.040 \times 652 = -26.1 \text{ K'/ft} \\ +M = +.0265 \times 11 = +17.3 \text{ K'/ft} \end{cases}$

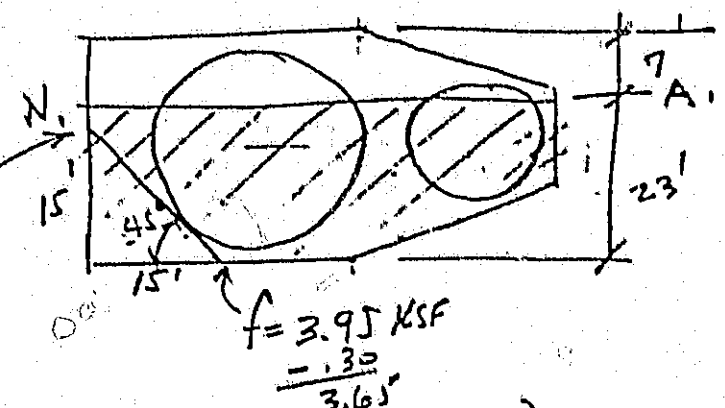
CTR. 18'φ TANK 325

$+M_S = .066 \times 1.21 (18.5)^2 \pi/4 = +21.5$ K'/ft

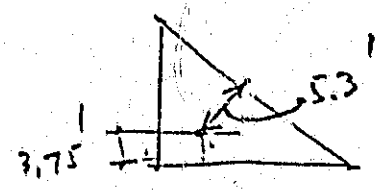
FIXED : $\begin{cases} -M = -13 \text{ K'/ft} \\ +M = +8.6 \text{ K'/ft} \end{cases}$

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SLAB BENDING – (DL+S) TRANSVERSE.



= 1.37 KSF
-.30
1.07



@ DIAGINAL (45°) – CORNER.

$P = \left(\frac{15^2}{2} = 112\right) \times 1.07\ KSF = 120^K$

$+ 112 \times (3.65 - 1.07) \times 1/3 = \underline{96^K}$

216^K

$M = 120 \times 10.6'/3 = 424$

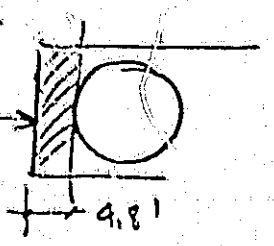
$+ 96 \times 5.3' = 509^{KI}$ $\Big\}$ 933^{KI}

$M = 933/10.6 \times 2 = \underline{44^{KI/ft}}$

$V = 216/10.6 \times 2 = \underline{10.2^{K/ft}}$

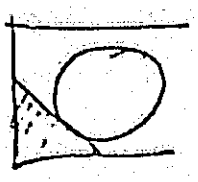
(DL+S) LONGITUDINAL.

END: 26' ϕ



$M = 2.8(4.8)^2/2 = \underline{32.3^{KI/ft}}$

DIAG. 26' ϕ



$M = \frac{48.2}{1.21} \times 2.8 = 111 3.5^{KI}$

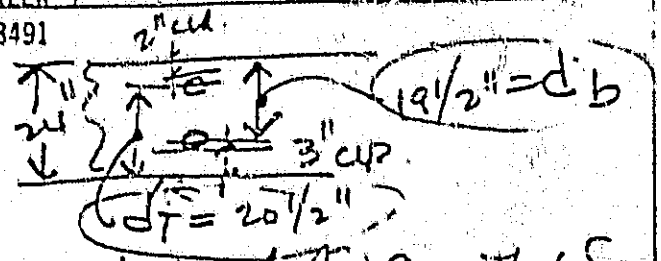
$M = \underline{52.5^{KI/ft}}$

$V = \underline{15.0^{K/ft}}$

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SLAB DESIGN

$\begin{cases} M_u = 1.7\,M \text{ FOR TL} \\ M_u = 0.75(1.7\times 1.1)M = 1.4\,M \text{ FOR TL+S} \end{cases}$



BOTTOM R/F

$-M = 26.1^{k}$ (TL) → $M_u = 26.1\times 1.7 = 44.37^{k'}/ft$ (@ EDGE wall 26'0)

$-M = 52.5^{k}$ (TL+S) → $M_u = 52.5\times 1.4 = 73.50^{k'}/ft$ (@ DIAG. 26'ϕ)

$A_{sR} = 73.5/2.9\times 19\tfrac{1}{2} = 1.30\,in^2/ft$

→ { #7 @ 9" (0.80)
  { #6 @ 9" (0.59)
  1.39 in^2/ft

AT DIAG'S & ENDS OF 26'ϕ

BEYOND END 26'ϕ

$-M = -26.1$

$M_u = 44.4^{k'}/ft$

$A_{sR} = 0.75\,in^2/ft$ → #7 @ 9" (0.80)

TOP R/F. (d = 20 1/2")

$M_R = 43^{k'}$ @ 26'ϕ

$M_u = 73.1^{k'}/ft$

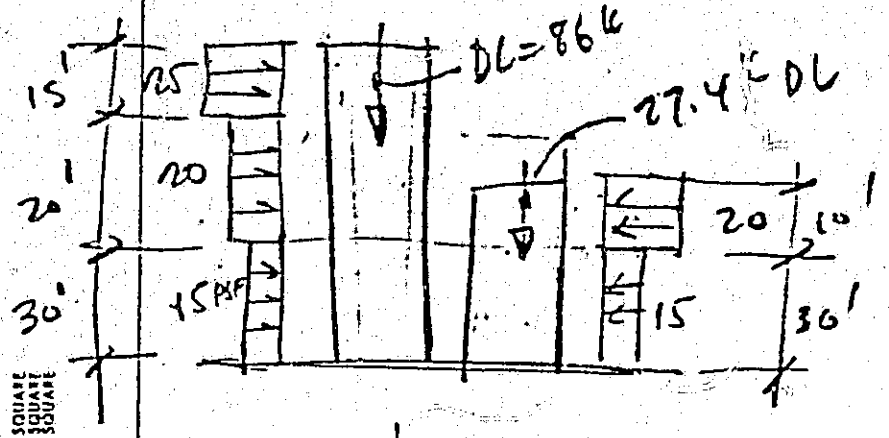
$A_{sR} = 1.23\,in^2/ft$ → { #7 @ 9 } 1.39 in^2/ft
{ #6 @ 9

$M_R = 21.5^{k'}$ @ 18'ϕ

$M_u = 30.6^{k'}/'$ $A_{sR} = 0.51\,in^2/ft$ → #6 @ 9" (.59)

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WIND ON TANKS

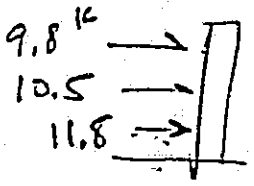


42 381 40 SHEETS 5 SQUARE
42 382 100 SHEETS 5 SQUARE
42 389 200 SHEETS 5 SQUARE
NATIONAL

26' ϕ

$Q = 26.2'(15\times30' + 20\times20' + 25\times15')$

$= 32095^{\#}$



$M_o = 9.8\times57.5^{o} + 10.5\times40^{o} + 11.5\times15^{o} \} \; 1160^{1K}$

$M_R = 86^{K}\times26.2\times1/2 = 1126.6^{1K} < M_o$

15' ϕ

$Q = 18.5(15\times30 + 20\times10)$

$= 8.32^{K} + 9.3^{K} = 17.62^{K}$

$M_o = 8.32\times15^{o} + 9.30\times35^{o} \} \; 450^{1K}$

$M_R = 27.4\times18.5'/2 = 253^{1K} < M_o$

DESIGN BOLT ANCHORAGE FOR:

26' ϕ (34-3/4" ϕ AB)

$\Delta M = 1/2 < 1160 - 1126.6 = \underline{613.4^{1K}}$

UPLIFT/ft. $= 613.4/\pi(13.1)^2 = 1.14^{K}/ft.$

UPLIFT/BOLT $= 1.14\times\frac{26.2\pi}{34} = 2.42^{K} \rightarrow f_s = 7.25\,KSI$ O.K.

18' ϕ (24-3/4" ϕ)

$\Delta M = 1/2\times450 - 253 = \underline{422^{K'}}$

UPLIFT/ft. $= 422/\pi(9.25)^2 = 1.57^{K}/ft.$

$U = 1.57\times\frac{18.5\pi}{24} = 3.8^{K} \rightarrow f_s = 11.4\,KSI$ O.K.

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WIND - SLIDING.

26'φ $\varphi = 32.1^{K}$

$DL = 86^{K}$ $f = \frac{32.1}{86} = 0.37$ O.K.

18'φ

$\varphi = 17.6^{K}$

$DL = 27.4^{K}$ $f = .64$ N.G.

SHEAR/BOLT $= \frac{1760}{24} = 730^{\#} \rightarrow$ 3/4"φ O.K.

NATIONAL | 42 301 50 SHEETS 5 SQUARE
42 302 100 SHEETS 5 SQUARE
42 309 200 SHEETS 5 SQUARE

CITY OF PITTSBURG

APN 25 G5 0 1 3 3 2.7

BUILDING DIVISION
439-4910

PLUMBING
PERMIT – APPLICATION

Owner Johns Manville
Mail Address 420 E. 3RD & HARBOR (P.O. Box 591)
City Pittsburg Telephone 427-2427
Plumber American Plumbing
Address 108 Railroad Ave.
City Antioch Telephone 754-4990
State License 418845 Pittsburg Business License 9012

Building Address 420 E. 3RD St
Nearest Cross Street

WORKMAN'S COMPENSATION

Policy Number WCO (86) 309 2746
Insurance Carrier Ohio Casualty
Expiration Date 2/22/86

Group | Zone

INSPECTION RECORD

NUMBER	FIXTURE OR ITEM	EACH	FEE
	Water Closet		
	Bath Tub		
	Shower		
	Lavatory		
	Sink		
	Dishwasher		
	Clothes Washer		
	Swimming Pool Receptor		
	* Lawn Sprinkler System		
	Water Heater		
1	Gas System Outlets		2 00
	Outlets Over 5 per System		
	Plan Check Fee 25% of Above.		
	* Permit Not Required on New Structure		
	PERMIT	$	10 00
	TOTAL FEE	$	12 00

I acknowledge that I have read this application and state that the above is correct and agree to comply with all city ordinances and state laws regulating plumbing.

I certify that I am properly registered and licensed as required by the City of Pittsburg and State of California or that I am the legal owner of the above described residential property.

Permittee's Signature Mark Petersen

APPROVALS	DATE	INSPECTOR'S SIGNATURE
Under Floor Work		
Rough Plumbing		
Gas Piping	4-25-95	M
Gas Vents		
Plumbing Fixtures		
Miscellaneous		
Hot Water Heater		
Gas Test	4-25-95	M
Utility Co. Notified		
FINAL	4-25-95	M

VALIDATION

This is a Plumbing Permit when properly filled out, signed and validated. Permit void if work is not commenced within 120 days of date of issuance.

PERMIT VALIDATION

P 6610

CD#6847
INSPECTOR'S COPY

CITY OF PITTSBURG

JUN 11 80 00 04491

BUILDING DIVISION
439-4910

ELECTRICAL
PERMIT - APPLICATION

Building Address X 429 East third ST.
Workman's Comp. Insurance Carrier X Liberty Mutual
Expiration Date X 7-6-81
Owner X Johns Manville
Mail Address X 420 E. 3RD Street
City X Pittsburg Telephone X
Electrician X G.W. VAN FOSSAN INC.
Address X 4515 So Soto st.
City X Vernon, C.A. Telephone X (213) 589-6091
State License X 219363 Pittsburg Business License X OK 17746

GROUP	ZONE	PROCESSED BY
		AP

I acknowledge that I have read this application and state that the above is correct and agree to comply with all city and state laws regulating electrical wiring.

I am properly registered and/or licensed as required by the City of Pittsburg and State of California or I am the legal owner of the above described residential property.

Permittee's Signature X G W VanFossan

INSPECTION RECORD

400 Amp

APPROVALS	DATE	INSPECTOR'S SIGNATURE
Temp. Power Pole		
Underslab Work		
Rough Conduit	8-22-80	
Wiring	8-22-80	
Fixtures		
Power Authorized		
Utility Co. Notifier		
FINAL	8-22-80	

VALIDATION
This is an Electrical Permit when properly filled out, signed and validated. Permit void if work is not commenced within 120 days of issuance.

FOR APPLICANT TO FILL IN

	EACH	NO.	FEE
New Residential Bldgs. & Pools			
1 & 2 - Family, Sq. Ft.		—	$
Multi-family Sq. Ft.		—	
Residential Swimming Pools			
Outlets: Light, Switch & Receptacle			
First 20			
Additional	.25	1	.25
Lighting Fixtures			
First 20			
Additional	.25	16	4 00
Fixed Appliances Not Over 1 HP			
Range___ Heater___ D.W.___			
Oven___ Dryer___ W.M.___			
Top___ FAU___ W.H.___			
Hood___ Fan___ ___ ___			
Disp.___ A.C.___ ___ ___			
Power Apparatus & Large Appliances			
Size & Type HP, KW, KVA, or KVAR			
___ Up to 1 Incl.			
11 Over 1 to 10 Incl.	5 00	11	55 00
3 Over 10 to 50 Incl.	10 00	3	30 00
1 Over 50 to 100 Incl.	15 00	1	15 00
___ Over 100			
Services			
0 - 200 Amp. Under 600 V			
201 - 1000 Amp. Under 600 V	10,00	1	10 00
Over 1000 Amp. or Over 600 V			
Temp. Power Pole & Appurtenances			
Sign with One Branch Circuit			
Additional Sign Branch Circuits			
(Other)			
MISC. CONDUIT & CONDUCTORS	7.50		7 50
PERMIT FEE (Sub-Total)			
PLAN CHECKING FEE (~~One-Fourth Permit Fee~~)			
PERMIT ISSUING FEE			5 00
TOTAL FEE			126 75

PERMIT VALIDATION
E 5371

CD# 11447 (B)

INSPECTOR'S COPY

BUILDING DIVISION
439-4910

CITY OF PITTSBURG

MECHANICAL
PERMIT – APPLICATION

Owner Johns-Manville Sls. Corporation
Mail Address E. 3rd & Harbor St.
City Pittsburg, CA Telephone 349-9500
Contractor Marina Heating & A/C
Address 23188 Foley St.,
City Hayward, CA 94545 Telephone 786-3500
State License 184701 Pittsburg Business License 2586

Building Address 420 E. 3rd East
Nearest Cross Street E. 3rd & Harbor St. Harbor

MAP NO.	GROUP	TYPE CONST.	PROCESSED BY
			CO

ZONE	SPECIAL CONDITIONS
FIRE ZONE	

BUILDING SETBACK	YARD	HWY.	STREET NAME	EXISTING WIDTH
Front P.L.				
Side P.L.				
Rear P.L.				

Planning Division Approval	DATE
Engineering Division Approval	DATE
Health Department Approval	DATE
Fire Department Approval	DATE
	DATE

NO.	TYPE OF APPLIANCE OR EQUIPMENT	FEE
	Absorption System, BTU	
	Air Handling Unit, CFM	
	Boiler, Horsepower	
	Compressor, Horsepower	
	Ventilation System	
	Evaporative Cooler	
	Furnace: FAU Gravity Floor BTU	
	Heater: Suspended Unit Wall	
1	15/ton Gas Electric Unit	10 00
	New Addition PERMIT $	5 00
	Alter Repair TOTAL FEE $	15.00

I hereby acknowledge that I have read this application and state that the above is correct and agree to comply with all ordinances and state laws regulating heating, ventilating, air conditioning.

I hereby certify that I am not acting in violation of Chapter 9, Division 3, of the Business and Professional Code of the State of California.

Signature of Permittee E. L. Johnson

INSPECTION RECORD

APPROVALS	DATE	INSPECTOR'S SIGNATURE
Rough		
Final	8-17-82	JM

Workman's Comp. CO-86-87
Insurance Carrier E.B.I.
Expiration Date 7-1-81

PLAN CHECK VALIDATION
This is a Building Permit when properly filled out, signed and validated. Permit void if work is not commenced within 60 days of date of issuance.

PERMIT VALIDATION
M 2947

CO 1282

INSPECTOR'S COPY

CITY OF PITTSBURG

BUILDING DIVISION
439-4910

SEP 4 79001791

BUILDING
PERMIT – APPLICATION

Owner Johns Manville
Mail Address 420 E 3rd
City Telephone
Contractor Solid Dynamics, Inc.
Address 1930 Argonne Dr.
City W.C. Telephone 798-7713
State License 302890 Pittsburg Business License 1209
Architect or Engineer
Address
City Telephone
State License Pittsburg Business License
Lot Block Tract
Lot Size No. Bldgs. Now on Lot
Use of Existing, Buildings
Metes and Bounds Attached Yes_____ No_____

SEP 4 '79 CD.10073

DESCRIPTION OF WORK

NEW	ADD.	ALTER	REPAIR	DEMOLISH	SPECIAL	OCCUPANCY
X						

SIZE	SQ. FT.	NO. ROOMS	NO. STORIES

EXT. WALL COVERING	INT. WALL COVERING	ROOF COVERING

PROPOSED USE OF STRUCTURE

STORAGE TANKS (2)

Signalization Fee $ N/A
Water Meter Fee $ N/A

Valuation $ 236,000 00 | Plan Check Fee $ 319 15
F.R. $ N/A | S.M.I. $ 1652 | Permit Fee $ 491 00

I acknowledge that I have read this application and state that the above is correct and agree to comply with all city ordinances and state laws regulating building construction.

Building Address 420 E. 3rd.
Nearest Cross Street

MAP NO.	GROUP	TYPE CONST.	PROCESSED BY
	M	IN	JS

ZONE M
SPECIAL CONDITIONS
FIRE ZONE 2

BUILDING SETBACK	YARD	HWY.	STREET NAME	EXISTING WIDTH
Front P.L.				
Side P.L.				
Rear P.L.				

Planning Division Approval MB DATE 9-5-79
Engineering Division Approval DATE
Health Department Approval DATE
Fire Department Approval M Lewis DATE 9-5-79
Workman's Comp. CB-74-70-7 Expiration Date 10-20-79
Ins. Carrier American States Ins Co (P)

APPROVALS	DATE	INSPECTOR'S SIGNATURE
Foundation: Location Forms, Materials		
Joists and Girders		
Floor Slab		
Frame		
Insulation		
Exterior Lath		
Interior Lath/ Dry Wall		
Roofing		
House Number Correct and Posted		
FINAL APPROVAL	3-30-80	JM

Permittee's Signature D M Gillman
Address

PLAN CHECK VALIDATION
This is a Building Permit when properly filled out, signed and validated.
Permit void if work is not commenced within 120 days of date of issuance.

PERMIT VALIDATION
B 4281

CD.10073
INSPECTOR'S COPY

CITY OF PITTSBURG

JUL 20 79001404

BUILDING DIVISION
439-4910

ELECTRICAL
PERMIT - APPLICATION

420 E. 3rd St

Building Address ~~East Harbor & Third St.~~

Workman's Comp. Insurance Carrier Northern Assurance Company

Expiration Date 10-1-79

Owner John Manville

Mail Address P.O. 541

City Pittsburg Telephone

Electrician Empire Electric Const. Co.

Address 1065 Valencia St.,

City S.F. Telephone 648-8180

State License 259022 Pittsburg Business License 1101

GROUP	ZONE	PROCESSED BY
		JS

I acknowledge that I have read this application and state that the above is correct and agree to comply with all city and state laws regulating electrical wiring.

I am properly registered and/or licensed as required by the City of Pittsburg and State of California or I am the legal owner of the above described residential property.

Permittee's Signature Peter J. Chan

INSPECTION RECORD

APPROVALS	DATE	INSPECTOR'S SIGNATURE
Temp. Power Pole		
Underslab Work		
Rough Conduit		
Wiring		
Fixtures		
Power Authorized		
Utility Co. Notified		
FINAL	3-3-80	

FOR APPLICANT TO FILL IN

	EACH	NO.	FEE
New Residential Bldgs. & Pools			
1 & 2 - Family, Sq. Ft.		—	$
Multi-family Sq. Ft.		—	
Residential Swimming Pools			
Outlets: Light, Switch & Receptacle			
First 20			
Additional			
Lighting Fixtures			
First 20			
Additional			
Fixed Appliances Not Over 1 HP			
Range___ Heater___ D.W.___			
Oven___ Dryer___ W.M.___			
Top___ FAU___ W.H.___			
Hood___ Fan___			
Disp.___ A.C.___			
Power Apparatus & Large Appliances			
Size & Type HP, KW, KVA, or KVAR			
___ Up to 1 Incl.			
X Over 1 to 10 Incl.			5 00
___ Over 10 to 50 Incl.			
___ Over 50 to 100 Incl.			
___ Over 100			
Services			
0 - 200 Amp. Under 600 V			
201 - 1000 Amp. Under 600 V			
Over 1000 Amp. or Over 600 V			
Temp. Power Pole & Appurtenances			
Sign with One Branch Circuit			
Additional Sign Branch Circuits			
(Other)___			

PERMIT FEE	(Sub-Total)	5 00
PLAN CHECKING FEE	(One-Fourth Permit Fee)	
PERMIT ISSUING FEE		5 00
TOTAL FEE		10 00

VALIDATION
This is an Electrical Permit when properly filled out, signed and validated.
Permit void if work is not commenced within 120 days of issuance.

PERMIT VALIDATION
E1875

C.D. 6048
INSPECTOR'S COPY

CITY OF PITTSBURG

BUILDING DIVISION
439-4910

APR 27 79 0 0 2300 E. 3rd St.

BUILDING PERMIT – APPLICATION

Owner JOHNS MANVILLE
Mail Address PO Box 591
City PITTSBURG Telephone 432-6426
Contractor OWL CONSTRUCTION
Address AS ABOVE
City — Telephone
State License 53810 TO 432-3482 Pittsburg Business License 1020
Architect or Engineer JACOBS ENG. CO
Address 2401 STILWELL
City CONCORD Telephone
State License — Pittsburg Business License
Lot — Block Tract
Lot Size — No. Bldgs. Now on Lot
Use of Existing Buildings
Metes and Bounds Attached Yes ____ No ____

Building Address 3ST & HARBOR
~~Nearest Cross Street~~ 420 E. 3rd St.

MAP NO.	GROUP	TYPE CONST.	PROCESSED BY
	X	V-N	JS

ZONE M
SPECIAL CONDITIONS
FIRE ZONE 2

BUILDING SETBACK	YARD	HWY.	STREET NAME	EXISTING WIDTH
Front P.L.				
Side P.L.				
Rear P.L.				

Planning Division Approval	DATE
Engineering Division Approval	DATE
Health Department Approval	DATE
Fire Department Approval	DATE
Workman's Comp.	Expiration Date CONTINUOUS
Ins. Carrier	

DESCRIPTION OF WORK

NEW	ADD.	ALTER	REPAIR	DEMOLISH	SPECIAL	OCCUPANCY
	X					

SIZE SQ. FT.	NO. ROOMS	NO. STORIES

EXT. WALL COVERING	INT. WALL COVERING	ROOF COVERING

PROPOSED USE OF STRUCTURE
MODIFICATION OF EXIST FACILITIES

Signalization Fee $
Water Meter Fee $

APPROVALS	DATE	INSPECTOR'S SIGNATURE
Foundation: Location Forms, Materials		
Joists and Girders		
Floor Slab		
Frame		
Insulation		
Exterior Lath		
Interior Lath/ Dry Wall		
Roofing		

PLAN CHECK SHORT $28.05, TO BE PAID AT TIME OF ISSUEING PERMIT. (PAID 4.27.79) CD.5469

House Number Correct and Posted
FINAL APPROVAL 5-3-80 VM

Valuation $ 50,000 00
Plan Check Fee $ 93.50
F.R. $ S.M.I. $ 3.50
Permit Fee $ 187 00

I acknowledge that I have read this application and state that the above is correct and agree to comply with all city ordinances and state laws regulating building construction.

Permittee's Signature _____
Address _____

CD.5408 PLAN CHECK VALIDATION
This is a Building Permit when properly filled out, signed and validated. Permit void if work is not commenced within 120 days of date of issuance.

PERMIT VALIDATION
B 3672

CD.5470
INSPECTOR'S COPY

CITY OF PITTSBURG

ELECTRICAL
PERMIT - APPLICATION

BUILDING DIVISION
439-4910

420 E. 3rd.

Building Address Third & Harbor St. PO Box 591

Workman's Comp. Insurance Carrier Industrial Indemnity

Expiration Date CERTIFICATE by SEPARATE MAIL 10/1/7

Owner Johns Manville

Mail Address Third & Harbor ST.

City Pittsburg Telephone 432-6426

Electrician Del Monte Electric

Address 1295 Boulevard Way

City Walnut Creek Telephone 937-4181

State License 161955 Pittsburg Business License 778

GROUP	ZONE	PROCESSED BY

I acknowledge that I have read this application and state that the above is correct and agree to comply with all city and state laws regulating electrical wiring.

I am properly registered and/or licensed as required by the City of Pittsburg and State of California or I am the legal owner of the above described residential property.

Permittee's Signature

INSPECTION RECORD

APPROVALS	DATE	INSPECTOR'S SIGNATURE
Temp. Power Pole		
Underslab Work		
Rough Conduit		
Wiring		
Fixtures		
Power Authorized		
Utility Co. Notified		
FINAL	12-28-78	

FOR APPLICANT TO FILL IN

	EACH	NO.	FEE
New Residential Bldgs. & Pools		—	$
1 & 2 - Family, Sq. Ft.		—	
Multi-family Sq. Ft.			
Residential Swimming Pools			
Outlets: Light, Switch & Receptacle			
First 20			
Additional			
Lighting Fixtures			
First 20			
Additional			
Fixed Appliances Not Over 1 HP			
Range___ Heater___ D.W.___			
Oven___ Dryer___ W.M.___			
Top___ FAU___ W.H.___			
Hood___ Fan___ ___ ___			
Disp.___ A.C.___ ___ ___			
Power Apparatus & Large Appliances			
Size & Type HP, KW, KVA, or KVAR			
___ Up to 1 Incl.			
___ Over 1 to 10 Incl.			
___ Over 10 to 50 Incl.			
___ Over 50 to 100 Incl.			
18 Over 100	2.50		45 —
Services			
0 - 200 Amp. Under 600 V			
201 - 1000 Amp. Under 600 V			
Over 1000 Amp. or Over 600 V			
Temp. Power Pole & Appurtenances			
Sign with One Branch Circuit			
Additional Sign Branch Circuits			
(Other)			
PERMIT FEE (Sub-Total)			45 00
PLAN CHECKING FEE (One-Fourth Permit Fee)			3 00
PERMIT ISSUING FEE			
TOTAL FEE			48 00

12-28-78 JM

VALIDATION

This is an Electrical Permit when properly filled out, signed and validated. Permit void if work is not commenced within 120 days of issuance.

12/16/78 E 0281
CO 8490

PERMIT VALIDATION

INSPECTOR'S COPY

CITY OF PITTSBURG

BUILDING DIVISION
439-4910

420 E. 3rd St.

BUILDING
PERMIT – APPLICATION

Owner Johns-Manville Sales Corp.
Mail Address East 3rd St. & Harbor
City Pittsburg Telephone 432-6426
Contractor Mastercraft Tile & Roofing Co
Address 1-20th St, P.O. Box 1086
City Richmond Telephone 233-0301
State License 248609 Pittsburg Business License 001954
Architect or Engineer
Address N/A
City Telephone
State License Pittsburg Business License
Lot Block Tract
Lot Size No. Bldgs. Now on Lot
Use of Existing Buildings
Metes and Bounds Attached Yes No

Building Address ~~P.O. 547~~ E 3rd & Harbor
Nearest Cross Street 420 E. 3rd St.

MAP NO.	GROUP	TYPE CONST.	PROCESSED BY
			CO

ZONE — SPECIAL CONDITIONS
FIRE ZONE

BUILDING SETBACK	YARD	HWY.	STREET NAME	EXISTING WIDTH
Front P.L.				
Side P.L.				
Rear P.L.				

	DATE
Planning Division Approval	
Engineering Division Approval	
Health Department Approval	
Fire Department Approval	

Workman's Comp. Expiration Date 11-1-78
Ins. Carrier State Fund

DESCRIPTION OF WORK

NEW	ADD.	ALTER	REPAIR	DEMOLISH	SPECIAL	OCCUPANCY

SIZE	SQ. FT.	NO. ROOMS	NO. STORIES

EXT. WALL COVERING	INT. WALL COVERING	ROOF COVERING

PROPOSED USE OF STRUCTURE
Roofing manufacturing plant

Signalization Fee $
Water Meter Fee $

APPROVALS	DATE	INSPECTOR'S SIGNATURE
Foundation: Location Forms, Materials		
Joists and Girders		
Floor Slab		
Frame		
Insulation		
Exterior Lath		
Interior Lath/ Dry Wall		
Roofing		
9163-CO		
5-26-78		
House Number Correct and Posted	12-22-78	JY

Valuation $ 35,629.11
Plan Check Fee $
F.R. $ S.M.I. $ 2.49
Permit Fee $ 147.49

FINAL APPROVAL 12-22-78

I acknowledge that I have read this application and state that the above is correct and agree to comply with all city ordinances and state laws regulating building construction.

Permittee Signature Mastercraft Tile & Roofing Co. Inc.
Address 1-20th St. Richmond, Ca. 94801

PLAN CHECK VALIDATION
This is a Building Permit when properly filled out, signed and validated. Permit void if work is not commenced within 120 days of date of issuance.

PERMIT VALIDATION
B 1524

INSPECTOR'S COPY

CITY OF PITTSBURG

BUILDING DIVISION
439-4910

Heady 420 E 3rd

BUILDING PERMIT – APPLICATION

Owner JOHN MANSVILLE
Mail Address 3RD & HARBOR ST.
City PITTSBURG Telephone
Contractor DELCON ASSOCIATES
Address 623 JACKSON STo
City HAYWARD Telephone 537-8852
State License 271830(B-1) Pittsburg Business License CD4982
Architect or Engineer
Address
City Telephone
State License Pittsburg Business License
Lot Block Tract
Lot Size No. Bldgs. Now on Lot
Use of Existing Buildings MANUFACTURING, STORAGE
Metes and Bounds Attached Yes ____ No X

DESCRIPTION OF WORK

NEW	ADD.	ALTER	REPAIR	DEMOLISH	SPECIAL	OCCUPANCY
		X				

SIZE	SQ. FT.	NO. ROOMS	NO. STORIES
	10490		

EXT. WALL COVERING	INT. WALL COVERING	ROOF COVERING
NEW STEEL PANELS	METAL	EXISTING ROLLED

PROPOSED USE OF STRUCTURE
MANUFACTURING - STORAGE

Signalization Fee $
Water Meter Fee $

Valuation $ 20,000 | Plan Check Fee $ —
F.R. $ | S.M.I. $ 140 | Permit Fee $ 92.00

I acknowledge that I have read this application and state that the above is correct and agree to comply with all city ordinances and state laws regulating building construction.

Permittee's Signature X
Address X623 JACKSON ST, HAYWARD CA.

Building Address 3RD & HARBOR (~~1150~~)
Nearest Cross Street

MAP NO.	GROUP	TYPE CONST.	PROCESSED BY
073-060-01	F-2		

ZONE | SPECIAL CONDITIONS
FIRE ZONE

BUILDING SETBACK	YARD	HWY.	STREET NAME	EXISTING WIDTH
Front P.L.				
Side P.L.				
Rear P.L.				

	DATE
Planning Division Approval	
Engineering Division Approval	
Health Department Approval	
Fire Department Approval	

Workmen's Comp. 023-161-019136-00 Expiration Date 7-1-78
Ins. Carrier Liberty Mutual

APPROVALS	DATE	INSPECTOR'S SIGNATURE
Foundation: Location Forms, Materials		
Joists and Girders		
Floor Slab		
Frame		
Insulation		
Exterior Lath		
Interior Lath/ Dry Wall		
Roofing		
OD 8956		
10-24-77		
CK-11-2		
House Number Correct and Posted		
FINAL APPROVAL		

Sheet Metal 5-A-10 4 of

PLAN CHECK VALIDATION
This is a Building Permit when properly filled out, signed and validated. Permit void if work is not commenced within 120 days of date of issuance.

PERMIT VALIDATION
B 0632

INSPECTOR'S COPY

CITY OF PITTSBURG

P.O. Box 1518
65 Civic Avenue
Pittsburg, CA 94565
BUILDING DIVISION
439-4910

PERMIT NO.

NOV 10 94 0 3 8 9 4 8

BUILDING
PERMIT — APPLICATION

USE BLACK INK OR TYPE Manville - Schuler

BUILDING ADDRESS
420 E. THIRD ST

TRACT | LOT | APN
073-050-001

OWNER
NAME Manville
ADDRESS SAME ABOVE PHONE
CITY STATE ZIP

ARCH. ENGR.
NAME John Michael Sindo LICENSE # C044190
ADDRESS 300 E. Leland Rd, Ste. 204 PHONE
CITY Pittsburg STATE CA ZIP 427-0871

CONTRACTOR
STATE LICENSE # 460576 AND CLASS C-12 PITTSBURG BUSINESS LICENSE # 38547
CONTRACTOR NAME W.R.W. Services
ADDRESS PHONE
CITY SEE OWNER/BLDR STATE ZIP

I hereby affirm that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5, Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License Law (Chapter 9 (commencing with Sec. 7000) of Division 3 of the Business and Professions Code) or that he is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500).):

OWNER/BUILDER
I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale.)

I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License Law.)

I am exempt under Sec. _____ B&P.C. for this reason

Signature Joseph D. Dunphy Date 11/10/94

WORKER'S COMPENSATION
I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Workers' Compensation Insurance, or a copy certified by the Director of Industrial Relations as to how I am self-insured, or a copy certified by my insurance carrier that I have Workers' Compensation insurance or self-insurance for the period of this permit. Policy # SIF 0046-94 Company Name State Fund
Certified copy is hereby furnished
Certified copy is filed with the city building inspection division
Signature attached Date
(This section need not be completed if the permit is for one hundred dollars ($100) or less.)
I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation Laws of California.
Signature Date
NOTICE TO APPLICANT: If, after making this Certificate of Exemption, you should become subject to the Workers' Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked.

LENDER
I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Civ. C.).
LENDERS NAME
LENDERS ADDRESS

APPLICANT
I CERTIFY THAT I HAVE READ THIS APPLICATION AND STATE THAT THE INFORMATION GIVEN IS TURE AND CORRECT. I AGREE TO COMPLY WITH ALL LOCAL ORDINANCES AND STATE LAWS RELATING TO BUILDING CONSTRUCTION AND I MAKE THIS STATEMENT UNDER PENALTY OF LAW. I HEREBY AUTHORIZE REPRESENTATIVES OF THIS CITY/COUNTY TO ENTER UPON THE ABOVE MENTIONED PROPERTY FOR INSPECTION PURPOSES. NOTICE: THIS PERMIT WILL EXPIRE BY LIMITATION IF WORK IS NOT STARTED IN 180 DAYS OR IF WORK IS ABANDONED FOR MORE THAN 180 DAYS. DO NOT CONCEAL OR COVER ANY CONSTRUCTION UNTIL THE WORK IS INSPECTED AND THE INSPECTION IS RECORDED ON THE INSPECTION CARD. ALL INSPECTION REQUESTS ARE REQUIRED 24 HOURS IN ADVANCE OF THE INSPECTION.
Signature of Contractor Joseph D. Dunphy Date 11/10/94

WORK TO BE PERFORMED
NEW | REPAIR | ADDITION
MOVE | ALTERATION | DEMOLITION
OTHER
DESCRIPTION Ent. Equip. Repairs - @10% Discount for Ent. Zone. Remo & Rebuild asphalt tank #350 at existing Ent.
MUNICIPAL CODE VIOLATIONS

FOR OFFICE USE ONLY

APPROVALS	DATE	INSP SIGNATURE	APPROVALS	DATE	INSP SIGNATURE
Foundations Forms			Ext. Lath		
Posts & Girders			Int. Lath/ Dry Wall		
Floor Slab			Roofing		
Frame			House No. Posted		
Insulation			Final Approval	2/3/95	

BUILDING DIVISION / Fee Schedule

Building Permit E/C $ 7.42.60 404.10
Plan Check PAY-UND 424.18 SB 241.ES 262.67
Energy Plan Check
SMI 943
Traffic Impact
Construction Water
Hwy #4 Traffic Mitigation
Fire District
Administration
Water Meter
CD RECEIPT NO PC 11800 / 12501
FD RECEIPT NO
SD / USD RECEIPT NO
ISSUED BY

Relative Building Information
Size
Valuation $44,703.00
Occupant Group M-2
Type of Const. 2B

APPROVED BY DATE

PLANNING DIVISION

General Plan Ent.
Zoning E
U.P. No
Var. No
Yards F RS LS R
Height 2nd
Stories
Parking Spaces
A.R.C. EXEMPT

APPROVED BY DATE

ENGINEERING DIVISION

X Site Development Pmt. #
Encroachment Pmt. #
Grading Pmt. #
USG 11/15/94

APPROVED BY DATE

FIRE DISTRICT

APPROVED BY DATE

INSPECTIONS COPY

W.R.W. SERVICES
ENGINEERING & CONSTRUCTION
(415) 671-7722

MICROFILM

QW-483 PROCEDURE QUALIFICATION RECORD (PQR)

Company Name W.R.W. Services

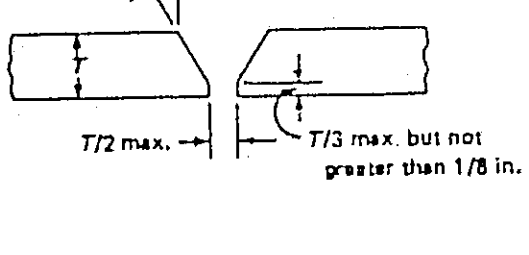
Procedure Qualification Record No. 9 Date 7/20/89

WPS No. 1-1-MA-3/4

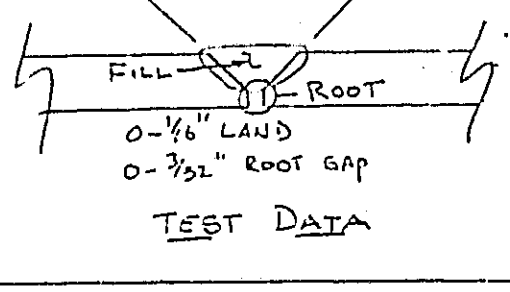
Welding Process(es) SMAW

Types (manual, automatic, semi-auto) Manual

JOINTS (QW-402)



Groove Design Used



TEST DATA

BASE METALS (QW-403)
Material Spec. SA 106
Type or Grade B
P No. 1 to P-No. 1
Thickness of Test Coupon 0.145" (Sch 40)
Diameter of Test Coupon 1½ Nom.
Other 1.900" O.D.

POSTWELD HEAT TREATMENT (QW-407)
Temperature None
Time
Other

FILLER METALS (QW-404)	ROOT	FILL
SFA Spec.	5.1	5.1
AWS Class.	E6010	E7018
Filler Metal F-No.	F-3	F-4
Weld Metal Analysis A-No.	A-1	A-1
Size of Filler Metal	3/32	3/32
Other		
Deposited Weld Metal (Thickness)	0.093	0.1145

GAS (QW-408)

	Percent Composition (Gases)	(Mixture)	Flow Rate
Shielding	N/A		
Trailing			
Backing			

POSITION (QW-405)
Position of Groove 2G and 5G
Weld Progression (Uphill, Downhill) Downhill
Other

ELECTRICAL CHARACTERISTICS (QW-409)
Current Direct
Polarity Reverse (electrode positive)
Amps. 70-90 Volts 21-26
Tungsten Electrode Size N/A
Other

PREHEAT (Q
Preheat Temp. Ambient (+50 °F)
Interpass Temp. +500 °F (temp stick)

TECHNIQUE (QW-410)
Travel Speed 3-8
String or Weave Bead String and Weave
Oscillation
Multipass or Single Pass (per side) Multiple
Single or Multiple Electrodes Single
Other

Pqr No. 9

QW-483 (Back)
Tensile Test (QW-150)
(QW 462.1 (e)

Specimen No.	Dia. or Width	Thickness	Area	Ultimate Total Load lb.	Ultimate Unit Stress psi	Character of Failure & Location
2G - 1	–	–	0.79945	48,850.	61,104	BM- Jagged
2G - 2	–	–	0.79945	49,200	61,542	BM-Jagged
5G - 1	–	–	0.79945	48,700.	60,916	BM-Jagged
5G - 2	–	–	0.79945	50,200	62,793	BM-Sharp

Guided Bend Tests (QW-160)

Type and Figure No.	Result
2G 1 Root – QW 462.3 (a)	Passed
2G 2 Root – " "	Passed
2G 1 Face – " "	Passed
2G 2 Face – " "	Passed

Toughness Tests (QW-170)

Specimen No.	Notch Location	Notch Type	Test Temp.	Impact Values	Lateral Exp. % Shear	Lateral Exp. Mils	Drop Weight Break	Drop Weight No Break

Fillet Weld Test (QW-180)

Result– Satisfactory: Yes _____ No _____ Penetration into Parent Metal: Yes _____ No _____

Macro-Results _____

Guided Bend Tests (QW-160) (Continued)

Type and Figure No.	Result
5G -1 Root – QW 462.3 (a)	Passed
5G -2 Root – " "	"
5G -1 Face – " "	"
5G -2 Face – " "	"

Welder's Name Dan Wiederhold Stamp No. DW

Tests conducted by Advanced Testing Laboratory Test No. 025

certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

Manufacturer W.R.W. Services

Date 7/20/89 By [signature]

(Detail of record of tests are illustrative only and may be modified to conform to the type and number of tests required by the Code.)

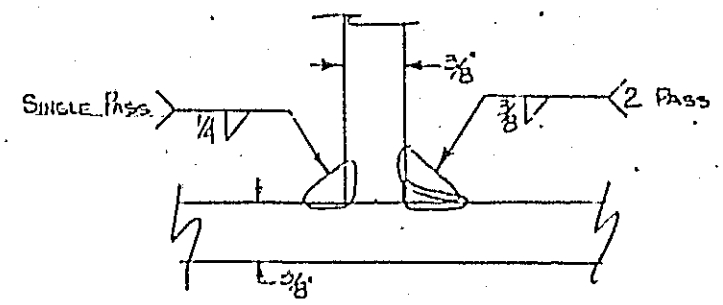
W.R.W. SERVICES
ENGINEERING & CONSTRUCTION
(415) 671-7722

MICROFILM

QW-483 PROCEDURE QUALIFICATION RECORD (PQR)

Company Name WRW SERVICES
Procedure Qualification Record No. 3 Date 2/3/86
WPS No. 1-1-MA-1-1
Welding Process(es) SMAW
Types (manual, automatic, semi-auto) MANUAL

JOINTS (QW-402)



Groove Design Used

BASE METALS (QW-403)
Material Spec. SA 36
Type or Grade —
P No. 1 GRP 1 to P-No. TOG
Thickness of Test Coupon 3/8
Diameter of Test Coupon —
Other

FILLER METALS (QW-404)	Fillet 1	Fillet 2
SFA Spec.	5.1	5.1
AWS Class.	E7024	E7024
Filler Metal F-No.	F-1	F-1
Weld Metal Analysis A-No.	A-1	A-1
Size of Filler Metal	1/4	1/4
Other		
Deposited Weld Metal (Thickness)	1/4	3/8

POSITION (QW-405)
Position of Groove —
Weld Progression (Uphill, Downhill) —
Other FILLET POSITION = 2F

PREHEAT (QW-406)
Preheat Temp. AMBIENT + 50°F
Interpass Temp. NOT MONITORED
Other

POSTWELD HEAT TREATMENT (QW-407)
Temperature NONE
Time
Other

GAS (QW-408)

	Percent Composition Gas(es)	(Mixture)	Flow Rate
Shielding	N/A	—	—
Trailing			
Backing			

ELECTRICAL CHARACTERISTICS (QW-409)
Current DIRECT
Polarity REVERSE (ELECTRODE POSITIVE)
Amps. 275-325 Volts 20-24
Tungsten Electrode Size N/A
Other

TECHNIQUE (QW-410)
Travel Speed 12 IPM
String or Weave Bead STRINGER
Oscillation NONE
Multipass or Single Pass (per side) SINGLE ONE SIDE MULTIPLE OTHER SIDE
Single or Multiple Electrodes SINGLE
Other

MICROFILM

PQR No. 3

QW-483 (Back)
Tensile Test (QW-150)

Specimen No.	Dia. or Width	Thickness	Area	Ultimate Total Load lb.	Ultimate Unit Stress psi	Character of Failure & Location

Guided Bend Tests (QW-160)

Type and Figure No.	Result
NONE	

Toughness Tests (QW-170)

Specimen No.	Notch Location	Notch Type	Test Temp.	Impact Values	Lateral Exp. % Shear	Lateral Exp. Mils	Drop Weight Break	Drop Weight No Break
NONE								

Fillet Weld Test (QW-180)

Result—Satisfactory: Yes ✓ No _____ Penetration into Parent Metal: Yes ✓ No _____

Macro-Results SATISFACTORY, EXAMINED BEFORE & AFTER FRACTURE TEST WITH NO VISIBLE DEFECTS.

FRACTURE TEST PER QW-182, NO VISIBLE DEFECTS BENT 180°

REFER: QW 462.4(a)

Welder's Name DAN WIEDERHOLD Stamp No. DW

Tests conducted by WRW SERVICES Laboratory Test No. _____

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

Manufacturer WRW SERVICES

Date 2/3/86 By [signature]

(Detail of record of tests are illustrative only and may be modified to conform to the type and number of tests required by the Code.)

W.R.W. SERVICES
ENGINEERING & CONSTRUCTION
(415) 671-7722

MISCHEM

QW-483 PROCEDURE QUALIFICATION RECORD (PQR)

Company Name W.R.W. Services

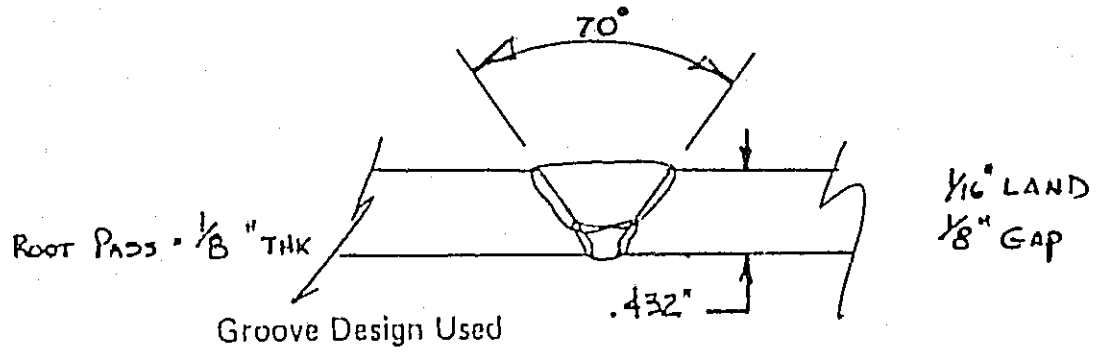
Procedure Qualification Record No. 8 Date 7/20/89

WPS No. 1-1-MA-3/4

Welding Process(es) SMAW

Types (manual, automatic, semi-auto) Manual

JOINTS (QW-402)



Groove Design Used

BASE METALS (QW-403)
Material Spec. SA 53
Type or Grade GR B
P No. 1 to P-No. .432" (Sch 80)
Thickness of Test Coupon 6" Ø
Diameter of Test Coupon
Other

POSTWELD HEAT TREATMENT (QW-407)
Temperature None
Time
Other

GAS (QW-408)

	Gas(es)	Percent Composition (Mixture)	Flow Rate
Shielding	N/A		
Trailing			
Backing			

FILLER METALS (QW-404)

	ROOT	FILL
SFA Spec.	5.1	5.1
AWS Class.	E6010	E7018
Filler Metal F-No.	F-3	F-4
Weld Metal Analysis A-No.	A-1	A-1
Size of Filler Metal	3/32	1/8
Other		
Deposited Weld Metal (Thickness)	1/8"	0.400

ELECTRICAL CHARACTERISTICS (QW-409)
Current Direct
Polarity Reverse (electrode positive)
Amps. 70-140 Volts 22-26
Tungsten Electrode Size N/A
Other

POSITION (QW-405)
Position of Groove 2G and 5G
Weld Progression (Uphill, Downhill) Uphill
Other

TECHNIQUE (QW-410)
Travel Speed 3-8 IPM
String or Weave Bead String and Weave
Oscillation
Multipass or Single Pass (per side) Multiple
Single or Multiple Electrodes Single
Other

PREHEAT (QW-406)
Preheat Temp. Ambient (150 °F)
Interpass Temp. 1500 °F (temp stick)
Other not monitored.

QW-483 (Back)
Tensile Test (QW-150)

PQR No. 8

Specimen No.	Dia. or Width	Thickness	Area	Ultimate Total Load lb.	Ultimate Unit Stress psi	Character of Failure & Location
2G -1	0.830	0.376	0.31208	22,100.	70,815.	BM-Jagged
2G -2	0.800	0.359	0.28720	20,800.	72,432.	BM-Sharp.
5G -1	0.787	0.358	0.28174	19,900	70,630.	WM-Jagged
5G -2	0.781	0.348	0.27178	19,300.	71,011.	WM-Jagged

Guided Bend Tests (QW-160)

Type and Figure No.	Result
2G -1 Side Bend QW 462.2	Passed
2G -2 Side Bend QW "	Passed
2G -3 Side Bend QW "	Passed
2G -4 Side Bend QW "	Passed

Toughness Tests (QW-170)

Specimen No.	Notch Location	Notch Type	Test Temp.	Impact Values	Lateral Exp. % Shear	Lateral Exp. Mils	Drop Weight Break	Drop Weight No Break

Fillet Weld Test (QW-180) (Continued)

Result—Satisfactory: Yes _____ No _____ Penetration into Parent Metal: Yes _____ No _____

Macro-Results _____

Guided Bend Tests (QW-160)

Type and Figure No.	Result
5G -1 Side Bend - QW 462.2	Passed
5G -2 Side Bend - QW "	Passed
5G -3 Side Bend - " "	Passed
5G -4 Side Bend - " "	Passed

Welder's Name Dan Wiederhold Stamp No. DW

Tests conducted by Advanced Testing Laboratory Test No. 024

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

Manufacturer W.R.W. Services

Date 7/20/89 By _____

(Detail of record of tests are illustrative only and may be modified to conform to the type and number of tests

SCHULLER

Roofing Systems

MICROFILM

WRW Services
1985 Bonifacio Street
Concord, CA 94520

November 23, 1994

Dear Cliff:

Per our discussion on 11/22/94, I would like to reduce the radius of the new T-350 tank by 6 inches. This will leave the tank with a diameter equal to the diameter of the previous tank. I have discussed this change with John Siino and asked him to review the effect that this change will have on the uplifting forces acting upon the anchor bolts. After running the calculations, he determined that the change will result in less tension on the anchor bolts and therefore we can proceed as planned.

If you have any questions, I can be reached at (510)427-2427 or paged at (510)503-0832.

Sincerely,

Joe Duszka

Joe Duszka
Project Engineer

cc: M. Wilen·n

East Third and Harbor Streets P.O. Box 591 Pittsburg, CA 94565 Tel: 510-432-6426 Fax: 510-427-2409

RECEIVED
OCT 5 1994
LINHART PETERSEN POWERS ASSOCIATES

Welded Steel Tanks for Oil Storage

SECTION 1—SCOPE

1.1 General

1.1.1 This standard covers material, design, fabrication, erection, and testing requirements for vertical, cylindrical, aboveground, closed- and open-top, welded steel storage tanks in various sizes and capacities for internal pressures approximating atmospheric pressure (internal pressure not exceeding the weight of the roof plates), except that a higher internal pressure is permitted when the additional requirements of Appendix F are met. This standard covers only tanks whose entire bottom is uniformly supported and only tanks in nonrefrigerated service that have a maximum operating temperature of 200°F (see 1.1.12).

1.1.2 This standard is designed to provide the petroleum industry with tanks of adequate safety and reasonable economy for use in the storage of petroleum and its products and other liquid products commonly handled and stored by the various branches of the industry. This standard does not present or establish a fixed series of allowable tank sizes; instead, it is intended to permit selection by the purchaser of whatever size tank may best meet his needs. This standard is for the convenience of purchasers and manufacturers in ordering, fabricating, and erecting tanks and is not intended to prohibit purchasers and manufacturers from purchasing or fabricating tanks that meet specifications other than those contained in this standard.

1.1.3 Appendix A provides for an alternative (and simplified) tank in which the stressed components, such as shell plates and reinforcing plates, are limited to a maximum of ½ inch nominal thickness, including any corrosion allowance, and to the minimum design metal temperatures stated in the appendix.

1.1.4 Appendix B contains recommendations for the design and construction of foundations under flat-bottom oil storage tanks.

1.1.5 Appendixes C and H present rules for special types of roofs for storage tanks. Appendix C provides requirements for pan-type, pontoon-type, and double-deck-type external floating roofs. Appendix H provides requirements for an internal floating roof in a tank that has a fixed roof at the top of the tank shell.

1.1.6 Appendix D provides a format for the preparation and submission of technical inquiries regarding this standard to the director of the API Refining Department.

1.1.7 Appendix E provides a recommended practice for the design of storage tanks subjected to seismic load when seismic design is specified by the purchaser.

1.1.8 Appendix F covers additional requirements for the design of tanks subject to a small internal pressure.

1.1.9 Appendix J presents requirements covering the complete shop assembly of tanks not more than 20 feet in diameter.

1.1.10 Appendix K provides an example of the application of the variable-design-point method to determine shell-plate thicknesses.

1.1.11 Appendix L provides data sheets to be used by the purchaser in ordering a storage tank and by the manufacturer upon completion of construction.

1.1.12 This standard applies to tanks with a maximum operating temperature of 200°F. When the requirements of Appendix M are fulfilled, a maximum operating temperature of 500°F is permitted.

1.1.13 Appendix N presents conditions for the use of materials that are on hand but are not completely identified by this standard as complying with any listed specification.

1.1.14 Appendix O contains basic recommendations for the design and construction of under-bottom connections for storage tanks.

1.1.15 Appendix P presents recommended basic requirements for the design of storage tank openings that conform to Table 3-8 and will be subjected to external piping loads.

1.2 Compliance

The manufacturer is responsible for complying with all the provisions of this standard. The purchaser may make any investigation necessary to satisfy himself of compliance by the manufacturer, and he may reject any material that does not comply with this standard.

It is urged that the purchaser avail himself of this right and furnish his own inspection independent of any supervisory inspection furnished by the manufacturer. The purchaser's inspector should closely follow all of the details of shop fabrication, field construction, and testing that affect the integrity and safety of the completed structure.

Advanced Engineering Services
300 EAST LELAND ROAD, #204, PITTSBURG, CA 94565
(510) 427-0871 FAX 427-7125

JOB 2336
DATE 8-1-94
BY JMS
CHK
PAGE 1 OF 56

SUBJECT:

FOUNDATION DESIGN CALCULATIONS FOR SUPPORT OF NEW 50,000 GAL ASPHALT TANK (#350) ON EXISTING PAD

SCHULLER - MANVILLE
PITTSBURG PLANT
PITTSBURG, CA

RECEIVED
SEP _ 8 1994
BUILDING DIVISION

FOUNDATION DESIGN PER API 650

INSPECTOR'S COPY

6/97

RECEIVED
SEP 12 1994
CONTRA COSTA COUNTY
BUILDING INSPECTION DEPARTMENT

Certificate of Compliance (Part 1 of 2)

CF-1

For Enforcement Agency Use Only

Project Title: [illegible] MAINLINE OFFICE REMODEL

Project Architect/Engineer: GILBERT A. FITCH & ASSOC.

Building Permit Number:

Project Location

City/Town: [illegible], CA

Climate Zone: 12

Documentation Author: GILBERT A. FITCH & ASSOC. 4-20-

Date

REGISTERED PROFESSIONAL ENGINEER G. A. FITCH No. 7546 Structural Option Registration Stamp

Plan Checked By

Date

Field Checked By

Date

Approved By

Date

Prescriptive Approach/Performance Approach Strategy

General

1	CEC Occupancy Type	054	
2	UBC Occupancy Group/Division	B-2	
3	Package Selected	A	
4	Gross Conditioned Floor Area	1020	ft²

Roof and Floors

5	Proposed Roof/Ceiling R_t (CF-2, CF-3)	R-19	hr-F-ft²/Btu
6	Required Roof/Ceiling R_t (CF-2)	9.52	hr-F-ft²/Btu
7	Proposed Exterior Floor R_t (CF-2, CF-3)	/	hr-F-ft²/Btu
8	Required Exterior Floor R_t (CF-2)	/	hr-F-ft²/Btu

Walls

9	Proposed Opaque Wall R_t (CF-2, CF-3)	R-11	hr-F-ft²/Btu
10	Wall Heat Capacity (CF-3)	>3.99	Btu/F-ft²
11	Required Opaque Wall R_t (CF-2)	7.52	hr-F-ft²/Btu

Glazing in Walls

12	Exterior Wall Area (CF-2)	12.16	ft²
13	Total Glazing Area (CF-2)	0	ft²
14	Proposed Total Percent (Line 13 / Line 12)	0	%
15	Average Total SC (CF-2)	0	
16	Allowed Total Glazing Percent	NONE	%
17	West Exterior Wall Area (CF-2)	N/A	ft²
18	West Glazing Area (CF-2)	N/A	ft²
19	Proposed West Percent (CF-2)	N/A	%
20	Average West SC (CF-2)	N/A	
21	Allowed West Glazing Percent	N/A	%

Glazing in Roof (CF-6)		Proposed	Allowed	
22	Skylight 1	N/A	N/A	ft²
23	Skylight 2			ft²
24	Skylight 3			ft²
25	Skylight 4			ft²
26	Skylight 5			ft²
27	Skylight 6			ft²
28	Skylight 7			ft²
29	Skylight 8			ft²

Lighting (See Part 2 for Additional Performance Specifications)

30	Proposed Adjusted LPD (CF-5)	1.49	Watts/ft²
31	Allowed LPD (CF-5)	1.50	Watts/ft²

HVAC (See Part 2 for Additional Performance Specifications) (EXISTING)

32	Performance Set Selected	N/A	
33	Proposed Fan Wattage Index (CF-4)		Watts/ft²
34	Allowed Fan Wattage Index		Watts/ft²
35	Proposed Cooling Power Index (CF-4)		Btuh/ft²
36	Allowed Cooling Power Index		Btuh/ft²
37	Proposed Heating Power Index (CF-4)		Btuh/ft²
38	Allowed Heating Power Index		Btuh/ft²

Performance Approach

Energy Budget (EXISTING)

1	CEC Occupancy Type	11/A	
2	UBC Occupancy Group/Division		
3	Conditioned Floor Area		ft²
4	Budget Table		
5	Allowed Energy Budget (WS-1A)		kBtu/yr-ft²

Calculated Annual Energy Consumption

6	Approved Calculation Method		
7	CEC Designation		
8	Multiplier		

Estimated Energy Use

9	Heating		kBtu/yr-ft²
10	Cooling		kBtu/yr-ft²
11	Fans		kBtu/yr-ft²
12	Lights		kBtu/yr-ft²
13	Miscellaneous Equipment		kBtu/yr-ft²
14	Total		kBtu/yr-ft²
15	Adj. Total Energy Use (line 8 x line 14)		kBtu/yr-ft²

Compliance Statement

General. The proposed building represented in this set of compliance documentation is consistent with the other compliance forms and worksheets, with the plans and specifications and with any other calculations or computer runs submitted with this permit application.

Performance Approach. (when applicable) The energy performance estimate presented on this form was calculated using the approved calculation method indicated above and with the CEC established fixed and restricted engineering inputs for the applicable climate zone and occupancy type.

Prescriptive Approach. (when applicable) The proposed building has been designed to meet the requirements of the Alternative Component Package indicated above for the appropriate occupancy type and climate zone.

Signed

Name/Title: GILBERT A. FITCH & ASSOC., INC.

Company

Address

City/State/Zip

Telephone

Calif. License Number

MICROFILM

Form Revised September 1986

Certificate of Compliance (Part 2 of 2)

CF-1

JOHNS MANVILLE OFFICE REMODEL
Project Title

For Enforcement Agency Use Only

GA FITCH & ASSOC. 4-1994
Documentation Author/Firm — Date

Checked By — Date

Both parts one and two of this Certificate of Compliance must be included with each building permit application for the above noted building and appear on the plans submitted for approval. The building features and requirements represented on the Certificate of Compliance are adequate to achieve compliance with the second generation nonresidential energy standards for the building referenced above. The building features and requirements are also adequate for any subsequent alterations, modifications or additions to the building.

Designer One

JOHN C. MONTGOMERY JR.
Name (Print)

GA FITCH & ASSOC, INC
Title/Company Name

1485 CONCORD AVE. CONCORD
Address

4-22-94
Signature — Date

Enforcement Agency Signature — Date

Designer Two

Name (Print)

Title/Company Name

Address

Signature — Date

Enforcement Agency Signature — Date

REGISTERED PROFESSIONAL ENGINEER
G. A. FITCH
No. 21546
EXP 9/30/96
CIVIL
STATE OF CALIFORNIA

Designer Three

Name (Print)

Title/Company Name

Address

Signature — Date

Enforcement Agency Signature — Date

Designer Four

Name (Print)

Title/Company Name

Address

Signature — Date

Enforcement Agency Signature — Date

Owner

Name (Print)

Title/Company Name

Address

Signature — Date

Enforcement Agency

Name (Print)

Title/Agency

Address

Additional Performance Approach Strategy Specifications

Lighting

HVAC

MICROFILM

Form Revised September 1986

JOB NO. 9402 | TITLE: STRUCTURAL CALCULATION | FOR: BUILDING @

E. 3rd & HARBOR ST.
PITTSBURG, CA

SCOPE = ENGINEERING WOOD BM. FOR REMOVING OF PARTITION WALL.

ASSUME = CEILING DEAD LOAD = 6.0 PSF
CEILING LIVE LOAD = 10.0 PSF

- BEAM

L = 16' max

TRIBUTARY WIDTH = 20' + 11' = 31'

W = (6 + 10) PSF x 31'/2 = 248 #/'

M = 7.941 ft-k

V = 1.98 #

4 x 12

Fb = 1290 PSI

Fv = 75 PSI

Actual = .52" = L/371 PSI

RECEIVED
MAY 3 1994
BUILDING DIVISION

REGISTERED PROFESSIONAL ENGINEER
G. A. FITCH
No. 7546
Exp 9/30/96
CIVIL
STATE OF CALIFORNIA

MICROFILM

GILBERT A. FITCH AND ASSOCIATES, INCORPORATED
2120 MT. DIABLO ST.
CONCORD, CALIFORNIA 94520
PHONE (510) 682-6234

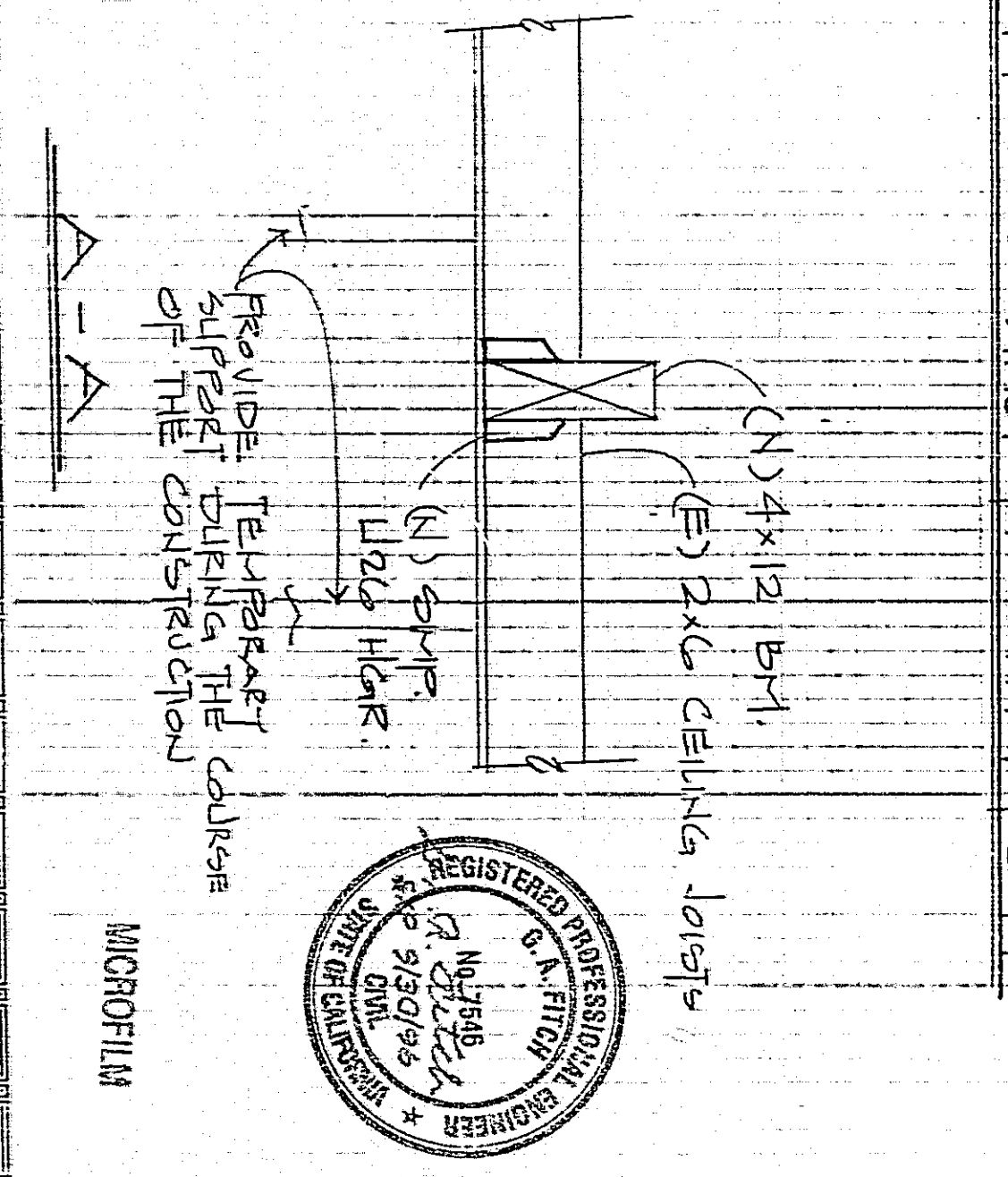
CALCULATED BY: [illegible] DATE: [illegible]
CHECKED BY: GAF DATE:
SCALE:

GILBERT A. FITCH AND ASSOCIATES,
INCORPORATED
2120 MT. DIABLO ST.
CONCORD, CALIFORNIA 94520
PHONE (510) 682-6234

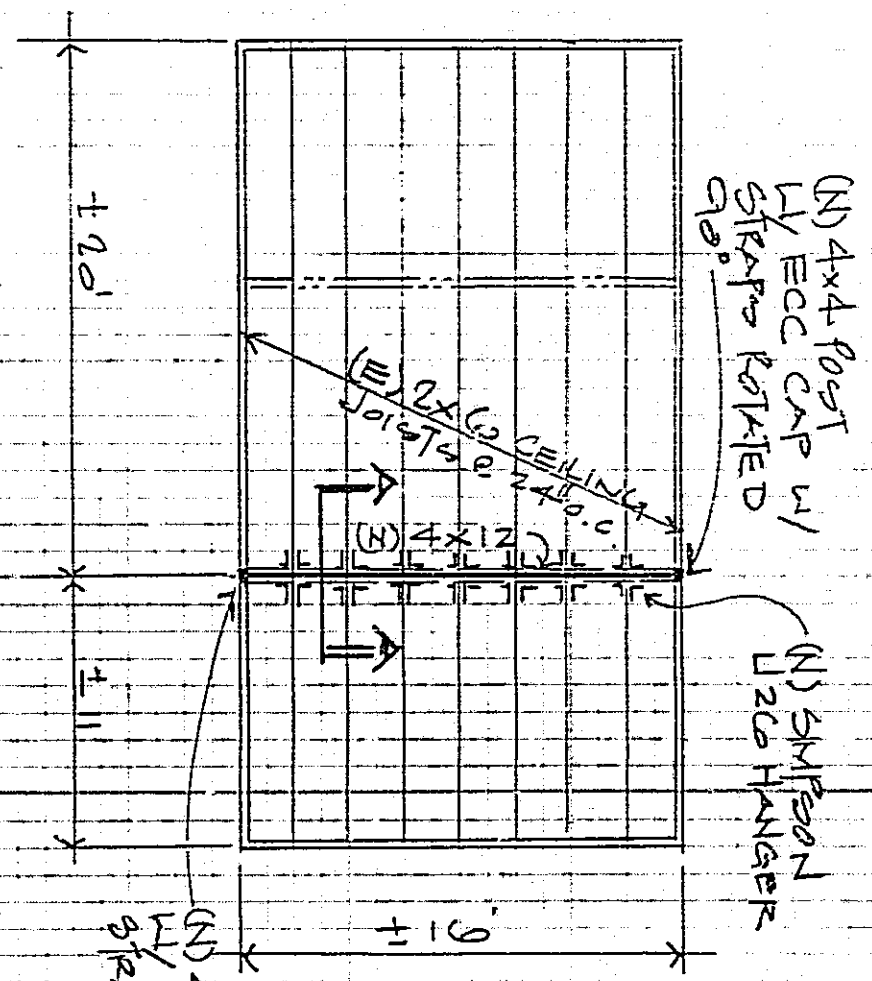
CALCULATED BY: _____ DATE: 4-30-95
CHECKED BY: _____ DATE: _____
SCALE: _____

JOB NO. 9402 SHEET

FOR: EAST 3rd & HARBOR ST.
PITTSBURG, CA



PARTIAL CEILING FRAMING PLAN



REGISTERED PROFESSIONAL ENGINEER
G. A. FITCH
No. 17546
Exp 5/30/95
CIVIL
STATE OF CALIFORNIA

MICROFILM

SHEET ___ OF ___

GILBERT A. FITCH & ASSOCIATES, INC.

CONSULTING CIVIL & STRUCTURAL ENGINEERING • SURVEYING • CUSTOM RESIDENTIAL DESIGN
2120 Mt. Diablo St., Concord, CA 94520 Phone: (510) 682-6234 Fax: (510) 682-5466

March 16, 1994

Mr. Joe Devito
Devito Construction

Re: Door opening @
3rd and Harbour Street
Pittsburg, CA
GAF #9402

Dear Mr. Devito:
This letter is to confirm our telephone conversation this morning in regarding to the above referenced project.

The structural design of a door opening to an existing block wall prepared by our office, dated 1/12/93 was for the support of gravity loads only. Therefore, this detail is acceptable for both reinforced and unreinforced block wall.

Please call if you have any questions.

Sincerely,

Gilbert A. Fitch & Associates, Inc.

Ting W. Yuan
Structural Engineer

MICROFILM

Fax 934-6411

JOB NO. 9402 | TITLE: STRUCTURAL CALCULATION | FOR: BUILDING C

Sec C

3rd & HARBOUR
PITTSBURG, CA

SCOPE: ENGINEERING NEW MAN DOOR OPENING 3'-0" WIDE x 6'-8" HIGH AT EXISTING WALL.

PER EXISTING STRUCTURAL PLAN PROVIDED TO US BY THE CLIENT, JOE DEVITO CONSTRUCTION, WE CONCLUDED THAT THE EXISTING BLDG IS A STEEL FRAMED STRUCTURE WITH 12" THICK CONCRETE IN-FILL. THEREFORE, THE DESIGN PRESENTED BELOW IS FOR GRAVITY LOADS ONLY.

ASSUME ROOF DEAD LOAD = 20.0 PSF
ROOF LIVE LOAD = 20.0 "
WALL Wt. (12" THICK) = 150.0 PSF

DESIGN NEW HEADER

L = 3'

$W = (20+20)psf \times \frac{5'}{2} + (150\,psf)(1') = 2.8^{k}/_{l}$

M = 3.15 'k

V = 4.2k

2 6x4x7/16

$f_b = 20.4$ ksi < $F_b = .6 \times 36 = 21.6$ ksi

$f_v = 2.1$ ksi < $F_v = .4 \times 36 = 14.4$ ksi O.K

GILBERT A. FITCH AND ASSOCIATES, INCORPORATED
2120 MT. DIABLO ST.
CONCORD, CALIFORNIA 94520
PHONE (510) 682-6234

CALCULATED BY: [illegible] DATE: 1-21-93
CHECKED BY: GAF DATE:
SCALE:

RECEIVED
JAN 19 1994
BUILDING DIVISION

MICROFILM

REGISTERED PROFESSIONAL ENGINEER
G. A. FITCH
No. 7545
CIVIL
STATE OF CALIFORNIA

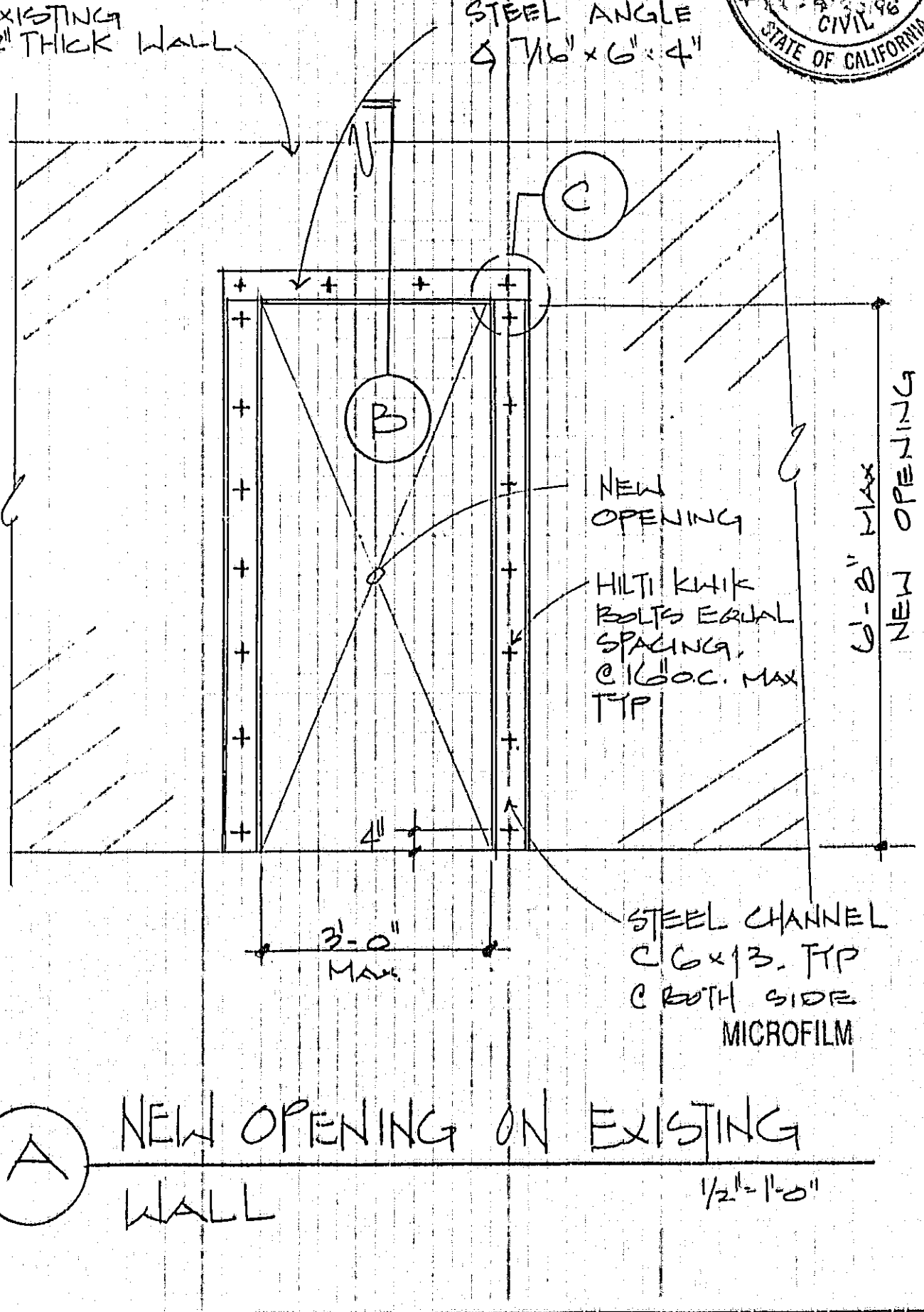
JOB NO. 9402 | TITLE: DETAIL | FOR: BUILDING @ 3rd & HABOUR

PITTSBURG, CA

NOTES

1. ALL DETAILS OF CONSTRUCTION MUST CONFORM WITH 1991 UNIFORM BUILDING CODE.
2. ALL STEEL SHAPES MUST HAVE $F_y = 36$ KSI.
3. NOTIFY THE ENGINEER IMMEDIATELY IF EXISTING CONDITION IS DIFFER FROM IT SHOWN.

REGISTERED PROFESSIONAL ENGINEER
G. A. FITCH
No. 7546
CIVIL
STATE OF CALIFORNIA



MICROFILM

A NEW OPENING ON EXISTING WALL

1/2"=1'-0"

CALCULATED BY: TWF DATE: 1/13/93
CHECKED BY: GAF DATE:
SCALE:

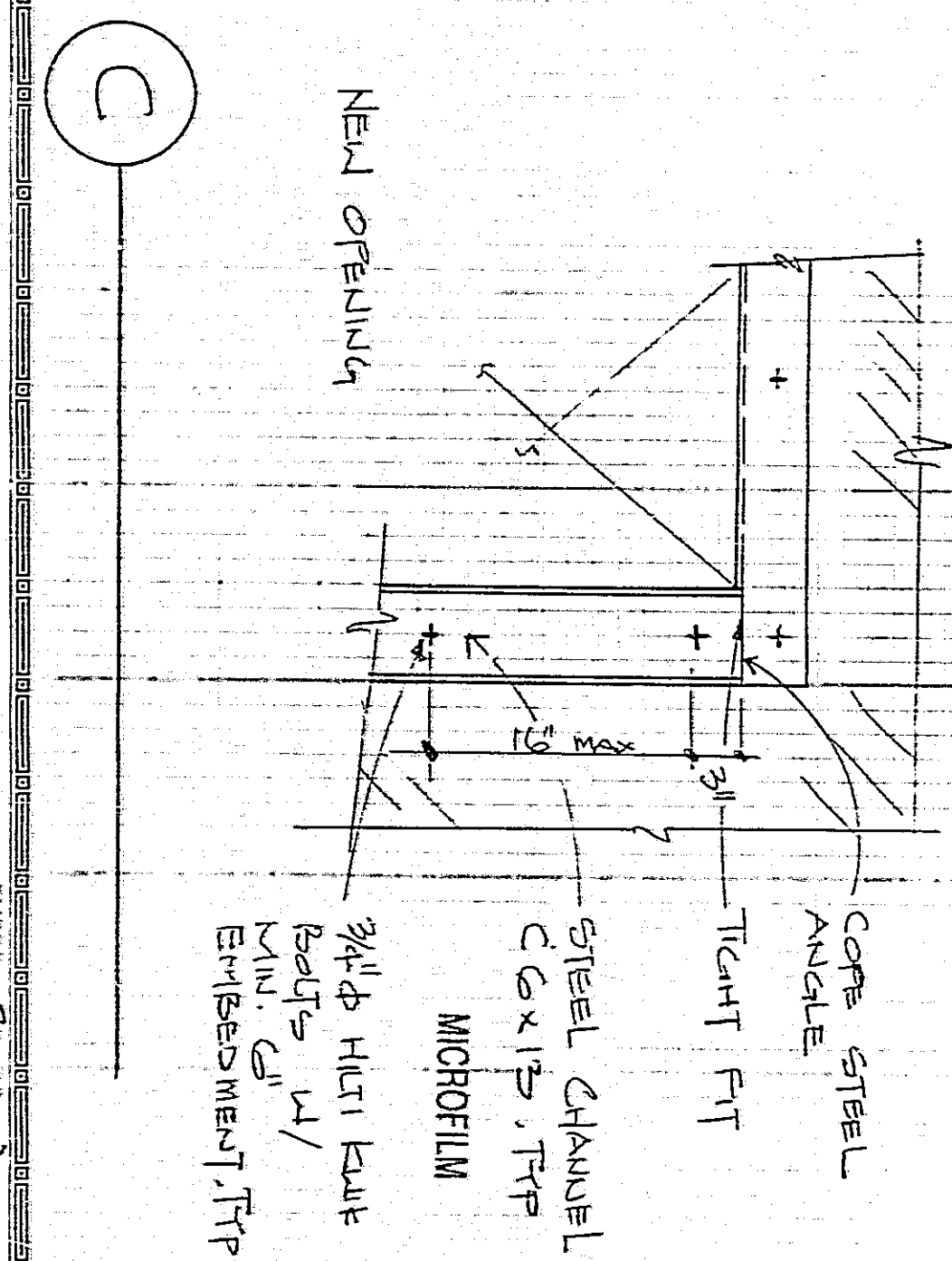
GILBERT A. FITCH AND ASSOCIATES, INCORPORATED
2120 MT. DIABLO ST.
CONCORD, CALIFORNIA 94520
PHONE (510) 682-6234

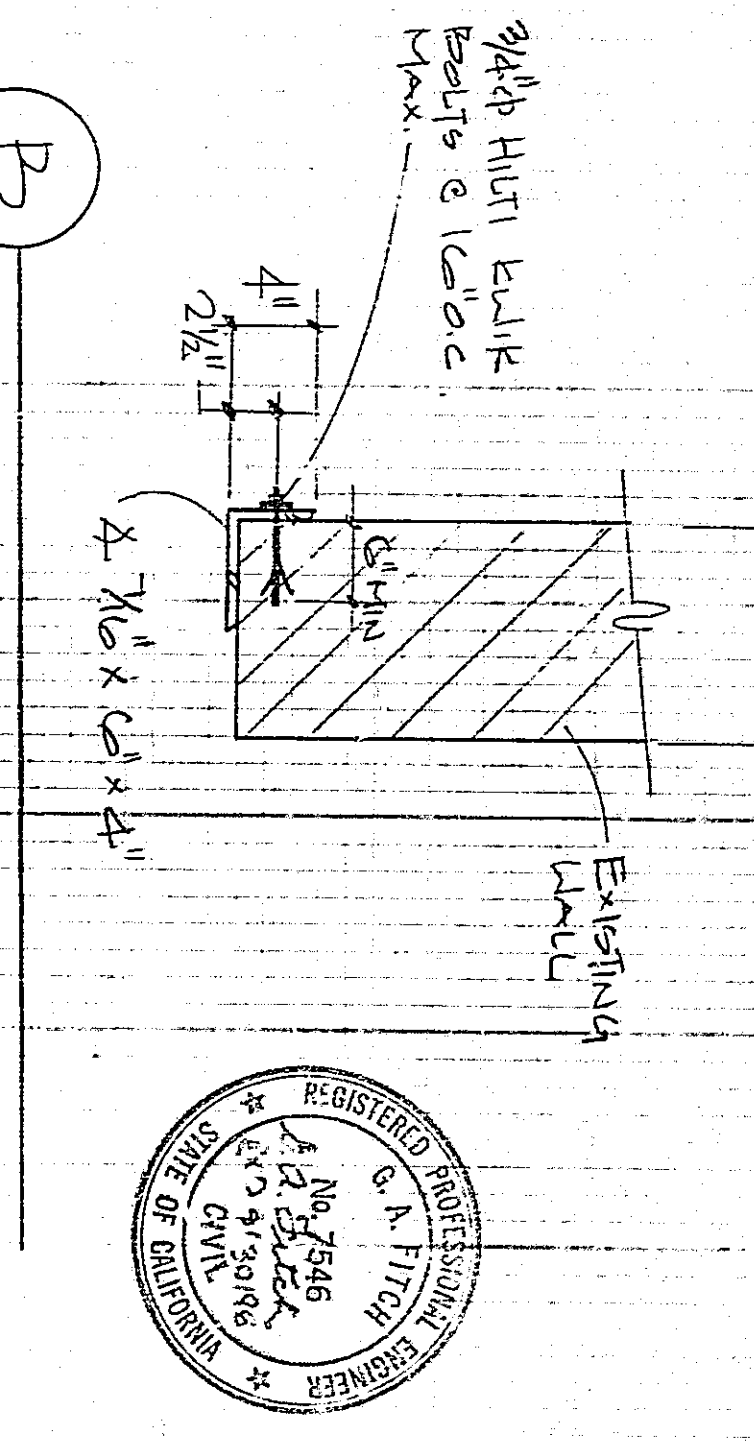
GILBERT A. FITCH AND ASSOCIATES,
INCORPORATED
2120 MT. DIABLO ST.
CONCORD, CALIFORNIA 94520
PHONE (510) 682-6234

CALCULATED BY: TWT DATE: 1/12/93
CHECKED BY: GAF DATE:
SCALE:

JOB NO. 9402 TITLE: DETAIL

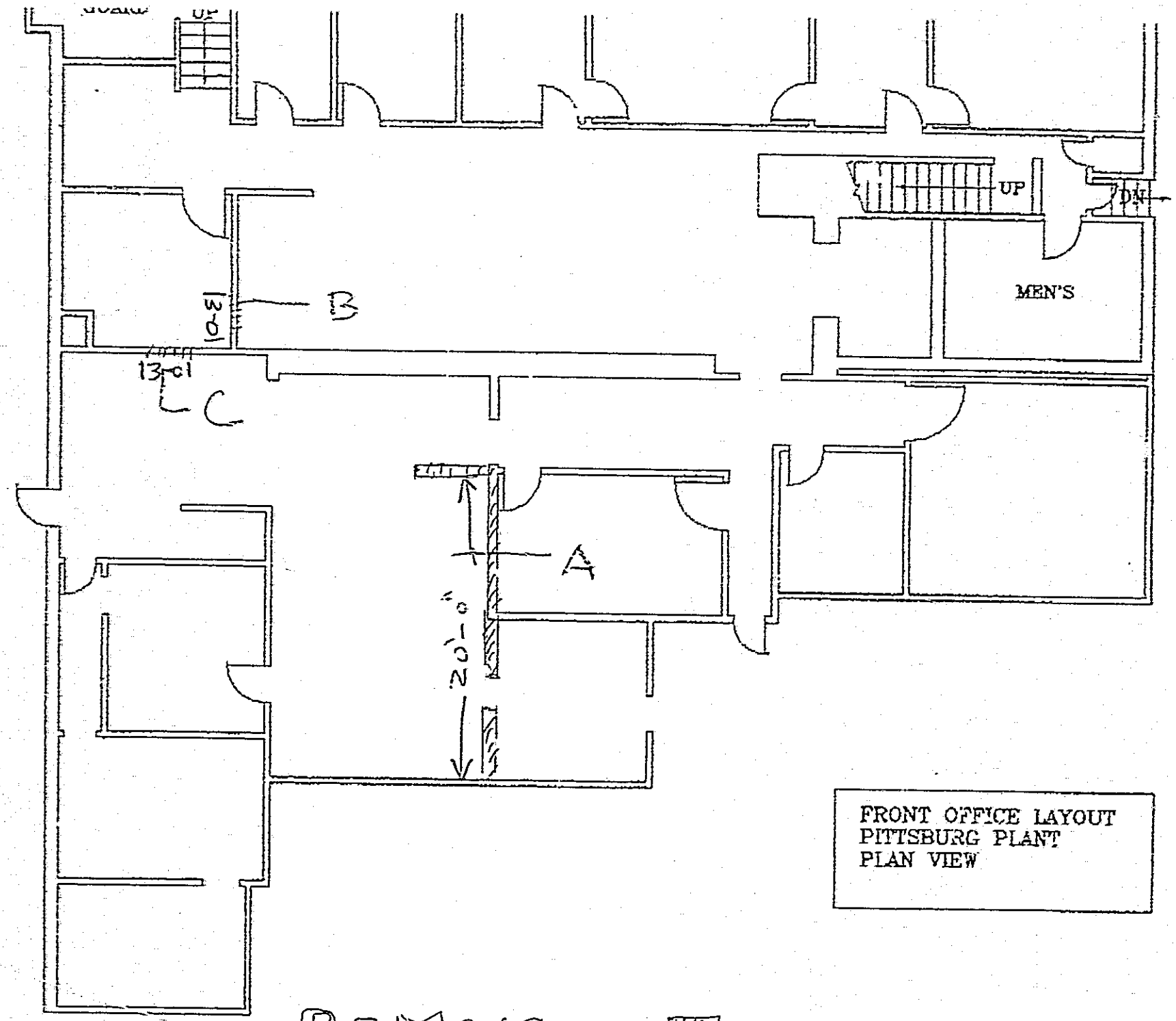
FOR: BUILDING B 3rd & HARBOR PITTSBURG, CA





REGISTERED PROFESSIONAL ENGINEER
G. A. FITCH
No. 7546
EXP 9/30/96
CIVIL
STATE OF CALIFORNIA

SHEET 22 OF 32



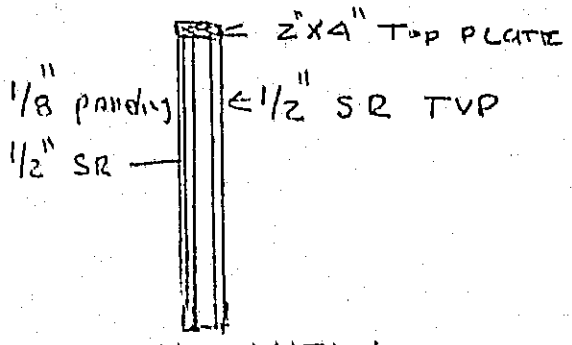
FRONT OFFICE LAYOUT
PITTSBURG PLANT
PLAN VIEW

MICROFILM

REMOVE — ///

Sec A

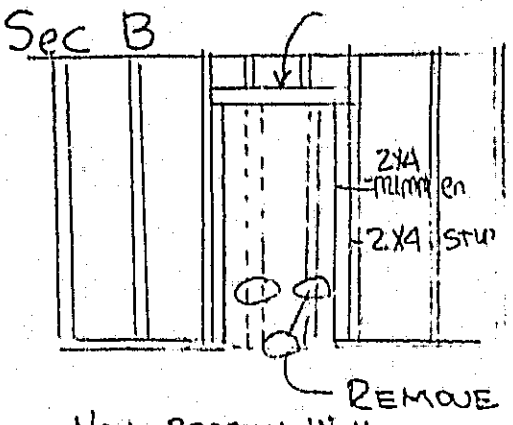
DEMO VIEW



END VIEW

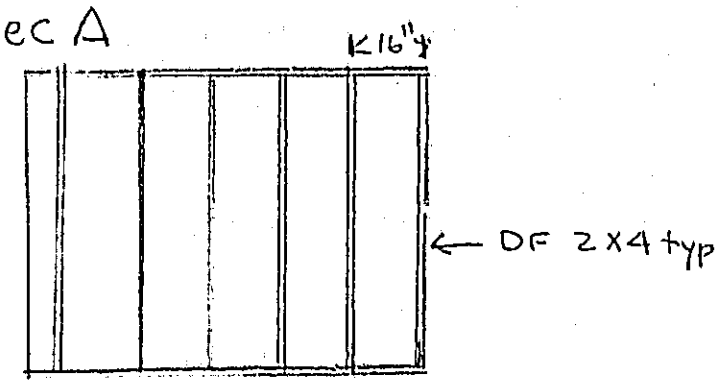
4X4 HEADER

Sec B



NON-BEARING Wall

Sec A



PARTICION WALL — NON BEARING
1/4"/ft

MICROFILM

Certificate of Occupancy

City of Pittsburg

Department of Building Inspection

This Certificate issued pursuant to the requirements of Section 306 of the Uniform Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the City regulating building construction or use. For the following:

Use Classification Office Tenant Improvement Occupancy Group B-2

Type Construction _____ Bldg. Permit No. 38401 Date 7/11/94 Use Zone _____

Owner of Building Mansville Schuller Address 420 E. Third Street, Pittsburg

Building Address 420 E. Third Street Locality Pittsburg, CA 94565

John P. Little

Building Official

By: Bill Sadler

Date: 5-17-95

POST IN A CONSPICUOUS PLACE

CITY OF PITTSBURG

P.O. Box 1518
65 Civic Avenue
Pittsburg, CA 94565
BUILDING DIVISION
439-4910

BUILDING
PERMIT – APPLICATION

Harriet Sheiner

BUILDING ADDRESS: [redacted] - 420 E 7th

073-052-02[illegible]

OWNER: [illegible]

CONTRACTOR: [illegible]

ARCHITECT

OWNER-BUILDER

WORKER'S COMPENSATION

[illegible] Signature of Applicant 2/24/95 Date

NOTICE TO APPLICANT: [illegible]

Date

LENDER: [illegible]

APPLICANT

I HEREBY CERTIFY THAT I HAVE READ THIS APPLICATION AND STATE THAT THE INFORMATION GIVEN IS TRUE AND CORRECT. I AGREE TO COMPLY WITH ALL LOCAL ORDINANCES AND STATE LAWS RELATING TO BUILDING CONSTRUCTION AND MAKE THIS STATEMENT UNDER PENALTY OF LAW. I HEREBY AUTHORIZE REPRESENTATIVES OF THIS JURISDICTION TO ENTER UPON THE ABOVE MENTIONED PROPERTY FOR INSPECTION PURPOSES. I AGREE THAT THIS PERMIT WILL EXPIRE BY LIMITATION IF WORK IS NOT STARTED IN 180 DAYS OR IF WORK IS ABANDONED FOR MORE THAN 180 DAYS. I DO NOT CONCEAL OR COVER ANY CONSTRUCTION UNTIL THE WORK IS INSPECTED AND THE INSPECTION IS RECORDED ON THE INSPECTION CARD. ALL INSPECTION REQUESTS ARE REQUIRED 24 HOURS IN ADVANCE OF THE INSPECTION.

Vicki Sheiner 2/24/95
Signature of Contractor Date

WORK TO BE PERFORMED

NEW	X REPAIR	ADDITION	
MOVE	ALTERATION	DEMOLITION	
OTHER			

DESCRIPTION: Tear off existing roofing
and install new roofing

MUNICIPAL CODE VIOLATIONS

FOR OFFICE USE ONLY

APPROVALS	DATE	INSP. SIGNATURE	APPROVALS	DATE	INSP. SIGNATURE
Foundations Forms			Ext. Lath		
Slab & Curbing			Int. Lath/ Sm Wall		
Floor Joist			Roofing		
Frame			Fence Gas Tested		
Insulation			Final Approval	5-19-95	

BUILDING DIVISION / Fee Schedule

Building Permit	$ 115.00
Plan Check	
Energy Plan Check	
S.M.I.	.50
Signalization	
Construction Water	
Sewer District	
School District	
Other	
Other	
CD RECEIPT NO.	14408
SD RECEIPT NO.	
SF RECEIPT NO.	
ISSUED BY:	LL

Relative Building Information

Size	
Valuation	$ 2459.00
Occupant Group	
Type of Const.	

APPROVED BY _____ DATE _____

PLANNING DIVISION

General Plan	
Zoning	
C.P. No.	
Var. No.	
Yards:	F RS LS R
Height	
Stories	
Parking Spaces	
A.R.C.	

APPROVED BY _____ DATE _____

ENGINEERING DIVISION

- ☐ Site Development Prm. #_____
- ☐ Encroachment Prm. #_____
- ☐ Grading Prm. #_____

APPROVED BY _____ DATE _____

FIRE DISTRICT

APPROVED BY _____ DATE _____
INSPECTOR'S CREW

E

CITY OF PITTSBURG

P.O. Box 1518
65 Civic Avenue
Pittsburg, CA 94565
BUILDING DIVISION
439-4910

PERMIT NO.

JUL 11 94 0384 01

BUILDING
PERMIT — APPLICATION

USE BLACK INK OR TYPE (Manville Schuyler)

OWNER

BUILDING ADDRESS: ~~300 E. Harbor~~ 420 E. 3rd St.
TRACT | LOT | APN: 073-050-001
NAME: Manville | PHONE: 427 2426
ADDRESS: ~~311 E. Harbor~~ | STATE | ZIP
CITY: Pittsburg

ARCH. ENGR.

NAME: Gilbert A Frair | LICENSE #: 682 6234
ADDRESS: 2120 Mt Diablo St | PHONE
CITY: Concord | STATE | ZIP

CONTRACTOR

STATE LICENSE # AND CLASS | PITTSBURG BUSINESS LICENSE #: 4173
CONTRACTOR'S NAME: Joseph DeVito Co. | PHONE: 932-3291
ADDRESS: 3180 Oak Grove Rd | PHONE: 932-6191
CITY: Walnut Creek | STATE: CA | ZIP: 94598

I hereby affirm that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5, Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License Law (Chapter 9 (commencing with Sec. 7000) of Div sion 3 of the business and Professions Code), or that he is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500).):

☐ I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale.)

☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License Law.).

I am exempt under Sec. _____ B&PC for this reason _____

Signature _____ Date _____

OWNER/BUILDER

WORKER'S COMPENSATION

I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Workers' Compensation insurance, or a copy thereof (Sec. 3800, Lab. C.)

Policy # _____ Company Name STATE FUND

☐ Certified copy is hereby furnished
☒ Certified copy is filed with the city building inspection division

Signature Joseph DeVito 5/3/94 Date

(This section need not be completed if the permit is for one hundred dollars ($100) or less.)
I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation Laws of California.

Signature _____ Date _____

NOTICE TO APPLICANT: If, after making this Certificate of Exemption, you should become subject to the Workers' Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked.

LENDER

I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Civ. C.)

LENDER'S NAME: -0-

LENDER'S ADDRESS

APPLICANT

I CERTIFY THAT I HAVE READ THIS APPLICATION AND STATE THAT THE INFORMATION GIVEN IS TURE AND CORRECT. I AGREE TO COMPLY WITH ALL LOCAL ORDINANCES AND STATE LAWS RELATING TO BUILDING CONSTRUCTION AND I MAKE THIS STATEMENT UNDER PENALTY OF LAW. I HEREBY AUTHORIZE REPRESENTATIVES OF THIS CITY/COUNTY TO ENTER UPON THE ABOVE MENTIONED PROPERTY FOR INSPECTION PURPOSES. NOTICE: IN THIS PERMIT WILL EXPIRE BY LIMITATION IF WORK IS NOT STARTED IN 180 DAYS OR IF WORK IS ABANDONED FOR MORE THAN 180 DAYS. DO NOT CONCEAL OR COVER ANY CONSTRUCTION UNTIL THE WORK IS INSPECTED AND THE INSPECTION IS RECORDED ON THE INSPECTION CARD. ALL INSPECTION REQUESTS ARE REQUIRED 24 HOURS IN ADVANCE OF THE INSPECTION.

x Joseph DeVito Signature of Contractor — Date 4/28/94

WORK TO BE PERFORMED

☐ NEW ☐ REPAIR ☒ ADDITION
☐ MOVE ☒ ALTERATION ☒ DEMOLITION
☐ OTHER

DESCRIPTION: Removal of 16 FEET of load bearing wall - remod of non-bearing - Install new non-bearing Wall &

MUNICIPAL CODE VIOLATION(S):

FOR OFFICE USE ONLY

APPROVALS	DATE	INSP. SIGNATURE	APPROVALS	DATE	INSP. SIGNATURE
Foundations Forms			Ext. Lath.	—	
Joists & Girders	EXIST		Int. Lath/ Dry Wall	5/11/94	RDJ
Floor Slab	—		Roofing	—	
Frame	7/28/94	RDJ	House No. Posted	—	
Insulation			Final Approval	11/2/94	RDJ

BUILDING DIVISION / Fee Schedule

Building Permit	$ ~~118.00~~
Plan Check	~~76.70~~
Energy Plan Check:	E/I
SMI:	2.10
Traffic Impact	
Construction Water	
Hwy #4 Traffic Mitigation	
Fire District	
Administration	
Water Meter	
CD RECEIPT NO	10815
FD RECEIPT NO	
SD / PUSD RECEIPT NO	
ISSUED BY	RD | AL

Relative Building Information

Size:	
Valuation:	10,000
Occupant Group:	
Type of Const.:	

APPROVED BY _____ DATE 7/11/94

PLANNING DIVISION

General Plan:	
Zoning:	R-7
U.P. No.:	
Var. No.:	
Yards:	F RS LS R
Height:	
Stories:	
Parking Spaces:	
A.R.C.:	

APPROVED BY _____ DATE 7/11/94

ENGINEERING DIVISION

☐ Site Development/Pmt. #_____
☐ Encroachment/Pmt. #_____
☐ Grading/Pmt #_____

APPROVED BY _____ DATE _____

FIRE DISTRICT

APPROVED BY _____ DATE _____

INSPECTORS COPY

CITY OF PITTSBURG

P.O. Box 1518
65 Civic Avenue
Pittsburg, CA 94565
PERMIT NO. *BUILDING DIVISION*
439-4910

JUL 11 94 0 3 8 4 0 2

ELECTRICAL
PERMIT — APPLICATION

Manville - Shuleva

BUILDING ADDRESS 402 E 3rd

OWNER
NAME Manville - Shuleva
ADDRESS 3rd & Harbor PHONE 432426
CITY Pittsburg STATE Ca ZIP 94565

CONTRACTOR
STATE LICENSE # AND CLASS 587108 PITTSBURG BUSINESS LICENSE # 4173
CONTRACTOR NAME Joseph b DeVito 934691
ADDRESS 3180 Oak Grove Rd PHONE
CITY Walnut Creek STATE Ca ZIP 94598

OWNER/BUILDER

I hereby affirm that I am exempt from the Contractor's License Law for the following reason (Sec 7031.5, Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License Law Chapter 9 (commencing with Sec 7000) of Division 3 of the business and Professions Code, or that he is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500):)

☐ I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure if not intended or offered for sale (Sec 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale.)

☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License Law.)

☐ I am exempt under Sec _____ B&PC for this reason _____

Signature _____ Date _____

LENDER

I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued (Sec 3097, Civ C.)

LENDERS NAME

LENDERS ADDRESS

WORKER'S COMPENSATION

I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Workers' Compensation Insurance, or a certified copy thereof (Sec 3800, Lab C.)

Policy # _____ Company Name State Fund

☐ Certified copy is hereby furnished.
☐ Certified copy is filed with the city building inspection division.

Signature Joseph DeVito Date 7/12/94

(This section need not be completed if the permit is for one hundred dollars ($100) or less.)

I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation Laws of California.

Signature _____ Date _____

NOTICE TO APPLICANT: If, after making this Certificate of Exemption, you should become subject to the Workers' Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked.

WORK TO BE PERFORMED

	EACH	NO.	FEE
New Residential Bldgs. & Pools			
1 & 2 - Family, Sq. Ft.		—	$
Multi-family Sq. Ft.		—	
Residential Swimming Pools			
Outlets: Light Switches & Receptacles			
First 20 #14 #18		10	
Additional		40	
Lighting Fixtures #16			
First 20		10	
Additional		23	
Fixed Appliances Not Over 1 HP			
Range ___ Heater ___ D.W. ___			
Oven ___ Dryer ___ W.M. ___			
Top ___ F.A.U. ___ W.H. ___			
Hood ___ Fan ___			
Disp. ___ A.C. ___			
Power Apparatus & Large Appliances			
Size & Type HP, KW, KVA, or KVAR			
___ Up to 1 Incl.			
___ Over 1 to 10 Incl.			
___ Over 10 to 50 Incl.			
___ Over 50 to 100 Incl.			
___ Over 100			
Services			
0 - 200 Amp. Under 600 V			
201 - 1000 Amp. Under 600 V			
Over 1000 Amp. or Over 600 V			
Temp. Power Pole & Appurtenances			
Sign with One Branch Circuit			
Additional Sign Branch Circuits			
(Other)	2	30	00
PERMIT ISSUING FEE			22 50
TOTAL FEE			52 50

This is an electrical permit when properly filled out, signed and validated. Permit void if work is not commenced within 180 days, or if work is stopped or abandoned for 180 days. All inspection requests are required 24 hours in advance of the inspection.

I acknowledge that I have read this application and state that the above is correct and agree to comply with all city and state laws regulating electrical wiring.

I am properly registered and/or licensed as required by the City of Pittsburg and State of California or I am the legal owner of the above described residential property.

Permittee's Signature Joseph DeVito

FOR OFFICE USE ONLY

INSPECTION RECORD

APPROVALS	DATE	INSPECTOR'S SIGNATURE
Temp. Power Pole		
Underslab Work		
Rough Conduit	7/28/94	RED
Wiring	7/28/94	RED
Fixtures	✓	
Power Authorized	✓	
Utility Co. Notified	✓	
FINAL	11/2/94	RED

CD Receipt No. _____

APPROVED BY _____

ISSUED BY _____

INSPECTOR'S COPY

(E)

CITY OF PITTSBURG

P.O. Box 1518
65 Civic Avenue
Pittsburg, CA 94565
BUILDING DIVISION
439-4910

ISSUED PERMIT NO.
JUL 12 94 0 3 8 4 0 6

BUILDING
PERMIT — APPLICATION

USE BLACK INK OR TYPE (John Manville)

BUILDING ADDRESS ~~3rd & Harbor~~ 470 E. 3rd St.

TRACT | LOT | APN

OWNER
NAME John Manville - Schuleen Int
ADDRESS ~~3rd & Harbor~~ PHONE 427-~~2324~~ 3427
CITY Pittsburg STATE C ZIP 94565

ARCH. ENGR.
NAME Gilbert Fitch LICENSE #
ADDRESS 2120 Mt Diablo ST PHONE
CITY Concord STATE CA ZIP 94520

CONTRACTOR
STATE LICENSE # AND CLASS PITTSBURG BUSINESS LICENSE # 41713 1934
CONTRACTOR NAME Joseph D. DeVito Const. 329
ADDRESS 3180 OAK GROVE Rd PHONE (938-4162
CITY Walnut Creek STATE Ca ZIP 94598

I hereby affirm that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5, Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License Law Chapter 9 (commencing with Sec. 7000) of Division 3 of the Business and Professions Code, or that he is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500):)

OWNER/BUILDER
☐ I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If, however, a building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale.)
☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License Law.)
☐ I am exempt under Sec. _____ B&PC for this reason _____

Signature _____ Date _____

WORKER'S COMPENSATION
I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Workers' Compensation Insurance, or a certified copy thereof (Sec. 3800, Lab. C.)
Policy # _____ Company Name State Fund
☐ Certified copy is hereby furnished.
☐ Certified copy is filed with the city building inspection division
Signature Joseph DeVito 1/18/94 Date
(This section need not be completed if the permit is for one hundred dollars ($100) or less.)
I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation Laws of California.
Signature _____ Date _____
NOTICE TO APPLICANT: If, after making this Certificate of Exemption, you should become subject to the Workers' Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked.

LENDER
I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Civ. C.)
LENDERS NAME. -0-
LENDERS ADDRESS

APPLICANT
I CERTIFY THAT I HAVE READ THIS APPLICATION AND STATE THAT THE INFORMATION GIVEN IS TURE AND CORRECT. I AGREE TO COMPLY WITH ALL LOCAL ORDINANCES AND STATE LAWS RELATING TO BUILDING CONSTRUCTION AND I MAKE THIS STATEMENT UNDER PENALTY OF LAW. I HEREBY AUTHORIZE REPRESENTATIVES OF THIS CITY/COUNTY TO ENTER UPON THE ABOVE MENTIONED PROPERTY FOR INSPECTION PURPOSES. NOTICE: IF THIS PERMIT WILL EXPIRE BY LIMITATION IF WORK IS NOT STARTED IN 180 DAYS OR IF WORK IS ABANDONED FOR MORE THAN 180 DAYS. DO NOT CONCEAL OR COVER ANY CONSTRUCTION UNTIL THE WORK IS INSPECTED AND THE INSPECTION IS RECORDED ON THE INSPECTION CARD. ALL INSPECTION REQUESTS ARE REQUIRED 24 HOURS IN ADVANCE OF THE INSPECTION.
X Joseph DeVito Date 1/18/94
Signature of Contractor

WORK TO BE PERFORMED
☐ NEW ☐ REPAIR ☐ ADDITION
☐ MOVE ☒ ALTERATION ☒ DEMOLITION
☐ OTHER
DESCRIPTION: cutting in 2 man Doors and removing 28 ft. of none bearing wall partitions
MUNICIPAL CODE VIOLATIONS:

FOR OFFICE USE ONLY

APPROVALS	DATE	INSP. SIGNATURE	APPROVALS	DATE	INSP. SIGNATURE
Foundations Forms			Ext. Lath.		
Joists & Girders			Int. Lath/ Dry Wall		
Floor Slab			Roofing		
Frame	3/8/94	CJD	House No. Posted		
Insulation			Final Approval	3/8/94	CJD

BUILDING DIVISION / Fee Schedule

Building Permit	$ 91.00
Plan Check:	Pd ✓ 59.15
Energy Plan Check:	
S.M.I.:	.50
Traffic Impact	
Construction Water:	
Hwy #4 Traffic Mitigation	
Fire District	
Administration	
Water Meter	
CD RECEIPT NO.:	PC 8247 / 1/19/94
FD RECEIPT NO.:	
SD/PUSD RECEIPT NO.:	
ISSUED BY:	

Relative Building Information

Size:	
Valuation:	5,000
Occupant Group:	
Type of Const.:	

J. Little 3-21-94
APPROVED BY DATE

PLANNING DIVISION

General Plan:
Zoning:
U.P. No.:
Var. No.:
Yards: F RS LS R
Height:
Stories:
Parking Spaces:
A.R.C.:

APPROVED BY DATE

ENGINEERING DIVISION

☐ Site Development/Pmt. #
☐ Encrochment/Pmt. #
☐ Grading/Pmt. #

APPROVED BY DATE

FIRE DISTRICT

APPROVED BY DATE

INSPECTORS COPY

7501

CITY OF PITTSBURG

P.O. Box 1518
65 Civic Avenue
Pittsburg, CA 94565
BUILDING DIVISION
439-4910

PERMIT NO.
NOV 18 93 0 0 7 5 9 0

BUILDING
PERMIT — APPLICATION

USE BLACK INK OR TYPE

BUILDING ADDRESS 420 EAST THIRD & ~~HARBOR~~ SCHULLER
TRACT LOT APN

OWNER
NAME: SCHULLER MANVILLE PLANT
ADDRESS: EAST THIRD & HARBOR PHONE
CITY: Pittsburg STATE: CAL ZIP: 94565

ARCH. ENGR.
NAME LICENSE #
ADDRESS PHONE
CITY STATE ZIP

CONTRACTOR
STATE LICENSE # AND CLASS
PITTSBURG BUSINESS LICENSE #
CONTRACTOR NAME
ADDRESS PHONE
CITY STATE ZIP

OWNER/BUILDER

I hereby affirm that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5, Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License Law Chapter 9 (commencing with Sec. 7000) of Division 3 of the business and Professions Code, or that he is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500)):

☐ I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure if not intended or offered for sale (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale.).

☒ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License Law.).

☐ I am exempt under Sec. _____ B.&P.C. for the reason _____

(X) Mark S. Williams 8/21/93
Signature Date

WORKER'S COMPENSATION

I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Workers' Compensation Insurance, or a certified copy thereof (Sec. 3800, Lab. C).

Policy # _____ Company Name _____

☐☐ Certified copy is hereby furnished.
☐ Certified copy is filed with the city building inspection division.

X _____
Signature Date

(This section need not be completed if the permit is for one hundred dollars ($100) or less.)

I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation Laws of California.

_____
Signature Date

NOTICE TO APPLICANT: If, after making this Certificate of Exemption, you should become subject to the Workers' Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked.

LENDER

I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Civ. C.)

LENDERS NAME _____

LENDERS ADDRESS _____

APPLICANT

I CERTIFY THAT I HAVE READ THIS APPLICATION AND STATE THAT THE INFORMATION GIVEN IS TURE AND CORRECT. I AGREE TO COMPLY WITH ALL LOCAL ORDINANCES AND STATE LAWS RELATING TO BUILDING CONSTRUCTION AND I MAKE THIS STATEMENT UNDER PENALTY OF LAW. I HEREBY AUTHORIZE REPRESENTATIVES OF THIS CITY/COUNTY TO ENTER UPON THE ABOVE MENTIONED PROPERTY FOR INSPECTION PURPOSES. NOTICE!! THIS PERMIT WILL EXPIRE BY LIMITATION IF WORK IS NOT STARTED IN 180 DAYS OR IF WORK IS ABANDONED FOR MORE THAN 180 DAYS. DO NOT CONCEAL OR COVER ANY CONSTRUCTION UNTIL THE WORK IS INSPECTED AND THE INSPECTION IS RECORDED ON THE INSPECTION CARD. ALL INSPECTION REQUESTS ARE REQUIRED 24 HOURS IN ADVANCE OF THE INSPECTION.

(X) _____ Date _____
Signature of Contractor

WORK TO BE PERFORMED

☒ NEW ☐ REPAIR ☐ ADDITION
☐ MOVE ☒ ALTERATION ☐ DEMOLITION
☐ OTHER Ind. Alt.

DESCRIPTION: Process equipment for "NEW Asphalt paving ability" at Manville - Schuller. /DLD

MUNICIPAL CODE VIOLATIONS: STORAGE ONLY

FOR OFFICE USE ONLY

APPROVALS	DATE	INSP. SIGNATURE	APPROVALS	DATE	INSP. SIGNATURE
Foundations Forms			Ext. Lath.		
Joists & Girders			Int. Lath/ Dry Wall		
Floor Slab			Roofing	EXPIRED	
Frame			House No. Posted	NO WORK DONE	
Insulation			Final Approval	4-29-96	

BUILDING DIVISION / Fee Schedule

Building Permit:	$ 1,258.80
Plan Check:	✓ 818.22
Energy Plan Check:	?
S.M.I.:	42.26
Traffic Impact	0
Construction Water:	0
Hwy #4 Traffic Mitigation	0
Fire District	0
Administration	0
Water Meter	0
CD RECEIPT NO.:	PC 6474/7623
FD RECEIPT NO.:	
SD/PUSD RECEIPT NO.:	
ISSUED BY:	P.K.

Relative Building Information

Size:	
Valuation:	$ 201,240.00
Occupant Group:	B-4
Type of Const.:	

J. Little 11-16-93
APPROVED BY DATE

PLANNING DIVISION

General Plan:	
Zoning:	
U.P. No.:	
Var. No.:	
Yards:	F RS LS R
Height:	
Stories:	
Parking Spaces:	
A.R.C.:	Appd by PC 7/13/93

APPROVED BY 11-16-93 DATE

ENGINEERING DIVISION

☐ Site Development/Pmt. #_____
☐ Encrochment/Pmt. #_____
☐ Grading/Pmt. #_____

D.S. by J.D.H. 11/16/93
APPROVED BY DATE

FIRE DISTRICT

ok Per Ramy T. Rende 11-16-93
APPROVED BY DATE

INSPECTORS COPY

CITY OF PITTSBURG

P.O. Box 1518
65 Civic Avenue
Pittsburg, CA 94565
BUILDING DIVISION
439-4910

ISSUED-PERMIT NO.
OCT 17 95 0 4 0 7 0 4

ELECTRICAL
PERMIT — APPLICATION

BUILDING ADDRESS
420 E. 3RD ST.

OWNER
NAME: SCHULLER INT'L, INC.
ADDRESS: E. 3RD & HARBOR STS. PHONE: (510) 432-6426
CITY: PITTSBURG STATE: CA. ZIP: 94565

CONTRACTOR
STATE LICENSE AND CLASS: 407603 C10 PITTSBURG BUSINESS LICENSE #: ~~[illegible]~~ 3/1551
CONTRACTOR NAME: MORRIS Elec. Company
ADDRESS: 2346-B MERCANTILE DR. PHONE: 635-6134
CITY: RANCHO CORDOVA STATE: CA ZIP: 95742

OWNER/BUILDER

I hereby affirm that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5, Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License Law Chapter 9 (commencing with Sec. 7000) of Division 3 of the business and Professions Code, or that he is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500)):

☐ I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale.)

☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License Law.).

☐ I am exempt under Sec. _____ B & P.C. for this reason _____

Signature _____ Date _____

LENDER

I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Civ. C.).

LENDERS NAME _____

LENDERS ADDRESS _____

WORKER'S COMPENSATION

I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Workers' Compensation Insurance, or a certified copy thereof (Sec. 3800, Lab. C.)

Policy # WCP34777E Company Name Sup. Nat.

☐ Certified copy is hereby furnished.
☐ Certified copy is filed with the city building inspection division.

Signature _____ Date 10/16/95

(This section need not be completed if the permit is for one hundred dollars ($100) or less.)

I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation Laws of California.

Signature _____ Date _____

NOTICE TO APPLICANT: If, after making this Certificate of Exemption, you should become subject to the Workers' Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked.

WORK TO BE PERFORMED

	EACH	NO.	FEE
New Residential Bldgs. & Pools			
1 & 2 - Family, Sq. Ft. _____		—	$
Multi-family Sq. Ft. _____		—	
Residential Swimming Pools			
Outlets: Light Switches & Receptacles			
First 20			
Additional			
Lighting Fixtures			
First 20			
Additional			
Fixed Appliances Not Over 1 HP			
Range ____ Heater ____ D.W. ____			
Oven ____ Dryer ____ W.M. ____			
Top ____ FAU ____ W.H. ____			
Hood ____ Fan ____			
Disp. ____ A.C. ____			
Power Apparatus & Large Appliances			
Size & Type HP, KW, KVA, or KVAR			
____ Up to 1 Incl.			
____ Over 1 to 10 Incl.			
____ Over 10 to 50 Incl.			
____ Over 50 to 100 Incl.			
____ Over 100			
Services			
0 - 200 Amp. Under 600 V			
201 - 1000 Amp. Under 600 V			
Over 1000 Amp. or Over 600 V			
Temp. Power Pole & Appurtenances			
Sign with One Branch Circuit			
Additional Sign Branch Circuits			
(Other) _____			
#3@25.50			915.60
			228.90
			1144.50
PERMIT ISSUING FEE			20.00
TOTAL FEE			1,164.50

This is an electrical permit when properly filled out, signed and validated. Permit void if work is not commenced within 180 days, or if work is stopped or abandoned for 180 days. All inspection requests are required 24 hours in advance of the inspection.

I acknowledge that I have read this application and state that the above is correct and agree to comply with all city and state laws regulating electrical wiring.

I am properly registered and/or licensed as required by the City of Pittsburg and State of California or I am the legal owner of the above described residential property.

Permittee's Signature _____

FOR OFFICE USE ONLY

INSPECTION RECORD

Based on Project Cost of $123,700.00 - Consolidate electrical to one main service.

APPROVALS	DATE	INSPECTOR'S SIGNATURE
Temp. Power Pole		
Underslab Work		
Rough Conduit		
Wiring		
Fixtures		
Power Authorized		
Utility Co. Notified	11/29/95	
FINAL		

CD Receipt No.: 34907

APPROVED BY: _____

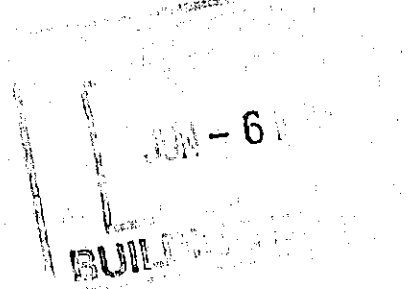
ISSUED BY: P.R.

INSPECTOR'S COPY

S|C|H|U|L|L|E|R

Roofing Systems

June 6, 1995



Mr. John Little
Chief Building Official - City of Pittsburg
65 Civic Avenue
Pittsburg, CA 94565

Dear Mr. Little,

The Schuller International, Inc. (Schuller) facility in Pittsburg is planning on consolidating its main electrical service from two feeds into one. Doing so will allow the plant to take advantage of its size and receive power at a transmission rate, thereby reducing electrical utility costs. In addition, the modification will allow the plant to take early advantage of future saving opportunities such as retail wheeling. The plant has enjoined the help of Pacific Gas and Electric (PG&E) and EETS, a professional engineering and field service company, to complete the transition. PG&E will provide labor to make the tie-in to the main after all other preparatory work has been completed. EETS has been contracted to design and provide specifications for the new plant electrical service. At this time a general contractor has not yet been chosen to provide the labor and materials to implement the changes.

Currently, the plant receives power from PG&E at two points, at the bank of transformers along Harbor Street and at the bank of transformers at the southwest corner of Building #4. By removing the three (3) existing single-phase transformers along Harbor Street (circa 1910) and installing one (1) three-phase transformer and meter set to the south of the existing pad, power will be fed from PG&E to the new transformer. The new transformer will then feed the bank of transformers at the southwest corner of Building #4. It has been determined to be cost effective to replace the existing transformers along Harbor Street with a single new transformer, as the circa 1910 transformers are projected to have little useful life left.

Enclosed please find three (3) copies of the plans for the proposed new electrical service as prepared by EETS. At this time PG&E has reviewed a copy of the plans and specifications.

If you have any questions regarding this project, I may be reached at (510) 427-2427.

Sincerely,

Joseph G. Duszka

Joseph G. Duszka
Plant Engineer

East Third and Harbor Streets P.O. Box 591 Pittsburg, CA 94565 Tel: 510-432-6426 Fax: 510-427-2409

engineers · technicians inc.
a professional engineering & field service company
p.o. box 1075 · 10725 fair oaks blvd., suite b · fair oaks, ca. 95628 (916) 965-1312
fax 965-1442

SCHULLER-PITTSBURG
SHORT CIRCUIT AND COORDINATION STUDY

RECEIVED
JUL 13 1995
BUILDING DIVISION

RECEIVED
JUN 22 1995
LINHART PETERSEN POWERS ASSOCIATES

PLAN REVIEW APPROVAL
JUL 11 1995
LINHART PETERSEN POWERS ASSOCIATES

PREPARED BY MICHAEL F. BREGAR, P.E.
EETS JOB NO. 95038
JUNE, 1995

REGISTERED PROFESSIONAL ENGINEER
MICHAEL F. BREGAR
10246
Electrical Engineer
STATE OF CALIFORNIA

EXPIRES AUG 30 1996

EETS inc.
engineers · technicians
a professional engineering & field service company
p.o. box 1075 · 10725 fair oaks blvd., suite b · fair oaks, ca. 95628 (916) 965-1312
fax 965-1442

SCHULLER INTERNATIONAL, INC.-ROOFING SYSTEMS
21kV SERVICE EQUIPMENT PROJECT
SPECIFICATION

RECEIVED
JUL 13 1995
BUILDING DIVISION

JUN - 6 1995
BUILDING DIVISION

PLAN REVIEW APPROVAL
JUL 11 1995
LINHART PETERSEN POWERS ASSOCIATES

RECEIVED
JUN 8 1995
LINHART PETERSEN POWERS ASSOCIATES

EETS REF. NO. 95038-E
MAY, 1995

PREPARED BY:
MICHAEL F. BREGAR, P.E.
E10246 (Exp. 9-30-96)

ADDITIONAL INSPECTION RECORD

STREET ADDRESS

PERMIT NUMBER

TYPE OF INSPECTION:	DATE OF INSPECTION:	INSPECTOR:
TRENCH @ BOX #1	1/3/96	RJD
TRENCH CONDUIT @ 300' SOUTH FROM BOX #1	1/4/96	RJD
ALL CONDUIT UNDER BOX #1	1/5/96	RJD
SLABS/FIGS BOX #1	1/8/96	RJD
NORTH OF BOX #1	1/11/96	RJD

INSPECTOR'S NOTES AND COMMENTS:

Advanced Engineering Services
300 EAST LELAND ROAD, #204, PITTSBURG, CA 94565
(510) 427-0871 FAX 427-7125

JOB 2249
DATE 8/16/93
BY JMS
CHK
PAGE 1 OF

SUBJECT:

REVISION 1 9/21/93 PER PLANCHECK
(REVISED PAGE 3,

STRUCTURAL CALCULATIONS

FOR

SUPPORT & BRACING FOR

NEW ASPHALT TANKS & LINE

MANSVILLE - SCHULLER PLANT

EAST THIRD & HARBOR STREET

P.O. BOX 591

PITTSBURG, CA 9456

PLAN REVIEW STRUCTURAL
NOV 17 1993
LINHART PETERSEN POWERS ASSOCIATES

APPROVED PLANS CITY OF PITTSBURG NOV 16 1993 PLANS TO REMAIN ON JOB SITE AT ALL TIMES

RECEIVED SEP - 7 1993 BUILDING DIVISION

REGISTERED PROFESSIONAL ENGINEER JOHN MICHAEL SIINO C 044190 Exp. CIVIL STATE OF CALIFORNIA

SEP. 21 1993

CONTACT: MR. MICHAEL MONK, NESTE
(510) 427-2414

SUMMARY OF FINDINGS:

1) EXISTING FOUNDATION & TANKS FOR ASPHALT STORAGE O.K.

2) ADD'L PIPE SUPPORT STANCHIONS ARE REQ'D

3) EXIST'G ROOF TRUSSES SUPPORTING RING ASSY'S ARE O.K. ADD'L STRESSES & DEFLECTIONS ARE NEGLIGIBLE.

4) L4X3X1/4 BEAMS SPANNING BETWEEN ROOF TRUSSES IS OVERSTRESSED & REQUIRES REINFORCEMENT.

5) DIAGONAL BRACING OF STEEL RINGS TO TRUSSES IS REQ'D. USE SINGLE L2X2X1/4 EACH DIRECTION.

Advanced Engineering Services
300 East Leland Road, Suite 204, Pittsburg, CA 94565
(510) 427-0871 FAX 427-7125

November 3, 1993 Ltr No. 2249-1

Mr. John Little
Chief Building Official
City of Pittsburg
Civic Center
Pittsburg, CA 94565

Subject: Responces to Plan Check Comments dated October 6, 1993 for the Expanded Asphalt Making Ability at the Pittsburg Manville Plant.

Dear Mr. Little:

The following are responses to the plan check comments prepared by LLPA dated 10/06/93:

1. The building size is approximately 520 feet by 240 feet (122,900 square feet in area).

2. The building is of Type III Construction and Group B, Division 4 Occupancy.

3. The Occupant Load is 500. Total Occupancy is 122,900sf/500 = 246.

4. According to the plant manager the building is completely sprinklered with 1-inch lines and the fire fighting systems have been reviewed and approved by the Fire Marshal.

5. Locations of equipment are noted in the plans.

Please note that it is not commonly our practice to be involved in architectural matters such as defining occupancy, etc. We are only involved in this matter in an effort to expedite this permit for the benefit of the plant employees and the City of Pittsburg.

Please call us if you have any questions or require additional information.

Very Truly Yours,

Advanced Engineering Services

APPROVED PLANS
CITY OF PITTSBURG
NOV 16 1993
PLANS TO REMAIN ON
JOB SITE AT ALL TIMES

John M. Siino, P.E.
Consulting Engineer

Exp 6/97
CIVIL
11/4/93

Advanced Engineering Services
300 East Leland Road, Suite 204, Pittsburg, CA 94565
(510) 427-0871 FAX 427-7125

November 3, 1993 Ltr No. 2249-1

Mr. John Little
Chief Building Official
City of Pittsburg
Civic Center
Pittsburg, CA 94565

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Please call us if you have any questions or require additional information.

Very Truly Yours,

Advanced Engineering Services

REGISTERED PROFESSIONAL ENGINEER JOHN MICHAEL SIINO C 044350 Exp. 6/97 CIVIL STATE OF CALIFORNIA

John M. Siino, P.E.
Consulting Engineer

11/4/93

APPROVED PLANS CITY OF PITTSBURG NOV 16 1993 PLANS TO REMAIN ON JOB SITE AT ALL TIMES

EETS engineers & technicians inc.
a professional engineering & field service company
p.o. box 1075 • 10725 fair oaks blvd., suite b • fair oaks, ca. 95628 (916) 965-1312
fax 965-1442

NEW 21kV ELECTRICAL EQUIPMENT
TEST REPORT

SCHULLER INTERNATIONAL
PITTSBURG, CALIFORNIA

EETS JOB NO. 95083
DATE: 2/21/96

REPORT BY:
GLEN CHYNOWETH

CITY OF PITTSBURG

P.O. Box 1518
65 Civic Avenue
Pittsburg, CA 94565
BUILDING DIVISION
439-4910

PERMIT NO.

APR 24 96 0 4 1 9 4 9

PERMIT — APPLICATION

BUILDING ADDRESS 420 E. 3rd St.
EAST 3RD & HARBOR STREETS

OWNER
NAME SCHUELLER INTERNATIONAL
ADDRESS EAST 3rd & HARBOR PHONE 432-6426
CITY PITTSBURG STATE CA ZIP 94565

CONTRACTOR
STATE LICENSE # AND CLASS 194879 PITTSBURG BUSINESS LICENSE # 96000064
CONTRACTOR NAME ARB INC.
ADDRESS 1875 LOVERIDGE PHONE 432-3563
CITY PITTSBURG STATE CA ZIP 94565

OWNER/BUILDER
I hereby affirm that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5, Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License Law Chapter 9 (commencing with Sec. 7000) of Division 3 of the Business and Professions Code, or that he is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500).)

☐ I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale.)

☑ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License Law.)

☐ I am exempt under Sec. _____ B&PC for this reason _____

Signature _____ Date 4-19-96

LENDER
I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097 Civ. C.)

LENDERS NAME _____

LENDERS ADDRESS _____

WORKER'S COMPENSATION
I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Workers' Compensation Insurance, or a certified copy thereof (Sec. 3800, Lab. C.)

Policy # WVE 83 00002 Company Name St. Paul Fire & Marine

☐ Certified copy is hereby furnished.

☐ Certified copy is filed with the city building inspection division

Signature _____ Date _____

(This section need not be completed if the permit is for one hundred dollars ($100) or less.)

I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation Laws of California.

Signature _____ Date _____

NOTICE TO APPLICANT: If, after making this Certificate of Exemption, you should become subject to the Workers' Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked.

WORK TO BE PERFORMED

NUMBER	FIXTURE OR ITEM	EACH	FEE
	Water Closet		$
	Bath Tub		
	Shower		
	Lavatory		
	Sink		
	Dishwasher		
	Clothes Washer		
	Lawn Sprinkler System		
	Water Heater		
1	Gas System Outlets		6 50
	Outlets Over 5 per System		
	Urinals		
	Solar		
	Sewer		
	PERMIT ISSUING FEE		20 00
	TOTAL FEE		26 50

This is a plumbing permit when properly filled out, signed and validated. Permit void if work is not commenced within 180 days, or if work is stopped or abandoned for 180 days. All inspection requests are required 24 hours in advance of the inspection.

I acknowledge that I have read this application and state that the above is correct and agree to comply with all city ordinances and state laws regulating plumbing.

I certify that I am properly registered and licensed as required by the City of Pittsburg and State of California or that I am the legal owner of the above described residential property.

Permittee's Signature _____

FOR OFFICE USE ONLY

INSPECTION RECORD

APPROVALS	DATE	INSPECTOR'S SIGNATURE
Under Floor Work		
Rough Plumbing		
Gas Piping		
Gas Test	4/26 OK per PW	
Plumbing		
Miscellaneous		
Hot Water Heater		
Gas Test	4/26 OK per PW	
Utility Co. Notified		
FINAL	5-8 to 3/4 per BE	
CP Receipt No.	04 3961	
APPROVED BY	PW 4/22/96	
ISSUED BY		

INSPECTOR'S COPY

S|C|H|U|L|L|E|R

Roofing Systems

June 6, 1995

- 6

Mr. John Little
Chief Building Official - City of Pittsburg
65 Civic Avenue
Pittsburg, CA 94565

Dear Mr. Little,

The Schuller International, Inc. (Schuller) facility in Pittsburg is planning on consolidating its main electrical service from two feeds into one. Doing so will allow the plant to take advantage of its size and receive power at a transmission rate, thereby reducing electrical utility costs. In addition, the modification will allow the plant to take early advantage of future saving opportunities such as retail wheeling. The plant has enjoined the help of Pacific Gas and Electric (PG&E) and EETS, a professional engineering and field service company, to complete the transition. PG&E will provide labor to make the tie-in to the main after all other preparatory work has been completed. EETS has been contracted to design and provide specifications for the new plant electrical service. At this time a general contractor has not yet been chosen to provide the labor and materials to implement the changes.

Currently, the plant receives power from PG&E at two points, at the bank of transformers along Harbor Street and at the bank of transformers at the southwest corner of Building #4. By removing the three (3) existing single-phase transformers along Harbor Street (circa 1910) and installing one (1) three-phase transformer and meter set to the south of the existing pad, power will be fed from PG&E to the new transformer. The new transformer will then feed the bank of transformers at the southwest corner of Building #4. It has been determined to be cost effective to replace the existing transformers along Harbor Street with a single new transformer, as the circa 1910 transformers are projected to have little useful life left.

Enclosed please find three (3) copies of the plans for the proposed new electrical service as prepared by EETS. At this time PG&E has reviewed a copy of the plans and specifications.

If you have any questions regarding this project, I may be reached at (510) 427-2427.

Sincerely,

Joseph G. Duszka
Plant Engineer

East Third and Harbor Streets P.O. Box 591 Pittsburg, CA 94565 Tel: 510-432-6426 Fax: 510-427-2409

S|C|H|U|L|L|E|R

Roofing Systems

RECEIVED
APR 19 1996
BUILDING DIVISION

Mr. Rick Dostal
City Building Inspector
City of Pittsburg
65 Civic Avenue
Pittsburg, CA 94565

April 19, 1996

RE: Permit Application for Natural Gas Piping Rearrangement

Dear Mr. Dostal:

Approval for the above referenced application will enable Schuller International to move natural gas solely through a single existing PG&E meter and realize a significant energy cost reduction.

The facility currently has two (2) PG&E meters because, years ago, a portion of the equipment located here required "firm", noninterruptible, gas transportation as a safety precaution. That equipment no longer exists or is now in a position in which a gas interruption does not become an issue. Gas which flows through the "firm" meter is purchased at a substantially higher cost from the gas company.

This project will eliminate the "firm" meter as shown in the schematic provided with the permit application. Specifically, PG&E will remove all of their equipment on the "firm" side, replace the gas filter on the "interruptible" side (sized larger for 50#), and remove their 30# regulator on the "interruptible" side. ARB, Inc. of Pittsburg, CA, will install the bypass piping as shown in the schematic, and will install a new 30# regulator on one of the three legs that service the plant to replace the regulator removed by PG&E. All connections are to be welded.

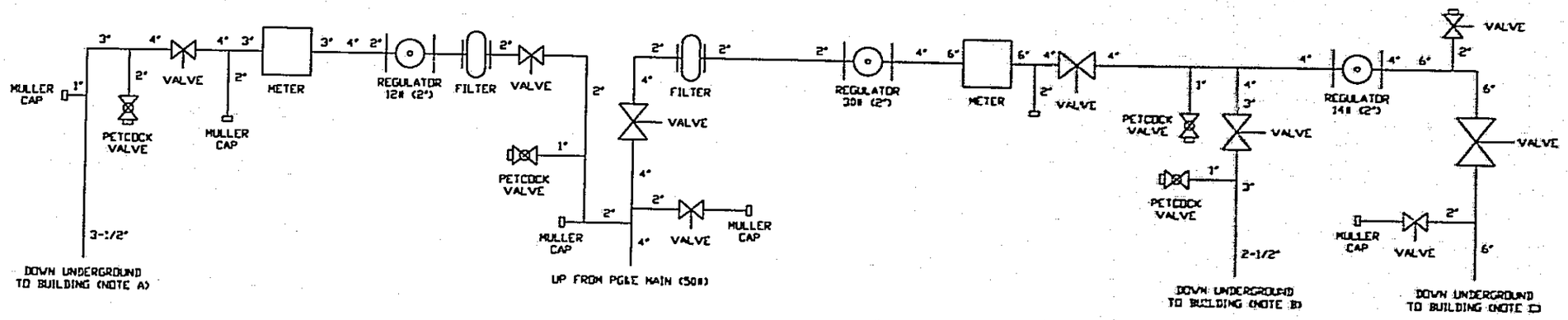
After speaking with you on Thursday (18th), I felt confident that the scheduling for this project could begin to move along. I had mentioned that PG&E Saturday crews are extremely difficult to corral, so in order to meet my objectives in a timely fashion, I have tentatively scheduled this work for May 4th, subject to permit application approval. I am hopeful that we will be able to meet this date, however, I would appreciate knowing as soon as possible if this is a problem so that I can get PG&E rescheduled quickly in order to begin realizing the savings planned.

Thank you, Rick, for your assistance. Please call me at 427-2427 if you have any questions.

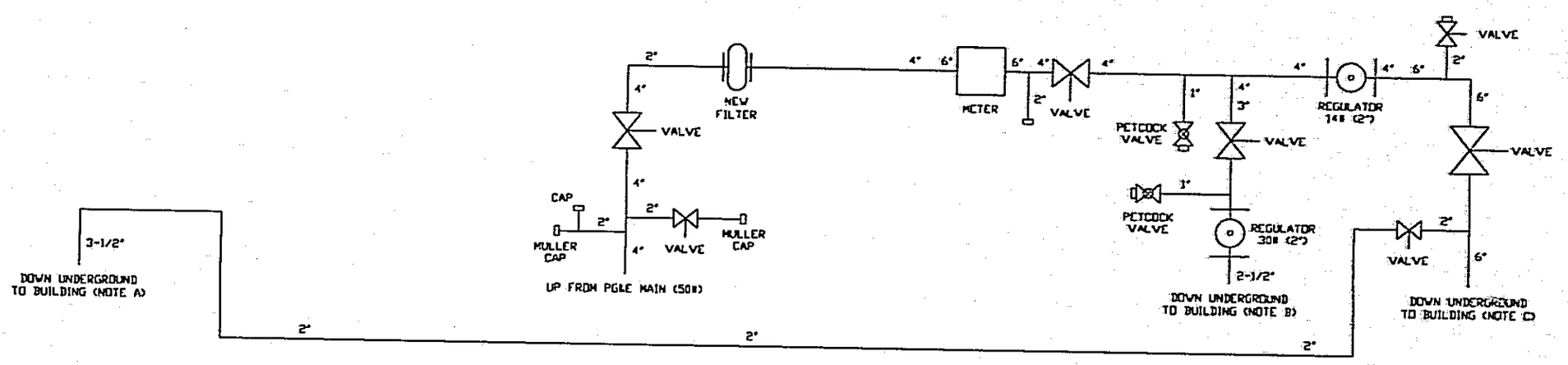
Sincerely,

Mark McKenna
Plant Engineer

East Third and Harbor Streets P.O. Box 591 Pittsburg, CA 94565 Tel: 510-432-6426 Fax: 510-427-2409



EXISTING CONDITIONS



PROPOSED CONDITIONS

RECEIVED
APR 19 1996
BUILDING DIVISION

NOTE A: MAX 16MMBTU/HR (TANK HTR, SPC HTRS)
NOTE B: MAX 11MMBTU/HR (1 BURNER)
NOTE C: MAX 37MMBTU/HR (2 BOILERS, 2 HEATERS)

SCHULLER	SCHULLER INTERNATIONAL, INC. PITTSBURG, CALIFORNIA		
TITLE: GAS LINE MODIFICATION PROPOSAL 3RD & HARBOR STS.	DESIGNED BY	DRAWN BY: M. MCKENNA	
	SCALE: NONE	GROUP	
NOTES	P.O.	SHEET: 1/1	
	SERIAL NO.		
SIZE / FILE NO.	DRAWING NAME: GAS_MAIN.DWG	REV.: 1	DATE: 16 APR 96

engineers · technicians EETS inc.
a professional engineering & field service company
p.o. box 1075 · 10725 fair oaks blvd., suite b · fair oaks, ca. 95628 (916) 965-1312
fax 965-1442

SCHULLER-PITTSBURG
SHORT CIRCUIT AND COORDINATION STUDY

RECEIVED
JUN 22 1995
LINHART PETERSEN POWERS ASSOCIATES

JUL 13 1995
RECEIVED

PLAN REVIEW APPROVAL
JUL 1 ? 1995
LINHART PETERSEN POWERS ASSOCIATES



EXPIRES AUG 30 1996

PREPARED BY MICHAEL F. BREGAR, P.E.
EETS JOB NO. 95038
JUNE, 1995

engineers · technicians
EETS inc.
a professional engineering & field service company
p.o. box 1075 · 10725 fair oaks blvd., suite b · fair oaks, ca. 95628 (916) 965-1312
fax 965-1442

SCHULLER INTERNATIONAL, INC.-ROOFING SYSTEMS
21kV SERVICE EQUIPMENT PROJECT
SPECIFICATION

RECEIVED
JUL 13 1995
BUILDING DIVISION

JUN - 6
BUILDING DIVISION

PLAN REVIEW APPROVAL
JUL 11 1995
LINHART PETERSEN POWERS ASSOCIATES

RECEIVED
JUN 8 1995
LINHART PETERSEN POWERS ASSOCIATES

EETS REF. NO. 95038-E
MAY, 1995

PREPARED BY:
MICHAEL F. BREGAR, P.E.
E10246 (EXP. 9-30-96)

ADDITIONAL INSPECTION RECORD

STREET ADDRESS

PERMIT NUMBER

TYPE OF INSPECTION:	DATE OF INSPECTION:	INSPECTOR:
TRENCH @ BOX #1	1/3/96	RLD
TRENCH & CONDUIT @ 300' SOUTH FROM BOX #1	1/4/96	RLD
ALL CONDUIT UNDER BOX #1	1/5/96	RLD
SWAGS/PIGS BOX #1	1/8/96	RLD
NORTH OF BOX #1	1/11/96	RLD

INSPECTOR'S NOTES AND COMMENTS:

Advanced Engineering Services
300 EAST LELAND ROAD, #204, PITTSBURG, CA 94565
(510) 427-0871 FAX 427-7125

JOB 2249
DATE 8/16/93
BY JMS
CHK
PAGE OF

SUBJECT:

REVISION 1 9/21/93 PER PLANCHECK
(REVISED PAGE 3)

STRUCTURAL CALCULATIONS

FOR

SUPPORT & BRACING FOR NEW ASPHALT TANKS & LINE

MANSVILLE - SCHULLER PLANT
EAST THIRD & HARBOR STREET
P.O. BOX 591
PITTSBURG, CA 94565

PLAN REVIEWED STRUCTURAL
NOV 17 1993
LIMBART PETERSEN BOWERS ASSOCIATES

APPROVED PLANS CITY OF PITTSBURG
NOV 16 '93
PLANS TO REMAIN ON JOB SITE AT ALL TIMES

RECEIVED
SEP - 7 1993
BUILDING DIVISION

PROFESSIONAL ENGINEER
JOHN MICHAEL SHNO
C 044190
Exp.
CIVIL
STATE OF CALIFORNIA

SEP. 21 1993

CONTACT : MR. MICHAEL MONK, NESTE
(510) 427-2414

SUMMARY OF FINDINGS:

1) EXISTING FOUNDATION & TANKS FOR ASPHALT STORAGE O.K.

2) ADD'L PIPE SUPPORT STANCHIONS ARE REQ'D

3) EXIST'G ROOF TRUSSES SUPPORTING RING ASSY'S ARE O.K. ADD'L STRESSES & DEFLECTIONS ARE NEGLIGIBLE.

4) L4x3x1/4 BEAMS SPANNING BETWEEN ROOF TRUSSES IS OVERSTRESSED & REQUIRES REINFORCEMENT.

5) DIAGONAL BRACING OF STEEL RINGS TO TRUSSES IS REQ'D. USE SINGLE L2x2x1/4 EACH DIRECTION.

Advanced Engineering Services
300 East Leland Road, Suite 204, Pittsburg, CA 94565
(510) 427-0871 FAX 427-7125

November 3, 1993 Ltr No. 2249-1

Mr. John Little
Chief Building Official
City of Pittsburg
Civic Center
Pittsburg, CA 94565

Subject: Responces to Plan Check Comments dated October 6, 1993 for the Expanded Asphalt Making Ability at the Pittsburg Manville Plant.

Dear Mr. Little:

The following are responses to the plan check comments prepared by LLPA dated 10/06/93:

1. The building size is approximately 520 feet by 240 feet (122,900 square feet in area).

2. The building is of Type III Construction and Group B, Division 4 Occupancy.

3. The Occupant Load is 500. Total Occupancy is 122,900sf/500 = 246.

4. According to the plant manager the building is completely sprinklered with 1-inch lines and the fire fighting systems have been reviewed and approved by the Fire Marshal.

5. Locations of equipment are noted in the plans.

Please note that it is not commonly our practice to be involved in architectural matters such as defining occupancy, etc. We are only involved in this matter in an effort to expedite this permit for the benefit of the plant employees and the City of Pittsburg.

Please call us if you have any questions or require additional information.

Very Truly Yours,

Advanced Engineering Services

John M. Siino, P.E.
Consulting Engineer

6/97

11/4/93

APPROVED PLANS
CITY OF PITTSBURG
NOV 16 1993
PLANS TO REMAIN ON
JOB SITE AT ALL TIMES

Advanced Engineering Services
300 East Leland Road, Suite 204, Pittsburg, CA 94565
(510) 427-0871 FAX 427-7125

November 3, 1993 Ltr No. 2249-1

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Chief Building Official
City of Pittsburg
Civic Center
Pittsburg, CA 94565

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Advanced Engineering Services

PLANS TO REMAIN ON JOB SITE AT ALL TIMES

John M. Siino, P.E.
Consulting Engineer

11/4/93

engineers, technicians inc.
a professional engineering & field service company
p.o. box 1075 • 10725 fair oaks blvd., suite b • fair oaks, ca. 95628 (916) 965-1312
fax 965-1442

NEW 21kV ELECTRICAL EQUIPMENT
TEST REPORT

SCHULLER INTERNATIONAL
PITTSBURG, CALIFORNIA

EETS JOB NO. 95083
DATE: 2/21/96

REPORT BY:
GLEN CHYNOWETH

CITY OF PITTSBURG

P.O. Box 1518
65 Civic Avenue
Pittsburg, CA 94565
BUILDING DIVISION
439-4910

ELECTRICAL
PERMIT — APPLICATION

BUILDING ADDRESS 420 E. 3RD ST ~~EAST THIRD & HARBOR STREET~~

OWNER
NAME: SCHULLER MANVILLE PLANT
ADDRESS: EAST THIRD & HARBOR PHONE: 427-2400
CITY: PITTSBURG STATE: CA ZIP: 94565

CONTRACTOR
STATE LICENSE # AND CLASS: 585130 C-10 PITTSBURG BUSINESS LICENSE #:
CONTRACTOR NAME: Dynamic Electric PHONE: 757-7575
ADDRESS: P.O. Box 3017
CITY: Antioch, CA STATE: ZIP: 94509

I hereby affirm that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5, Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License Law Chapter 9 (commencing with Sec. 7000) of Division 3 of the business and Professions Code, or that he is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500)):

OWNER/BUILDER
☐ I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale.)

☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License Law.)

☐ I am exempt under Sec. _____ B.&P.C. for this reason _____

X _____ Signature _____ Date

LENDER
I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Civ. C.).

LENDERS NAME _____

LENDERS ADDRESS _____

WORKER'S COMPENSATION
I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Workers' Compensation Insurance, or a certified copy thereof (Sec. 3800, Lab. C.).

Policy # _____ Company Name _____

☐ Certified copy is hereby furnished.
☐ Certified copy is filed with the city building inspection division.

_____ Signature _____ Date

(This section need not be completed if the permit is for one hundred dollars ($100) or less.)
I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation Laws of California.

_____ Signature _____ Date

NOTICE TO APPLICANT: If, after making this Certificate of Exemption, you should become subject to the Workers' Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked.

TO BE PERFORMED WORK TO BE PERFORMED

	EACH	NO.	FEE	
New Residential Bldgs. & Pools				
1 & 2 - Family, Sq. Ft. _____		—	$	
Multi-family Sq. Ft. _____		—		
Residential Swimming Pools				
Outlets: Light Switches & Receptacles				
First 20				
Additional				
Lighting Fixtures				
First 20				
Additional				
Fixed Appliances Not Over 1 HP				
Range ____ Heater ____ D.W. ____				
Oven ____ Dryer ____ W.M. ____				
Top ____ FAU ____ W.H. ____				
Hood ____ Fan ____				
Disp. ____ A.C. ____				
Power Apparatus & Large Appliances				
Size & Type HP, KW, KVA, or KVAR				
_____ Up to 1 Incl.				
_____ Over 1 to 10 Incl.				
25 HP Over 10 to 50 Incl.	20.50	2	41	00
_____ Over 50 to 100 Incl.				
_____ Over 100				
Services				
0 - 200 Amp. Under 600 V	25.00	1	25	00
201 - 1000 Amp. Under 600 V				
Over 1000 Amp. or Over 600 V				
Temp. Power Pole & Appurtenances				
Sign with One Branch Circuit				
Additional Sign Branch Circuits				
(Other) Plan check			21	50
		PERMIT ISSUING FEE	20	00
		TOTAL FEE	107	50

This is an electrical permit when properly filled out, signed and validated. Permit void if work is not commenced within 180 days, or if work is stopped or abandoned for 180 days. All inspection requests are required 24 hours in advance of the inspection.

I acknowledge that I have read this application and state that the above is correct and agree to comply with all city and state laws regulating electrical wiring.

I am properly registered and/or licensed as required by the City of Pittsburg and State of California or I am the legal owner of the above described residential property.

Permittee's Signature X

FOR OFFICE USE ONLY

INSPECTION RECORD

Asphalt packaging process

APPROVALS	DATE	INSPECTOR'S SIGNATURE
Temp. Power Pole		
Underslab Work		
Rough Conduit		
Wiring		
Fixtures		
Power Authorized		
Utility Co. Notified		
FINAL		

Date 1/6/93

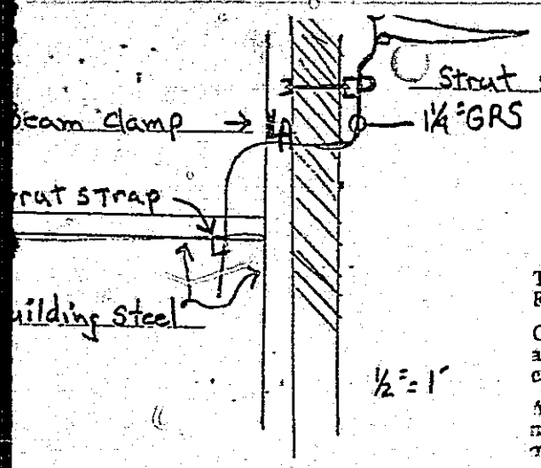
Expired

CD Receipt No.: _____

APPROVED BY: RAD 1/6/93

ISSUED BY: _____

INSPECTOR'S COPY



CITY OF PITTSBURG
Community Development Department
65 Civic Avenue
Telephone 439-4910

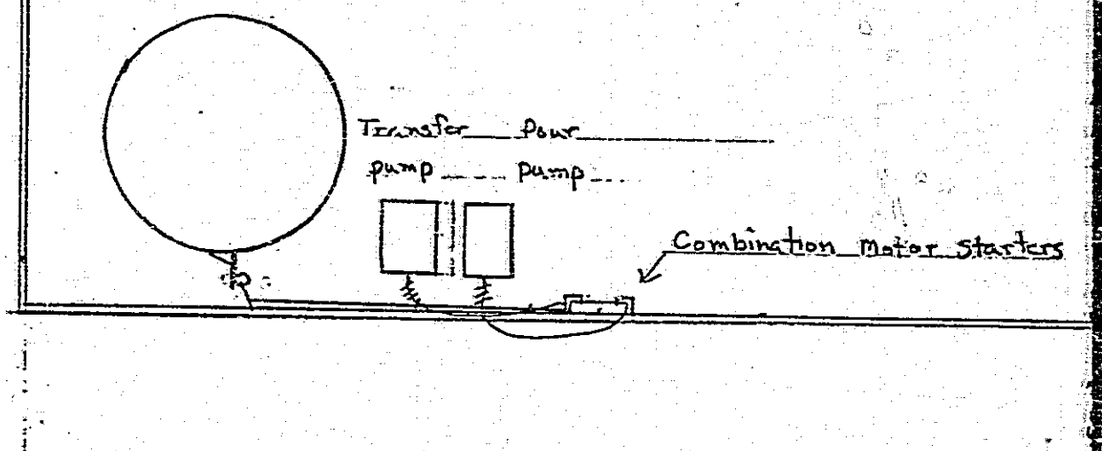
THESE PLANS ARE APPROVED SUBJECT TO THE FOLLOWING CONDITIONS:

One copy of these approved plans must be on the job and available to all Contractors and Craftsmen involved with the construction or installation.

Any changes or alterations to these plans and specifications must be submitted to the Community Development Department for approval.

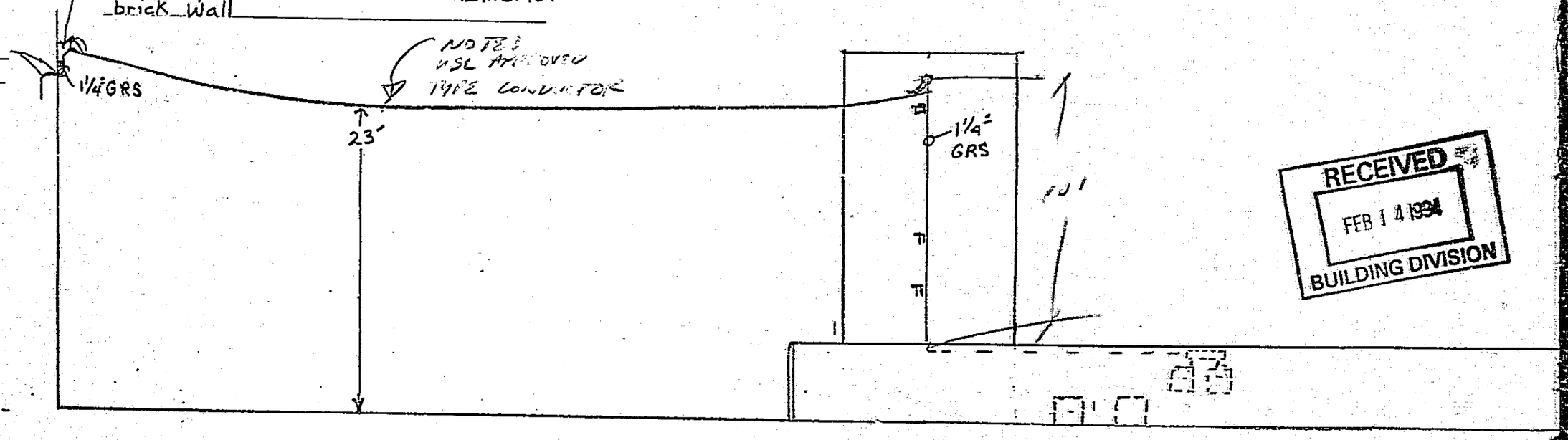
This approval on these plans does not relieve the Contractor or Craftsmen of any regulations or provisions of the Uniform Codes or any City Ordinances.

Building Division		1/6/95 Date
Engineering Division		Date
Fire Department		Date
Planning Division		Date



Supported by Strut Attached To Exterior brick Wall

Supported by Building Steel inside

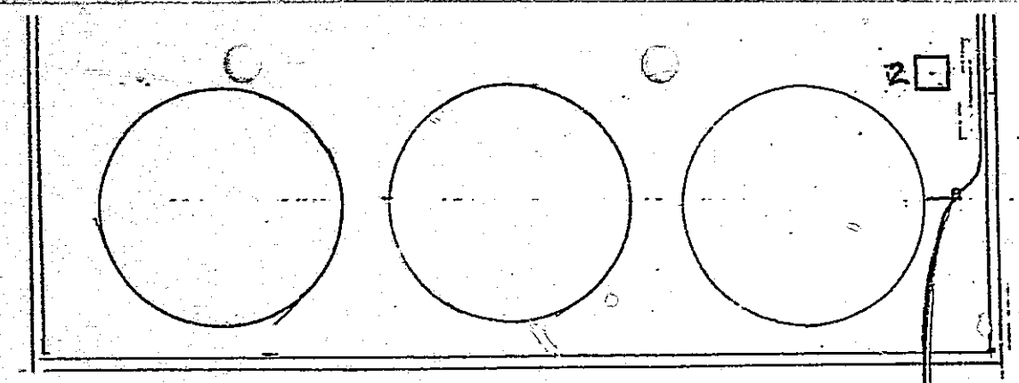


RECEIVED
FEB 14 1994
BUILDING DIVISION

DYNAMIC ELECTRIC
P. O. BOX 3017
ANTIOCH, CA 94531
C-10 585130

NESTE/SCHULLER ASPHALT EXPANSION

1½ = 1'



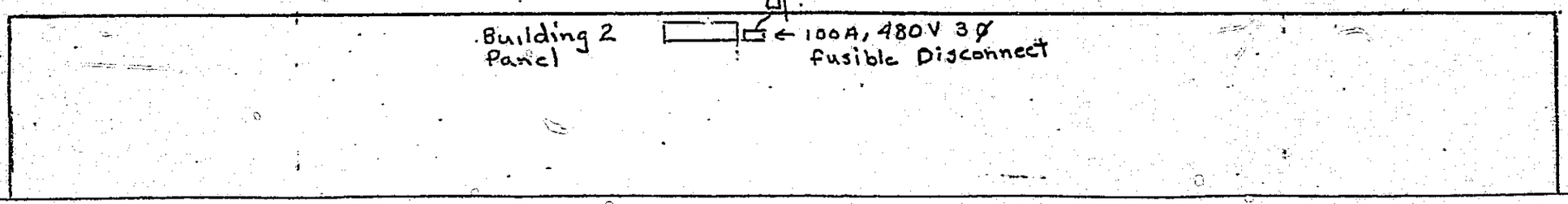
1 Pour Pump

2 Transfer pump

NESTE/SCHULLER ASPHALT EXPANSION

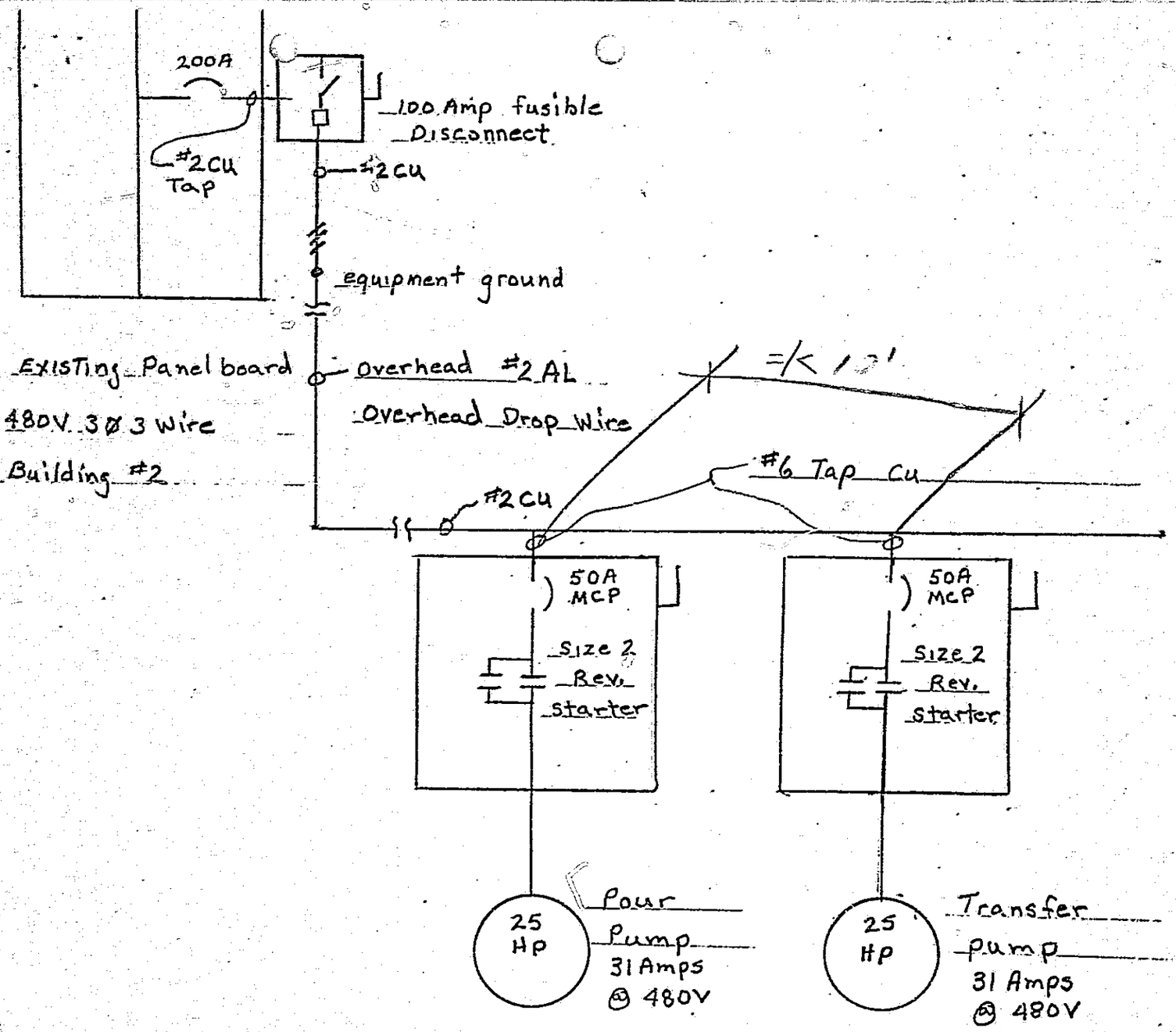
ELECTRICAL DRAWINGS

Page 2 of 6 page

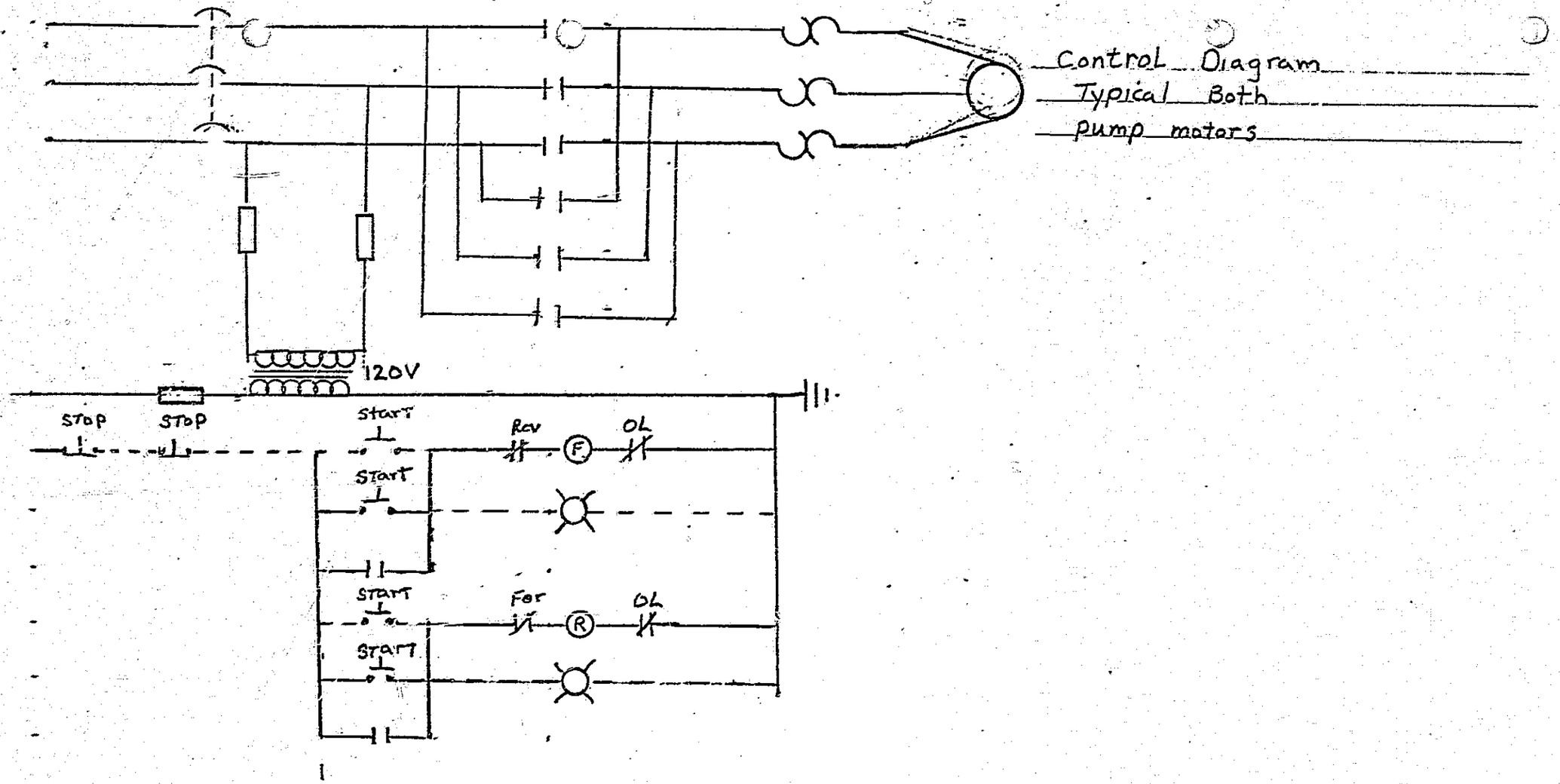


1/8" = 1'

DYNAMIC
ELECTRIC
P. O. BOX 3017
ITIOCH, CA 94531
585130



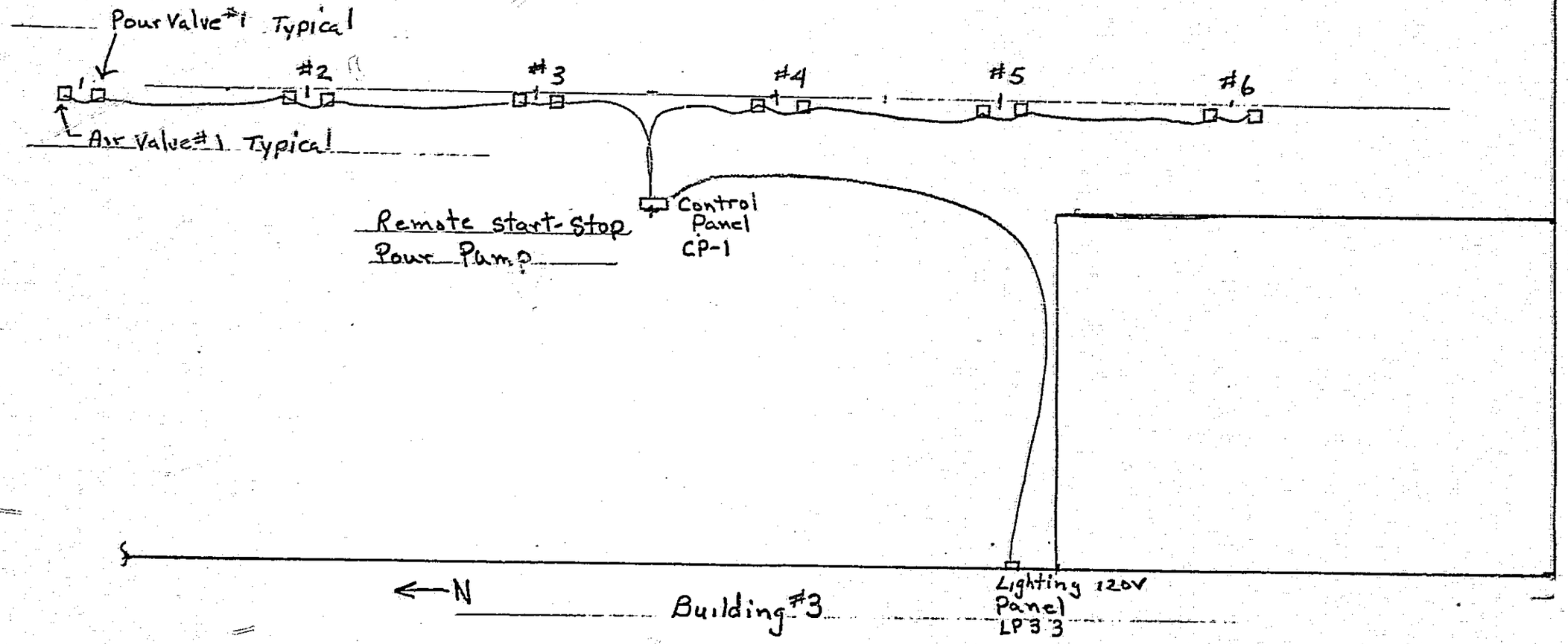
DYNAMIC ELECTRIC
P. O. BOX 3017
ANTIOCH, CA 94531
385130 C-10
David F. Vaughan



Control Diagram
Typical Both
pump motors

----- field wiring

DYNAMIC ELECTRIC
P. O. BOX 3017
ANTIOCH, CA 94531
C-10 585130
Dan J Vaughn

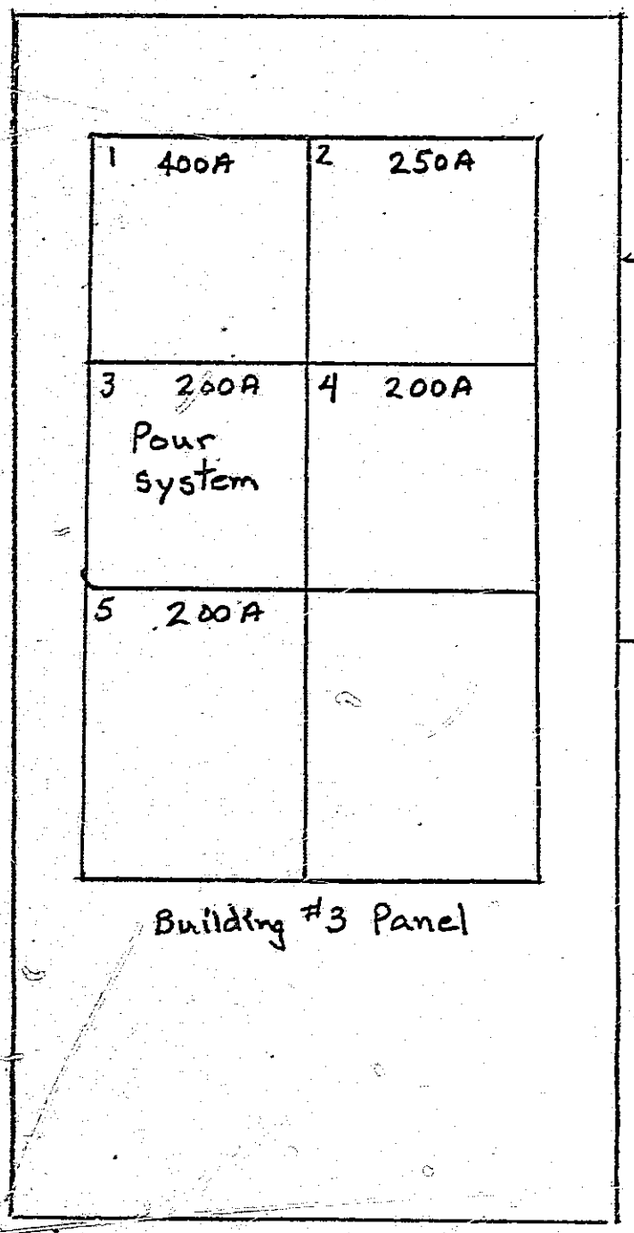


DYNAMIC ELECTRIC
P. O. BOX 3017
ANTIOCH, CA 94531

C-10 585130

NESTE/SCHULLER ASPHALT EXPANSION

1/16=1'



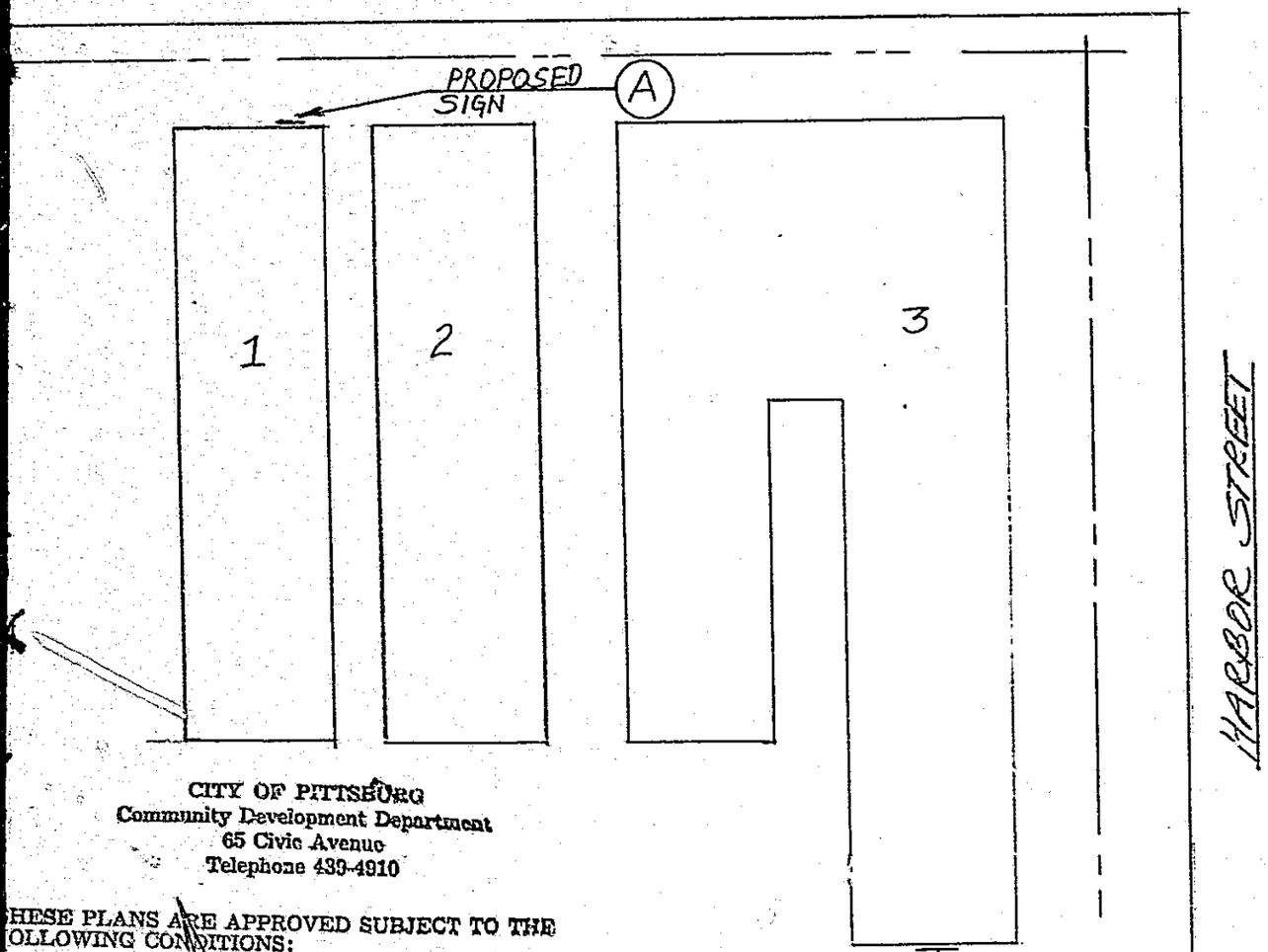
SS-1 thru SS-6 2-Position maintained Keyed Selector Switch
SS-1A thru SS-6A 2-Position Spring Return Keyed Selector Switch

Illuminated Push Buttons

Start - Flush head Push buttons
Stop - Extended head Push buttons

AMIC
CTRIC
O. BOX 3017
OCH, CA 94531
585130

3rd STREET



CITY OF PITTSBURG
Community Development Department
65 Civic Avenue
Telephone 439-4910

HESE PLANS ARE APPROVED SUBJECT TO THE OLLOWING CONDITIONS:

ne copy of these approved plans must be on the job an available to all Contractors and Craftsmen involved with th onstruction or installation.

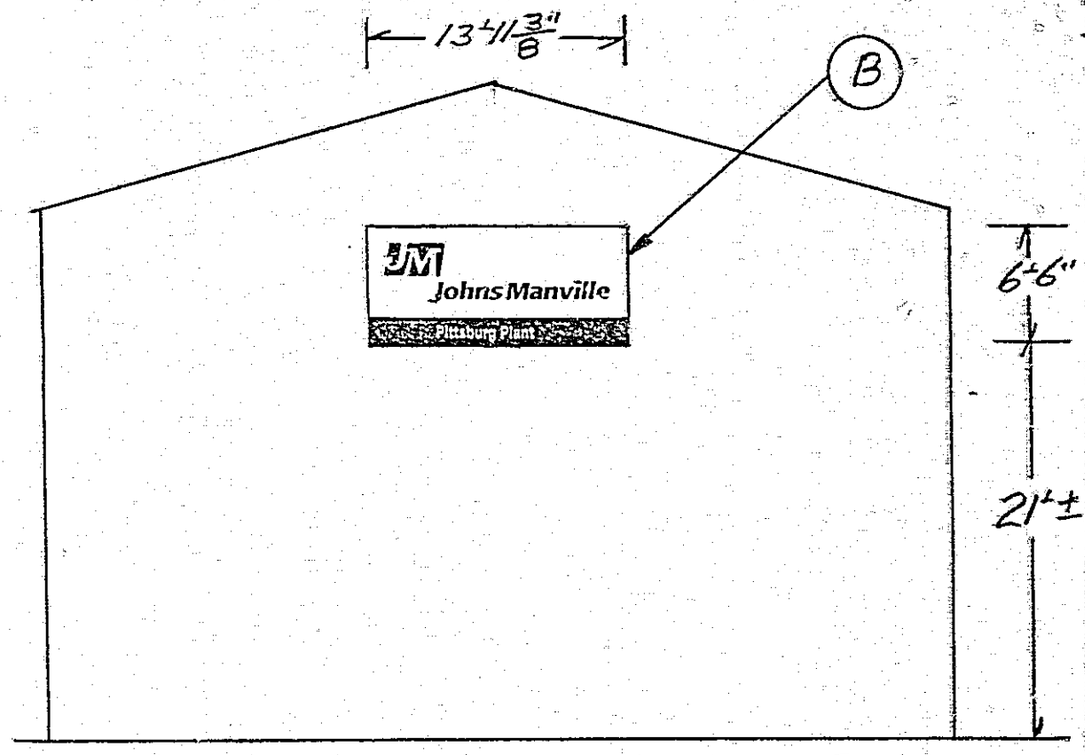
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his approval on these plans does not relieve the Contracto Craftsmen of any of the provisions of the Uniform odes or any City Ordinances.

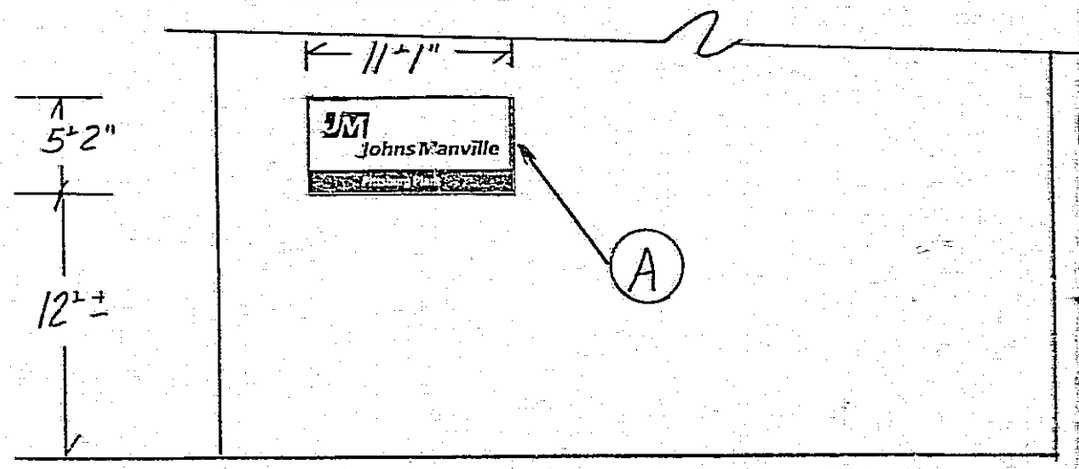
uilding Division	4/30/98 Date
ngineering Division	Date
re Department	Date
Planning Division	4/30/98 Date

RECEIVED
APR 15 1998
BUILDING DIVISION

Sign to area shall not exceed the dimensions identified on the plans.
A



PARTIAL SOUTH ELEV. BLDG. 3



PARTIAL NORTH ELEV. BLDG. 1

SIGNS A & B TO REPLACE EXISTING SIGNS OF SIMILAR SIZE

JOHNS MANVILLE
420 E. 3rd St.
PITTSBURG CA
WADE 4-2-96
SHT. 1 OF 2

City of Pittsburg Building Permit

65 Civic Avenue
Civc Center
(925) 252-4910
Fax (925) 252-4814

PERMIT NO:B0600993

Proj Descr: DEMOLITION OF 6 BUILDINGS # 1-6
Bldg Addr: 420 E 3RD ST
Location: 3RD & HARBOR (JOHN MANSVILLE) #5 WAREHOUSE/#6 BOILER BLDG
Parcel No: 073050001
Ent. Zone: Replacement of withdrawn Permit # B0501739

APPLICANT ENVIRONMENTAL TACTICS INC. Phone: 630-461-7059
4040 WEST ROYAL LANE #136, IRVING, TX 75063
CONTRACTOR ENVIRONMENTAL TACTICS INC. Phone: 630-461-7059
4040 WEST ROYAL LANE #136, IRVING, TX 75063
OWNER PITTSBURG RIVER PARK LLC Phone: 415-243-8155
55 HAWTHORNE ST., SUITE 555, SAN FRANCISCO, CA 94105

LICENSE NUMBERS:
Contractor: 854628
Architect.:
Engineer..:

PROJECT DATA
Permit Type : BLDG
Issued Date : 06/28/2006
Applied Date: 06/28/2006
Expires Date: 12/25/2006
Validated By: NHF

BUILDING DATA:
Construction Area:
Application Type:B063
Occupancy Type:

PERMIT FEES:

VALUATION.....:	.00
Investigation Fee.:	.00
Bldg Permit Fee...:	.00
Bldg PC Fee.....:	.00
Energy PC Fee.....:	.00
Plumbing Fee.....:	.00
Electrical Fee....:	.00
Mechanical Fee....:	.00
Residential SMI...:	.00
Commercial SMI....:	.00
Demolition Fee....:	.00
New Constr E/P/M..:	.00
Other Inspections.:	.00
Investigate/Report:	.00
Fence Fee.....:	.00
Re-Roof Fee.....:	.00
Moved Building Fee:	.00
Interior Partition:	.00
Water Meter Fee...:	.00
Construction Water:	.00
Fire District Fee.:	.00
Fire Admin Fee....:	.00
Contra Costa Fee..:	.00
CCWD Admin Fee....:	.00
CALCULATED FEES:	$.00
Additional Fees:	.00
TOTAL FEES:	$.00

CONTRACTOR

LICENSED CONTRACTORS DECLARATION

I hereby affirm that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code and my license is in full force and effect.

Lic. Number 854628 Lic. Class _____

Contractor Environmental Tactics Inc. Date 6/28/06

OWNER/BUILDER

OWNER-BUILDER DECLARATION

I hereby affirm that I am exempt from the Contractor's License Law for the following reason {Sec.7031.5, Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he/she is licensed pursuant to the provisions of the Contractor's License Law [Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code} or that he/she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500).}:

☐ I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself/herself or through his/her own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he/she did not build or improve for the purpose of sale.).

☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project [Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License Law].

☐ I am exempt under Sec. _____, B. & P.C. for this reason:

Date _____ Owner _____

WORKER'S COMPENSATION

WORKER'S COMPENSATION DECLARATION

I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Worker's Compensation Insurance, or a certified copy thereof (Sec. 3800. Lab. C.)

Policy No. _____ Company _____

☐ Certified copy is hereby furnished
☐ Certified copy is filed with the City of Pittsburg Code Enforcement Division

X Date 6/28/06 Applicant Environmental Tactics, Inc

CERTIFICATE OF EXEMPTION FROM WORKER'S COMPENSATION INSURANCE

{This section need not be completed if the permit is for one hundred dollars ($100) or less.}

I certify that in the performance of the work for which this permit is issued I shall not employ any person in any manner so as to become subject to the Worker's Compensation Laws of California.

Date _____ Applicant _____

NOTICE TO APPLICANT: If after making this Certificate of Exemption, you should become subject to the Worker's Compensation provisions of the Labor Code, you must forthwith comply with such provisions of this permit shall be deemed revoked.

LENDER

CONSTRUCTION LENDING AGENCY

I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097 Civ C.)

Lender's Name _____

Lender's Address _____

APPLICANT

I certify that I have read this application and state that the above information is correct. I agree to comply with all city ordinances and state laws relating to building construction, and hereby authorize representatives to enter upon the above-mentioned property for inspection purposes.

X _____ 6/28/06
Signature of Applicant or Agent Date

☐ Owner
☒ Contractor
☒ Agent for ☒ Contractor ☐ Owner

INSPECTOR'S COPY

ENGINEERING INSPECTIONS - 252-4930

APPR	10 - Pad Elevation Certification	15 - Pad Compaction Certification

Permit # B06-993
420 E. 3rd St.

BUILDING INSPECTIONS - 252-4910

	BUILDING	ELECTRICAL	MECHANICAL	PLUMBING
FOUNDATION	101 - Setback	201 - Temp. Const Power	301 - Underslab	401 - Underslab
	102 - Piers	202 - Underslab		402 - Sewer
	103 - Footing/Slab	203 - Grounding		
	104 - Hold Downs			
	1 - OK TO POUR			
FLOOR	110 - Girder/Joists	210 - Underfloor	310 - Underfloor	410 - Underfloor
	111 - Insulation			
	112 - Mobile Home Frame	212 - Elec. Continuity	312 - Mobile Home Mech.	412 - Mobile Home Plbg.
	2 - OK TO COVER			
FRAME	120 - Roof Nail			
	121 - Straps/Ties		321 - Flue/Vents	421 - Shower Pan
	122 - Shearwall		322 - Exhaust System	422 - Rainwater Ldr
	123 - Shaft/Firewall	223 - Conduit	323 - HVAC	423 - Water Heater
	124 - Frame	224 - Wiring	324 - Heating/Ducts	424 - Plumbing
	125 - Pre-Roof			425 - Gas Piping
	3 - OK TO INSULATE		326 - T-1 Hood	
FINISH	127 - Insulation		327 - Solar	427 - Boiler
	128 - Lath/T-Bar		328 - Appliance	428 - Backflow Prev.
	4 - OK TO COVER			
	129 - Int. Drywall	229 - Temp. Power		429 - Gas Test
PRE-FINAL APPROVALS	Planning Division 439-4920		C.C.C. Fire Protection District 930-5500	
	Engineering Division 439-4930		C.C.C. Health/Hazardous Materials 646-2286	
FINAL	150 - Building 1-28-06 PJ	250 - Electrical	350 - Mechanical	450 - Plumbing
	160 - Smoke Detector			
	4 - APPROVAL TO OCCUPY			

	POOL/SPA
PRE-GUNITE	501 - Setback
	502 - Reinforcing
	503 - Bonding
	504 - Pool Piping
PRE-DECK	**6 - OK TO GUNITE**
	510 - Reinforce
	511 - Bonding
	6 - OK TO POUR
PRE-PLASTER	520 - Electrical
	521 - Plumbing
	522 - Gas Test
	6 - OK TO PLASTER
PRE-FINAL APPROVALS	C.C.C. Health Dept. 646-2521
	Planning Dept. 439-4920
	Engineering Dept. 439-4930
	530 - Gate/Door/Fence
FINAL	590 - Pool Spa

	SIGNS
	601 - Footing
	602 - Electrical
FINAL	603 - Signs

Inspections: Inspections shall be made in consecutive order as shown. Do not cover or proceed with any work until the required inspecitions have been made. The field set of City approved plans, specifications and calculations, and this inspection card must be made available to the inspector during the inspection and protected from the weather.

Calling for Inspections: When calling for inspection give the permit number, the address, the name of the owner and/or contractor, and the type of inspection required. Failure to provide this information may result in the inspection not being made. ALL INSPECTION REQUESTS REQUIRE 24 HOUR NOTICE.

Access for Inspection: It shall be the duty of the person requesting an inspection required by the Code to provide access to and means for proper inspection of such work. POST NOTICE IF DOG IS ON THE PREMISES. DOGS SHALL BE CONFINED DURING INSPECTION.

Reinspection Fee: Reinspection fees may be assessed when the permit card is not properly posted on the work site, the approved plans are not readily available to the inspector, for failure to provide access on the date for which the inspection is requested, or for deviating from plans requiring approval of the Building Official. A reinspection fee may be assessed for each inspection or reinspection when such portion of work for which inspection is called is not complete or when corrections called for are not made.

Expiration: This permit expires and becomes null and void if work is not commenced within 180 days, or if work is abandoned or suspended for a period of 180 days.

Pre-final Approvals: See front of Permit for a listing of which pre-final approvals are or may be required for this project.

Final: The "FINAL" section of this card must be signed and dated, by your inspector, after completion of this project. If the project is complete and this requirement is not met, the permit will be subject to expiration within 180 days of the last inspection.

Comments:

PITTSBURG RIVER PARK LLC
55 Hawthorne Street, Suite 555
San Francisco, California 94105
415.243.8155 phone
415.243.8157 fax

June 22, 2006

Curtis Smith
Chief Building Official
City of Pittsburg
65 Civic Avenue
Pittsburg, CA 94565-3814

SUBJECT: Demolition Permit Transfer, Pittsburg River Park LLC Development, 3rd & Harbor Streets, Pittsburg, CA

Dear Mr. Smith:

As you may be aware, Pittsburg River Park LLC is in the process of transitioning to a different contractor at the above referenced project. Effective June 23, 2006, Plant Reclamation will no longer be operating at this site. Effective June 26, Entact and Associates, LLC will be continuing demolition activities. Please transfer the existing demolition permit to Entact and Associates, LLC and delete Plant Reclamation from the permit.

Please contact me at 415/243-8162 if you have any questions.

Best regards,
PITTSBURG RIVER PARK LLC

Chris Nelson
Project Director

Cc: Fred Glueck, Plant Reclamation
Mike Stoub, Entact and Associates, LLC

ENTACT

1010 Executive Court
Suite 280
Westmont, Illinois
60559

Curtis Smith
City of Pittsburg Building Permits
65 Civic Avenue
Civic Center
Pittsburg, CA 94565

Dec. 21, 2007

RE: Building Permit B0600993

Mr Smith,

The project schedule has been extended into 2007. We expect to be done with any remaining demo work by 3/1. Another buried footer was found and we have additional concrete and asphalt to be sized and removed. The 180 day extension should definitely cover all activities.

If you have any further questions I can be reached at 630-669-3803.

Sincerely,

B. Edgar Longstreet

RECEIVED
DEC 21 2006
BUILDING DIVISION

COPY

PLANT RECLAMATION

June 26, 2006

CITY OF PITTSBURG
BUILDING DIVISION
RECEIVED
JUN 29 2006

Curtis Smith
Chief Building Official
City of Pittsburg
65 Civic Avenue
Pittsburg, California 94565 3814

Subject: Plant Reclamation Completion of Demolition Project
420 East 3rd Street, Pittsburg, California
Permit Number B05-1739

Dear Mr. Smith:

This letter will serve to inform you that as of close of business on June 26, 2006, Plant Reclamation has completed its project at 420 East 3rd Street, Pittsburg, California, Permit Number B05-1739.

If you so choose to extend the permit as per the request of Mr. Chris Nelson of Pittsburg River Park LLC, that is at your discretion. However please be advised that Plant Reclamation is no longer on site and its State of California Contractors License Number and insurance no longer cover that site or work.

Hope this meets with your approval.

Thank you very much.

Sincerely,

Fred Glueck
Plant Reclamation

cc: Chris Nelson, Pittsburg River Park LLC

See enclosed letter.

912 HARBOUR WAY SO. • RICHMOND, CALIFORNIA 94804 • (510) 233-6552 • FAX NO. 510-237-6739

City of Pittsburg Building Permit

65 Civic Avenue
Civc Center
(925) 252-4910
Fax (925) 252-4814

PERMIT NO:B0600136

Proj Descr: INSTALL NEW WATER METER DUE TO DAMAGED EXTG METER
Bldg Addr: 420 E 3RD ST
Location: 3" METER INSTALLED - SAME FOR SAME
Parcel No: 073050001
Ent. Zone:

APPLICANT	PLANT RECLAMATION 912 HARBOUR WY SOUTH, RICHMOND CA, RICHMOND CA 94804	Phone: (510)233-6552
CONTRACTOR	PLANT RECLAMATION 912 HARBOUR WY SOUTH, RICHMOND CA, RICHMOND CA 94804	Phone: (510)233-6552
OWNER	PITTSBURG RIVER PARK LLC 912 HARBOUR WAY, SAN FRANCISCO, CA 94804	Phone: 415-243-8155

LICENSE NUMBERS:
Contractor: 518628
Architect.:
Engineer..:

PROJECT DATA
Permit Ty[illegible] BLDG
Issued Date : 02/07/2006
Applied Date: 02/07/2006
Expires Date: 08/06/2006
Validated By: PR

BUILDING DATA:
Construction Area:
Application Type:B054
Occupancy Type:

PERMIT FEES:

VALUATION.....:	500.00
Investigation Fee.:	.00
Bldg Permit Fee...:	.00
Bldg PC Fee.....:	.00
Energy PC Fee.....:	.00
Plumbing Fee.....:	.00
Electrical Fee....:	.00
Mechanical Fee....:	.00
Residential SMI...:	.00
Commercial SMI....:	.00
Demolition Fee....:	.00
New Constr E/P/M..:	.00
Other Inspections.:	.00
Investigate/Report:	.00
Fence Fee.....:	.00
Re-Roof Fee.....:	.00
Moved Building Fee:	.00
Interior Partition:	.00
Water Meter Fee...:	683.00
Construction Water:	.00
Fire District Fee.:	.00
Fire Admin Fee....:	.00
Contra Costa Fee..:	.00
CCWD Admin Fee....:	.00
CALCULATED FEES:	$683.00
Additional Fees:	.00
TOTAL FEES:	$683.00

CONTRACTOR

LICENSED CONTRACTORS DECLARATION

I hereby affirm that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code and my license is in full force and effect.

Lic. Number 518628 Lic. Class _____

Contractor Plant Reclamation Date 2/7/06

OWNER/BUILDER

OWNER-BUILDER DECLARATION

I hereby affirm that I am exempt from the Contractor's License Law for the following reason {Sec.7031.5, Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he/she is licensed pursuant to the provisions of the Contractor's License Law [Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code} or that he/she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500).}:

☐ I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself/herself or through his/her own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he/she did not build or improve for the purpose of sale.).

☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project [Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License Law].

☐ I am exempt under Sec. _____, B. & P.C. for this reason:

_____

Date _____ Owner _____

WORKER'S COMPENSATION

WORKER'S COMPENSATION DECLARATION

I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Worker's Compensation Insurance, or a certified copy thereof (Sec. 3800. Lab. C.)

Policy No. _____ Company _____

☐ Certified copy is hereby furnished
☐ Certified copy is filed with the City of Pittsburg Code Enforcement Division

X Date 2-7-06 Applicant PLANTREC

CERTIFICATE OF EXEMPTION FROM WORKER'S COMPENSATION INSURANCE

[This section need not be completed if the permit is for one hundred dollars ($100) or less.]

I certify that in the performance of the work for which this permit is issued I shall not employ any person in any manner so as to become subject to the Worker's Compensation Laws of California.

Date _____ Applicant _____

NOTICE TO APPLICANT: If after making this Certificate of Exemption, you should become subject to the Worker's Compensation provisions of the Labor Code, you must forthwith comply with such provisions of this permit shall be deemed revoked.

LENDER

CONSTRUCTION LENDING AGENCY

I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097 Civ C.)

Lender's Name _____

Lender's Address _____

APPLICANT

I certify that I have read this application and state that the above information is correct. I agree to comply with all city ordinances and state laws relating to building construction, and hereby authorize representatives to enter upon the above-mentioned property for inspection purposes.

X Joel Myers 2/7/06
Signature of Applicant or Agent Date

☐ Owner
☒ Contractor
☐ Agent for ☐ Contractor ☐ Owner

INSPECTOR'S COPY

ENGINEERING INSPECTIONS - 252-4930

48"	10 - Pad Elevation Certification	15 - Pad Compaction Certification

Permit # BC6-136

420 E. 3rd St.

BUILDING INSPECTIONS - 252-4910

	BUILDING	ELECTRICAL	MECHANICAL	PLUMBING
FOUNDATION	101 - Setback	201 - Temp. Const Power	301 - Underslab	401 - Underslab
	102 - Piers	202 - Underslab		402 - Sewer
	103 - Footing/Slab	203 - Grounding		
	104 - Hold Downs			
	1 - OK TO POUR			
FLOOR	110 - Girder/Joists	210 - Underfloor	310 - Underfloor	410 - Underfloor
	111 - Insulation			
	112 - Mobile Home Frame	212 - Elec. Continuity	312 - Mobile Home Mech.	412 - Mobile Home Plbg.
	2 - OK TO COVER		Water meter 2/8/06 $$	
FRAME	120 - Roof Nail			
	121 - Straps/Ties		321 - Flue/Vents	421 - Shower Pan
	122 - Sheerwall		322 - Exhaust System	422 - Rainwater Ldr
	123 - Shaft/Firewall	223 - Conduit	323 - HVAC	423 - Water Heater
	124 - Frame	224 - Wiring	324 - Heating/Ducts	424 - Plumbing
	125 - Pre-Roof			425 - Gas Piping
	3 - OK TO INSULATE		326 - T-1 Hood	
FINISH	127 - Insulation		327 - Solar	427 - Boiler
	128 - Lath/T-Bar		328 - Appliance	428 - Backflow Prev.
	4 - OK TO COVER			
	129 - Int. Drywall	229 - Temp. Power		429 - Gas Test
PRE-FINAL APPROVALS	Planning Division 439-4920		C.C.C. Fire Protection District 930-5500	
	Engineering Division 439-4930		C.C.C. Health/Hazardous Materials 646-2286	
FINAL	150 - Building	250 - Electrical	350 - Mechanical	450 - Plumbing
	160 - Smoke Detector			
	4 - APPROVAL TO OCCUPY			

POOL/SPA	
PRE-GUNITE	501 - Setback
	502 - Reinforcing
	503 - Bonding
	504 - Pool Piping
	5 - OK TO GUNITE
PRE-DECK	510 - Reinforce
	511 - Bonding
	6 - OK TO POUR
PRE-PLASTER	520 - Electrical
	521 - Plumbing
	522 - Gas Test
	6 - OK TO PLASTER
PRE-FINAL APPROVALS	C.C.C. Health Dept. 646-2521
	Planning Dept. 439-4920
	Engineering Dept. 439-4930
	530 - Gate/Door/Fence
FINAL	590 - Pool Spa

SIGNS	
	601 - Footing
	602 - Electrical
FINAL	603 - Signs

Inspections: Inspections shall be made in consecutive order as shown. Do not cover or proceed with any work until the required inspecitions have been made. The field set of City approved plans, specifications and calculations, and this inspection card must be made available to the inspector during the inspection and protected from the weather.

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Expiration: This permit expires and becomes null and void if work is not commenced within 180 days, or if work is abandoned or suspended for a period of 180 days.

Pre-final Approvals: See front of Permit for a listing of which pre-final approvals are or may be required for this project.

Final: The "FINAL" section of this card must be signed and dated, by your inspector, after completion of this project. If the project is complete and this requirement is not met, the permit will be subject to expiration within 180 days of the last inspection.

Comments:

City of Pittsburg

Civic Center • P.O. Box 1518 • Pittsburg, California 94565

BUILDING PERMIT NO:B9700360

Proj Descr: COMM/REROOF
Bldg Addr: 420 E 3RD ST
Location:
Parcel No: 073050001

APPLICANT	ENTERPRISE ROOFING SERVICE P.O. BOX 27368, CONCORD CA, CONCORD CA 94527	Phone: (510)689-8100
CONTRACTOR	ENTERPRISE ROOFING SERVICE P.O. BOX 27368, CONCORD CA, CONCORD CA 94527	Phone: (510)689-8100
OWNER	SCHULLER INTERNATIONAL INC P O BOX 17086, DENVER CO 80217	

LICENSE NUMBERS:
Contractor: 221274
Architect.:
Engineer..:

UNCHECKED

PROJECT DATA
Permit Type : BLDG
Issued Date : 04/03/1997
Applied Date: 04/03/1997
Expires Date: 09/30/1997

BUILDING DATA:
Construction Area:
Construction Type:
Occupancy Group..:

PERMIT FEES:

VALUATION.....:	$6,879.00
Work W/O permit?..:	.00
Bldg Permit Fee...:	.00
Bldg PC Fee.....:	.00
Energy PC Fee.....:	.00
Plumbing Fee.....:	.00
Electrical Fee....:	.00
Mechanical Fee....:	.00
Residential SMIP..:	.00
Commercial SMIP...:	1.44
Demolition Fee....:	.00
New Constr E/P/M..:	.00
Other Inspections.:	.00
Investigate/Report:	.00
Fence Fee.....:	.00
Drop Ceiling Fee..:	.00
Re-Roof Fee.....:	115.00
Moved Building Fee:	.00
Interior Partition:	.00
Water Meter Fee...:	.00
Construction Water:	.00
Fire District Fee.:	.00
Contra Costa Fee..:	.00
CALCULATED FEES:	$116.44
Additional Fees:	.00
TOTAL FEES:	$116.44

LICENSED CONTRACTORS DECLARATION

CONTRACTOR

I hereby affirm that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code and my license is in full force and effect.

Lic. Number [illegible] Lic. Class [illegible] Date 4/3/97

Contractor [signature]

OWNER-BUILDER DECLARATION

OWNER/BUILDER

I hereby affirm that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5, Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he/she is licensed pursuant to the provisions of the Contractor's License Law (Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code) or that he/she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500).):

☐ I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself/herself or through his/her own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he/she did not build or improve for the purpose of sale.).

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☐ I am exempt under Sec. _____, B. & P.C. for this reason:

Date _____ Owner _____

WORKER'S COMPENSATION DECLARATION

WORKERS COMPENSATION

I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Worker's Compensation Insurance, or a certified copy thereof (Sec. 3800, Lab. C.)

Policy No. _____ Company [illegible]

☐ Certified copy is hereby furnished
☐ Certified copy is filed with the City of Pittsburg Code Enforcement Division

Date 4/3/97 Applicant [signature]

CERTIFICATE OF EXEMPTION FROM WORKER'S COMPENSATION INSURANCE

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I certify that in the performance of the work for which this permit is issued I shall not employ any person in any manner so as to become subject to the Worker's Compensation Laws of California.

Date _____ Applicant _____

NOTICE TO APPLICANT: If after making this Certificate of Exemption, you should become subject to the Worker's Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked.

CONSTRUCTION LENDING AGENCY

LENDER

I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097 Civ C.)

Lender's Name _____

Lender's Address _____

I certify that I have read this application and state that the above information is correct. I agree to comply with all city ordinances and state laws relating to building construction, and hereby authorize representatives to enter upon the above-mentioned property for inspection purposes.

APPLICANT

X [signature] 4/3/97
Signature of Applicant or Agent Date

☐ Owner
☒ Contractor
☐ Agent for ☐ Contractor ☐ Owner

INSPECTOR'S COPY

ENGINEERING INSPECTIONS - 439-4930

Permit # B9700360

ASPH	10 - Pad Elevation Certification	18 - Pad Compaction Certification

BUILDING INSPECTIONS - 439-4910

	BUILDING	ELECTRICAL	MECHANICAL	PLUMBING
FOUNDATION	101 - Setback	201 - Temp Const Power	301 - Underslab	401 - Underslab
	102 - Piers	202 - Underground		402 - Sewer
	103 - Footing Slab	203 - Grounding		
	104 - Hold Downs			
	1 - OK TO POUR			
FLOOR	110 - Girder Joists	210 - Sub Floor	310 - Underfloor	410 - Underfloor
	111 - Insulation			
	112 - Mobile Home Frame	212 - Ceiling Insulation	312 - Mobile Home Mech.	412 - Mobile Home Plbg.
	2 - OK TO COVER			
FRAME	120 - Roof Nail			
	121 - Straps/Ties		321 - Flue Vents	421 - Shower Pan
	122 - Shearwall		322 - Exhaust System	422 - Rainwater Ldr
	123 - Shaft Firewall	223 - Conduit	323 - HVAC	423 - Water Heater
	124 - Frame	224 - Wiring	324 - Heating Ducts	424 - Plumbing
	125 - Pre-Roof			425 - Gas Piping
	3 - OK TO INSULATE		326 - T-1 Hood	
FINISH	127 - Insulation		327 - Solar	427 - Boiler
	128 - Lath/ T-Bar		328 - Appliance	428 - Backflow Prev.
	4 - OK TO COVER			
	129 - Int. Drywall	229 - Temp Power		429 - Gas Test
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	Engineering Division 439-4930		C.C.C. Health/Hazardous Materials 646-2286	
FINAL	150 - Building		350 - Mechanical	450 - Plumbing
	160 - Smoke Detector			
	FINAL APPROVAL TO OCCUPY			

POOL/SPA	
PRE-GUNITE	501 - Setback
	502 - Reinforcing
	503 - Bonding
	504 - Pool Piping
PRE-DECK	6 - OK TO GUNITE
	510 - Reinforce
	511 - Bonding
	6 - OK TO POUR
PRE-PLASTER	520 - Electrical
	521 - Plumbing
	522 - Gas Test
	6 - OK TO PLASTER
PRE-FINAL APPROVALS	C.C.C. Health Dept. 646-2521
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FINAL	590 - Pool Spa

SIGNS	
	601 - Footing
	602 - Electrical
FINAL	603 - Signs

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Final: The "FINAL" section of this card must be signed and dated by your inspector, after completion of this project. If the project is complete and this requirement is not met, the permit will be subject to expiration within 180 days of the last inspection.

Comments:

_____

_____

_____

City of Pittsburg

Civic Center • P.O. Box 1518 • Pittsburg, California 94565

BUILDING PERMIT No.: ~~B980042~~ B9800424

Proj Descr: INSTALL 2 NON-ILLUMINATED WALL SIGNS
Bldg Addr: 420 E 3RD ST
Location:

APPLICANT	AMERICAN SIGN AND LIGHTING 6527 SIERRA LANE, DUBLIN, CA 94568	Phone: 510-803-0120
CONTRACTOR	AMERICAN SIGN AND LIGHTING 6527 SIERRA LANE, DUBLIN, CA 94568	Phone: 510-803-0120
OWNER	SCHULLER INTERNATIONAL INC P O BOX 17086, DENVER CO 80217	

LICENSE NUMBERS:
Contractor: 721724
Architect.:
Engineer..:

PROJECT DATA
Permit Type : SIGN
Issued Date : 04/30/1998
Applied Date: 04/16/1998
Expires Date: 10/27/1998
Building...:

PERMIT FEES:

Contract Price....:	$6,800.00
Bldg Permit Fee...:	117.68
Plan Check Fee....:	183.58
Addit'l Plan Check:	.00
Consultant Plan Ck:	.00
Addit'l Inspection:	.00
Reinspections.....:	.00
Misc Inspections..:	.00
Other Fee.....:	.00
Electrical Fee:	
1 Branch Circuit:	.00
Addit'l Branches:	.00
CALCULATED FEES:	$302.6
Additional Fees...:	.0
TOTAL FEES:	$302.6

LICENSED CONTRACTORS DECLARATION

CONTRACTOR

I hereby affirm that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code and my license is in full force and effect.

Lic. Number 721724 Lic. Class _____

Contractor [signature] Date 4/30/98

OWNER-BUILDER DECLARATION

OWNER/BUILDER

I hereby affirm that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5, Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he/she is licensed pursuant to the provisions of the Contractor's License Law [Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code) or that he/she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500).):

☐ I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself/herself or through his/her own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he/she did not build or improve for the purpose of sale.).

☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project [Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License Law].

☐ I am exempt under Sec. _____, B. & P.C. for this reason:

Date _____ Owner _____

WORKER'S COMPENSATION DECLARATION

WORKER'S COMPENSATION

I hereby affirm the I have a certificate of consent to self-insure, or a certificate of Worker's Compensation insurance, or a certified copy thereof (Sec. 3800, Lab. C.)

Policy No. _____ Company [illegible]

☐ Certified copy is hereby furnished
☐ Certified copy is filed with the City of Pittsburg Code Enforcement Division

Date 4/30/98 Applicant [signature]

CERTIFICATE OF EXEMPTION FROM WORKER'S COMPENSATION INSURANCE

(This section need not be completed if the permit is for one hundred dollars ($100) or less.)

I certify that in the performance of the work for which this permit is issued I shall not employ any person in any manner so as to become subject to the Worker's Compensation Laws of California.

Date _____ Applicant _____

NOTICE TO APPLICANT: If after making this Certificate of Exemption, you should become subject to the Worker's Compensation provisions of the Labor Code, you must forthwith comply with such provisions of this permit shall be deemed revoked.

CONSTRUCTION LENDING AGENCY

LENDER

I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097 Civ C.)

Lender's Name _____

Lender's Address _____

APPLICANT

I certify that I have read this application and state that the above information is correct. I agree to comply with all city ordinances and state laws relating to building construction, and hereby authorize representatives of this city to enter upon the above-mentioned property for inspection purposes.

Signature of Applicant or Agent [signature] Date 4/30/98

☐ Owner
☑ Contractor
☐ Agent for ☐ Contractor ☐ Owner

INSPECTOR'S COPY

ENGINEERING INSPECTIONS - 439-4930

APPR		
	10 - Pad Elevation Certification	15 - Pad Compaction Certification

Permit # B9800424

420 E. 3rd St.

BUILDING INSPECTIONS - 439-4910

	BUILDING	ELECTRICAL	MECHANICAL	PLUMBING
FOUNDATION	101 - Setback	201 - Temp. Const Power	301 - Underslab	401 - Underslab
	102 - Piers	202 - Underslab		402 - Sewer
	103 - Footing/Slab	203 - Grounding		
	104 - Hold Downs			
	1 - OK TO POUR			
FLOOR	110 - Girder/Joists	210 - Underfloor	310 - Underfloor	410 - Underfloor
	111 - Insulation			
	112 - Mobile Home Frame	212 - Elec. Continuity	312 - Mobile Home Mech.	412 - Mobile Home Plbg.
	2 - OK TO COVER			
FRAME	120 - Roof Nail			
	121 - Straps/Ties		321 - Flue/Vents	421 - Shower Pan
	122 - Shearwall		322 - Exhaust System	422 - Rainwater Ldr
	123 - Shaft/Firewall	223 - Conduit	323 - HVAC	423 - Water Heater
	124 - Frame	224 - Wiring	324 - Heating/Ducts	424 - Plumbing
	125 - Pre-Roof			425 - Gas Piping
	3 - OK TO INSULATE		326 - Type I Hood	
FINISH	127 - Insulation		327 - Solar	427 - Boiler
	128 - Lath/T-Bar		328 - Appliance	428 - Backflow Prev.
	4 - OK TO COVER			
	129 - Int. Drywall	229 - Temp.Power		429 - Gas Test
PRE-FINAL APPROVALS	Planning Division 439-4920		C.C.C. Fire Protection District 930-5500	
	Engineering Division 439-4930		C.C.C. Health/Hazardous Materials 646-2286	
FINAL	150 - Building	250 - Electrical	350 - Mechanical	450 - Plumbing
	160 - Smoke Detector			
	4 - APPROVAL TO OCCUPY			

POOL/SPA	
PRE-GUNITE	501 - Setback
	502 - Reinforcing
	503 - Bonding
	504 - Pool Piping
PRE-DECK	6 - OK TO GUNITE
	510 - Reinforce
	511 - Bonding
	6 - OK TO POUR
PRE-PLASTER	520 - Electrical
	521 - Plumbing
	522 - Gas Test
	6 - OK TO PLASTER
PRE-FINAL APPROVALS	C.C.C. Health Dept. 646-2521
	Planning Dept. 439-4920
	Engineering Dept. 439-4930
	530 - Gate/Door/Fence
FINAL	690 - Pool Spa

MICROFILM

SIGNS	
	601- ~~Footing~~
	602- ~~Electrical~~
FINAL	603- 5/28/98

Inspections: Inspections shall be made in consecutive order as shown. Do not cover or proceed with any work until the required inspections have been made. The field set of City approved plans, specifications and calculations, and this inspection card must be made available to the inspector during the inspection and protected from the weather.

Calling for Inspections: When calling for inspection give the permit number, the address, the name of the owner and/or contractor, and the type of inspection required. Failure to provide this information may result in the inspection not being made. ALL INSPECTION REQUESTS REQUIRE 24 HOUR NOTICE.

Access for Inspection: It shall be the duty of the person requesting an inspection required by the Code to provide access to and means for proper inspection of such work. POST NOTICE IF DOG IS ON THE PREMISES. DOGS SHALL BE CONFINED DURING INSPECTION.

Reinspection Fee: Reinspection fees may be assessed when the permit card is not properly posted on the work site, the approved plans are not readily available to the inspector, for failure to provide access on the date for which the inspection is requested, or for deviating from plans requiring approval of the Building Official. A reinspection fee may be assessed for each inspection or reinspection when such portion of work for which inspection is called is not complete or when corrections called for are not made.

Expiration: This permit expires and becomes null and void if work is not commenced within 180 days, or if work is abandoned or suspended for a period of 180 days.

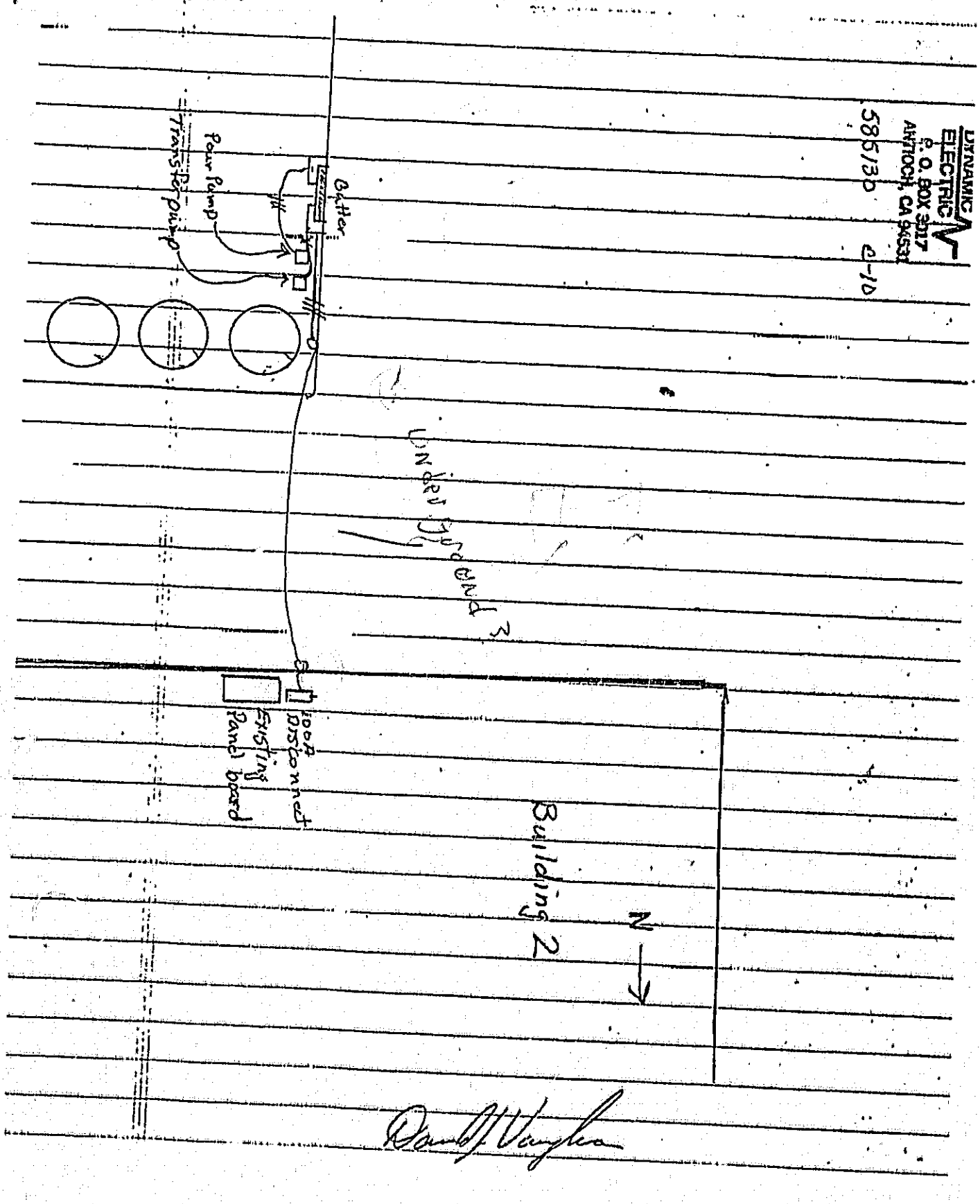
Pre-final Approvals: See front of Permit for a listing of which pre-final approvals are or may be required for this project.

Final: The "FINAL" section of this card must be signed and dated, by your inspector, after completion of this project. If the project is complete and this requirement is not met, the permit will be subject to expiration within 180 days of the last inspection.

Comments:

DYNAMIC ELECTRIC
P. O. BOX 3017
ANTIOCH, CA 94531

585/3b E-10

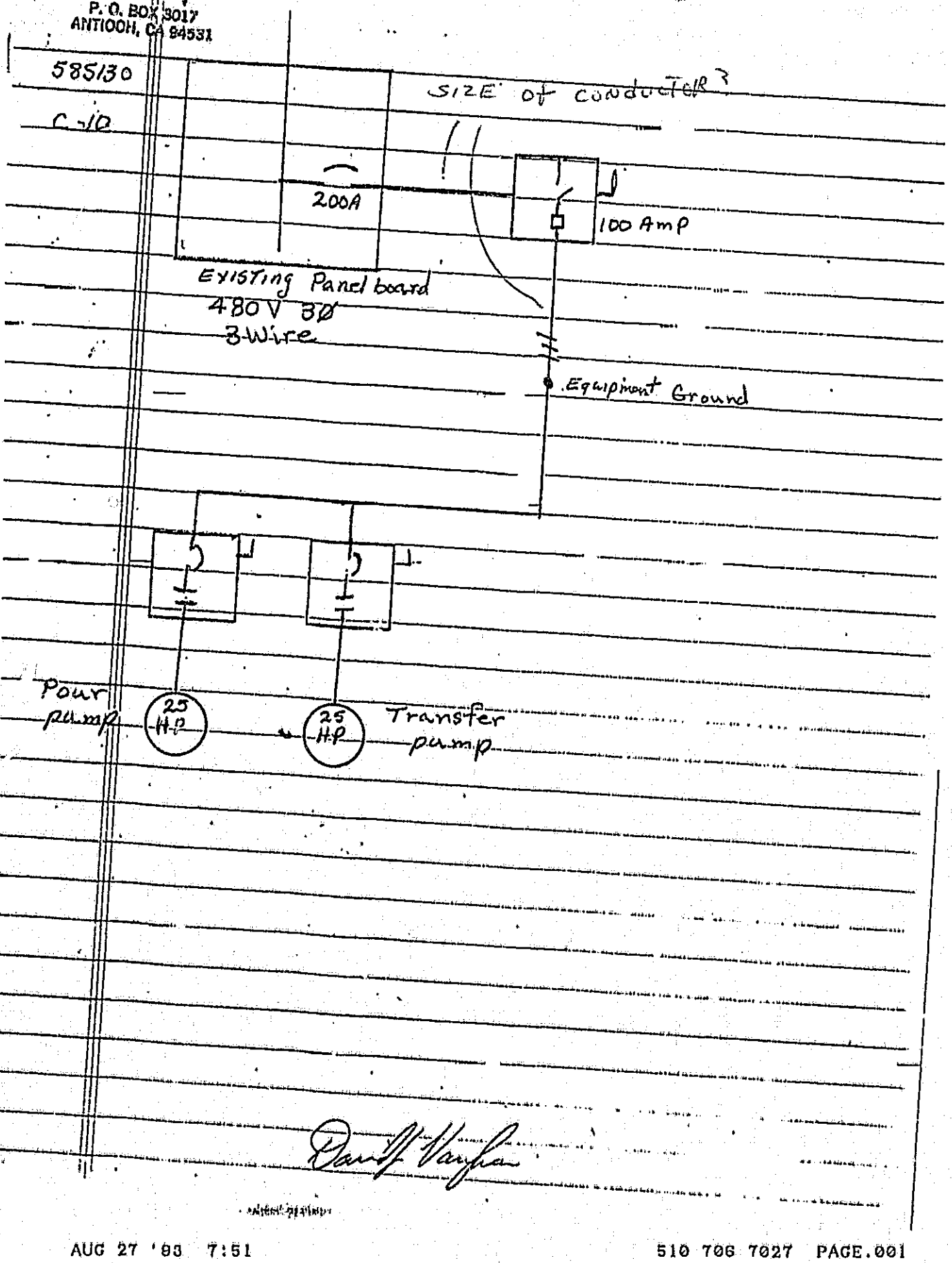


Dan Vaughan

ELECTRIC
P. O. BOX 3017
ANTIOCH, CA 94531

585130

C-10



Dan J. Vaughan

Appendix H

Request for Records Search to the
Regional Water Quality Control Board – Bay Area Region and
Response and Photocopies Obtained from that Agency

Est. 1988

Environmental Support Services

Environmental Research & Due Diligence Compliance
30251 Golden Lantern, #E-305, Laguna Niguel, CA 92677
P) 949.429.3564 | F) 949.429.3563 | E) Shannon@EnvironmentalSupportServices.com
www.EnvironmentalSupportServices.com | EIN# 83-0533710

February 22, 2021

Regional Water Quality Control Board
Bay Area Region
Oakland, CA

Attention: LUST/WIP/SLIC/Site Mitigation Divisions

Dear Ms. Wong,

Please check for any files/information on the following site:

Site: 420 East 3rd Street
Pittsburgh, CA 94565

I would like to set up an appointment to review this file **as soon as possible**. Anything you can do to expedite this request would be greatly appreciated. Please call me at (949) 429-3564. Thanks!

Sincerely,
Environmental Support Services

Shannon Castagno
Project Manager
Shannon@EnvironmentalSupportServices.com

Shannon Castagno

From: Wong, Melinda@Waterboards <Melinda.Wong@waterboards.ca.gov>
Sent: Tuesday, March 2, 2021 1:16 PM
To: Shannon Castagno
Subject: RE: PRA 20-0642 Records Request

Hello Shannon,

The San Francisco Bay Regional Water Board received your February 22, 2021 file review request, which seeks records related to the address you described below. Based on a thorough search, it appears in Geotracker database as an inactive case and some documents are available at this link: https://geotracker.waterboards.ca.gov/profile_report?global_id=SLT2O208311

Other record related to a construction stormwater NOI permit coverage, some documents are available at this link: CA Storm water Multiple Applications and Report Tracking System - Ver 2015.11 Bld: 10.28.2015.8.40

I suggest please contact the local agency, Contra Costa County Health Department for any further information they may have.

Thank you,

Melinda Wong
Management Services Division
San Francisco Bay Water Board
1515 Clay Street, Suite 1400
Oakland, CA 94612
Phone: (510) 622-2430
Fax: (510) 622-2095 direct line for Public Records Act request
Email: mwong@waterboards.ca.gov

From: Shannon Castagno <shannon@environmentalsupportservices.com>
Sent: Monday, February 22, 2021 5:59 PM
To: Wong, Melinda@Waterboards <Melinda.Wong@waterboards.ca.gov>
Subject: Records Request

EXTERNAL:

Environmental Support Services
Environmental Research & Due Diligence Compliance
30251 Golden Lantern, #E-305, Laguna Niguel, CA 92677
Tel) 949-429-3564 • Fax) 949-429-3563
www.EnvironmentalSupportServices.com • Info@EnvironmentalSupportServices.com

February 22, 2021

Regional Water Quality Control Board
Bay Area Region
Oakland, CA

Attention: LUST/WIP/SLIC/Site Mitigation Divisions

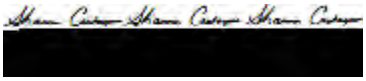
Dear Ms. Wong,

Please check for any files/information on the following site:

Site: 420 East 3rd Street
Pittsburgh, CA 94565

I would like to set up an appointment to review this file **as soon as possible**. Anything you can do to expedite this request would be greatly appreciated. Please call me at (949) 429-3564. Thanks!

Sincerely,
Environmental Support Services



Shannon Castagno
Project Manager
Shannon@EnvironmentalSupportServices.com

State Water Resources Control Board

NOTICE OF INTENT

GENERAL PERMIT TO DISCHARGE STORM WATER
ASSOCIATED WITH CONSTRUCTION ACTIVITY
(WQ ORDER No. 2009-0009-DWQ)

WDID: Risk Level: Level1

Property Owner Information

Type: Other

Name: Third Street Pittsburg Campus Owner LLC
Address: 3045 Research Drive
Address 2: Suite 250
City/State/Zip: Richmond CA 94806
Contact Name: Matt Kozina
Title: Project Manager
Phone Number: 209-337-8632
Email Address: mkozina@making-waves.org

Contractor/Developer Information

Name: Bayview Environmental Services Inc
Address: 6925 San Leandro Street
Address 2:
City/State/Zip: Oakland CA 94621
Contact Name: Wayne Pelletier
Title: Project Manager
Phone Number: 510-544-5261
Email Address: wdp@bvdmi.com

Construction Site Information

Contact Name: Wayne Pelletier
Title: Project Manager
Site Name: Former Johns Manville Site Remediation
Address: 420 East 3rd Street
City/State/Zip: Pittsburg CA 94565
Site Phone #: 510-544-5261
County: Contra Costa
Email Address: wdp@bvdmi.com
Latitude: 38.030497
Longitude: -121.878889
Construction Start: June 01, 2019
Total Size of Construction Area: 19.4 Acres
Complete Grading:
Total Area to be Disturbed: 3.2 Acres
Final Stabilization: September 21, 2019

Risk Values

R: 0.88
K: 0.24
LS: 0.46
Beneficial Uses/303(d): No

Type of Construction: *Other: Remediation
Receiving Water:
Qualified SWPPP Developer: Yizhen Shao

RWQCB Jurisdiction: Region 2 - San Francisco Bay
Phone: 510-622-2300
Email: r2stormwater@waterboards.ca.gov

Certification

Certification #: 26463

Name: Matt Kozina
Date: May 23, 2019
Title: Project Manager

Approved Date: N/A

Matt Kozina
Third Street Pittsburg Campus Owner LLC
3045 Research Drive Suite 250
Richmond CA 94806

RECEIPT OF YOUR NOTICE OF INTENT (NOI)

The State Water Resources Control Board (State Water Board) has received and processed your NOI to comply with the terms of the General Permit to Discharger Storm Water Associated with Construction Activity. Accordingly, you are required to comply with the permit requirements.

The Waste Discharger Identification (WDID) number is: . Please use this number in any future communication regarding this permit.

	SITE DESCRIPTION
OWNER:	Third Street Pittsburg Campus Owner LLC
DEVELOPER:	Bayview Environmental Services Inc
SITE INFORMATION:	Former Johns Manville Site Remediation 420 East 3rd Street Pittsburg
TOTAL DISTURBED ACRES:	3.2
START DATE:	June 01, 2019
COMPLETION DATE:	September 21, 2019
COUNTY:	Contra Costa

When the Owner changes , a new NOI, site map, and fee must be submitted by the new Owner. As the previous owner, you are required to submit a Notice of Termination (NOT) to the local Regional Water Board stating you no longer own or operate the Site and coverage under the General Permit is not required. Unless notified, you will continue and are responsible to pay the annual fee invoiced each .

If you have any questions regarding permit requirements, please contact your Regional Water Board at . Please visit the storm water web site at http://www.waterboards.ca.gov/water_issues/programs/stormwater/ to obtain an NOT and other storm water related information and forms.

Sincerely,

Storm Water Section
Division of Water Quality

APPENDIX A

Site Map



N



Note

Basemap provided by Esri ArcGIS Online, August 2017.

SCALE (Feet)

0 500 1,000

Projected Coordinate System
Datum: NAD83
State Plane California Zone III
Units: Feet

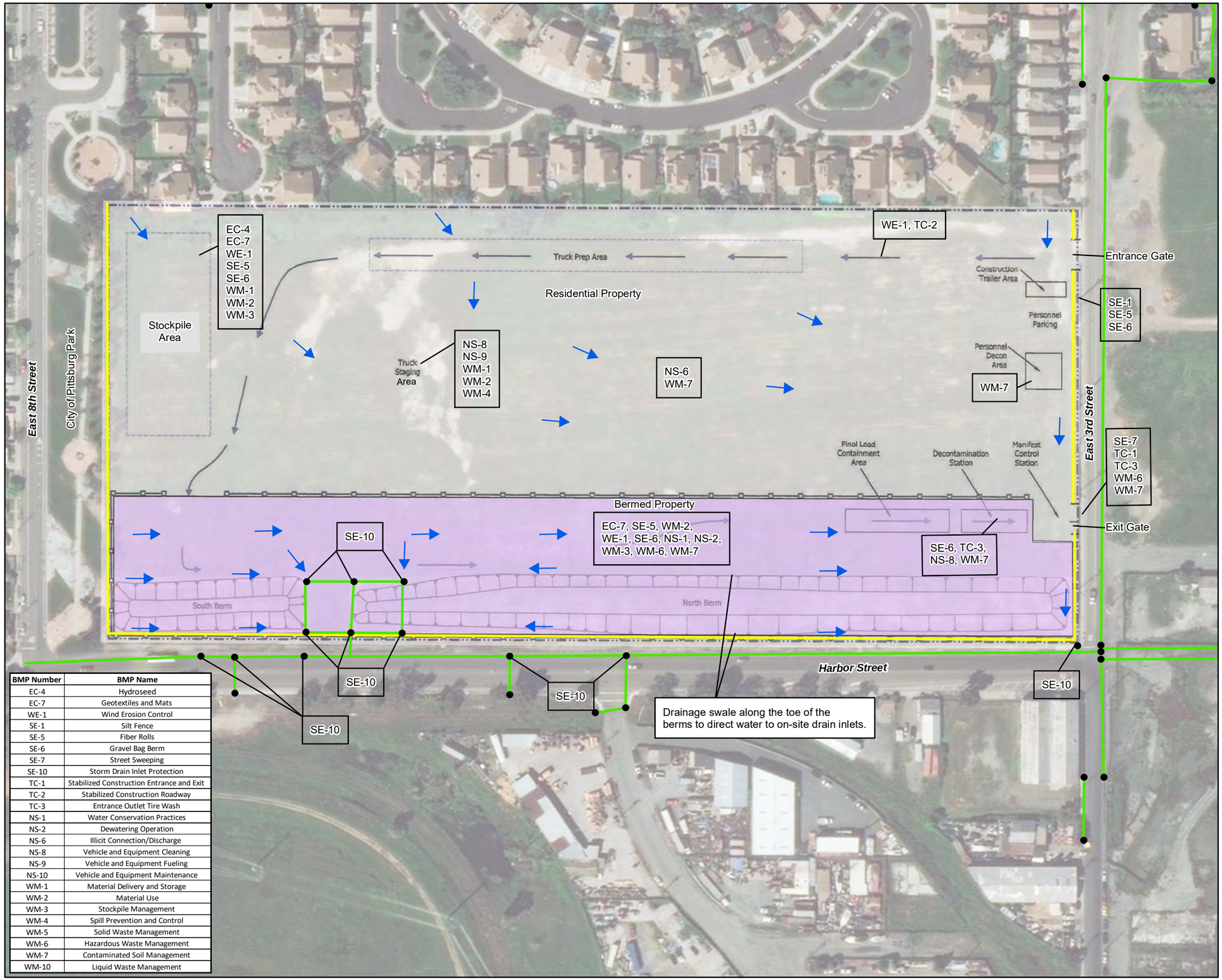
GSI ENVIRONMENTAL

SITE VICINITY MAP

420 East Third Street
Pittsburg, California

GSI Job No.	5152	Drawn By:	AV
Issued:	3-Apr-2019	Chk'd By:	SS
Map ID:	**BC_SiteVicinityMap**	Appv'd By:	MG

FIGURE 1



BMP Number	BMP Name
EC-4	Hydroseed
EC-7	Geotextiles and Mats
WE-1	Wind Erosion Control
SE-1	Silt Fence
SE-5	Fiber Rolls
SE-6	Gravel Bag Berm
SE-7	Street Sweeping
SE-10	Storm Drain Inlet Protection
TC-1	Stabilized Construction Entrance and Exit
TC-2	Stabilized Construction Roadway
TC-3	Entrance Outlet Tire Wash
NS-1	Water Conservation Practices
NS-2	Dewatering Operation
NS-6	Illicit Connection/Discharge
NS-8	Vehicle and Equipment Cleaning
NS-9	Vehicle and Equipment Fueling
NS-10	Vehicle and Equipment Maintenance
WM-1	Material Delivery and Storage
WM-2	Material Use
WM-3	Stockpile Management
WM-4	Spill Prevention and Control
WM-5	Solid Waste Management
WM-6	Hazardous Waste Management
WM-7	Contaminated Soil Management
WM-10	Liquid Waste Management

LEGEND

- Catch Basin/Stormdrain Inlet
- Storm Drain
- Approximate Storm Water Flow Direction
- Silt Fence and Fiber Roll Protection
- Approximate Property Boundary
- High Fence with Wind Barrier
- Regulated Area
- Onsite Truck Route

Notes

1) Basemap provided by Esri ArcGIS Online, August 2017.
2) Catch basin and stormwater drainage layers provided by the City of Pittsburg, California, 25 March 2019.

SCALE (Feet)
0 70 140

Projected Coordinate System
Datum: NAD83
State Plane California Zone III
Units: Feet

GSI ENVIRONMENTAL

FORMER JOHNS MANVILLE SITE
SWPPP SITE MAP

420 East Third Street
Pittsburg, California

GSI Job No.	5152	Drawn By:	AV
Issued:	7-May-2019	Chk'd By:	SS
Map ID:	BC_SWPPP	Appv'd By:	MG

FIGURE 2

	A	B	C
1	**Sediment Risk Factor Worksheet**		**Entry**
2	**A) R Factor**		
3	Analyses of data indicated that when factors other than rainfall are held constant, soil loss is directly proportional to a rainfall factor composed of total storm kinetic energy (E) times the maximum 30-min intensity (I30) (Wischmeier and Smith, 1958). The numerical value of R is the average annual sum of EI30 for storm events during a rainfall record of at least 22 years. "Isoerodent" maps were developed based on R values calculated for more than 1000 locations in the Western U.S. Refer to the link below to determine the R factor for the project site.		
4	http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm		
5	**R Factor Value**		0.875
6	**B) K Factor (weighted average, by area, for all site soils)**		
7	The soil-erodibility factor K represents: (1) susceptibility of soil or surface material to erosion, (2) transportability of the sediment, and (3) the amount and rate of runoff given a particular rainfall input, as measured under a standard condition. Fine-textured soils that are high in clay have low K values (about 0.05 to 0.15) because the particles are resistant to detachment. Coarse-textured soils, such as sandy soils, also have low K values (about 0.05 to 0.2) because of high infiltration resulting in low runoff even though these particles are easily detached. Medium-textured soils, such as a silt loam, have moderate K values (about 0.25 to 0.45) because they are moderately susceptible to particle detachment and they produce runoff at moderate rates. Soils having a high silt content are especially susceptible to erosion and have high K values, which can exceed 0.45 and can be as large as 0.65. Silt-size particles are easily detached and tend to crust, producing high rates and large volumes of runoff. Use Site-specific data must be submitted.		
8	Site-specific K factor guidance		
9	**K Factor Value**		0.24
10	**C) LS Factor (weighted average, by area, for all slopes)**		
11	The effect of topography on erosion is accounted for by the LS factor, which combines the effects of a hillslope-length factor, L, and a hillslope-gradient factor, S. Generally speaking, as hillslope length and/or hillslope gradient increase, soil loss increases. As hillslope length increases, total soil loss and soil loss per unit area increase due to the progressive accumulation of runoff in the downslope direction. As the hillslope gradient increases, the velocity and erosivity of runoff increases. Use the LS table located in separate tab of this spreadsheet to determine LS factors. Estimate the weighted LS for the site prior to construction.		
12	LS Table		
13	**LS Factor Value**		0.46
14			
15	**Watershed Erosion Estimate (=RxKxLS) in tons/acre**		0.0966
16	**Site Sediment Risk Factor**		**Low**
17	Low Sediment Risk: < 15 tons/acre		
18	Medium Sediment Risk: >=15 and <75 tons/acre		
19	High Sediment Risk: >= 75 tons/acre		
20			

R Factor Calculation

Location:	420 E 3rd St, Pittsburg, CA 94565	EI %
Erosivity Index Zone:	24	
Isoerodent Interpolated:	35	
Project Start	6/1/2019	58.9
Project End	9/21/2019	61.4
Duration	16 weeks	
R		0.875

Table 1. Erosivity Index (%EI Values extracted from USDA Manual 703)

All values are at the end of the day listed below - Linear interpolation between dates is acceptable.
EI as a percentage of Average Annual R Value Computed for Geographic Areas Shown in Figure 1

Month	Jan	Jan	Jan	Feb	Mar	Mar	Mar	Apr	Apr	May	May	Jun	Jun	Jul	Jul	Aug	Aug	Sept	Sept	Oct	Oct	Nov	Nov	Dec	Dec
Day	1	16	31	15	1	16	31	15	30	15	30	14	29	14	29	13	28	12	27	12	27	11	26	11	31
EI Zone																									
1	0	4.3	8.3	12.8	17.3	21.6	25.1	28	30.9	34.9	39.1	42.6	45.4	48.2	50.8	53	56	60.8	66.8	71	75.7	82	89.1	95.2	100
2	0	4.3	8.3	12.8	17.3	21.6	25.1	28.0	30.9	34.9	39.1	42.6	45.4	48.2	50.8	53.0	56.0	60.8	66.8	71.0	75.7	82.0	89.1	95.2	100
3	0	7.4	13.8	20.9	26.5	31.8	35.3	38.5	40.2	41.6	42.5	43.6	44.5	45.1	45.7	46.4	47.7	49.4	52.8	57.0	64.5	73.1	83.3	92.3	100
4	0	3.9	7.9	12.6	17.4	21.6	25.2	28.7	31.9	35.1	38.2	42.0	44.9	46.7	48.2	50.1	53.1	56.6	62.2	67.9	75.2	83.5	90.5	96.0	100
5	0	2.3	3.6	4.7	6.0	7.7	10.7	13.9	17.8	21.2	24.5	28.1	31.1	33.1	35.3	38.2	43.2	48.7	57.3	67.8	77.9	86.0	91.3	96.9	100
6	0	0.0	0.0	0.5	2.0	4.1	8.1	12.6	17.6	21.6	25.5	29.6	34.5	40.0	45.7	50.7	55.6	60.2	66.5	75.5	85.6	95.9	99.5	99.9	100
7	0	0.0	0.0	0.0	0.0	1.2	4.9	8.5	13.9	19.0	26.0	35.4	43.9	48.8	53.9	64.5	73.4	77.5	80.4	84.8	89.9	96.6	99.2	99.7	100
8	0	0.0	0.0	0.0	0.0	0.9	3.6	7.8	15.0	20.2	27.4	38.1	49.8	57.9	65.0	75.6	82.7	86.8	89.4	93.4	96.3	99.1	100.0	100.0	100
9	0	0.8	3.1	4.7	7.4	11.7	17.8	22.5	27.0	31.4	36.0	41.6	46.4	50.1	53.4	57.4	61.7	64.9	69.7	79.0	89.6	97.4	100.0	100.0	100
10	0	0.3	0.5	0.9	2.0	4.3	9.2	13.1	18.0	22.7	29.2	39.5	46.3	48.8	51.1	57.2	64.4	67.7	71.1	77.2	85.1	92.5	96.5	99.0	100
11	0	5.4	11.3	18.8	26.3	33.2	37.4	40.7	42.5	44.3	45.4	46.5	47.1	47.4	47.8	48.3	49.4	50.7	53.6	57.5	65.5	76.2	87.4	94.8	100
12	0	3.5	7.8	14.0	21.1	27.4	31.5	35.0	37.3	39.8	41.9	44.3	45.6	46.3	46.8	47.9	50.0	52.9	57.9	62.3	69.3	81.3	91.5	96.7	100
13	0	0.0	0.0	1.8	7.2	11.9	16.7	19.7	24.0	31.2	42.4	55.0	60.0	60.8	61.2	62.6	65.3	67.6	71.6	76.1	83.1	93.3	98.2	99.6	100
14	0	0.7	1.8	3.3	6.9	16.5	26.6	29.9	32.0	35.4	40.2	45.1	51.9	61.1	67.5	70.7	72.8	75.4	78.6	81.9	86.4	93.6	97.7	99.3	100
15	0	0.0	0.0	0.5	2.0	4.4	8.7	12.0	16.6	21.4	29.7	44.5	56.0	60.8	63.9	69.1	74.5	79.1	83.1	87.0	90.9	96.6	99.1	99.8	100
16	0	0.0	0.0	0.5	2.0	5.5	12.3	16.2	20.9	26.4	35.2	48.1	58.1	63.1	66.5	71.9	77.0	81.6	85.1	88.4	91.5	96.3	98.7	99.6	100
17	0	0.0	0.0	0.7	2.8	6.1	10.7	12.9	16.1	21.9	32.8	45.9	55.5	60.3	64.0	71.2	77.2	80.3	83.1	87.7	92.6	97.2	99.1	99.8	100
18	0	0.0	0.0	0.6	2.5	6.2	12.4	16.4	20.2	23.9	29.3	37.7	45.6	49.8	53.3	58.4	64.3	69.0	75.0	86.6	93.9	96.6	98.0	100.0	100
19	0	1.0	2.6	7.4	16.4	23.5	28.0	31.0	33.5	37.0	41.7	48.1	51.1	52.0	52.5	53.6	55.7	57.6	61.1	65.8	74.7	88.0	95.8	98.7	100
20	0	9.8	18.5	25.4	30.2	35.6	38.9	41.5	42.9	44.0	45.2	48.2	50.8	51.7	52.5	54.6	57.4	58.5	60.1	63.2	69.6	76.7	85.4	92.4	100
21	0	7.5	13.6	18.1	21.1	24.4	27.0	29.4	31.7	34.6	37.3	39.6	41.6	43.4	45.4	48.1	51.3	53.3	56.6	62.4	72.4	81.3	88.9	94.7	100
22	0	1.2	1.6	1.6	1.6	1.6	1.6	2.2	3.9	4.6	6.4	14.2	32.8	47.2	58.8	69.1	76.0	82.0	87.1	96.7	99.9	99.9	99.9	99.9	100
23	0	7.9	15.0	20.9	25.7	31.1	35.7	40.2	43.2	46.2	47.7	48.8	49.4	49.9	50.7	51.8	54.1	57.7	62.8	65.9	70.1	77.3	86.8	93.5	100
24	0	12.2	23.6	33.0	39.7	47.1	51.7	55.9	57.7	58.6	58.9	59.1	59.1	59.2	59.2	59.3	59.5	60.0	61.4	63.0	66.5	71.8	81.3	89.6	100
25	0	9.8	20.8	30.2	37.6	45.8	50.6	54.4	56.0	56.8	57.1	57.1	57.2	57.6	58.5	59.8	62.2	65.3	67.5	68.2	69.4	74.8	86.6	93.0	100
26	0	2.0	5.4	9.8	15.6	21.5	24.7	26.6	27.4	28.0	28.7	29.8	32.5	36.6	44.9	55.4	65.7	72.6	77.8	84.4	89.5	93.9	96.5	98.4	100
27	0	0.0	0.0	1.0	4.0	5.9	8.0	11.1	13.0	14.0	14.6	15.3	17.0	23.2	39.1	60.0	76.3	86.1	89.7	90.4	90.9	93.1	96.6	99.1	100
28	0	0.0	0.0	0.0	0.2	0.5	1.5	3.3	7.2	11.9	17.7	21.4	27.0	37.1	51.4	62.3	70.6	78.8	84.6	90.6	94.4	97.9	99.3	100.0	100
29	0	0.6	0.7	0.7	0.7	1.5	3.9	6.0	10.5	17.9	28.8	36.6	43.8	51.5	59.3	68.0	74.8	80.3	84.3	88.8	92.7	98.0	99.8	99.9	100
30	0	0.0	0.0	0.0	0.0	0.2	0.8	2.8	7.9	14.2	24.7	35.6	45.4	52.2	58.7	68.5	77.6	84.5	88.9	93.7	96.2	97.6	98.3	99.6	100

K Factor Determination

420 E 3rd street, Pittsburg

Browns Island

0.02

420 E 3rd St

Pittsburg

0.24

Dowest Slough

Legend

- 0.02
- 0.1
- 0.11
- 0.15
- 0.17
- 0.2
- 0.37
- 0.43
- 0.49
- 420 E 3rd St
- Delta Bowl
- Delta View Golf Club
- E.J. Phair at The Liberty Hotel
- Enterprise Rent-A-Car
- Feature 1
- Feature 2
- Feature 3
- Feature 4
- Feature 5
- Feature 6
- Feature 7
- Feature 8
- G C Dental Lab
- Island
- Pittsburg
- Pittsburg Historical Society
- Pittsburg Police Dept
- School
- Small World Park
- Starbucks
- Walgreens Store Pittsburg
- WinCo Foods

Google Earth

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N

4000 ft

LS Factor Determination

420 E 3rd street, Pittsburg

Browns Island

0.15

420 E 3rd St

Pittsburg

0.46

Legend

- 0.02
- 0.1
- 0.11
- 0.15
- 0.17
- 0.2
- 0.37
- 0.43
- 0.49
- 420 E 3rd St
- Delta Bowl
- Delta View Golf Club
- E.J. Phair at The Liberty Hotel
- Enterprise Rent-A-Car
- Feature 1
- Feature 2
- Feature 3
- Feature 4
- Feature 5
- Feature 6
- Feature 7
- Feature 8
- G C Dental Lab
- Island
- Pittsburg
- Pittsburg Historical Society
- Pittsburg Police Dept
- School
- Small World Park
- Starbucks
- Walgreens Store Pittsburg
- WinCo Foods

N

3000 ft

Google Earth

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Receiving Water (RW) Risk Factor Worksheet	Entry	Score
A. Watershed Characteristics	**yes/no**	
A.1. Does the disturbed area discharge (either directly or indirectly) to a **303(d)-listed waterbody impaired by sediment** (For help with impaired waterbodies please visit the link below) or has a **USEPA approved TMDL implementation plan for sediment**?: http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml **OR** A.2. Does the disturbed area discharge to a waterbody with designated beneficial uses of SPAWN & COLD & MIGRATORY? (For help please review the appropriate Regional Board Basin Plan) http://www.waterboards.ca.gov/waterboards_map.shtml	**No**	**Low**
Region 1 Basin Plan Region 2 Basin Plan Region 3 Basin Plan Region 4 Basin Plan Region 5 Basin Plan Region 6 Basin Plan Region 7 Basin Plan Region 8 Basin Plan Region 9 Basin Plan		

SUISUN BASIN

COUNTY Waterbody	AGR	MUN	FRSH	GWR	IND	PROC	COMM	SHELL	COLD	EST	MAR	MIGR	RARE	SPWN	WARM	WILD	REC-1	REC-2	NAV
SOLANO COUNTY, continued																			
Volanti Slough							E			E			E			E	E	E	
Montezuma Slough							E			E		E	E	E	E	E	E	E	E
Nurse Slough							E			E		E	E			E	E	E	
Denverton Slough							E			E		E	E			E	E	E	
Denverton Creek													E	E	E	E	E	E	
CONTRA COSTA COUNTY																			
Alhambra Creek									E			E	E		E	E	E	E	
Franklin Creek									E			E	E	E	E	E	E	E	
Arroyo del Hambre									E						E	E	E	E	
Peyton Slough					E		E			E		E	E			E	E	E	
Pacheco Creek															E	E	E	E	
Walnut Creek									E			E	E	E	E	E	E	E	
Grayson Creek									E			E	E		E	E	E	E	
Pine Creek									E			E	E	E	E	E	E	E	
Galindo Creek									E						E	E	E	E	
San Ramon Creek															E	E	E	E	
Bollinger Canyon Creek									E					E	E	E	E	E	
Las Trampas Creek									E				E		E	E	E	E	
Tice Creek													E		E	E	E	E	
Lafayette Creek									E						E	E	E	E	
Lafayette Reservoir		E					E		E					E	E	E	E*	E	
Hastings Slough										E			E			E	E	E	
Mt. Diablo Creek									E			E	E	E	E	E	E	E	
Mitchell Creek									E			E	E	E	E	E	E	E	
Donner Creek									E					E	E	E	E	E	
Mallard Slough (Contra Costa)							E			E		E	E			E	E	E	
Kirker Creek													E		E	E	E	E	
New York Slough							E			E		E	E			E	E	E	E

E: Existing beneficial use E*: Water quality objectives apply; water contact recreation is prohibited or limited to protect public health P: Potential beneficial use

Storm Water Pollution Prevention Plan

Former Johns Manville Site Remediation

Risk Level: 1

420 E. 3rd Street

Pittsburg, CA 94565

Owner/ Legally Responsible Person (LRP):

Third Street Pittsburg Campus Owner LLC

c/o Making Waves™ Foundation, Inc

3220 Blume Drive, Suite 250

Richmond, CA 94806

Operator:

Bayview Environmental Services, Inc.

6925 San Leandro Street

Oakland, CA 94621

Estimated Project Dates:

June 2019 to September 2019

WDID Number: TBD

Prepared By:

GSI Environmental Inc.
19200 Von Karman Avenue, Suite 800
Irvine, California 92612
(949) 679-1070

GSI Job No.: 5152
Preparation Date: May 2019

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Construction Site Monitoring Program (CSMP) Attachments

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Appendices

Appendix A: Site Maps

Appendix B: Permit Registration Documents

Appendix C: SWPPP Amendment Certifications

Appendix D: Submitted Changes to PRDs

Appendix E: CASQA Stormwater BMP Handbook Portal: Construction Fact Sheets

Appendix F: Inspection Forms

Appendix G: Training Reporting Form

Appendix H: Documentation of Authorized Representatives for Permit-related Signatures

Exhibits

Exhibit A: Construction General Permit Order 2009-0009-DWQ (kept on Site)

QUALIFIED SWPPP DEVELOPER

Approval and Certification of the Stormwater Pollution Prevention Plan

"This Stormwater Pollution Prevention Plan and Attachments were prepared under my direction to meet the requirements of the California Construction General Permit (SWRCB Orders No. 2009-009-DWQ as amended by Order 2010-0014-DWQ and Order 2012-0006-DWQ). I certify that I am a Qualified SWPPP Developer in good standing as of the date signed below."



QSD Signature	Date
05/10/2019	

QSD Name	QSD Certificate Number
Yizhen (Stella) Shao	26463

Title and Affiliation	Telephone Number
Staff Engineer, GSI Environmental	949-679-1070

Email

sshao@gsi-net.com

LEGALLY RESPONSIBLE PERSON

"I certify under penalty of law that this document and all Attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Third Street Pittsburg Campus Owner LLC

Legally Responsible Person

Signature of Legally Responsible Person or Approved Signatory	Date

Name of Legally Responsible Person or Approved Signatory	Telephone Number

REVISION SHEET

All revisions to the Storm Water Pollution Prevention Plan must be documented. Presented below is a listing, by date, of the sections that have been revised.

Revision Date	Section Revised	Purpose of Revision	Revised By
			Name: QSD#:

1.0 SWPPP REQUIREMENTS

1.1 Introduction

The Former Johns Manville Site Remediation project is located at 420 East 3rd Street in Pittsburg, California (the "Site"). The approximately 19.4-acre property is owned by Third Street Pittsburg Campus Owner LLC (Owner). The Owner and Making Waves™ Foundation, Inc (Making Waves), are planning to construct a school on the Site. Prior to construction of the school, a portion of the property known as the Bermed Property will be remediated. The Bermed Property is currently being used as an engineered containment cell for asbestos- and petroleum hydrocarbon-affected soil generated during previous remediation of other portions of the Site. The current remediation project includes excavation and off-site disposal of the contaminated soil encapsulated at the Bermed Property. The excavation will occur on approximately 3.2 acres of the Site and will be conducted by Bayview Environmental Services, Incorporated (Bayview). The project location is shown on the Site Map in Appendix A.

This Stormwater Pollution Prevention Plan (SWPPP) is designed to comply with California's General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (CGP) Order No. 2009-0009-DWQ as amended in 2010 and 2012 (NPDES No. CAS000002) issued by the State Water Resources Control Board (State Water Board). This SWPPP has been prepared following the SWPPP Template provided on the California Stormwater Quality Association Stormwater *Best Management Practice Handbook Portal: Construction* (CASQA, 2012). In accordance with the CGR, Section XIV, this SWPPP is designed to address the following:

- All pollutants and their sources, including sources of sediment associated with construction, construction site erosion and all other activities associated with construction activity are controlled;
- Where not otherwise required to be under a Regional Water Quality Control Board (Regional Water Board) permit, all non-stormwater discharges are identified and either eliminated, controlled, or treated;
- Site Best Management Plans (BMPs) are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges from construction activity to the Best Available Technology/Best Control Technology (BAT/BCT) standard;
- Calculations and design details, as well as BMP controls, are complete and correct;
- Stabilization BMPs installed to reduce or eliminate pollutants after construction are completed.

1.2 Permit Registration Documents

Required Permit Registration Documents (PRDs) shall be submitted to the State Water Board via the Stormwater Multi Application and Report Tracking System (SMARTS) by the Legally Responsible Person (LRP), or authorized personnel (i.e., Approved Signatory) under the direction of the LRP. The project-specific PRDs include:

- Notice of Intent (NOI);
- Risk Assessment;
- Site Map(s);
- Annual fee;

- Signed Certification Statement (LRP Certification is provided electronically with SMARTS PRD submittal); and
- SWPPP

Site Maps can be found in Appendix A. A copy of the submitted PRDs shall also be kept in Appendix B along with the Waste Discharge Identification (WDID) confirmation.

1.3 SWPPP Availability and Implementation

The CGP requires that this SWPPP be available at the construction Site during working hours while construction is occurring and shall be made available upon request by a State or Municipal inspector. When the original SWPPP is retained by a crewmember in a construction vehicle and is not currently at the construction Site, current copies of the BMPs and map/drawing will be left with the field crew and the original SWPPP shall be made available via a request by radio/telephone. (CGP Section XIV.C)

The SWPPP will implemented concurrently with the start of ground disturbing activities.

1.4 SWPPP Amendments

The SWPPP should be revised when:

- If there is a CGP violation.
- When there is a reduction or increase in total disturbed acreage (CGP Section II Part C).
- BMPs do not meet the objectives of reducing or eliminating pollutants in stormwater discharges.

Additionally, the SWPPP shall be amended when:

- There is a change in construction or operations which may affect the discharge of pollutants to surface waters, groundwater(s), or a municipal separate storm sewer system (MS4);
- When there is a change in the project duration that changes the project's risk level; or
- When deemed necessary by the QSD.

The following items shall be included in each amendment:

- Who requested the amendment;
- The location of proposed change;
- The reason for change;
- The original BMP proposed, if any; and
- The new BMP proposed.

Amendments shall be logged at the front of the SWPPP and certifications kept in Appendix C. The SWPPP text shall be revised replaced, and/or hand annotated as necessary to properly convey the amendment. SWPPP amendments must be made by a QSD. The following changes have been designated by the QSD as "to be field determined" and constitute minor changes that the QSP may implement based on field conditions.

1.5 Retention of Records

Paper or electronic records of documents required by this SWPPP shall be retained for a minimum of three years from the date generated or date submitted, whichever is last, for the following items:

- Site inspections and monitoring record
- Compliance certifications
- Discharge reports
- Approved SWPPP document and amendments

These records shall be available at the Site until construction is complete. Records assisting in the determination of compliance with the CGP shall be made available within a reasonable time to the Regional Water Board, State Water Board or U.S. Environmental Protection Agency (EPA) upon request. Requests by the Regional Water Board for retention of records for a period longer than three years shall be adhered to.

1.6 Required Exceedance/Non-Compliance Reporting

The CGP identifies several areas of exceedance/non-compliance reporting. It is the responsibility of the LRP to properly document reportable discharges or other violations of the CGP.

This is a Risk Level 1 project. The following exceedances and non-compliance should be reported using SMARTS:

- Discharges that contain a hazardous substance in excess of reportable quantities established in 40 Code of Federal Regulations (CFR) § 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.
- Self-reporting of any other discharge violations or to comply with RWQCB enforcement actions.

In the event of a violation, the QSP shall immediately notify the QSD and the LRP. The LRP shall file a violation report electronically using SMARTS. Corrective measures will be implemented immediately following identification of the discharge or written notice of non-compliance from the Regional Water Board. Discharges and corrective actions must be documented and include the following items:

- The date, time, location, nature of operation and type of unauthorized discharge.
- The cause or nature of the notice or order.
- The control measures (BMPs) deployed before the discharge event, or prior to receiving notice or order.
- The date of deployment and type of control measures (BMPs) deployed after the discharge event, or after receiving the notice or order, including additional measures installed or planned to reduce or prevent re-occurrence.

1.7 Annual Report

The CGP requires all projects that are enrolled for more than one continuous three-month period to submit information and annually certify that the site is in compliance with these requirements, no later than September 1st of each year. Annual reports will be filed in SMARTS and in accordance with information required by the on-line forms. Reporting requirements are identified in Section XVI of the CGP and include:

- A summary of corrective actions taken during the compliance year;
- Identification of any compliance activities or corrective actions that were not implemented;
- A summary of violations of the CGP;

- The names of individuals who performed the facility inspections, sampling, visual observation (inspections), and/or measurements;
- The date, place, time of facility inspections, sampling, visual observation (inspections), and/or measurements, including precipitation (rain gauge); and
- The visual observation and sample collection exception records and reports.

1.8 Change to Permit Coverage

The CGP allows for the reduction or increase of the total acreage covered under the CGP when:

- A portion of the project is complete and/or conditions for termination of coverage have been met;
- When ownership of a portion of the project is purchased by a different entity; or
- When new acreage is added to the project.

Modified PRDs shall be filed electronically within 30 days of a reduction or increase in total disturbed area if a change in permit covered acreage is to be sought. The SWPPP shall be modified appropriately, shall be logged at the front of the SWPPP and certification of SWPPP amendments are to be kept in Appendix C (SWPPP modification). Updated PRDs submitted electronically via SMARTS can be found in Appendix D (Submitted Changes to PRDs).

1.9 Notice of Termination

Within 90 days of when construction is complete or ownership has been transferred, the discharger shall electronically file a Notice of Termination (NOT), a final site map, and photos through the State Water Boards SMARTS system. Filing a NOT certifies that all CGP requirements have been met. The Regional Water Board will consider a construction site complete only when all portions of the site have been transferred to a new owner, or all of the following conditions have been met:

- For purposes of “final stabilization,” the Site will not pose any additional sediment discharge risk than it did prior to the commencement of construction activity;
- There is no potential for construction-related storm water pollutants to be discharged into Site runoff;
- Final stabilization has been reached;
- Construction materials and waste have been disposed of properly;
- Compliance with the Post-Construction Standards in Section XIII of the CGP has been demonstrated;
- Post-construction storm water management measures have been installed and a long-term maintenance plan has been established; and
- All construction-related equipment, materials, and any temporary BMPs no longer needed are removed from the Site.

The discharger shall certify that final stabilization conditions are satisfied in their NOT. Failure to certify shall result in continuation of permit coverage and annual billing. The NOT must demonstrate through photos, RUSLE or RUSLE2, or results of testing and analysis that the Site meets all the conditions above and the final stabilization condition is attained by one of the following methods:

- “70% final cover method,” no computational proof required, or
- “RUSLE or RUSLE2 method,” computational proof required, or
- “Custom method”, the discharger shall demonstrate in some other manner than a or b, above, that the Site complies with the “final stabilization” requirement.

2.0 PROJECT INFORMATION

2.1 Project and Site Description

2.1.1 Site Description

WDID #	207C386595
Project Name	Former Johns Manville Site Remediation
Address	420 East 3rd Street Pittsburg, CA 94565
Latitude/longitude	38.030497, -121.878889
Property Size	19.4 acres
Excavation Size	3.2 acres
Description of neighboring major roads and/or community areas	North – East 3rd Street South – East 8th Street East – Harbor St West – Residential Area of Old Town Pittsburg
Receiving Water	New York Slough that leads to Honker Bay and Suisun Bay
Receiving Water Location	Approximately 1550 feet north east from the Site
303d Listings for Receiving Water*	Chlordane, DDT, Invasive species, Dieldrin, Dioxin compounds (including 2,3,7,8-TCDD), Furan Compounds, Mercury, Selenium, PCBs (Polychlorinated biphenyls), PCB (Polychlorinated biphenyls) (dioxin-like),
Beneficial Uses	**Existing:** COMM, EST, MIGR, RARE, WILD, REC-1, REC-2, NAV
TMDL(s) Established for Receiving Water	None

* Based on the final 2014/16 303(d) listing (most recent 303(d) listing). Although New York Slough is not listed, it is part of Sacramento-San Joaquin Delta that was addressed as a whole unit in the 303(d) listing.

2.1.2 Existing Conditions

The subject property is the location of the former Johns Manville Plant Site and is currently undeveloped and consists of two areas: The Residential Property and the Bermed Property. The Residential Property is covered with clean soil and mostly pervious. The Bermed Property, including a north berm and a south berm, is currently being used as an engineered containment cell for asbestos containing material (ACM) and total petroleum hydrocarbon (TPH) impacted soil generated during remediation of other portions of the Site that occurred between 2006 and 2008. The contaminated soil in the berms are currently covered with a “Tensar Product” geo textile liner and capped with a 2 feet thick layer of clean soil. The berms were constructed to a depth of approximately 10 feet and 8 feet wide and were filled above grade to a height of approximately 12 feet. The berms were also hydroseeded to stabilize the cap soil for long term storage and containment as part of a long-term re-development application.

Following the remediation in 2008, a Covenant was issued by California Department of Toxic Substances Control (DTSC) in 2009 that limits the land use for the Bermed Property from schools for persons under 21 years of age. The Owner and Making Waves acquired the Site in 2017 and proposed to redevelop the Bermed Property as part of the school facility. Remediation of the Bermed Property is required prior to construction of the proposed school facility.

2.1.3 Existing Drainage

The project Site is sloped generally from southwest to northeast. The elevation of the project Site ranges from 10 to 35 feet above mean sea level (msl). Surface drainage at the Residential Property currently flows northeast towards a drain inlet at the corner of East 3rd Street and the north berm. The drainage at the Bermed Property flows though drainage swales adjacent to the toe of the berms and directed to six on-site catch basins located between the north and south berms as well as to the drain inlet at the corner of East 3rd Street and the north berm.

Stormwater is infiltrated in the soil first and any excess runoff is conveyed through the storm drain system along 3rd Street and Harbor Street. Existing Site topography, drainage patterns, and stormwater conveyance systems are shown on the site map in Appendix A.

2.1.4 Geology and Groundwater

The Bermed Property is underlain by ACM- and petroleum hydrocarbon-impacted clay and topsoil mix. The groundwater level beneath the Site is normally at approximately 13 feet below ground surface (bgs).

2.1.5 Project Description

The proposed remediation entails excavation of contaminated soil encapsulated at the Bermed Property, loading of the excavated material into trucks and transportation and disposal of the material at appropriate off-site disposal locations in accordance with applicable federal and state laws. The initial phase of excavation will consist of grubbing of the berm to remove existing vegetation and removal of the majority of clean overburden soil following agency-approved protocols to manage and monitor construction and asbestos containing dust. After the overburden soil is removed, the ACM- and petroleum hydrocarbon-affected soil present in the berm areas will be excavated and placed in high-sided open top trucks lined with 6-millimeter (mm) polyethylene sheeting, or a suitable equivalent. Once the truck is full, the polyethylene liner will be folded over the top of the soil to completely encapsulate the soil. Once filled, the truck will transport the soil to an off-site Class II asbestos-permitted landfill for disposal. Excavation of the affected soil will continue until undisturbed native soils are reached horizontally and vertically within the former soil containment trench. After removal of the ACM and petroleum-hydrocarbon-affected soil, verification testing will be conducted to confirm that removal actions were successful. Once confirmed, the trench excavation will be backfilled with the stockpiled clean berm cover soil and import materials.

The excavation will occur on approximately 3.2 acres of the Site (Bermed Property), which comprises approximately 16.5 percent of the total area of the property. Approximately 11,000 tons (6,460 cubic yards) of clean overburden soil will be removed and stockpiled for reuse outside the regulated area. Approximately 110,000 tons (64,600 cubic yards) of ACM and petroleum hydrocarbon-impacted soil will be removed and transported offsite.

2.1.6 Developed Condition

Post remediation drainage is expected to be similar to pre-remediation conditions until the actual redevelopment of the Site occurs.

Total size of construction Site	19.4 acres
Total area to be disturbed	3.2 acres
Percent impervious before construction	0 %
Runoff coefficient before construction[1]	0.5
Percent impervious after construction	0 %
Runoff coefficient after construction[1]	0.5

2.2 Permit and Governing Documents

In addition to the CGP, the following documents have been considered while preparing this SWPPP.

- Regional Water Board requirements
- Basin Plan requirements
- Contract Documents
- Bay Air Quality Regulations and Permits
- Federal Endangered Species Act
- National Historic Preservation Act/Requirements of the State Historic Preservation Office
- State of California Endangered Species Act

2.3 Stormwater Run-on from Offsite Areas

There is no anticipated run-on from offsite areas to this construction site because the Site is bounded by a wall (west), curb (north), vegetated sidewalk (south), or the berm structures (east).

2.4 Construction Schedule

The Site sediment risk was determined based on construction taking place between June and September 2019 (approximately 16 weeks). Modification or extension of the schedule (start and end dates) may affect risk determination and permit requirements. The LRP shall contact the QSD if the schedule changes during construction to address potential impact to the SWPPP.

Activity	Schedule
Contractor Mobilization and Set-Up	June 2019 (2 weeks)
Soil Removal and Excavation Backfill	June to September 2019 (12 weeks)
Waste Transport and Disposal	June to September 2019 (12 weeks)
Contractor Demobilization	September 2019 (2 weeks)

2.5 Potential Construction Activity and Pollutant Sources

The purpose of this section is to identify pollutants that could impact stormwater discharge during construction. Below is a detailed description of the activities:

[1] County of Contra Costa Hydrology Document: http://www.cccounty.us/5745/Documents-and-Standards

Regulated Area Delineation and Preparation

Prior to the start of excavation activities, a designated work area in the eastern portion of the Site (the "Regulated Area") will be delineated around the containment berms using high fencing equipped with visual screens and plastic wind barriers. The Regulated Area will have openings for trucks entering the area and zones for loading trucks, worker ingress and egress, f trucks exiting the decontamination area, and a manifest control station prior to leaving the Site.

Clean Overburden Grubbing and Stockpiling

Once the Regulated Area has been established, the surface of the berm will be grubbed to remove existing vegetation followed by excavation of the clean overburden cap within 3 to 4 inches above the geotextile marker barrier that was originally placed to separate the clean overburden soil from the underlying contaminated fill. The clean soil and grubbed material will be transported using 20-yard end dump trucks to the Clean Soil Stockpile Area outside the Regulated Area where it will be stockpiled in 200-cubic yard piles for short term storage.

Once the stockpiles have been created, a 4-point composite sample of the soil will be collected and tested for asbestos and medium to heavy fraction petroleum hydrocarbons to verify that it is below residential clean up levels. The stockpiles will be sampled at a rate of one 4-point composite sample per 200 cubic yards of excavated cap soil. Upon confirmation, the pile will be consolidated into a larger stockpile for longer term storage pending backfilling operations.

The estimated amount of clean overburden soil to be excavated and stockpiled for potential re-use is 11,000 tons (approximately 6,670 cubic yards).

ACM and Petroleum Hydrocarbon-Impacted Soil Removal

Soil excavation activities will commence at the southern extent of the Bermed Property and move north until the northern boundary of the engineered containment cell is reached. Soil excavation will be conducted using conventional earthmoving equipment (e.g. track or tire mounted excavator and front-end loaders).

Excavations are not expected to encounter groundwater (groundwater is approximately 13 feet below ground surface). However, if groundwater is encountered, special handling of the excavated soil and dewatering of the excavation will be implemented. Prior to placement in the lined bins, water-saturated soils will be temporarily stockpiled within portions of the excavation above the saturated zone to allow for drainage of free water back into the excavation. Free water from the excavated soil will be retained within the limits of excavation and managed through excavation dewatering. In addition, a dewatering permit will be obtained and the SWPPP will be modified accordingly.

It is not known if a geotextile or other marker barrier is present at the base of the containment berm cell. In order to reduce the possibility of over-excavation of native soils underlying the containment cell, an assessment of visual cues (marker barrier, soil color or consistency differences, presence of debris, etc.) at the encapsulated fill/native soil interface will be used to direct excavation at the interface. If such cues are not found, the encapsulated soil will be removed to a depth of 10 feet below grade and will be verified by sampling and analysis alone.

It is estimated that approximately 110,000 tons (approximately 64,600 cubic yards of ACM and petroleum-hydrocarbon-impacted soil is present in the containment berm which will be excavated and disposed off-site.

Vehicle Movement

Upon excavation, contaminated soils removed from the engineered containment cell will be placed in a minimum of 6-mil polyethylene lined, high sided, 20-yard end dump truck. Each truck

will be decontaminated prior to the truck leaving the Regulated Area. The truck route is described below, and the schematic of this operation is also shown in Appendix A:

- Site Entrance and Truck Preparation Area: The empty trucks will enter the Site at the main ingress location and travel southward along the western property boundary to the truck preparation area. At this location, the bed of the truck will be lined with a minimum of 6-mil polyethylene sheeting or suitable equivalent such as pre-assembled zippered plastic bags.
- Truck Staging Area: The prepared trucks will then move to Truck Staging Area where they will await entrance to the Regulated Area for loading.
- Regulated Area: Upon entering the Regulated Area, the prepared trucks will be positioned adjacent to the active excavation area so that soil can be direct-loaded into the lined truck bed.
- Final Containment Area: Once each truck is filled with approximately 20 tons of soil, it will proceed to the Final Containment Area where polyethylene sheeting will be used to enclose the soil, the seams of the wrapped soil will be secured, the waste containment will be appropriately labeled, and a final bed tarp will be placed over the enclosed load.
- Decontamination Station: Once secured, the trucks will proceed to the Decontamination Station to have the truck wheels cleaned, as described below, prior to leaving the Regulated Area.

Decontamination:

Soil residue on equipment and excavator tracks/tires and truck tires will be removed using a combination of wet and dry methods using pressure washing and physical brushing. The decontamination station will consist of a bermed bed of crushed aggregate rock equipped with a water collection sump.

The Personnel Decontamination Unit (outside the Regulated Area) will consist of an arrangement of connected rooms or spaces, designated the Clean Room, the Shower Rooms, and the Equipment Room, separated by polyethylene sheeting and plastic flaps. Construction materials may include portable decontamination units, canopies, wood framing and or other suitable construction materials. The framing of the decontamination unit shall be wrapped or covered with layer of 6-mm fire retardant polyethylene sheeting or fire retardant shrink wrap material.

Decontamination fluids generated during truck cleaning will be stored at the Site in either Department of Transportation (DOT)-approved 55-gallon drums or a polyethylene tank, pending characterization. Based on characterization analytical results, the decontamination fluids either will be filtered for on-site reuse or transported off-site for disposal.

Backfilling

Following completion of excavation activities and verification sampling, backfilling will proceed in accordance with the project geotechnical engineer's requirements. If the excavation extends into the saturated zone (encountering groundwater), backfilling may require the use of bridging material (consisting of imported granular fill) to an elevation at or slightly above the water table. Excavation areas above the water table will be backfilled with clean overburden soil and imported fill. In addition to the overburden soil, it is estimated that roughly 91,665 tons of import soil will be required to backfill the berm excavation to ground surface elevation.

Based on the construction activities described above, potential pollutants are identified below:

Construction Activity	Designation Area	Oil and Grease	Sediment	TPH	Asbestos
Grubbing	Regulated Area		X		
Stockpiling Clean Soil	Stockpiling Area		X	X	X
Excavation of ACM and Petroleum Hydrocarbon-impacted soil	Regulated Area, Final Load Containment Area		X	X	X
Transportation	Entrance, Exit, Staging Area, Truck Preparation Area, Regulated Area	X	X	X	X
Decontamination	Decontamination Station and Personnel Decontamination Area	X	X	X	X

The anticipated activities and associated pollutants were used in Section 3 to select the BMPs for the project. Location of anticipated pollutants and associated BMPs are show on the Site Map in Appendix A.

Refer to Section 7.6.2 for sampling requirements for non-visible pollutants associated with construction activities. For a more complete list of potential onsite pollutants, refer to the Material Safety Data Sheets (MSDS), which are retained onsite.

2.6 Identification of Non-Stormwater Discharges

Non-stormwater discharges consist of discharges which do not originate from precipitation events. The CGP provides allowances for specified non-stormwater discharges that do not cause erosion or carry other pollutants.

Non-stormwater discharges into storm drainage systems or waterways, which are not authorized under the CGP and listed in the SWPPP, or authorized under a separate NPDES permit, are prohibited.

Non-stormwater discharges that are authorized from this project Site include the following:

- Irrigation of temporary erosion control vegetation
- Dust control water

These authorized non-stormwater discharges will be managed with the stormwater and non-stormwater BMPs described in Section 3 of this SWPPP and will be minimized by the QSP.

Steps will be taken, including the implementation of appropriate BMPs, to ensure that unauthorized discharges are eliminated, controlled, disposed, or treated on-site.

Discharges of construction materials and wastes, such as fuel or paint, resulting from dumping, spills, or direct contact with rainwater or stormwater runoff, are also prohibited.

The following discharge(s) have been authorized by (a) regional NPDES permit(s):

- None

2.7 Risk Determination

A construction site risk assessment has been performed for the project and the resultant risk level is **Risk Level 1**.

Sediment Risk Factor:

The sediment risk was determined by multiplying the rainfall erosivity factor (R-factor), soil erodibility factor (K-factor), and the length-slope factor (LS-factor) from the RUSLE equation to obtain an estimate of project-related bare ground soil loss (through sheet and rill erosion) expressed in tons per acre (tons/acre). In general, a project's sediment risk is dependent on the following project features.

- Project duration – The length of time a project site is exposed to the environment will increase the potential for sediment discharges. The project duration will affect the R-factor. Shorter projects will have lower R-factors.
- Season – Construction scheduled during the rainy season will increase the potential for sediment discharges. The construction schedule will affect the R-factor. Projects conducted during the dry season will have lower R-factors.
- Project site location – The soil types and slopes associated with a site location can increase or decrease the potential for sediment discharges. Soil type affects the K-factor and the slopes affect the LS-factor. Projects conducted on sites with less erodible soils will have lower

K-factors and projects conducted on flatter terrain with short sheet flow lengths will have lower LS-factors. The risk level is based on project duration, location, proximity to impaired receiving waters and soil conditions. SWRCB has provided a Sediment Risk Spreadsheet. A copy of the Risk Level determination submitted on SMARTS with the PRDs is included in Appendix B. The following table summarizes the calculated sediment risk factors and documents the sources of information used to derive the factors.

RUSLE Factor	Value	Method for Establishing Value
R	0.875	Calculated based on Estimated Project Start and End Date and SMARTS Erosivity Index Zone and Isoerodent Map
K	0.24	SMARTS GIS MAP
LS	0.46	SMARTS GIS MAP
Total Predicted Sediment Loss (tons/acre)		**0.097 (Low)**
Overall Sediment Risk Low Sediment Risk < 15 tons/ acre Medium Sediment Risk >= 15 and < 75 tons/acre High Sediment Risk >= 75 tons/acre		☒ **Low** ☐ **Medium** ☐ **High**

Receiving Water Risk Factor:

Runoff from the project Site discharges into municipal storm drain systems that discharge into New York Slough that leads to Honker Bay and Suisun Bay. The following table summarizes the findings of receiving water risk.

Receiving Water Name	303(d) Listed for Sediment Related Pollutant(1)	TMDL for Sediment Related Pollutant(1)	Beneficial Uses of COLD, SPAWN, and MIGRATORY(1)
New York Slough	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Overall Receiving Water Risk			☒ **Low** ☐ **High**
(1) If yes is selected for any option the Receiving Water Risk is High			

Based on both Sediment Risk and Risk Level Matrix, the Site is determined to be Risk Level 1.

Receiving Water Risk		Sediment Risk		
		Low	Medium	High
Low		**Level 1**	Level 2	
	High	Level 2		Level 3

Risk Level 1 sites are subject to the narrative effluent limitations specified in the General Permit. The narrative effluent limitations require stormwater discharges associated with construction activity to minimize or prevent pollutants in stormwater and authorized non-stormwater through the use of controls, structures, and best management practices. This SWPPP has been prepared to address Risk Level 1 requirements (General Permit Attachment C).

3.0 BEST MANAGEMENT PRACTICES

3.1 Site Storm Water Drainage and Permitting Approach

	BMP	Implementation	Duration
Erosion Control	EC-1 Scheduling	Prior to Construction	The entirety of the project
	EC-4 Hydroseed	Start of Construction	
	EC-7 Geotextiles and Mats		
	WE-1 Wind Erosion Control		
Sediment Control	SE-1 Silt Fence		
	SE-5 Fiber Rolls		
	SE-6 Gravel Bag Berm		
	SE-7 Street Sweeping		
	SE-10 Storm Drain Inlet Protection		
Tracking Control	TC-1 Stabilized Construction Entrance and Exit		
	TC-2 Stabilized Construction Roadway		
	TC-3 Entrance Outlet Tire Wash		
Non-Stormwater Controls	NS-1 Water Conservation Practices		
	NS-2 Dewatering Operation	As needed	
	NS-6 Illicit Connection/Discharge	Start of Construction	
	NS-8 Vehicle and Equipment Cleaning		
	NS-9 Vehicle and Equipment Fueling		
	NS-10 Vehicle and Equipment Maintenance		
Material and Waste Management	WM-1 Material Delivery and Storage		
	WM-2 Material Use		
	WM-3 Stockpile Management		
	WM-4 Spill Prevention and Control		
	WM-5 Solid Waste Management		
	WM-6 Hazardous Waste Management		
	WM-7 Contaminated Soil Management		
	WM-10 Liquid Waste Management		

3.2 Erosion and Sediment Control

Erosion and sediment controls are required by the CGP to provide effective reduction or elimination of sediment related pollutants in stormwater discharges and authorized non-stormwater discharges from the Site. Applicable BMPs are identified in this section for erosion control, sediment control, tracking control, and wind erosion control.

3.2.1 Erosion Control

Erosion control, also referred to as soil stabilization, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in stormwater runoff. Erosion control BMPs protect the soil surface by covering and/or binding soil particles.

This construction project will implement the following practices to provide effective temporary and final erosion control during construction:

- Preserve existing vegetation where required and when feasible.
- The area of soil disturbing operations shall be controlled such that the Contractor is able to implement erosion control BMPs quickly and effectively.
- Stabilize non-active areas within 14 days of cessation of construction activities or sooner if stipulated by local requirements.
- Control erosion in concentrated flow paths by applying erosion control blankets, check dams, erosion control seeding, or alternate methods.
- Prior to the completion of construction, apply permanent erosion control to remaining disturbed soil areas.

Sufficient erosion control materials shall be maintained onsite to allow implementation in conformance with this SWPPP.

The following temporary erosion control BMP selection table indicates the BMPs that shall be implemented to control erosion on the construction site. Fact Sheets for temporary erosion control BMPs are provided in Appendix E.

CASQA Fact Sheet	BMP Name	Meets a Minimum Requirement[1]	BMP Used		If not used, state reason
			YES	NO	
EC-1	Scheduling	✓	X		
EC-2	Preservation of Existing Vegetation	✓		X	Not Applicable.
EC-3	Hydraulic Mulch	✓[2]		X	Alternative applied (EC-7, EC-4)
EC-4	Hydroseed	✓[2]	X		
EC-5	Soil Binders	✓[2]		X	Alternative applied (EC-7, EC-4)
EC-6	Straw Mulch	✓[2]		X	Alternative applied (EC-7, EC-4)
EC-7	Geotextiles and Mats	✓[2]	X		
EC-8	Wood Mulching	✓[2]		X	Not Applicable.
EC-9	Earth Dike and Drainage Swales	✓[3]		X	Not Applicable.
EC-10	Velocity Dissipation Devices			X	Not Required.
EC-11	Slope Drains			X	Not Required.
EC-12	Stream Bank Stabilization			X	Not Required.
EC-14	Compost Blankets	✓[2]		X	Alternative applied (EC-7, EC-4)
EC-15	Soil Preparation-Roughening			X	Not Required.
EC-16	Non-Vegetated Stabilization	✓[2]		X	Alternative applied (EC-7, EC-4)
WE-1	Wind Erosion Control	✓	X		
Alternate BMPs Used:					**If used, state reason:**
No other alternate BMPs outside those listed above.					Not applicable

[1] Applicability to a specific project shall be determined by the QSD.
[2] The QSD shall ensure implementation of one of the minimum measures listed or a combination thereof to achieve and maintain the Risk Level requirements.
[3] Run-on from offsite shall be directed away from all disturbed areas; diversion of offsite flows may require design/analysis by a licensed civil engineer and/or additional environmental permitting

These temporary erosion control BMPs shall be implemented in conformance with the following guidelines and as outlined in the BMP Factsheets provided in Appendix E. If there is a conflict between documents, the Site Map will prevail over narrative in the body of the SWPPP or guidance in the BMP Fact Sheets. Site specific details in the Site Map prevail over standard details included in the Site Map. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

Scheduling (EC-1)

The majority of the excavation activities will be performed during dry season from June to September.

Hydroseed (EC-4)

Stockpile Area: Clean overburden soil stockpile will be considered inactive if soil is not being received at least once within a 14-day period. Hydroseed will be applied to those inactive stockpiles if they are not covered.

Geotextiles and Mats (EC-7)

Stockpile Area: Both active and inactive clean soil stockpiles will be constructed with polyethylene sheeting beneath. Active stockpiles will be covered at the end of each day. Inactive stockpiles will be covered to prevent run on/run off and dust emissions.

Regulated Area: The working face of excavations will be covered at the end of each day or during periods of inactivity.

Wind Erosion Control (WE-1)

Stockpile Area: Water will be applied to keep the active stockpiles adequately wet if not covered. In addition, wind breaks will be established along existing and installed chain-link fence perimeters.

Truck Route: Onsite traffic routes will be covered with non-asbestos materials and watered every two hours of active operations or sufficiently often to keep the area adequately wetted. In addition, a speed limit of 10 miles per hour shall be imposed on all construction vehicles while moving within the Site. Speed limit signs will be prominently posted on site at 500-foot intervals.

Regulated Area: Water will be applied to disturbed areas as necessary to control dust, but no less than 4 times per day during excavation and earthwork activities. In addition, the disturbed area will be sprayed down at the end of the work shift to form a thin crust upon drying. Wind breaks will be established along existing and installed chain-link fence perimeters. Grading operations will be suspended when wind speeds are high enough to result in dust emissions crossing the Site property line, despite the application of dust mitigation measures.

3.2.2 Sediment Controls

Sediment controls are temporary or permanent structural measures that are intended to complement the selected erosion control measures and reduce sediment discharges from active construction areas. Sediment controls are designed to intercept and settle out soil particles that have been detached and transported by the force of water.

The following sediment control BMP selection table indicates the BMPs that shall be implemented to control sediment on the construction site. Fact Sheets for temporary sediment control BMPs are provided in Appendix E.

CASQA Fact Sheet	BMP Name	Meets a Minimum Requirement[1]	BMP used		If not used, state reason
			YES	NO	
SE-1	Silt Fence	✓(2) (3)	X		
SE-2	Sediment Basin			X	Not Applicable.
SE-3	Sediment Trap			X	Not Applicable.
SE-4	Check Dams			X	Not Applicable.
SE-5	Fiber Rolls	✓(2)(3)	X		
SE-6	Gravel Bag Berm	✓(3)	X		
SE-7	Street Sweeping	✓	X		
SE-8	Sandbag Barrier			X	Alternative Applied (SE-5, SE-6)
SE-9	Straw Bale Barrier			X	Not required.
SE-10	Storm Drain Inlet Protection	✓ RL2&3	X		
SE-11	ATS			X	Not Applicable.
SE-12	Manufactured Linear Sediment Controls			X	Not Applicable.
SE-13	Compost Sock and Berm	✓(3)		X	Alternative Applied (SE-1, SE-5, SE-6)
SE-14	Biofilter Bags	✓(3)		X	Alternative Applied (SE-1, SE-5, SE-6).
TC-1	Stabilized Construction Entrance and Exit	✓	X		
TC-2	Stabilized Construction Roadway		X		
TC-3	Entrance Outlet Tire Wash		X		
Alternate BMPs Used:					**If used, state reason:**
No other alternate BMPs outside those listed above.					Not applicable

(1) Applicability to a specific project shall be determined by the QSD
(2) The QSD shall ensure implementation of one of the minimum measures listed or a combination thereof to achieve and maintain the Risk Level requirements
(3) Risk Level 2 & 3 shall provide linear sediment control along toe of slope, face of slope, and at the grade breaks of exposed slope

These temporary sediment control BMPs shall be implemented in conformance with the following guidelines and in accordance with the BMP Fact Sheets provided in Appendix E. If there is a conflict between documents, the Site Map will prevail over narrative in the body of the SWPPP or guidance in the BMP Fact Sheets. Site specific details in the Site Map prevail over standard details included in the Site Map. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

Silt Fence (SE-5)

Entire Site: Silt fence will be installed along the north, east and south perimeter of the Site.

Fiber Rolls (SE-5)

Entire Site: Fiber rolls will be installed along the north, east, and south perimeter of the Site.

Stockpile Area: Fiber rolls will be placed around inactive stockpiles and will be trenched in and staked.

Regulated Area: Fiber rolls will be deployed along the perimeter of the Regulated Area, including the north and east sides of the area prior to rain events and will be trenched in and staked. They should also be deployed around the downslope of exposed excavated areas at the discretion of the QSP during the remedial operations.

Public Streets: Fiber rolls will be placed around the drain inlets adjacent to the Site on East 3rd Street and Harbor Street to control and filter stormwater runoff from the Site prior to forecasted rain events.

Gravel Bag Berm (SE-6)

Stockpile Area: Gravel bags may be used to anchor stockpile covers and fiber rolls.

Regulated Area: Gravel bags may also be used at the project perimeter to control runoff. They will also be placed around the drain inlets to control and filter stormwater runoff and prevent non-stormwater from entering the municipal storm drain system.

Decontamination Area: Gravel bags may be used to build extra berms around decontamination area in addition to the berm bed of crushed aggregate rock.

Public Streets: Gravel bags should also be placed around the inlets adjacent to the Site on E 3rd Street and Harbor Street to control and filter stormwater runoff from the Site prior to forecasted rain event or as soon as feasible after an accident spill event occurs.

Street Sweeping (SE-7)

Public Streets: A street sweeper will be utilized to sweep public streets should track-out be observed. The roadway will be cleaned using wet sweeping or a vacuum device equipped with a High Efficiency Particulate Air (HEPA) filter promptly and no later than 24 hours after observation of accidental track-out.

Storm Drain Inlet Protection (SE-10)

Regulated Area: Gravel bags or sand bags will be stacked around the onsite drain inlets to control and filter large stormwater runoff and prevent non-stormwater from entering the municipal storm drain system.

Public Streets: Gravel bags or sandbags will be placed around the drain inlets adjacent to the Site on East 3rd Street and Harbor Street to control and filter large stormwater runoff from the Site prior to forecasted rain event or as soon as feasible after an accident spill event occurs.

Stabilized Construction Entrance and Exit (TC-1)

Entrance and Exit: A gravel pad will be installed to clean the tires of exiting vehicles. The gravel pad should be a layer of gravel, rock or crushed rock which is at least 1-inch or larger in diameter and less than 5% silt content. A visual inspection and tire cleaning area will be set up to ensure that the tires of the vehicles leaving the Site are reasonable free of accumulated soil. In addition, street sweeping will be implemented as described above under SE-7.

Stabilized Construction Roadway (TC-2)

Truck Route: Onsite traffic routes will be covered with non-asbestos materials and watered as described under WE-1.

Entrance Outlet Tire Wash (TC-3)

Decontamination Area: The tire wash station will consist of a bermed bed of crushed aggregate rock equipped with a water collection sump (see Section 3.3.1 for water management procedures). During dry conditions, soil residues will be removed by dry brushing. Soil that cannot be removed by dry brushing will be removed from equipment by washing with high-pressure water. During wet conditions, high-pressure water washing will be used to remove material residues and mud from equipment and tires. The work area will be kept clean and free of excessive soil or debris.

3.3 Non-Stormwater Controls and Waste and Materials Management

3.3.1 Non-Stormwater Controls

Non-stormwater discharges into storm drainage systems or waterways, which are not authorized under the CGP, are prohibited. Non-stormwater discharges for which a separate NPDES permit is required by the local Regional Water Board are prohibited unless coverage under the separate NPDES permit has been obtained for the discharge. The selection of non-stormwater BMPs is based on the list of construction activities with a potential for non-stormwater discharges identified in Section 2.6 of this SWPPP.

The following non-stormwater control BMP selection table indicates the BMPs that shall be implemented to control sediment on the construction site. Fact Sheets for temporary non-stormwater control BMPs are provided in Appendix E.

CASQA Fact Sheet	BMP Name	Meets a Minimum Requirement[1]	BMP used		If not used, state reason
			YES	NO	
NS-1	Water Conservation Practices	✓	**X**		
NS-2	Dewatering Operation		**X (if encountered)**		
NS-3	Paving and Grinding Operation			**X**	Not Applicable.
NS-4	Temporary Stream Crossing			**X**	Not Applicable.
NS-5	Clear Water Diversion			**X**	Not Applicable.
NS-6	Illicit Connection/Discharge	✓	**X**		
NS-7	Potable Water/Irrigation			X	Not Applicable
NS-8	Vehicle and Equipment Cleaning	✓	**X**		
NS-9	Vehicle and Equipment Fueling	✓	**X**		
NS-10	Vehicle and Equipment Maintenance	✓	**X**		
NS-11	Pile Driving Operation			**X**	Not Applicable.
NS-12	Concrete Curing			**X**	Not Applicable.
NS-13	Concrete Finishing			**X**	Not Applicable.
NS-14	Material and Equipment Use Over Water			**X**	Not Applicable.
NS-15	Demolition Removal Adjacent to Water			**X**	Not Applicable.
NS-16	Temporary Batch Plants			**X**	Not Applicable.
Alternate BMPs Used:			**If used, state reason:**		
No other alternate BMPs outside those listed above.			Not applicable		
[1] Applicability to a specific project shall be determined by the QSD					

Non-stormwater BMPs shall be implemented in conformance with the following guidelines and in accordance with the BMP Fact Sheets provided in Appendix E. If there is a conflict between documents, the Site Map will prevail over narrative in the body of the SWPPP or guidance in the BMP Fact Sheets. Site specific details in the Site Map prevail over standard details included in the Site Map. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

Water Conservation Practices (NS-1)

Entire Site: Water will be used for dust control, tire wash, and decontamination. Dust control water will be applied in a way to minimize runoff. Tire wash and decontamination water will be collected in a sump and filtered with a 5-micron bag and an activated carbon bed and stored in a tank on-site pending characterization. Samples of the water will be analyzed for CAM 17 metals by EPA Method 6010/6020 and volatile organic compounds (VOCs) by EPA Method 8260. Based on characterization analytical results, the decontamination water may be reused on-site or transported off site for disposal.

Dewatering Operation (NS-2)

Regulated Area: If groundwater is encountered, dewatering activities will be operated in compliance with the dewatering permit. Dewatering operation records should be maintained in accordance with all local and project specific permits and regulations.

Illicit Connection/Discharge (NS-6)

Entire Site: Signs of illegal discharges to the ground and to drain inlets should be reported to the QSP immediately. In the event of an illicit discharge, the guidance in NS-6 will be followed (Appendix E).

Vehicle and Equipment Cleaning (NS-8)

Decontamination Area: The station will consist of a bermed bed of crushed aggregate rock equipped with a water collection sump. During dry conditions, soil residues will be removed by dry brushing. Soil that cannot be removed by dry brushing will be removed from equipment by washing with high-pressure water. During wet conditions, high-pressure water washing will be used to remove material residues and mud from equipment and tires. The work area will be kept clean and free of excessive soil or debris. Tire wash and decontamination water will be collected in a sump and stored at the Site in either DOT-approved 55-gallon drums or a polyethylene tank, pending characterization. Based on characterization analytical results, the decontamination fluids will be filtered for onsite reuse or transported off site for disposal.

Vehicle and Equipment Fueling (NS-9) and Vehicle and Equipment Maintenance (NS-10)

Construction Trailer Area and Truck Staging Area: Vehicles and equipment may be fueled and/or maintained at the construction site by the contractor. The designated fueling location is located within the project Construction Trailer Area and Truck Staging Area. A drip pan/tray, a spill kit and secondary containment control measures will be available for use in these staging areas to help prevent and mitigate any potential spills.

3.3.2 Materials Management and Waste Management

Materials management control practices consist of implementing procedural and structural BMPs for handling, storing and using construction materials to prevent the release of those materials into stormwater discharges. The amount and type of construction materials to be utilized at the Site will depend upon the type of construction and the length of the construction period. The

materials may be used continuously, such as fuel for vehicles and equipment, or the materials may be used for a discrete period, such as soil binders for temporary stabilization.

Waste management consist of implementing procedural and structural BMPs for handling, storing and ensuring proper disposal of wastes to prevent the release of those wastes into stormwater discharges.

Materials and waste management pollution control BMPs shall be implemented to minimize stormwater contact with construction materials, wastes and service areas; and to prevent materials and wastes from being discharged off-site. The primary mechanisms for stormwater contact that shall be addressed include:

- Direct contact with precipitation
- Contact with stormwater run-on and runoff
- Wind dispersion of loose materials
- Direct discharge to the storm drain system through spills or dumping
- Extended contact with some materials and wastes, such as asphalt cold mix and treated wood products, which can leach pollutants into stormwater.

A list of construction activities is provided in Section 2.5. The following Materials and Waste Management BMP selection table indicates the BMPs that shall be implemented to handle materials and control construction site wastes associated with these construction activities. Fact Sheets for Materials and Waste Management BMPs are provided in Appendix E.

CASQA Fact Sheet	BMP Name	Meets a Minimum Requirement[1]	BMP used		If not used, state reason
			YES	NO	
WM-1	Material Delivery and Storage	✓	X		
WM-2	Material Use	✓	X		
WM-3	Stockpile Management	✓	X		
WM-4	Spill Prevention and Control	✓	X		
WM-5	Solid Waste Management	✓	X		
WM-6	Hazardous Waste Management	✓	X		
WM-7	Contaminated Soil Management		X		
WM-8	Concrete Waste Management	✓		X	Not Applicable.
WM-9	Sanitary-Septic Waste Management	✓		X	Not Applicable.
WM-10	Liquid Waste Management		X		
Alternate BMPs Used:				**If used, state reason:**	
No other alternate BMPs outside those listed above.				Not applicable	
[1] Applicability to a specific project shall be determined by the QSD.					

Material management BMPs shall be implemented in conformance with the following guidelines and in accordance with the BMP Fact Sheets provided in Appendix E. If there is a conflict between documents, the Site Map will prevail over narrative in the body of the SWPPP or guidance in the BMP Fact Sheets. Site specific details in the Site Map prevail over standard details included in the Site Map. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

Material Delivery and Storage (WM-1)

Stockpile Area: Imported clean soil delivered and stored at the Site will be placed on and covered with polyethylene sheeting similar to other stockpiles, until it is used for backfilling.

Construction Trailer Area: Other materials (such as erosion control materials, personal protection equipment, fuel, oil, lubricants and cleaning tools etc.) at the project will be delivered, received, and stored within the Construction Trailer Area. Materials which could introduce pollutants to stormwater will be stored within a proper container, secondary containment, or under polyethylene sheeting and/or tarps.

Material Use (WM-2)

Regulated Area: Contaminated personal protection equipment (e.g., hardhats, boots, coveralls, respirators, safety goggles, work gloves) will be required to remain in the work area until thoroughly cleaned and decontaminated or properly disposed.

Stockpile Area**:** Imported clean soil will be placed with proper erosion and sediment control according to EC-3, EC-7, WE-1, SE-5, SE-6, SE-8 and WM-1 described above.

Truck Preparation Area and Truck Staging Area: Fuel and motor oil will be properly stored and managed as described in NS-9 and NS-10.

Stockpile Management (WM-3)

Stockpile Area: Both active and inactive clean soil stockpiles in various sizes will be stored at the Stockpile Area until it is used for backfilling or disposed offsite. Proper erosion and sediment control measures will be applied to those stockpiles according to EC-3, EC-7, WE-1, SE-5, SE-6, SE-8 and WM-1.

Regulated Area: Water-saturated soils will be temporarily stockpiled within portions of the excavation above the saturated zone to allow for drainage of free water back into the excavation. Free water from the excavated soil will be retained within the limits of excavation and managed through excavation dewatering.

Spill Prevention and Control (WM-4)

Construction Trailer Area and Truck Staging Area: As described in NS-9 and NS-10, drip pans/trays, a spill kit and secondary containment control measures will be available for use in the Construction Trailer Area and Truck Staging Area to help prevent and mitigate any potential spills of fuel or motor oil.

Solid Waste Management (WM-5)

Regulated Area: The majority of solid waste generated from the Site is hazardous and the management of these materials is discussed under WM-6 below.

Hazardous Waste Management (WM-6)

Regulated Area: ACM- and petroleum hydrocarbon-impacted soil is the primary hazardous waste that will be generated from the Site remediation activities. Inhaling asbestos is dangerous and may cause cancer and lung disease. Therefore, the excavation plan is designed to minimize the

amount of open material at any given time and to expedite the removal process. A wet removal procedure during the excavation process will be implemented using the following procedures:

- The soil berm will be sprayed with water at the beginning of each shift and repeatedly during the work process, as necessary, to maintain an adequate wet condition.
- Soil will be direct-loaded into polyethylene lined trucks with additional wetting as needed to meet landfill procedures. The trucks will be wrapped in the polyethylene sheeting and sealed.
- At the end of each shift, the "open" end of the berm will be wetted and covered with 6-mm polyethylene sheeting and secured with sandbags until the next shift of soil removal operations.

In addition, contaminated personal protection equipment will be properly decontaminated or disposed according to WM-2.

Public Streets: A truck route for the soil off-haul activities has been designed to avoid residential areas as the trucks travel to the freeway. Street sweeping and dust control will be implemented according to SE-7 and WE-1.

Contaminated Soil Management (WM-7)

Regulated Area: A wet removal procedure for the excavation, transportation, and disposal processes will be implemented as described in WM-6. Confirmation samples will be taken before backfilling the Bermed Property with clean soil. Contaminated personal-protection equipment will be properly decontaminated or disposed according to WM-2.

Decontamination Area: Decontamination will be conducted using both wet and dry measures according to NS-8.

Public Streets: Proper street sweeping, dust control and public impact mitigation will be implemented according to WM-6, SE-7 and WE-1.

Sanitary Waste Management (WM-9)

Sanitary facilities (i.e., portable toilets) will be contained to prevent discharges of pollutants to the storm drain system. Inspect sanitary facilities regularly for leaks and spills. Sanitary facilities will be cleaned or replaced as necessary. The toilets will be located away from concentrated flow paths and drainage inlets.

Liquid Waste Management (WM-10)

Decontamination Area and Personnel Decontamination Area: Decontamination fluids generated during truck cleaning will be stored at the Site in either DOT-approved 55-gallon drums or a polyethylene tank, pending characterization. Based on the characterization analytical results, the decontamination fluids will be filtered for onsite reuse or transported off-site for disposal.

3.4 Post construction Stormwater Management Measures

Post construction BMPs are permanent measures installed during construction and are designed to reduce or eliminate pollutant discharges from the Site after construction is completed.

This Site is located in an area subject to a Phase I or Phase II Municipal Separate Storm Sewer System (MS4) permit approved Stormwater Management Plan.

☒ Yes ☐ No

This SWPPP has been prepared for the Site remediation activity only and the post construction condition will be largely the same (undeveloped, covered and pervious surfaces) as it was before the remediation activity. Therefore, it is not expected that the Site will pose any additional sediment discharge risk than it did prior to start of construction activities which satisfies the NOT requirement in CGP XIII.A.

In addition, the Site is being planned to be redeveloped into a school campus and a separate CGP SWPPP will be developed for the actual development construction activities. The Stormwater Management Plan for the final development of the property is currently under review by the City of Pittsburg.

The following source control post-construction BMPs to comply with CGP Section XIII.B and local requirements have been identified for the Site:

- The remediation excavation area will be backfilled to surrounding grade (no slope identifed).
- Fiber rolls will be installed along the north and east perimeter of the Site.
- All waste and stockpiles will be removed and properly disposed.
- Onsite stormdrain inlets will be protected using stacked gravel bags until the redevelopment construction activities resume.

4.0 BMP INSPECTION, MAINTENANCE, AND RAIN EVENT ACTION PLANS

4.1 BMP Inspection and Maintenance

The CGP (Section G of Attachment C: Risk Level 1 Requirements) requires weekly inspections and observations, and at least once during each 24-hour period during extended storm events, to identify and record BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. Inspectors shall be the QSP or be trained by the QSP.

A BMP inspection checklist must be filled out for inspections and maintained on-site with the SWPPP. The inspection checklist includes the necessary information covered in Section 7.5. A blank inspection checklist can be found in Appendix F. Completed checklists shall be kept in Construction Site Monitoring Program (CSMP) Attachment 2 “Monitoring Records.” In general, the required information to be recorded for BMP/facility inspections includes:

- The date of the inspection
- Weather information
- Site information
- Observations and descriptions of the inspected BMPs and any deficiencies
- Corrective actions that were taken, such as BMPs that were fixed or additional BMPs that were implemented
- Inspector’s name, title, and signature

BMPs shall be maintained regularly to ensure proper and effective functionality. Upon identifying failures or other shortcomings, as directed by the QSP, corrective actions (e.g. repairs or design changes) shall be implemented within 72 hours and associated amendments to the SWPPP shall be prepared by the QSD.

Specific details for maintenance, inspection, and repair of Construction Site BMPs can be found in the BMP Factsheets in Appendix E.

4.2 Rain Event Action Plans

A Rain Event Action Plans (REAP) is not required for Risk Level 1 projects.

5.0 TRAINING

The CGP requires that all elements of the SWPPP be developed by a QSD and implemented by a QSP. The QSP may delegate tasks to trained employees provided adequate supervision and oversight is provided.

Personnel at the Site shall receive training appropriate for individual roles and responsibilities on the project. Appropriate personnel shall receive training on SWPPP implementation, BMP inspection and maintenance, and record keeping.

The QSP shall be responsible for providing this information at the meetings, and subsequently completing the training logs shown in Appendix H, which identifies the Site-specific stormwater topics covered as well as the names of site personnel who attended the meeting.

The following personnel has been identified as the QSP(s):

Name	Affiliation	QSP #	Contact Information
TBD	TBD	TBD	TBD

6.0 RESPONSIBLE PARTIES AND OPERATORS

The CGP requires listing the name of any "approved signatory" in this SWPPP, a list of all authorized representatives granted authority to sign permit-related documents, a copy of the written agreement or other mechanism that provides this authority from the LRP will be included in Appendix I.

The QSD's duties including the following:

- Prepares and implement the SWPPP
- Oversees the implementation of BMPs identified in the SWPPP Conducts and/or provides the inspection and monitoring activities Identifies any deficiencies in the SWPPP and correct them
- Amends the SWPPP if there are any changes in the construction plan

To aid in the implementation of the SWPPP, the CGP also requires that the SWPPP include a list of names of all contractors, subcontractors, and individuals who will be directed by the QSP. This list shall include telephone numbers and work addresses. Specific areas of responsibility of each subcontractor and emergency contact numbers shall also be included.

An updated list will be available on-site in this SWPPP. The list includes the telephone numbers, work addresses, and specific areas of responsibility.

Below is a summary of the required listed personnel as mentioned above:

Name	Title	Company	Contact	Responsibility /Duties
Responsible Parties				
Matt Kozina	Project Manager	Third Street Pittsburg Campus Owner LLC	209-337-8632 mkozina@making-waves.org 3045 Research Drive Richmond CA 94806	Owner/LRP
Wayne.D. Pelletier	HMSD Director, E.P.	Bayview Environmental Services, Incorporated	WDP@Bvdmi.com 510-562-6181 6925 San Leandro St, Oakland, CA 94621	Project Manager
TBD	TBD	TBD	TBD	LRP's Approved Signatory
TBD	TBD	TBD	TBD	QSP
Contractors				
TBD	TBD	TBD	TBD	Excavation
TBD	TBD	TBD	TBD	Waste Hauling
TBD	TBD	TBD	TBD	Disposal
TBD	TBD	TBD	TBD	Street Sweeping

7.0 CONSTRUCTION SITE MONITORING PROGRAM

7.1 Purpose

This Construction Site Monitoring Program was developed to address the following objectives:

- To demonstrate that the Site is in compliance with the Discharge Prohibitions and NALs of the CGP;
- To determine whether non-visible pollutants are present at the construction site and are causing or contributing to exceedances of water quality objectives;
- To determine whether immediate corrective actions, additional BMP implementation, or SWPPP revisions are necessary to reduce pollutants in stormwater discharges and authorized non-stormwater discharges;
- To determine whether BMPs included in the SWPPP and REAP are effective in preventing or reducing pollutants in stormwater discharges and authorized non-stormwater discharges.

7.2 Applicability of Permit Requirements

This project has been determined to be a Risk Level 1 project. The CGP identifies the following types of monitoring as being applicable this project.

Risk Level 1

- Visual inspections of BMPs;
- Visual monitoring of the site related to qualifying storm events;
- Visual monitoring of the site for non-stormwater discharges;
- Sampling and analysis of construction site runoff for non-visible pollutants when applicable; and
- Sampling and analysis of non-stormwater discharges when applicable.

7.3 Weather and Rain Event Tracking

Visual monitoring and inspections requirements of the CGP are triggered by a qualifying rain event. The CGP defines a qualifying rain event as any event that produces ½ inch of precipitation. A minimum of 48 hours of dry weather will be used to distinguish between separate qualifying storm events.

7.3.1 Weather Tracking

The QSP should daily consult the National Oceanographic and Atmospheric Administration (NOAA) for the weather forecasts. Weather reports should be printed and maintained with the SWPPP in CSMP Attachment 1 “Weather Reports”.

The forecasts can be obtained at: http://www.srh.noaa.gov

7.3.2 Rain Gauges

The rain gauge shall be read daily at approximately the same time during normal site scheduled hours. Rain gauge records can be logged in CSMP Attachment 2 “Rain Gauge Log Sheet.”

The nearest public rain gauge station is located at 37.9973, -121.8564 (Station: LSM- Los Medonos, 2.6 miles from the project Site). Data can be obtained by contacting Contra Costa County: http://www.cccounty.us/1455/Rain-Gauge.

7.4 Safety and Monitoring Exemptions

Sampling or inspection is not required under the following conditions:

- During dangerous weather conditions such as flooding and electrical storms
- Outside of scheduled site business hours

If monitoring (visual monitoring or sample collection) of the Site is unsafe because of dangerous conditions noted above, then the QSP shall document the conditions for why an exception to performing the monitoring was necessary. The exemption documentation shall be filed in CSMP Attachment 3 “Monitoring Records”.

7.5 Visual Monitoring

Visual monitoring includes observations and inspections. Inspections of BMPs are required to identify and record BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. Visual observations of the Site are required to observe storm water drainage areas to identify any spills, leaks, or uncontrolled pollutant sources.

The required frequency of visual observations and inspections are identified below:

Type of Inspection	Frequency
Routine Inspections	
BMP Inspections	Weekly[1]
BMP Inspections at Tracking in and out	Daily
Non-Stormwater Discharge Observations	Quarterly during daylight hours
Rain Event Triggered Inspections	
Site Inspections Prior to a Qualifying Event	Within 48 hours of a qualifying event [2]
BMP Inspections During an Extended Storm Event	Every 24-hour period of a rain event[3]
Site Inspections Following a Qualifying Event	Within 48 hours of a qualifying event[2]

[1] Most BMPs must be inspected weekly; those identified below must be inspected more frequently.
[2] Inspections are required during scheduled site operating hours.
[3] Inspections *are required during scheduled site operating hours regardless of the amount of precipitation on any given day.*

7.5.1 Routine Observations and Inspections

Routine site inspections and visual monitoring are necessary to ensure that the project is in compliance with the requirements of the CGP.

Routine BMP Inspections

Inspections of BMPs are conducted to identify and record:

- BMPs that are properly installed;
- BMPs that need maintenance to operate effectively;
- BMPs that have failed; or
- BMPs that could fail to operate as intended.

Non-Stormwater Discharge Observations

Each drainage area will be inspected for the presence of or indications of prior unauthorized and authorized non-stormwater discharges. Inspections will record:

- Presence or evidence of any non-stormwater discharge (authorized or unauthorized);
- Pollutant characteristics (floating and suspended material, sheen, discoloration, turbidity, odor, etc.); and
- Source of discharge.

7.5.2 Rain-Event Triggered Observations and Inspections

Visual observations of the Site and inspections of BMPs are required prior to a qualifying rain event; following a qualifying rain event, and every 24-hour period during a qualifying rain event.

Visual Observations Prior to a Forecasted Qualifying Rain Event

Within 48-hours prior to a qualifying event a stormwater visual monitoring site inspection will include observations of the following locations:

- Stormwater drainage areas to identify any spills, leaks, or uncontrolled pollutant sources;
- BMPs to identify if they have been properly implemented;
- Any stormwater storage and containment areas to detect leaks and ensure maintenance of adequate freeboard.

The inspections will be triggered if 1) ½ -inch or more of precipitation is produced or 2) the predicted probability of precipitation is greater than 50%.

BMP Inspections During an Extended Storm Event

During an extended rain event, BMP inspections will be conducted to identify and record:

- BMPs that are properly installed;
- BMPs that need maintenance to operate effectively;
- BMPs that have failed; or
- BMPs that could fail to operate as intended.

If the construction site is not accessible during the rain event, the visual inspections shall be performed at all relevant outfalls, discharge points, downstream locations. The inspections should record any projected maintenance activities.

Visual Observations Following a Qualifying Rain Event

Within 48 hours following a qualifying rain event a stormwater visual monitoring site inspection is required to observe:

- Stormwater drainage areas to identify any spills, leaks, or uncontrolled pollutant sources;
- BMPs to identify if they have been properly designed, implemented, and effective;
- Need for additional BMPs;
- Any stormwater storage and containment areas to detect leaks and ensure maintenance of adequate freeboard; and
- Discharge of stored or contained rain water.

7.5.3 Visual Monitoring Procedures

Visual monitoring shall be conducted by the QSP or staff trained by and under the supervision of the QSP.

Stormwater observations shall be documented on the Visual Inspection Field Log Sheet (see Appendix F for a template). BMP inspections shall be documented on the BMP inspection checklist (see Appendix F for a template). Completed inspection forms/sheets with any photographs used to document observations will be referenced on stormwater site inspection report and maintained with the Monitoring Records in Attachment 3.

7.5.4 Visual Monitoring Follow-Up and Reporting

Correction of deficiencies identified by the observations or inspections, including required repairs or maintenance of BMPs, shall be initiated and completed as soon as possible.

If identified deficiencies require design changes, including additional BMPs, the implementation of changes will be initiated within 72 hours of identification and be completed as soon as possible. When design changes to BMPs are required, the SWPPP shall be amended to reflect the changes.

Deficiencies identified in site inspection reports and correction of deficiencies will be tracked, submitted to the QSP and kept in CSMP Attachment 3 “Monitoring Records”.

Results of visual monitoring must be summarized and reported in the Annual Report.

7.6 Water Quality Sampling and Analysis

7.6.1 Non-Visible Pollutants

This section describes the sampling and analysis strategy and schedule for monitoring non-visible pollutants in stormwater runoff discharges from the project site.

Sampling for non-visible pollutants will be conducted when:

- a breach, leakage, malfunction, or spill is observed;
- the leak or spill has not been cleaned up prior to the rain event; and
- there is the potential for discharge of non-visible pollutants to surface waters or drainage system.

The following non-visible pollutants are identified in Section 2.5:

- Asbestos
- Oil and Grease
- TPH

<u>Sampling Schedule</u>

Collection of discharge samples for non-visible pollutant monitoring will be triggered when any of the following conditions are observed during site inspections conducted prior to or during a rain event.

- Materials or wastes containing potential non-visible pollutants are not stored under watertight conditions. Watertight conditions are defined as (1) storage in a watertight container, (2) storage under a watertight roof or within a building, or (3) protected by

temporary cover and containment that prevents stormwater contact and runoff from the storage area.

- Materials or wastes containing potential non-visible pollutants are stored under watertight conditions, but (1) a breach, malfunction, leakage, or spill is observed, (2) the leak or spill is not cleaned up prior to the rain event, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.
- A construction activity, including but not limited to those in Section 2.5, with the potential to contribute non-visible pollutants (1) was occurring during or within 24 hours prior to the rain event, (2) BMPs were observed to be breached, malfunctioning, or improperly implemented, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.
- Soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil have been applied, and there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.
- Stormwater runoff from an area contaminated by historical usage of the Site has been observed to combine with stormwater runoff from the Site, and there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.

In addition, an uncontaminated sample shall be collected that has not come in contact with the disturbed soil or the materials for comparison with the discharge sample. Sample shall be collected during the first two hours of discharge from rain events that occur during business hours and which generate runoff.

Sampling Locations

Sampling locations are based on proximity to planned non-visible pollutant storage, occurrence or use; accessibility for sampling, and personnel safety. If stormwater runoff sampling is triggered, the actual locations should be determined by the QSP based on observed breaches, malfunctions, leakages, spills, operational areas, soil amendment application areas, and historical Site usage areas.

Potential Pollution Source	Potential Non-visible Pollutant
Portable toilet, contaminated soil, truck batteries and fueling tanks	TPH, Asbestos, Oil and Grease
Contaminated soil	TPH, Asbestos, Oil and Grease

No potential sources of non-visible pollutants that originate off the project site are expected. Thus, no sampling locations have been identified for the collection of samples of run-on to the project site.

If a stormwater visual monitoring site inspection conducted prior to or during a storm event identifies the presence of a material storage, waste storage, or operations area with spills or the potential for the discharge of non-visible pollutants to surface waters or a storm drain system that is at a location not listed above and has not been identified on the Site Maps, sampling locations will be selected by the QSP using the same rationale as that used to identify planned locations. Non-visible pollutant sampling locations shall be identified by the QSP on the pre-rain event inspection form and/or the REAPs prior to a forecasted qualifying rain event.

Sample Analysis

Samples will be analyzed using the analytical methods identified in the following table:

Parameter	Method	Minimum Volume	Sample Container	Preservation	Maximum Holding Time
Oil and Grease	EPA 1664A	1 L	1 L Clear Glass	H_2SO_4	28 Days
TPH	EPA 8015B	500 mL	500 mL Amber Glass	None	7 days for extraction; 40 days after extraction
Asbestos	EPA 100.1	500 mL	1 L Plastic	None	48 hours

Notes: L – Liter
mL – Milliliter

Sample Collection

An adequate stock of monitoring supplies and equipment for monitoring non-visible pollutants will be available on the project site prior to a sampling event. Monitoring supplies and equipment will be stored in a cool temperature environment that will not come into contact with rain or direct sunlight. Sampling personnel will be available to collect samples in accordance with the sampling schedule. Supplies maintained at the project site will include, but are not limited to, clean powder-free nitrile gloves, sample collection equipment, coolers, appropriate number and volume of sample bottles, identification labels, re-sealable storage bags, paper towels, personal rain gear, ice, and "*Effluent Sampling Field Log Sheets"* and "Chain-of-Custody (COC) forms", which are provided in CSMP Attachment 4 and 5.

Samples on the project site will be collected by:

Company Name:	TBD
Street Address:	TBD
City, State Zip:	TBD
Telephone Number:	TBD
Point of Contact:	TBD
Name of Sampler(s):	TBD
Name of Alternate(s):	TBD

The QSP or his/her designee will contact sampler 24 hours prior to a predicted rain event or for an unpredicted event, as soon as a rain event begins if one of the triggering conditions is identified during an inspection to ensure that adequate sample collection personnel and supplies for monitoring non-visible pollutants are available and will be mobilized to collect samples on the project site in accordance with the sampling schedule.

Samples will be analyzed by:

Laboratory Name:	TBD
Street Address:	TBD
City, State Zip:	TBD
Telephone Number:	TBD
Point of Contact:	TBD
ELAP Certification Number:	TBD

Data Evaluation and Reporting

The QSP shall complete an evaluation of the water quality sample analytical results.

Runoff/downgradient results shall be compared with the associated upgradient/unaffected results and any associated run-on results. Should the runoff/downgradient sample show an increased level of the tested analyte relative to the unaffected background sample, which cannot be explained by run-on results, the BMPs, site conditions, and surrounding influences shall be assessed to determine the probable cause for the increase.

As determined by the Site and data evaluation, appropriate BMPs shall be repaired or modified to mitigate discharges of non-visible pollutant concentrations. Any revisions to the BMPs shall be recorded as an amendment to the SWPPP.

The CGP prohibits the storm water discharges that contain hazardous substances equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4. The results of any non-stormwater discharge results that indicate the presence of a hazardous substance in excess of established reportable quantities shall be immediately reported to the Regional Water Board and other agencies as required by 40 C.F.R. §§ 117.3 and 302.4.

Results of non-visible pollutant monitoring shall be reported in the Annual Report.

7.6.2 Sample Collection and Handling Instructions

Use of correct methods to collect and handle samples help to ensure the samples are valid. While the handling requirements apply primarily to grab samples collected for laboratory analysis, field measurements can be affected by sample collection procedures.

Sample Collection

Samples shall be collected at the designated sampling locations shown on the Site Map in Appendix A and listed in the preceding sections. Samples shall be collected, maintained and shipped in accordance with the SWAMP 2008 Quality Assurance Program Plan (QAPP).

Grab samples shall be collected and preserved in accordance with the methods identified in preceding sections. To maintain sample integrity and prevent cross-contamination, sample collection personnel shall follow the protocols below.

- Collect samples (for laboratory analysis) only in analytical laboratory-provided sample containers;
- Wear clean, powder-free nitrile gloves when collecting samples;
- Change gloves whenever something not known to be clean has been touched;
- Change gloves between sample locations;
- Decontaminate all equipment (e.g. bucket, tubing) prior to sample collection using a trisodium phosphate water wash, distilled water rinse, and final rinse with distilled water. (Dispose of wash and rinse water appropriately, i.e., do not discharge to storm drain or receiving water). Do not decontaminate laboratory provided sample containers;
- Do not smoke during sampling events;
- Never sample near a running vehicle;
- Do not park vehicles in the immediate sample collection area (even non-running vehicles);
- Do not eat or drink during sample collection; and
- Do not breathe, sneeze, or cough in the direction of an open sample container.

The most important aspect of grab sampling is to collect a sample that represents the entire runoff stream. Typically, samples are collected by dipping the collection container in the runoff flow paths and streams as noted below.

- For small streams and flow paths, dip the bottle facing upstream until full.
- For larger streams that can be safely accessed, collect a sample in the middle of the flow stream by directly dipping the mouth of the bottle. Once again making sure that the opening of the bottle is facing upstream to avoid any contamination by the sampler.
- For larger streams that cannot be safely waded, pole-samplers may be needed to safely access the representative flow.
- Avoid collecting samples from ponded, sluggish, or stagnant water.
- Avoid collecting samples directly downstream from a bridge as the samples can be affected by the bridge structure or runoff from the road surface.

Note, that depending upon the specific analytical test, some containers may contain preservatives. These containers should **never** be dipped into the stream, but filled indirectly from a collection container.

Sample Handling

Samples for laboratory analysis must be handled as follows. Immediately following sample collection:

- Cap sample containers;
- Label sample containers;
- Seal containers in a re-sealable storage bag;
- Place sample containers into an ice-chilled cooler;
- Document sample information on the *Effluent Sampling Field Log Sheet*; and
- Record samples on the Chain-of-Custoday (COC).

All samples for laboratory analysis must be maintained between 0-6 degrees Celsius during delivery to the laboratory. Samples must be kept on ice, or refrigerated, from sample collection through delivery to the laboratory. Place samples to be shipped inside coolers with ice. Make sure the sample bottles are packaged well to prevent breakage and secure cooler lids with packaging tape.

Ship samples to the analytical laboratory as soon as possible. Hold times are measured from the time the sample is collected to the time the sample is analyzed. The CGP requires that samples be received by the analytical laboratory within 48 hours of the physical sampling (unless required sooner by the analytical laboratory).

Sample Documentation Procedures

All original data documented on sample bottle identification labels, *Effluent Sampling Field Log Sheet*, and COCs shall be recorded using waterproof ink. These shall be considered accountable documents. If an error is made on an accountable document, the individual shall make corrections by drawing a line through the error and entering the correct information. The erroneous information shall not be obliterated. All corrections shall be initialed and dated.

Duplicate samples shall be labeled consistent with the numbering system for other samples to prevent the laboratory from identifying duplicate samples. Duplicate samples shall be identified in the *Effluent Sampling Field Log Sheet*.

Sample documentation procedures include the following:

- Sample Bottle Identification Labels: Sampling personnel shall attach an identification label to each sample bottle. Sample identification shall uniquely identify each sample location.
- Field Log Sheets: Sampling personnel shall complete the *Effluent Sampling Field Log Sheet* and *Receiving Water Sampling Field Log Sheet* (if applies) for each sampling event, as appropriate.
- Chain of Custody: Sampling personnel shall complete the COC for each sampling event for which samples are collected for laboratory analysis. The sampler will sign the COC when the sample(s) is turned over to the testing laboratory or courier.

7.6.3 Quality Assurance and Quality Control

An effective Quality Assurance and Quality Control (QA/QC) plan shall be implemented as part of the CSMP to ensure that analytical data can be used with confidence. QA/QC procedures to be initiated include the following:

- Field logs;
- Clean sampling techniques;
- COCs;
- Data verification.

Each of these procedures is discussed in more detail in the following sections.

Field Logs

The purpose of field logs is to record sampling information and field observations during monitoring that may explain any uncharacteristic analytical results. Sampling information to be included in the field log include the date and time of water quality sample collection, sampling personnel, sample container identification numbers, and types of samples that were collected. Field observations should be noted in the field log for any abnormalities at the sampling location (color, odor, BMPs, etc.). A Visual Inspection Field Log and an *Effluent Sampling Field Log Sheet* are included in CSMP Attachment 4.

Clean Sampling Techniques

Clean sampling techniques involve the use of certified clean containers for sample collection and clean powder-free nitrile gloves during sample collection and handling. As discussed in Section 7.6.3, adoption of a clean sampling approach will minimize the chance of field contamination and questionable data results.

Chain of Custody

The sample COC is an important documentation step that tracks samples from collection through analysis to ensure the validity of the sample. Sample COC procedures include the following:

- Proper labeling of samples;
- Use of COC forms for all samples; and
- Prompt sample delivery to the analytical laboratory.

Analytical laboratories usually provide COC forms to be filled out for sample containers. An example COC is included in CSMP Attachment 5.

Data Verification

After results are received from the analytical laboratory, the QSP shall verify the data to ensure that it is complete, accurate, and the appropriate QA/QC requirements were met. Data must be verified as soon as the data reports are received. Data verification shall include:

- Check the COC and laboratory reports: Make sure all requested analyses were performed and all samples are accounted for in the reports.
- Check laboratory reports to make sure hold times were met and that the reporting levels meet or are lower than the reporting levels agreed to in the contract.
- Check data for outlier values and follow up with the laboratory: Occasionally typographical errors, unit reporting errors, or incomplete results are reported and should be easily detected. These errors need to be identified, clarified, and corrected quickly by the laboratory. The QSP should especially note data that is an order of magnitude or more different than similar locations, or is inconsistent with previous data from the same location.
- Check laboratory QA/QC results: EPA establishes QA/QC checks and acceptable criteria for laboratory analyses. These data are typically reported along with the sample results. The QSP shall evaluate the reported QA/QC data to check for contamination (method, field, and equipment blanks), precision (laboratory matrix spike duplicates), and accuracy (matrix spikes and laboratory control samples). When QA/QC checks are outside acceptable ranges, the laboratory must flag the data, and usually provides an explanation of the potential impact to the sample results.
- Check the data set for outlier values and, accordingly, confirm results and re-analyze samples where appropriate: Sample re-analysis should only be undertaken when it appears that some part of the QA/QC resulted in a value out of the accepted range. Sample results may not be discounted unless the analytical laboratory identifies the required QA/QC criteria were not met and confirms this in writing.

Field data including inspections and observations must be verified as soon as the field logs are received, typically at the end of the sampling event. Field data verification shall include:

- Check field logs to make sure all required measurements were completed and appropriately documented;
- Check reported values that appear out of the typical range or inconsistent; Follow-up immediately to identify potential reporting or equipment problems, if appropriate, recalibrate equipment after sampling;
- Verify equipment calibrations;
- Review observations noted on the field logs; and
- Review notations of any errors and actions taken to correct the equipment or recording errors.

Records Retention

All records of stormwater monitoring information and copies of reports (including Annual Reports) must be retained for a period of at least three years from date of submittal or longer if required by the Regional Water Board.

Results of visual monitoring, field measurements, and laboratory analyses must be kept in the SWPPP along with COCs, and other documentation related to the monitoring.

Records are to be kept onsite while construction is ongoing. Records to be retained include:

- The date, place, and time of inspections, sampling, visual observations, and/or measurements, including precipitation;
- The individual(s) who performed the inspections, sampling, visual observation, and/or field measurements;
- The date and approximate time of field measurements and laboratory analyses;
- The individual(s) who performed the laboratory analyses;
- A summary of all analytical results, the method detection limits and reporting limits, and the analytical techniques or methods used;
- Rain gauge readings from site inspections;
- QA/QC records and results;
- Calibration records;
- Visual observation and sample collection exemption records;
- The records of any corrective actions and follow-up activities that resulted from analytical results, visual observations, or inspections.

APPENDIX A

Site Map



N



Note

Basemap provided by Esri ArcGIS Online, August 2017.

SCALE (Feet)

0 500 1,000

Projected Coordinate System
Datum: NAD83
State Plane California Zone III
Units: Feet

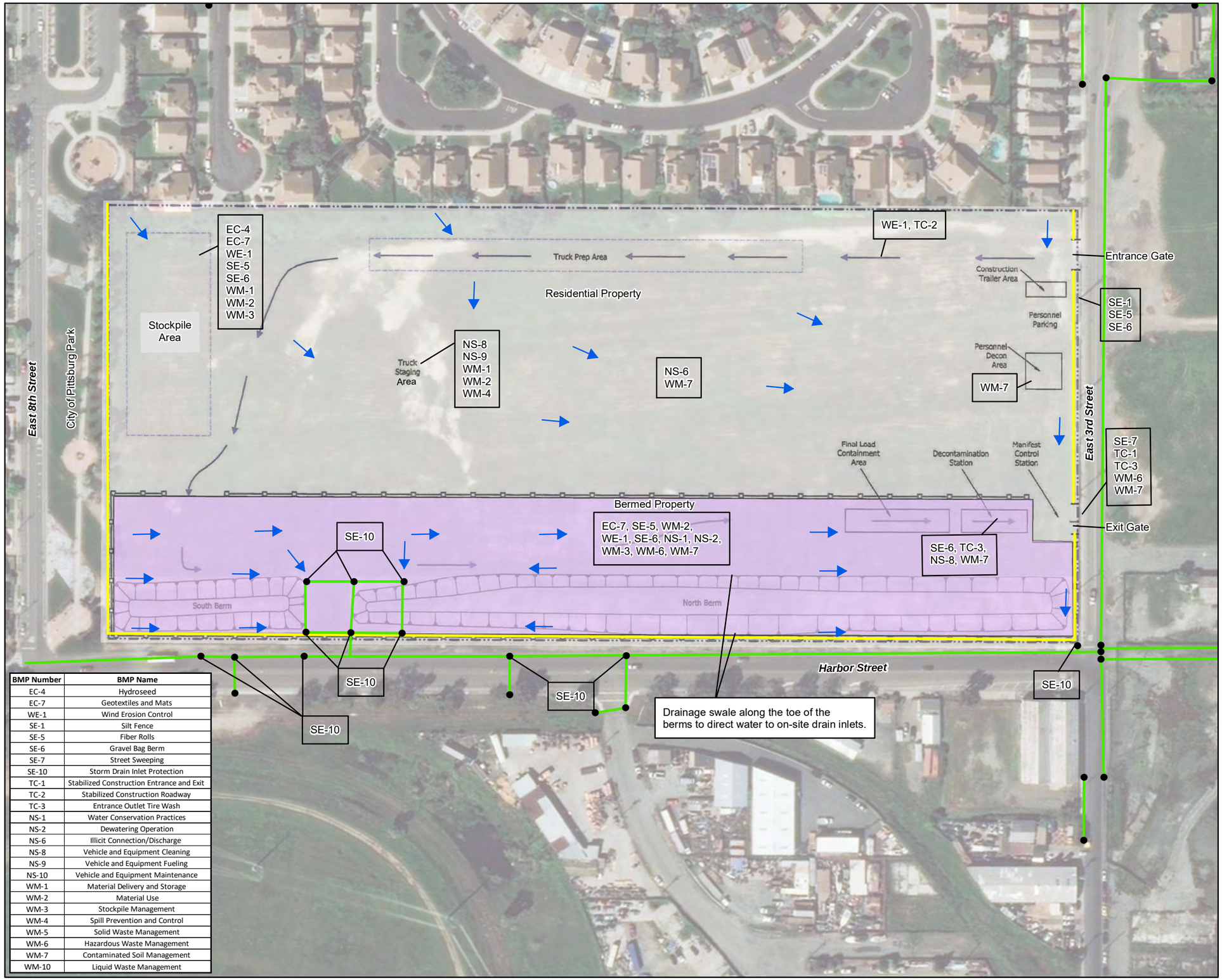
GSI ENVIRONMENTAL

SITE VICINITY MAP

420 East Third Street
Pittsburg, California

GSI Job No.	5152	Drawn By:	AV
Issued:	3-Apr-2019	Chk'd By:	SS
Map ID:	**BC_SiteVicinityMap**	Appv'd By:	MG

FIGURE 1



BMP Number	BMP Name
EC-4	Hydroseed
EC-7	Geotextiles and Mats
WE-1	Wind Erosion Control
SE-1	Silt Fence
SE-5	Fiber Rolls
SE-6	Gravel Bag Berm
SE-7	Street Sweeping
SE-10	Storm Drain Inlet Protection
TC-1	Stabilized Construction Entrance and Exit
TC-2	Stabilized Construction Roadway
TC-3	Entrance Outlet Tire Wash
NS-1	Water Conservation Practices
NS-2	Dewatering Operation
NS-6	Illicit Connection/Discharge
NS-8	Vehicle and Equipment Cleaning
NS-9	Vehicle and Equipment Fueling
NS-10	Vehicle and Equipment Maintenance
WM-1	Material Delivery and Storage
WM-2	Material Use
WM-3	Stockpile Management
WM-4	Spill Prevention and Control
WM-5	Solid Waste Management
WM-6	Hazardous Waste Management
WM-7	Contaminated Soil Management
WM-10	Liquid Waste Management

LEGEND

- Catch Basin/Stormdrain Inlet
- Storm Drain
- Approximate Storm Water Flow Direction
- Silt Fence and Fiber Roll Protection
- Approximate Property Boundary
- High Fence with Wind Barrier
- Regulated Area
- Onsite Truck Route

Notes

1) Basemap provided by Esri ArcGIS Online, August 2017.
2) Catch basin and stormwater drainage layers provided by the City of Pittsburg, California, 25 March 2019.

SCALE (Feet)
0 70 140

Projected Coordinate System
Datum: NAD83
State Plane California Zone III
Units: Feet

GSI ENVIRONMENTAL

FORMER JOHNS MANVILLE SITE
SWPPP SITE MAP

420 East Third Street
Pittsburg, California

GSI Job No.	5152	Drawn By:	AV
Issued:	7-May-2019	Chk'd By:	SS
Map ID:	BC_SWPPP	Appv'd By:	MG

FIGURE 2

APPENDIX B

Permit Registration Documents (PRD)

Permit Registration Documents included in this Appendix

Y/N	Permit Registration Document
	Notice of Intent
	Risk Assessment
	Certification
	Post Construction Water Balance
	Copy of Annual Fee Receipt
N/A	ATS Design Documents
	Site Map

APPENDIX C

SWPPP Amendment Certifications

SWPPP Amendment No. _____

Project Name: _____

Project Number: _____

Qualified SWPPP Developer's Certification of the
Stormwater Pollution Prevention Plan Amendment

"This Stormwater Pollution Prevention Plan and attachments were prepared under my direction to meet the requirements of the California Construction General Permit (SWRCB Order No. 2009-009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ). I certify that I am a Qualified SWPPP Developer in good standing as of the date signed below."

QSD's Signature	Date
QSD Name	QSD Certificate Number
Title and Affiliation	Telephone
Address	Email

APPENDIX D

Submitted Changes to PRDs

Log of Updated PRDs

The General Permit allows for the reduction or increase of the total acreage covered under the General Permit when a portion of the project is complete and/or conditions for termination of coverage have been met; when ownership of a portion of the project is purchased by a different entity; or when new acreage is added to the project.

Modified PRDs shall be filed electronically within 30 days of a reduction or increase in total disturbed area if a change in permit covered acreage is to be sought. The SWPPP shall be modified appropriately, with revisions and amendments recorded in Appendix B. Updated PRDs submitted electronically via SMARTS can be found in this Appendix.

This appendix includes all of the following updated PRDs (check all that apply):

☐ Revised Notice of Intent (NOI);

☐ Revised Site Map;

☐ Revised Risk Assessment;

☐ New landowner's information (name, address, phone number, email address); and

☐ New signed certification statement.

_____

Legally Responsible Person

_____ _____

Signature of Legally Responsible Person or Approved Signatory | Date

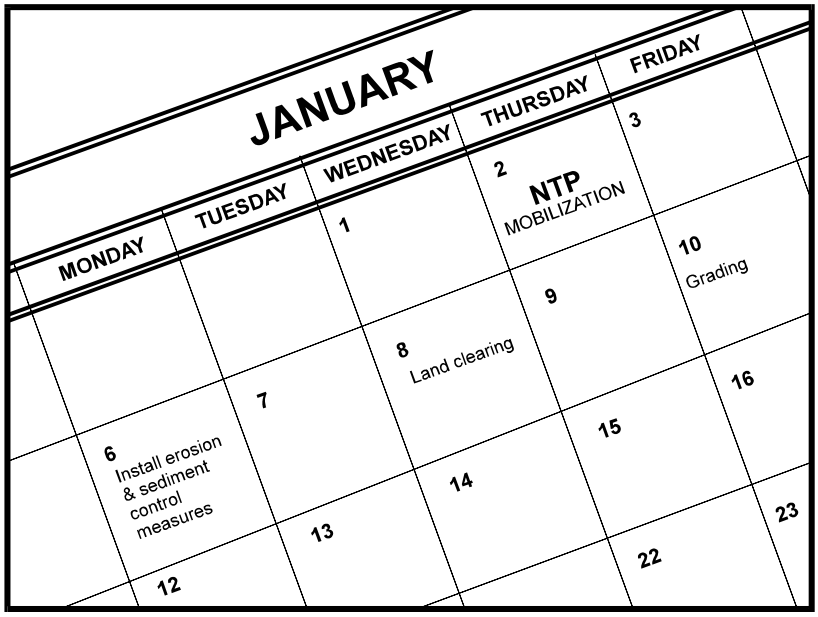
_____ _____

Name of Legally Responsible Person or Approved Signatory | Telephone Number

APPENDIX E

CASQA Stormwater BMP Handbook Portal: Construction Fact Sheets

Scheduling EC-1



Description and Purpose

Scheduling is the development of a written plan that includes sequencing of construction activities and the implementation of BMPs such as erosion control and sediment control while taking local climate (rainfall, wind, etc.) into consideration. The purpose is to reduce the amount and duration of soil exposed to erosion by wind, rain, runoff, and vehicle tracking, and to perform the construction activities and control practices in accordance with the planned schedule.

Suitable Applications

Proper sequencing of construction activities to reduce erosion potential should be incorporated into the schedule of every construction project especially during rainy season. Use of other, more costly yet less effective, erosion and sediment control BMPs may often be reduced through proper construction sequencing.

Limitations

- Environmental constraints such as nesting season prohibitions reduce the full capabilities of this BMP.

Implementation

- Avoid rainy periods. Schedule major grading operations during dry months when practical. Allow enough time before rainfall begins to stabilize the soil with vegetation or physical means or to install sediment trapping devices.
- Plan the project and develop a schedule showing each phase of construction. Clearly show how the rainy season relates

Categories

EC	Erosion Control	☑
SE	Sediment Control	☒
TC	Tracking Control	☒
WE	Wind Erosion Control	☒
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

☑ **Primary Objective**

☒ **Secondary Objective**

Targeted Constituents

Sediment	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

None

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to soil disturbing and re-stabilization activities. Incorporate the construction schedule into the SWPPP.

- Include on the schedule, details on the rainy season implementation and deployment of:
  - Erosion control BMPs
  - Sediment control BMPs
  - Tracking control BMPs
  - Wind erosion control BMPs
  - Non-stormwater BMPs
  - Waste management and materials pollution control BMPs
- Include dates for activities that may require non-stormwater discharges such as dewatering, sawcutting, grinding, drilling, boring, crushing, blasting, painting, hydro-demolition, mortar mixing, pavement cleaning, etc.
- Work out the sequencing and timetable for the start and completion of each item such as site clearing and grubbing, grading, excavation, paving, foundation pouring utilities installation, etc., to minimize the active construction area during the rainy season.
  - Sequence trenching activities so that most open portions are closed before new trenching begins.
  - Incorporate staged seeding and re-vegetation of graded slopes as work progresses.
  - Schedule establishment of permanent vegetation during appropriate planting time for specified vegetation.
- Non-active areas should be stabilized as soon as practical after the cessation of soil disturbing activities or one day prior to the onset of precipitation.
- Monitor the weather forecast for rainfall.
- When rainfall is predicted, adjust the construction schedule to allow the implementation of soil stabilization and sediment treatment controls on all disturbed areas prior to the onset of rain.
- Be prepared year round to deploy erosion control and sediment control BMPs. Erosion may be caused during dry seasons by un-seasonal rainfall, wind, and vehicle tracking. Keep the site stabilized year round, and retain and maintain rainy season sediment trapping devices in operational condition.
- Apply permanent erosion control to areas deemed substantially complete during the project's defined seeding window.

Costs

Construction scheduling to reduce erosion may increase other construction costs due to reduced economies of scale in performing site grading. The cost effectiveness of scheduling techniques should be compared with the other less effective erosion and sedimentation controls to achieve a cost effective balance.

Inspection and Maintenance

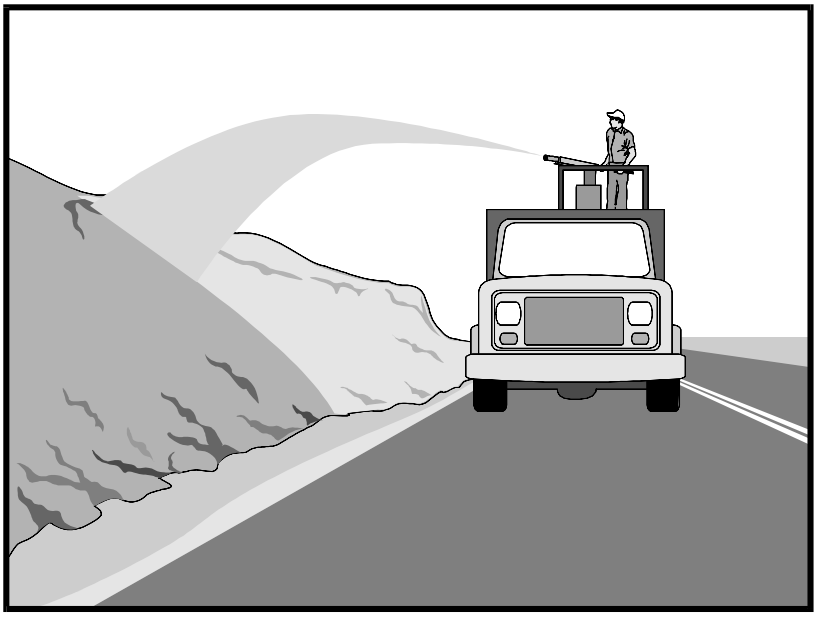
- Verify that work is progressing in accordance with the schedule. If progress deviates, take corrective actions.
- Amend the schedule when changes are warranted.
- Amend the schedule prior to the rainy season to show updated information on the deployment and implementation of construction site BMPs.

References

Stormwater Quality Handbooks Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Stormwater Management for Construction Activities Developing Pollution Prevention Plans and Best Management Practices (EPA 832-R-92-005), U.S. Environmental Protection Agency, Office of Water, September 1992.

Hydraulic Mulch EC-3



Categories

EC	Erosion Control	☑
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	☒
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

☑ **Primary Category**

☒ **Secondary Category**

Targeted Constituents

Sediment	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

EC-4 Hydroseeding

EC-5 Soil Binders

EC-6 Straw Mulch

EC-7 Geotextiles and Mats

EC-8 Wood Mulching

EC-14 Compost Blanket

EC-16 Non-Vegetative Stabilization

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Description and Purpose

Hydraulic Mulch consists of various types of fibrous materials mixed with water and sprayed onto the soil surface in slurry form to provide a layer of temporary protection from wind and water erosion.

Suitable Applications

Hydraulic mulch as a temporary, stand alone, erosion control BMP is suitable for disturbed areas that require temporary protection from wind and water erosion until permanent soil stabilization activities commence. Examples include:

- Rough-graded areas that will remain inactive for longer than permit-required thresholds (e.g., 14 days) or otherwise require stabilization to minimize erosion or prevent sediment discharges.
- Soil stockpiles.
- Slopes with exposed soil between existing vegetation such as trees or shrubs.
- Slopes planted with live, container-grown vegetation or plugs.
- Slopes burned by wildfire.

Hydraulic mulch can also be applied to augment other erosion control BMPs such as:

- In conjunction with straw mulch (see EC-6 Straw Mulch) where the rate of hydraulic mulch is reduced to 100-500 lbs per acre and the slurry is applied over the straw as a tackifying agent to hold the straw in place.
- Supplemental application of soil amendments, such as fertilizer, lime, gypsum, soil bio-stimulants or compost.

Limitations

In general, hydraulic mulch is not limited by slope length, gradient or soil type. However, the following limitations typically apply:

- Most hydraulic mulch applications, particularly bonded fiber matrices (BFMs), require at least 24 hours to dry before rainfall occurs.
- Temporary applications (i.e., without a vegetative component) may require a second application in order to remain effective for an entire rainy season.
- Treatment areas must be accessible to hydraulic mulching equipment.
- Availability of water sources in remote areas for mixing and application.
- As a stand-alone temporary BMP, hydraulic mulches may need to be re-applied to maintain their erosion control effectiveness, typically after 6-12 months depending on the type of mulch used.
- Availability of hydraulic mulching equipment may be limited just prior to the rainy season and prior to storms due to high demand.
- Cellulose fiber mulches alone may not perform well on steep slopes or in course soils.
- This BMP consists of a mixture of several constituents (e.g., fibers/mulches, tackifiers, and other chemical constituents), some of which may be proprietary and may come pre-mixed by the manufacturer. The water quality impacts of these constituents are relatively unknown and some may have water quality impacts due to their chemical makeup. Refer to specific chemical properties identified in the product Material Safety Data Sheet; products should be evaluated for project-specific implementation by the SWPPP Preparer. Refer to factsheet EC-05 for further guidance on selecting soil binders.

Implementation

- Where feasible, it is preferable to prepare soil surfaces prior to application by roughening embankments and fill areas with a crimping or punching type roller or by track walking.
- The majority of hydraulic mulch applications do not necessarily require surface/soil preparation (See EC-15 Soil Preparation) although in almost every case where re-vegetation is included as part of the practice, soil preparation can be beneficial. One of the advantages of hydraulic mulch over other erosion control methods is that it can be applied in areas where soil preparation is precluded by site conditions, such as steep slopes, rocky soils, or inaccessibility.

- Avoid mulch over spray onto roads, sidewalks, drainage channels, existing vegetation, etc.
- Hydraulic mulching is generally performed utilizing specialized machines that have a large water-holding/mixing tank and some form of mechanical agitation or other recirculation method to keep water, mulch and soil amendments in suspension. The mixed hydraulic slurry can be applied from a tower sprayer on top of the machine or by extending a hose to areas remote from the machine.
- Where possible apply hydraulic mulch from multiple directions to adequately cover the soil. Application from a single direction can result in shadowing, uneven coverage and failure of the BMP.
- Hydraulic mulch can also include a vegetative component, such as seed, rhizomes, or stolons (see EC-4 Hydraulic Seed).
- Typical hydraulic mulch application rates range from 2,000 pounds per acre for standard mulches (SMs) to 3,500 pounds per acre for BFMs. However, the required amount of hydraulic mulch to provide adequate coverage of exposed topsoil may appear to exceed the standard rates when the roughness of the soil surface is changed due to soil preparation methods (see EC-15 Soil Preparation) or by slope gradient.
- Other factors such as existing soil moisture and soil texture can have a profound effect on the amount of hydraulic mulch required (i.e. application rate) applied to achieve an erosion-resistant covering.
- Avoid use of mulch without a tackifier component, especially on slopes.
- Mulches used in the hydraulic mulch slurry can include:
  - Cellulose fiber
  - Thermally-processed wood fibers
  - Cotton
  - Synthetics
  - Compost (see EC-14, Compost Blanket)
- Additional guidance on the comparison and selection of temporary slope stabilization methods is provided in Appendix F of the Handbook.

Categories of Hydraulic Mulches

Standard Hydraulic Mulch (SM)

Standard hydraulic mulches are generally applied at a rate of 2,000 pounds per acre and are manufactured containing around 5% tackifier (i.e. soil binder), usually a plant-derived guar or psyllium type. Most standard mulches are green in color derived from food-color based dyes.

Hydraulic Matrices (HM) and Stabilized Fiber Matrices (SFM)

Hydraulic matrices and stabilized fiber matrices are slurries which contain increased levels of tackifiers/soil binders; usually 10% or more by weight. HMs and SFMs have improved performance compared to a standard hydraulic mulch (SM) because of the additional percentage of tackifier and because of their higher application rates, typically 2,500 – 4,000 pounds per acre. Hydraulic matrices can include a mixture of fibers, for example, a 50/50 blend of paper and wood fiber. In the case of an SFM, the tackifier/soil binder is specified as a polyacrylamide (PAM).

Bonded Fiber Matrix (BFM)

Bonded fiber matrices (BFMs) are hydraulically-applied systems of fibers, adhesives (typically guar based) and chemical cross-links. Upon drying, the slurry forms an erosion-resistant blanket that prevents soil erosion and promotes vegetation establishment. The cross-linked adhesive in the BFM should be biodegradable and should not dissolve or disperse upon re-wetting. BFMs are typically applied at rates from 3,000 to 4,000 lbs/acre based on the manufacturer's recommendation. BFMs should not be applied immediately before, during or immediately after rainfall or if the soil is saturated. Depending on the product, BFMs typically require 12 to 24 hours to dry and become effective.

Mechanically-Bonded Fiber Matrices (MBFM)

Mechanically-bonded fiber matrices (MBFMs) are hydraulically applied systems similar to BFM that use crimped synthetic fibers and PAM and are typically applied to a slope at a higher application rate than a standard BFM.

Hydraulic Compost Matrix (HCM)

Hydraulic compost matrix (HCM) is a field-derived practice whereby finely graded or sifted compost is introduced into the hydraulic mulch slurry. A guar-type tackifier can be added for steeper slope applications as well as any specified seed mixtures. A HCM can help to accelerate seed germination and growth. HCMs are particularly useful as an in-fill for three-dimensional re-vegetation geocomposites, such as turf reinforcement mats (TRM) (see EC-7 Geotextiles and Mats).

Costs

Average installed costs for hydraulic mulch categories are is provided in Table 1, below.

Table 1
HYDRAULIC MULCH BMPs
INSTALLED COSTS

BMP	Installed Cost/Acre
Standard Hydraulic Mulching (SM)	$1,700 - $3,600 per acre
Hydraulic Matrices (HM) and Stabilized Fiber Matrices	
Guar-based	$2,000 - $4,000 per acre
PAM-based	$2,500 - $5,610 per acre
Bonded Fiber Matrix (BFM)	$3,900 - $6,900 per acre
Mechanically Bonded Fiber Matrix (MBFM)	$4,500 - $6,000 per acre
Hydraulic Compost Matrix (HCM)	$3,000 - $3,500 per acre

Source: Cost information received from individual product manufacturers solicited by Geosyntec Consultants (2004)

Inspection and Maintenance

- Maintain an unbroken, temporary mulched ground cover throughout the period of construction when the soils are not being reworked.
- BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Areas where erosion is evident should be repaired and BMPs re-applied as soon as possible. Care should be exercised to minimize the damage to protected areas while making repairs, as any area damaged will require re-application of BMPs.
- Compare the number of bags or weight of applied mulch to the area treated to determine actual application rates and compliance with specifications.

References

Soil Stabilization BMP Research for Erosion and Sediment Controls: Cost Survey Technical Memorandum, State of California Department of Transportation (Caltrans), July 2007.

Controlling Erosion of Construction Sites, Agricultural Information #347, U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) (formerly Soil Conservation Service – SCS).

Guides for Erosion and Sediment Control in California, USDA Soils Conservation Service, January 1991.

Manual of Standards of Erosion and Sediment Control Measures, Association of Bay Area Governments, May 1995.

Sedimentation and Erosion Control, An Inventory of Current Practices Draft, US EPA, April 1990.

Soil Erosion by Water, Agriculture Information Bulletin #513, U.S. Department of Agriculture, Soil Conservation Service.

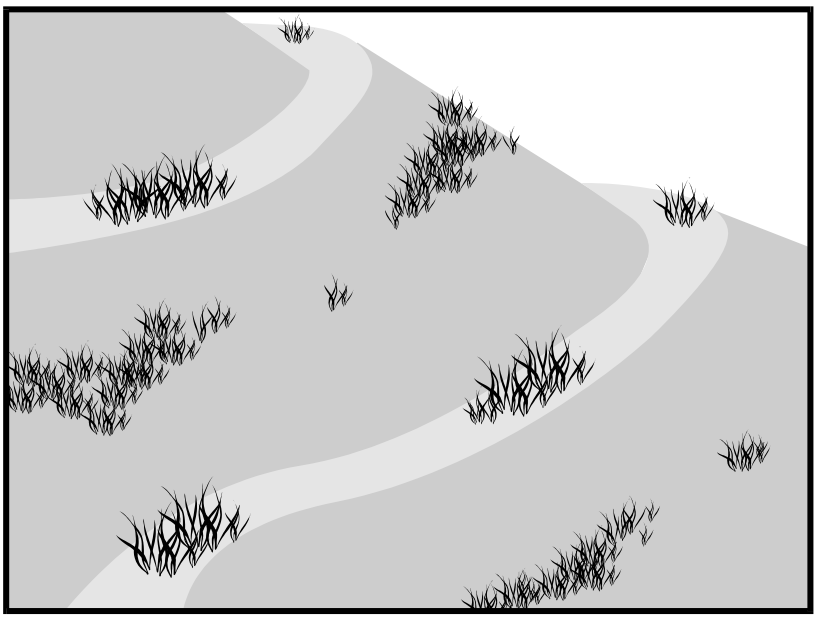
Stormwater Quality Handbooks Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), March 2003.

Guidance Document: Soil Stabilization for Temporary Slopes, State of California Department of Transportation (Caltrans), November 1999

Stormwater Management of the Puget Sound Basin, Technical Manual, Publication #91-75, Washington State Department of Ecology, February 1992.

Water Quality Management Plan for the Lake Tahoe Region, Volume II, Handbook of Management Practices, Tahoe Regional Planning Agency, November 1988.

Hydroseeding EC-4



Description and Purpose

Hydroseeding typically consists of applying a mixture of a hydraulic mulch, seed, fertilizer, and stabilizing emulsion with a hydraulic mulcher, to temporarily protect exposed soils from erosion by water and wind. Hydraulic seeding, or hydroseeding, is simply the method by which temporary or permanent seed is applied to the soil surface.

Suitable Applications

Hydroseeding is suitable for disturbed areas requiring temporary protection until permanent stabilization is established, for disturbed areas that will be re-disturbed following an extended period of inactivity, or to apply permanent stabilization measures. Hydroseeding without mulch or other cover (e.g. EC-7, Erosion Control Blanket) is not a stand-alone erosion control BMP and should be combined with additional measures until vegetation establishment.

Typical applications for hydroseeding include:

- Disturbed soil/graded areas where permanent stabilization or continued earthwork is not anticipated prior to seed germination.
- Cleared and graded areas exposed to seasonal rains or temporary irrigation.
- Areas not subject to heavy wear by construction equipment or high traffic.

Categories

EC	Erosion Control	☑
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	☒
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:
☑ **Primary Category**
☒ **Secondary Category**

Targeted Constituents

Sediment	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

EC-3 Hydraulic Mulch
EC-5 Soil Binders
EC-6 Straw Mulch
EC-7 Geotextiles and Mats
EC-8 Wood Mulching
EC-14 Compost Blanket
EC-16 Non-Vegetative Stabilization

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Limitations

- Availability of hydroseeding equipment may be limited just prior to the rainy season and prior to storms due to high demand.
- Hydraulic seed should be applied with hydraulic mulch or a stand-alone hydroseed application should be followed by one of the following:
    - Straw mulch (see Straw Mulch EC-6)
    - Rolled erosion control products (see Geotextiles and Mats EC-7)
    - Application of Compost Blanket (see Compost Blanket EC-14)

  Hydraulic seed may be used alone only on small flat surfaces when there is sufficient time in the season to ensure adequate vegetation establishment and coverage to provide adequate erosion control.
- Hydraulic seed without mulch does not provide immediate erosion control.
- Temporary seeding may not be appropriate for steep slopes (i.e., slopes readily prone to rill erosion or without sufficient topsoil).
- Temporary seeding may not be appropriate in dry periods without supplemental irrigation.
- Temporary vegetation may have to be removed before permanent vegetation is applied.
- Temporary vegetation may not be appropriate for short term inactivity (i.e. less than 3-6 months).
- This BMP consists of a mixture of several constituents (e.g., fibers/mulches, tackifiers, and other chemical constituents), some of which may be proprietary and may come pre-mixed by the manufacturer. The water quality impacts of these constituents are relatively unknown and some may have water quality impacts due to their chemical makeup. Additionally these constituents may require non-visible pollutant monitoring. Refer to specific chemical properties identified in the product Material Safety Data Sheet; products should be evaluated for project-specific implementation by the SWPPP Preparer. Refer to factsheet EC-05 for further guidance on selecting soil binders.

Implementation

In order to select appropriate hydraulic seed mixtures, an evaluation of site conditions should be performed with respect to:

- Soil conditions
- Site topography and exposure (sun/wind)
- Season and climate
- Vegetation types
- Maintenance requirements
- Sensitive adjacent areas
- Water availability
- Plans for permanent vegetation

The local office of the U.S.D.A. Natural Resources Conservation Service (NRCS), Resource Conservation Districts and Agricultural Extension Service can provide information on appropriate seed mixes.

The following steps should be followed for implementation:

- Where appropriate or feasible, soil should be prepared to receive the seed by disking or otherwise scarifying (See EC-15, Soil Preparation) the surface to eliminate crust, improve air and water infiltration and create a more favorable environment for germination and growth.
- Avoid use of hydraulic seed in areas where the BMP would be incompatible with future earthwork activities.
- Hydraulic seed can be applied using a multiple step or one step process.
  - In a multiple step process, hydraulic seed is applied first, followed by mulch or a Rolled Erosion Control Product (RECP).
  - In the one step process, hydraulic seed is applied with hydraulic mulch in a hydraulic matrix. When the one step process is used to apply the mixture of fiber, seed, etc., the seed rate should be increased to compensate for all seeds not having direct contact with the soil.
- All hydraulically seeded areas should have mulch, or alternate erosion control cover to keep seeds in place and to moderate soil moisture and temperature until the seeds germinate and grow.
- All seeds should be in conformance with the California State Seed Law of the Department of Agriculture. Each seed bag should be delivered to the site sealed and clearly marked as to species, purity, percent germination, dealer's guarantee, and dates of test. The container should be labeled to clearly reflect the amount of Pure Live Seed (PLS) contained. All legume seed should be pellet inoculated. Inoculant sources should be species specific and should be applied at a rate of 2 lb of inoculant per 100 lb seed.
- Commercial fertilizer should conform to the requirements of the California Food and Agricultural Code, which can be found at http://www.leginfo.ca.gov/.html/fac_table_of_contents.html. Fertilizer should be pelleted or granular form.
- Follow up applications should be made as needed to cover areas of poor coverage or germination/vegetation establishment and to maintain adequate soil protection.
- Avoid over spray onto roads, sidewalks, drainage channels, existing vegetation, etc.
- Additional guidance on the comparison and selection of temporary slope stabilization methods is provided in Appendix F of the Handbook.

Costs

Average cost for installation and maintenance may vary from as low as $1,900 per acre for flat slopes and stable soils, to $4,000 per acre for moderate to steep slopes and/or erosive soils. Cost of seed mixtures vary based on types of required vegetation.

BMP	Installed Cost per Acre
Hydraulic Seed	$1,900-$4,000

Source: Cost information received from individual product manufacturers solicited by Geosyntec Consultants (2004).

Inspection and Maintenance

- BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Areas where erosion is evident should be repaired and BMPs re-applied as soon as possible. Care should be exercised to minimize the damage to protected areas while making repairs, as any area damaged will require re-application of BMPs.
- Where seeds fail to germinate, or they germinate and die, the area must be re-seeded, fertilized, and mulched within the planting season, using not less than half the original application rates.
- Irrigation systems, if applicable, should be inspected daily while in use to identify system malfunctions and line breaks. When line breaks are detected, the system must be shut down immediately and breaks repaired before the system is put back into operation.
- Irrigation systems should be inspected for complete coverage and adjusted as needed to maintain complete coverage.

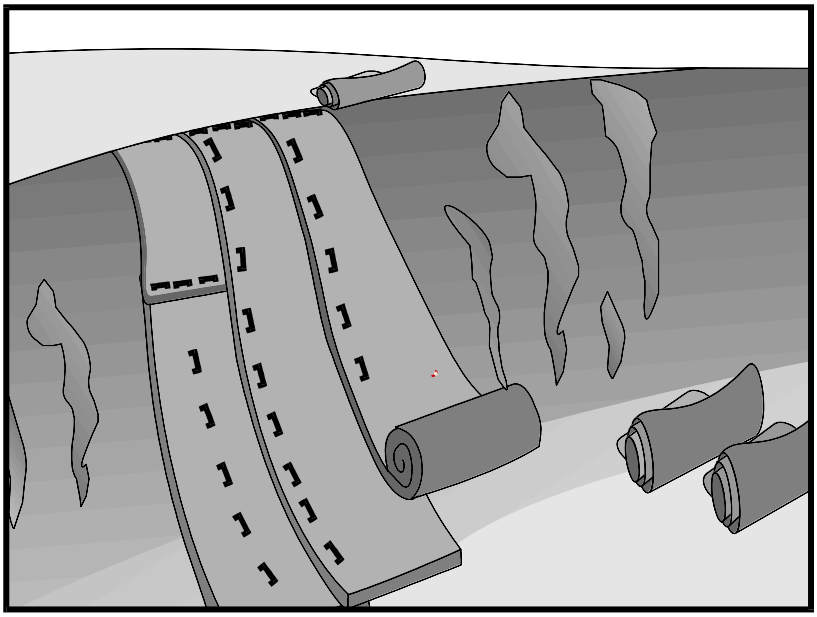
References

Soil Stabilization BMP Research for Erosion and Sediment Controls: Cost Survey Technical Memorandum, State of California Department of Transportation (Caltrans), July 2007.

Stormwater Quality Handbooks Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), March 2003.

Guidance Document: Soil Stabilization for Temporary Slopes, State of California Department of Transportation (Caltrans), November 1999.

Geotextiles and Mats EC-7



Categories

EC	Erosion Control	☑
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	☒
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:
☑ **Primary Category**
☒ **Secondary Category**

Targeted Constituents

Sediment	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

EC-3 Hydraulic Mulch

EC-4 Hydroseeding

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Description and Purpose

Mattings, or Rolled Erosion Control Products (RECPs), can be made of natural or synthetic materials or a combination of the two. RECPs are used to cover the soil surface to reduce erosion from rainfall impact, hold soil in place, and absorb and hold moisture near the soil surface. Additionally, RECPs may be used to stabilize soils until vegetation is established or to reinforce non-woody surface vegetation.

Suitable Applications

RECPs are typically applied on slopes where erosion hazard is high and vegetation will be slow to establish. Mattings are also used on stream banks, swales and other drainage channels where moving water at velocities between 3 ft/s and 6 ft/s are likely to cause scour and wash out new vegetation, and in areas where the soil surface is disturbed and where existing vegetation has been removed. RECPs may also be used when seeding cannot occur (e.g., late season construction and/or the arrival of an early rain season). RECPs should be considered when the soils are fine grained and potentially erosive. RECPs should be considered in the following situations.

- Steep slopes, generally steeper than 3:1 (H:V)
- Slopes where the erosion potential is high
- Slopes and disturbed soils where mulch must be anchored
- Disturbed areas where plants are slow to develop

- Channels with flows exceeding 3.3 ft/s
- Channels to be vegetated
- Stockpiles
- Slopes adjacent to water bodies

Limitations

- RECP installed costs are generally higher than other erosion control BMPs, limiting their use to areas where other BMPs are ineffective (e.g. channels, steep slopes).
- RECPs may delay seed germination, due to reduction in soil temperature.
- RECPs are generally not suitable for excessively rocky sites or areas where the final vegetation will be mowed (since staples and netting can catch in mowers). If a staple or pin cannot be driven into the soil because the underlying soil is too hard or rocky, then an alternative BMP should be selected.
- If used for temporary erosion control, RECPs should be removed and disposed of prior to application of permanent soil stabilization measures.
- The use of plastic should be limited to covering stockpiles or very small graded areas for short periods of time (such as through one imminent storm event) until more environmentally friendly measures, such as seeding and mulching, may be installed.
    - Plastic sheeting is easily vandalized, easily torn, photodegradable, and must be disposed of at a landfill.
    - Plastic sheeting results in 100% runoff, which may cause serious erosion problems in the areas receiving the increased flow.
- RECPs may have limitations based on soil type, slope gradient, or channel flow rate; consult the manufacturer for proper selection.
- Not suitable for areas that have foot traffic (tripping hazard) – e.g., pad areas around buildings under construction.
- RECPs that incorporate a plastic netting (e.g. straw blanket typically uses a plastic netting to hold the straw in place) may not be suitable near known wildlife habitat. Wildlife can become trapped in the plastic netting.
- RECPs may have limitations in extremely windy climates. However, when RECPs are properly trenched at the top and bottom and stapled in accordance with the manufacturer's recommendations, problems with wind can be minimized.

Implementation

Material Selection

- Natural RECPs have been found to be effective where re-vegetation will be provided by re-seeding. The choice of material should be based on the size of area, side slopes, surface conditions such as hardness, moisture, weed growth, and availability of materials.

- Additional guidance on the comparison and selection of temporary slope stabilization methods is provided in Appendix F of the Handbook.

- The following natural and synthetic RECPs are commonly used:

Geotextiles

- Material can be a woven or a non-woven polypropylene fabric with minimum thickness of 0.06 in., minimum width of 12 ft and should have minimum tensile strength of 150 lbs (warp), 80 lbs (fill) in conformance with the requirements in ASTM Designation: D 4632. The permittivity of the fabric should be approximately 0.07 sec^{-1} in conformance with the requirements in ASTM Designation: D4491. The fabric should have an ultraviolet (UV) stability of 70 percent in conformance with the requirements in ASTM designation: D4355. Geotextile blankets must be secured in place with wire staples or sandbags and by keying into tops of slopes to prevent infiltration of surface waters under geotextile. Staples should be made of minimum 11 gauge steel wire and should be U-shaped with 8 in. legs and 2 in. crown.

- Geotextiles may be reused if they are suitable for the use intended.

Plastic Covers

- Generally plastic sheeting should only be used as stockpile covering or for very small graded areas for short periods of time (such as through one imminent storm event). If plastic sheeting must be used, choose a plastic that will withstand photo degradation.

- Plastic sheeting should have a minimum thickness of 6 mils, and must be keyed in at the top of slope (when used as a temporary slope protection) and firmly held in place with sandbags or other weights placed no more than 10 ft apart. Seams are typically taped or weighted down their entire length, and there should be at least a 12 in. to 24 in. overlap of all seams. Edges should be embedded a minimum of 6 in. in soil (when used as a temporary slope protection).

- All sheeting must be inspected periodically after installation and after significant rainstorms to check for erosion, undermining, and anchorage failure. Any failures must be repaired immediately. If washout or breakages occur, the material should be re-installed after repairing the damage to the slope.

Erosion Control Blankets/Mats

- Biodegradable RECPs are typically composed of jute fibers, curled wood fibers, straw, coconut fiber, or a combination of these materials. In order for an RECP to be considered 100% biodegradable, the netting, sewing or adhesive system that holds the biodegradable mulch fibers together must also be biodegradable. See typical installation details at the end of this fact sheet.

- **Jute** is a natural fiber that is made into a yarn that is loosely woven into a biodegradable mesh. The performance of jute as a stand-alone RECP is low. Most other RECPs outperform jute as a temporary erosion control product and therefore jute is not commonly used. It is designed to be used in conjunction with vegetation. The material is supplied in rolled strips, which should be secured to the soil with U-shaped staples or stakes in accordance with manufacturers' recommendations.

- **Excelsior** (curled wood fiber) blanket material should consist of machine produced mats of curled wood excelsior with 80 percent of the fiber 6 in. or longer. The excelsior blanket should be of consistent thickness. The wood fiber must be evenly distributed over the entire area of the blanket. The top surface of the blanket should be covered with a photodegradable extruded plastic mesh. The blanket should be smolder resistant without the use of chemical additives and should be non-toxic and non-injurious to plant and animal life. Excelsior blankets should be furnished in rolled strips, a minimum of 48 in. wide, and should have an average weight of 0.8 lb/yd^2, ±10 percent, at the time of manufacture. Excelsior blankets must be secured in place with wire staples. Staples should be made of minimum 11 gauge steel wire and should be U-shaped with 8 in. legs and 2 in. crown.

- **Straw blanket** should be machine produced mats of straw with a lightweight biodegradable netting top layer. The straw should be attached to the netting with biodegradable thread or glue strips. The straw blanket should be of consistent thickness. The straw should be evenly distributed over the entire area of the blanket. Straw blanket should be furnished in rolled strips a minimum of 6.5 ft wide, a minimum of 80 ft long and a minimum of 0.5 lb/yd^2. Straw blankets must be secured in place with wire staples. Staples should be made of minimum 11 gauge steel wire and should be U-shaped with 8 in. legs and 2 in. crown.

- **Wood fiber blanket** is composed of biodegradable fiber mulch with extruded plastic netting held together with adhesives. The material is designed to enhance re-vegetation. The material is furnished in rolled strips, which must be secured to the ground with U-shaped staples or stakes in accordance with manufacturers' recommendations.

- **Coconut fiber blanket** should be a machine produced mat of 100 percent coconut fiber with biodegradable netting on the top and bottom. The coconut fiber should be attached to the netting with biodegradable thread or glue strips. The coconut fiber blanket should be of consistent thickness. The coconut fiber should be evenly distributed over the entire area of the blanket. Coconut fiber blanket should be furnished in rolled strips with a minimum of 6.5 ft wide, a minimum of 80 ft. long and a minimum of 0.5 lb/yd^2. Coconut fiber blankets must be secured in place with wire staples. Staples should be made of minimum 11 gauge steel wire and should be U-shaped with 8 in. legs and 2 in. crown.

- **Coconut fiber mesh** is a thin permeable membrane made from coconut or corn fiber that is spun into a yarn and woven into a biodegradable mat. It is designed to be used in conjunction with vegetation and typically has longevity of several years. The material is supplied in rolled strips, which must be secured to the soil with U-shaped staples or stakes in accordance with manufacturers' recommendations.

- **Straw coconut fiber blanket** should be machine produced mats of 70 percent straw and 30 percent coconut fiber with a biodegradable netting top layer and a biodegradable bottom net. The straw and coconut fiber should be attached to the netting with biodegradable thread or glue strips. The straw coconut fiber blanket should be of consistent thickness. The straw and coconut fiber should be evenly distributed over the entire area of the blanket. Straw coconut fiber blanket should be furnished in rolled strips a minimum of 6.5 ft wide, a minimum of 80 ft long and a minimum of 0.5 lb/yd^2. Straw coconut fiber blankets must be secured in place with wire staples. Staples should be made of minimum 11 gauge steel wire and should be U-shaped with 8 in. legs and 2 in. crown.

- Non-biodegradable RECPs are typically composed of polypropylene, polyethylene, nylon or other synthetic fibers. In some cases, a combination of biodegradable and synthetic fibers is used to construct the RECP. Netting used to hold these fibers together is typically non-biodegradable as well.

  - **Plastic netting** is a lightweight biaxially oriented netting designed for securing loose mulches like straw or paper to soil surfaces to establish vegetation. The netting is photodegradable. The netting is supplied in rolled strips, which must be secured with U-shaped staples or stakes in accordance with manufacturers' recommendations.

  - **Plastic mesh** is an open weave geotextile that is composed of an extruded synthetic fiber woven into a mesh with an opening size of less than ¼ in. It is used with re-vegetation or may be used to secure loose fiber such as straw to the ground. The material is supplied in rolled strips, which must be secured to the soil with U-shaped staples or stakes in accordance with manufacturers' recommendations.

  - **Synthetic fiber with netting** is a mat that is composed of durable synthetic fibers treated to resist chemicals and ultraviolet light. The mat is a dense, three dimensional mesh of synthetic (typically polyolefin) fibers stitched between two polypropylene nets. The mats are designed to be re-vegetated and provide a permanent composite system of soil, roots, and geomatrix. The material is furnished in rolled strips, which must be secured with U-shaped staples or stakes in accordance with manufacturers' recommendations.

  - **Bonded synthetic fibers** consist of a three dimensional geomatrix nylon (or other synthetic) matting. Typically it has more than 90 percent open area, which facilitates root growth. It's tough root reinforcing system anchors vegetation and protects against hydraulic lift and shear forces created by high volume discharges. It can be installed over prepared soil, followed by seeding into the mat. Once vegetated, it becomes an invisible composite system of soil, roots, and geomatrix. The material is furnished in rolled strips that must be secured with U-shaped staples or stakes in accordance with manufacturers' recommendations.

  - **Combination synthetic and biodegradable RECPs** consist of biodegradable fibers, such as wood fiber or coconut fiber, with a heavy polypropylene net stitched to the top and a high strength continuous filament geomatrix or net stitched to the bottom. The material is designed to enhance re-vegetation. The material is furnished in rolled strips,

which must be secured with U-shaped staples or stakes in accordance with manufacturers' recommendations.

Site Preparation

- Proper soil preparation is essential to ensure complete contact of the RECP with the soil. Soil Roughening is not recommended in areas where RECPs will be installed.
- Grade and shape the area of installation.
- Remove all rocks, clods, vegetation or other obstructions so that the installed blankets or mats will have complete, direct contact with the soil.
- Prepare seedbed by loosening 2 to 3 in. of topsoil.

Seeding/Planting

Seed the area before blanket installation for erosion control and re-vegetation. Seeding after mat installation is often specified for turf reinforcement application. When seeding prior to blanket installation, all areas disturbed during blanket installation must be re-seeded. Where soil filling is specified for turf reinforcement mats (TRMs), seed the matting and the entire disturbed area after installation and prior to filling the mat with soil.

Fertilize and seed in accordance with seeding specifications or other types of landscaping plans. The protective matting can be laid over areas where grass has been planted and the seedlings have emerged. Where vines or other ground covers are to be planted, lay the protective matting first and then plant through matting according to design of planting.

Check Slots

Check slots shall be installed as required by the manufacturer.

Laying and Securing Matting

- Before laying the matting, all check slots should be installed and the seedbed should be friable, made free from clods, rocks, and roots. The surface should be compacted and finished according to the requirements of the manufacturer's recommendations.
- Mechanical or manual lay down equipment should be capable of handling full rolls of fabric and laying the fabric smoothly without wrinkles or folds. The equipment should meet the fabric manufacturer's recommendations or equivalent standards.

Anchoring

- U-shaped wire staples, metal geotextile stake pins, or triangular wooden stakes can be used to anchor mats and blankets to the ground surface.
- Wire staples should be made of minimum 11 gauge steel wire and should be U-shaped with 8 in. legs and 2 in. crown.
- Metal stake pins should be 0.188 in. diameter steel with a 1.5 in. steel washer at the head of the pin, and 8 in. in length.
- Wire staples and metal stakes should be driven flush to the soil surface.

Installation on Slopes

Installation should be in accordance with the manufacturer's recommendations. In general, these will be as follows:

- Begin at the top of the slope and anchor the blanket in a 6 in. deep by 6 in. wide trench. Backfill trench and tamp earth firmly.
- Unroll blanket down slope in the direction of water flow.
- Overlap the edges of adjacent parallel rolls 2 to 3 in. and staple every 3 ft (or greater, per manufacturer's specifications).
- When blankets must be spliced, place blankets end over end (shingle style) with 6 in. overlap. Staple through overlapped area, approximately 12 in. apart.
- Lay blankets loosely and maintain direct contact with the soil. Do not stretch.
- Staple blankets sufficiently to anchor blanket and maintain contact with the soil. Staples should be placed down the center and staggered with the staples placed along the edges. Steep slopes, 1:1 (H:V) to 2:1 (H:V), require a minimum of 2 staples/yd^2. Moderate slopes, 2:1 (H:V) to 3:1 (H:V), require a minimum of 1 ½ staples/yd^2. Check manufacturer's specifications to determine if a higher density staple pattern is required.

Installation in Channels

Installation should be in accordance with the manufacturer's recommendations. In general, these will be as follows:

- Dig initial anchor trench 12 in. deep and 6 in. wide across the channel at the lower end of the project area.
- Excavate intermittent check slots, 6 in. deep and 6 in. wide across the channel at 25 to 30 ft intervals along the channels.
- Cut longitudinal channel anchor trenches 4 in. deep and 4 in. wide along each side of the installation to bury edges of matting, whenever possible extend matting 2 to 3 in. above the crest of the channel side slopes.
- Beginning at the downstream end and in the center of the channel, place the initial end of the first roll in the anchor trench and secure with fastening devices at 12 in. intervals. Note: matting will initially be upside down in anchor trench.
- In the same manner, position adjacent rolls in anchor trench, overlapping the preceding roll a minimum of 3 in.
- Secure these initial ends of mats with anchors at 12 in. intervals, backfill and compact soil.
- Unroll center strip of matting upstream. Stop at next check slot or terminal anchor trench. Unroll adjacent mats upstream in similar fashion, maintaining a 3 in. overlap.

- Fold and secure all rolls of matting snugly into all transverse check slots. Lay mat in the bottom of the slot then fold back against itself. Anchor through both layers of mat at 12 in. intervals, then backfill and compact soil. Continue rolling all mat widths upstream to the next check slot or terminal anchor trench.
- Alternate method for non-critical installations: Place two rows of anchors on 6 in. centers at 25 to 30 ft. intervals in lieu of excavated check slots.
- Staple shingled lap spliced ends a minimum of 12 in. apart on 12 in. intervals.
- Place edges of outside mats in previously excavated longitudinal slots; anchor using prescribed staple pattern, backfill, and compact soil.
- Anchor, fill, and compact upstream end of mat in a 12 in. by 6 in. terminal trench.
- Secure mat to ground surface using U-shaped wire staples, geotextile pins, or wooden stakes.
- Seed and fill turf reinforcement matting with soil, if specified.

Soil Filling (if specified for turf reinforcement mat (TRM))

Installation should be in accordance with the manufacturer's recommendations. Typical installation guidelines are as follows:

- After seeding, spread and lightly rake ½-3/4 inches of fine topsoil into the TRM apertures to completely fill TRM thickness. Use backside of rake or other flat implement.
- Alternatively, if allowed by product specifications, spread topsoil using lightweight loader, backhoe, or other power equipment. Avoid sharp turns with equipment.
- Always consult the manufacturer's recommendations for installation.
- Do not drive tracked or heavy equipment over mat.
- Avoid any traffic over matting if loose or wet soil conditions exist.
- Use shovels, rakes, or brooms for fine grading and touch up.
- Smooth out soil filling just exposing top netting of mat.

Temporary Soil Stabilization Removal

- Temporary soil stabilization removed from the site of the work must be disposed of if necessary.

Costs

Installed costs can be relatively high compared to other BMPs. Approximate costs for installed materials are shown below:

Rolled Erosion Control Products		Installed Cost per Acre (2004)[1]	Estimated Cost per Acre (2009)[2]
Biodegradable	Jute Mesh	$6,000-$7,000	$6,600-$7,700
	Curled Wood Fiber	$8,000-$10,500	$8,800-$11,050
	Straw	$8,000-$10,500	$8,800-$11,050
	Wood Fiber	$8,000-$10,500	$8,800-$11,050
	Coconut Fiber	$13,000-$14,000	$14,300-$15,400
	Coconut Fiber Mesh	$30,000-$33,000	$33,000-$36,300
	Straw Coconut Fiber	$10,000-$12,000	$11,000-$13,200
Non-Biodegradable	Plastic Netting	$2,000-$2,200	$2,200-$2,220
	Plastic Mesh	$3,000-$3,500	$3,300-$3,850
	Synthetic Fiber with Netting	$34,000-$40,000	$37,400-$44,000
	Bonded Synthetic Fibers	$45,000-$55,000	$49,500-$60,500
	Combination with Biodegradable	$30,000-$36,000	$33,000-$39,600

1. Source: Cost information received from individual product manufacturers solicited by Geosyntec Consultants (2004).
2. 2009 costs reflect a 10% escalation over year 2004 costs. Escalation based on informal survey of industry trends. Note: Expected cost increase is offset by competitive economic conditions.

Inspection and Maintenance

- RECPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Areas where erosion is evident shall be repaired and BMPs reapplied as soon as possible. Care should be exercised to minimize the damage to protected areas while making repairs, as any area damaged will require reapplication of BMPs.
- If washout or breakage occurs, re-install the material after repairing the damage to the slope or channel.
- Make sure matting is uniformly in contact with the soil.
- Check that all the lap joints are secure.
- Check that staples are flush with the ground.

References

Erosion and Sediment Control Manual, Oregon Department of Environmental Quality, February 2005

Erosion Control Pilot Study Report, State of California Department of Transportation (Caltrans), June 2000.

Guides for Erosion and Sediment Controls in California, USDA Soils Conservation Service, January 1991.

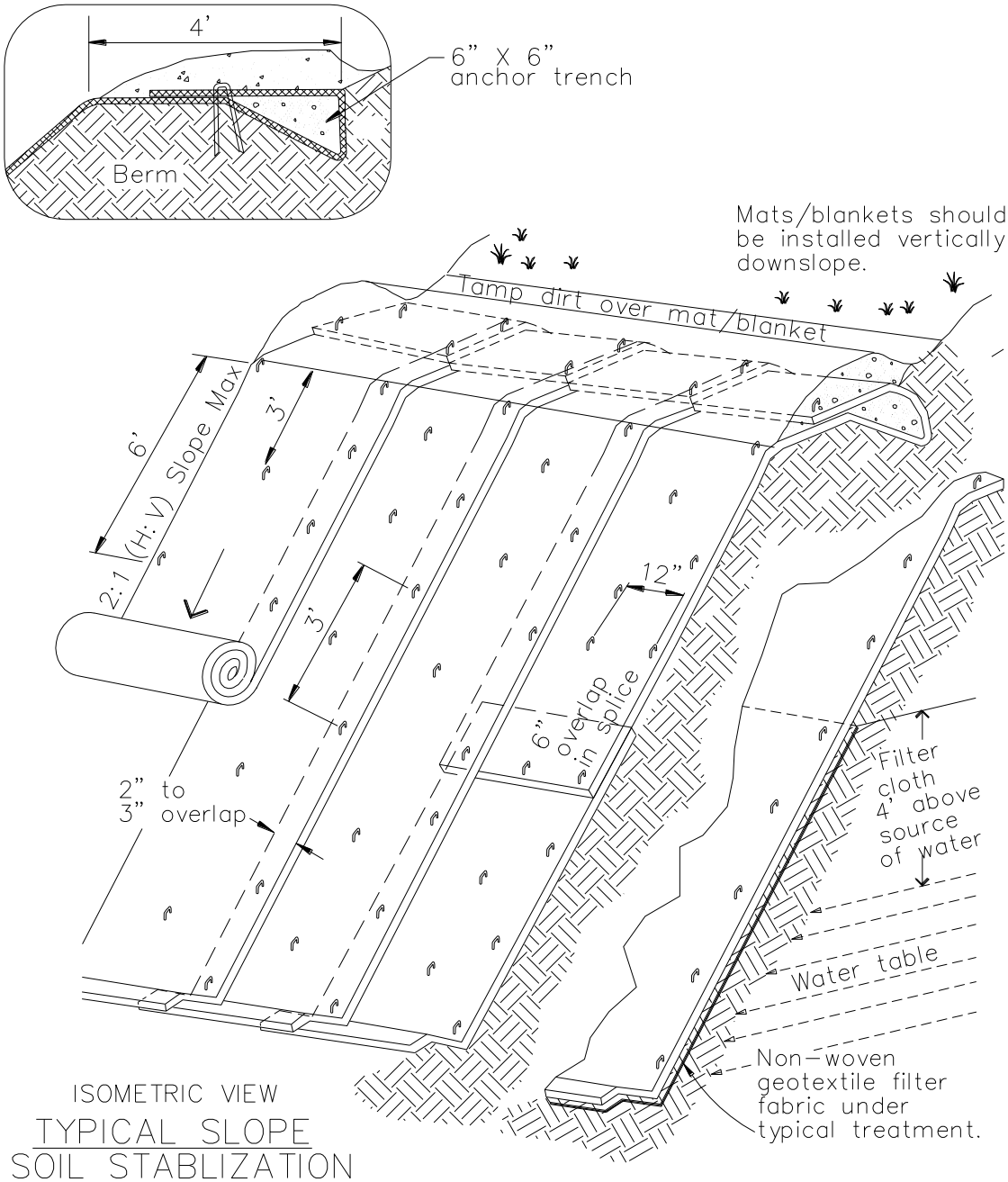
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Water Quality Management Plan for The Lake Tahoe Region, Volume II, Handbook of Management Practices, Tahoe Regional Planning Agency, November 1988.



ISOMETRIC VIEW

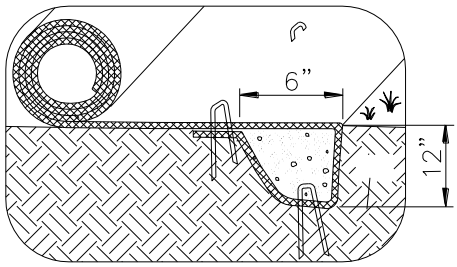
TYPICAL SLOPE
SOIL STABLIZATION
NTS

WET SLOPE LINING
NTS

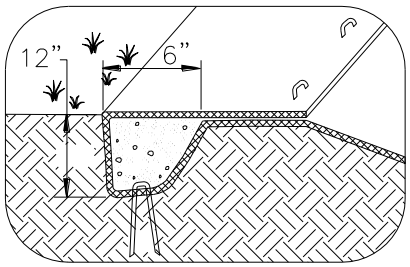
NOTES:

1. Slope surface shall be free of rocks, clods, sticks and grass. Mats/blankets shall have good soil contact.
2. Lay blankets loosely and stake or staple to maintain direct contact with the soil. Do not stretch.
3. Install per manufacturer's recommendations

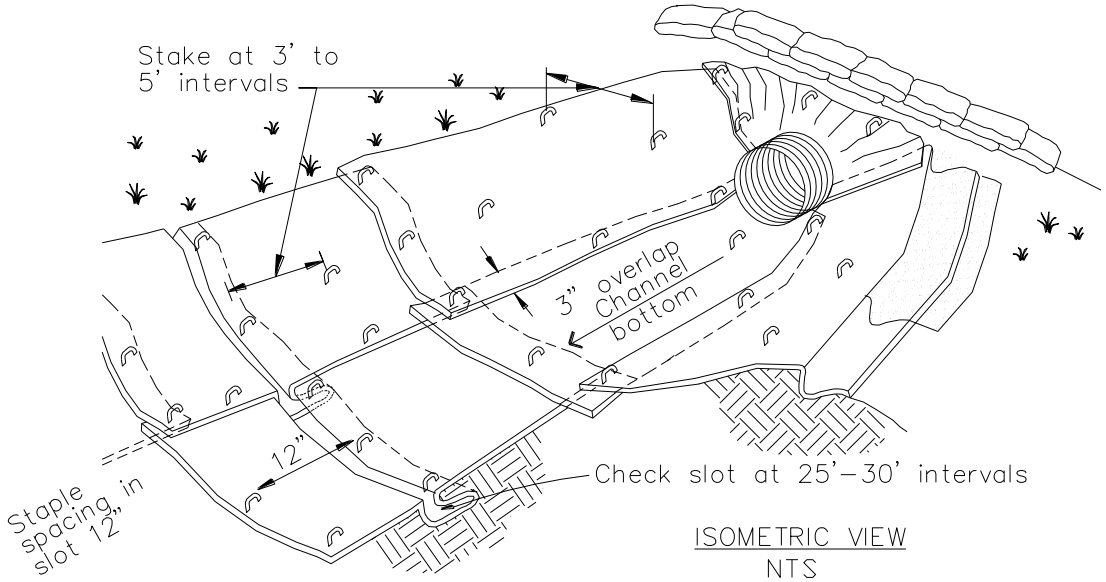
TYPICAL INSTALLATION DETAIL



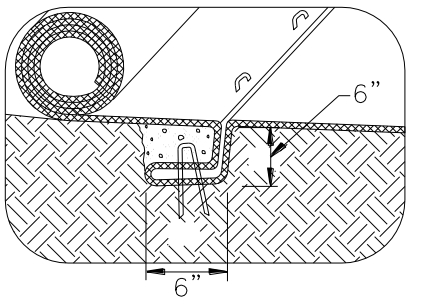
INITIAL CHANNEL ANCHOR TRENCH
NTS



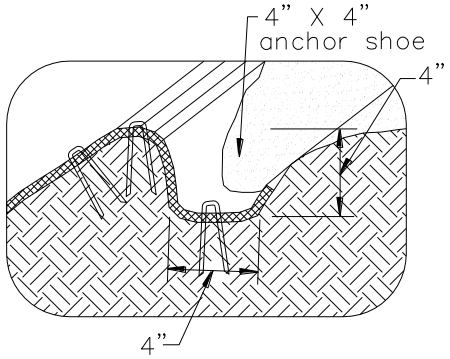
TERMINAL SLOPE AND CHANNEL ANCHOR TRENCH
NTS



ISOMETRIC VIEW
NTS



INTERMITTENT CHECK SLOT
NTS

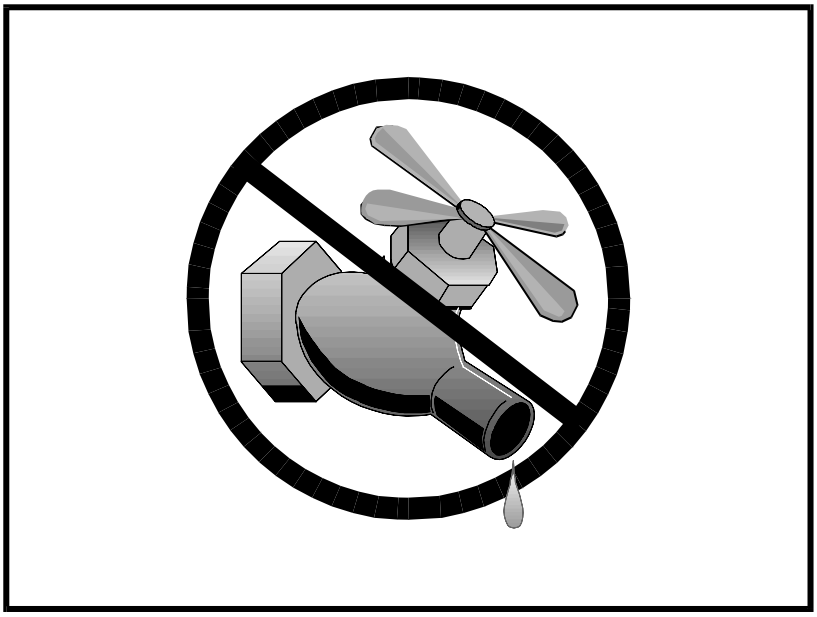


LONGITUDINAL ANCHOR TRENCH
NTS

NOTES:
1. Check slots to be constructed per manufacturers specifications.
2. Staking or stapling layout per manufacturers specifications.
3. Install per manufacturer's recommendations

TYPICAL INSTALLATION DETAIL

Water Conservation Practices NS-1



Categories

EC	Erosion Control	☒
SE	Sediment Control	☒
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	☑
WM	Waste Management and Materials Pollution Control	

Legend:

☑ **Primary Objective**

☒ **Secondary Objective**

Targeted Constituents

Sediment	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

None

Description and Purpose

Water conservation practices are activities that use water during the construction of a project in a manner that avoids causing erosion and the transport of pollutants offsite. These practices can reduce or eliminate non-stormwater discharges.

Suitable Applications

Water conservation practices are suitable for all construction sites where water is used, including piped water, metered water, trucked water, and water from a reservoir.

Limitations

- None identified.

Implementation

- Keep water equipment in good working condition.
- Stabilize water truck filling area.
- Repair water leaks promptly.
- Washing of vehicles and equipment on the construction site is discouraged.
- Avoid using water to clean construction areas. If water must be used for cleaning or surface preparation, surface should be swept and vacuumed first to remove dirt. This will minimize amount of water required.

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- Direct construction water runoff to areas where it can soak into the ground or be collected and reused.
- Authorized non-stormwater discharges to the storm drain system, channels, or receiving waters are acceptable with the implementation of appropriate BMPs.
- Lock water tank valves to prevent unauthorized use.

Costs

The cost is small to none compared to the benefits of conserving water.

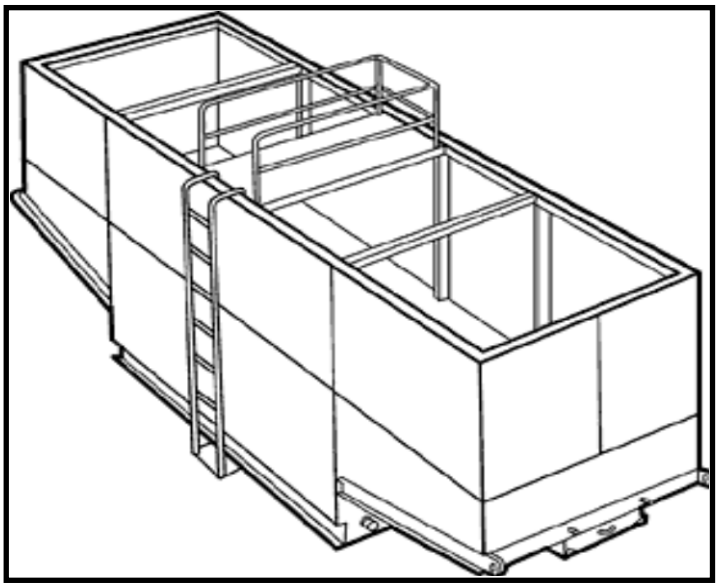
Inspection and Maintenance

- Inspect and verify that activity based BMPs are in place prior to the commencement of authorized non-stormwater discharges.
- Inspect BMPs in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Inspect BMPs subject to non-stormwater discharges daily while non-stormwater discharges are occuring.
- Repair water equipment as needed to prevent unintended discharges.
  - Water trucks
  - Water reservoirs (water buffalos)
  - Irrigation systems
  - Hydrant connections

References

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Dewatering Operations NS-2



Categories		
EC	Erosion Control	
SE	Sediment Control	☒
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	☑
WM	Waste Management and Materials Pollution Control	

Legend:
☑ **Primary Category**
☒ **Secondary Category**

Targeted Constituents	
Sediment	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	☑
Organics	

Potential Alternatives

SE-5: Fiber Roll

SE-6: Gravel Bag Berm

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Description and Purpose

Dewatering operations are practices that manage the discharge of pollutants when non-stormwater and accumulated precipitation (stormwater) must be removed from a work location to proceed with construction work or to provide vector control.

The General Permit incorporates Numeric Action Levels (NAL) for turbidity (see Section 2 of this handbook to determine your project's risk level and if you are subject to these requirements).

Discharges from dewatering operations can contain high levels of fine sediment that, if not properly treated, could lead to exceedances of the General Permit requirements or Basin Plan standards.

The dewatering operations described in this fact sheet are not Active Treatment Systems (ATS) and do not include the use of chemical coagulations, chemical flocculation or electrocoagulation.

Suitable Applications

These practices are implemented for discharges of non-stormwater from construction sites. Non-stormwaters include, but are not limited to, groundwater, water from cofferdams, water diversions, and waters used during construction activities that must be removed from a work area to facilitate construction.

Practices identified in this section are also appropriate for implementation when managing the removal of accumulated

precipitation (stormwater) from depressed areas at a construction site.

Stormwater mixed with non-stormwater should be managed as non-stormwater.

Limitations

- Dewatering operations will require, and should comply with applicable local and project-specific permits and regulations. In some areas, all dewatering activities, regardless of the discharge volume, require a dewatering permit.
- Site conditions will dictate design and use of dewatering operations.
- The controls discussed in this fact sheet primarily address sediment. Other secondary pollutant removal benefits are discussed where applicable.
- The controls detailed in this fact sheet only allow for minimal settling time for sediment particles. Use only when site conditions restrict the use of the other control methods.
- Avoid dewatering discharges where possible by using the water for dust control.

Implementation

- A Construction Site Monitoring Plan (CSMP) should be included in the project Stormwater Pollution Prevention Plan (SWPPP).
- Regional Water Quality Control Board (RWQCB) Regions may require notification and approval prior to any discharge of water from construction sites.
- The destination of discharge from dewatering activities will typically determine the type of permit required for the discharge. For example, when discharging to a water of the U.S., a dewatering permit may be required through the site's governing RWQCB. When discharging to a sanitary sewer or Municipal Separate Storm Sewer System (MS4), a permit may need to be obtained from the owner of the sanitary sewer or MS4 in addition to obtaining an RWQCB dewatering permit. Additional permits or permissions from other agencies may be required for dewatering cofferdams or diversions.
- Dewatering discharges should not cause erosion at the discharge point. Appropriate BMPs should be implemented to maintain compliance with all applicable permits.
- Maintain dewatering records in accordance with all local and project-specific permits and regulations.

Sediment Treatment

A variety of methods can be used to treat water during dewatering operations. Several devices are presented below and provide options to achieve sediment removal. The sediment particle size and permit or receiving water limitations on sediment or turbidity are key considerations for selecting sediment treatment option(s); in some cases, the use of multiple devices may be appropriate. Use of other enhanced treatment methods (i.e., introduction of chemicals or electric current to enhance flocculation and removal of sediment) must comply with: 1) for storm drain or surface water discharges, the requirements for Active Treatment Systems (see SE-11); or 2) for sanitary sewer discharges, the requirements of applicable sanitary sewer discharge permits.

Sediment Basin (see also SE-2)

Description:

- A sediment basin is a temporary basin with a controlled release structure that is formed by excavation or construction of an embankment to detain sediment-laden runoff and allow sediment to settle out before discharging. Sediment basins are generally larger than Sediment Traps (SE-3) and have a designed outlet structure.

Appropriate Applications:

- Effective for the removal of trash, gravel, sand, silt, some metals that settle out with the sediment.

Implementation:

- Excavation and construction of related facilities is required.
- Temporary sediment basins should be fenced if safety is a concern.
- Outlet protection is required to prevent erosion at the outfall location.

Maintenance:

- Maintenance is required for safety fencing, vegetation, embankment, inlet and outlet, as well as other features.
- Removal of sediment is required when the storage volume is reduced by one-third.

Sediment Trap (See also SE-3)

Description:

- A sediment trap is a temporary basin formed by excavation and/or construction of an earthen embankment across a waterway or low drainage area to detain sediment-laden runoff and allow sediment to settle out before discharging. Sediment traps are generally smaller than Sediment Basins (SE-2) and do not have a designed outlet (but do have a spillway or overflow).

Appropriate Applications:

Effective for the removal of large and medium sized particles (sand and gravel) and some metals that settle out with the sediment.

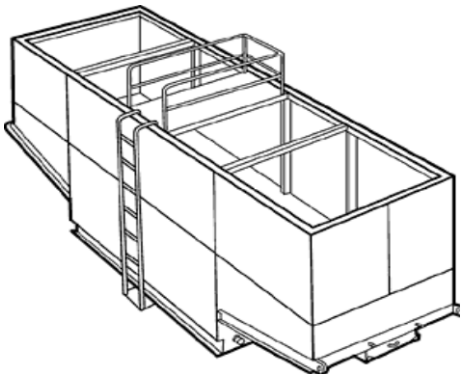
Implementation:

- Excavation and construction of related facilities is required.
- Trap inlets should be located to maximize the travel distance to the trap outlet.
- Use rock or vegetation to protect the trap outlets against erosion.

Maintenance:

- Maintenance is required for vegetation, embankment, inlet and outfall structures, as well as other features.
- Removal of sediment is required when the storage volume is reduced by one-third.

Weir Tanks



Description:

- A weir tank separates water and waste by using weirs. The configuration of the weirs (over and under weirs) maximizes the residence time in the tank and determines the waste to be removed from the water, such as oil, grease, and sediments.

Appropriate Applications:

- The tank removes trash, some settleable solids (gravel, sand, and silt), some visible oil and grease, and some metals (removed with sediment). To achieve high levels of flow, multiple tanks can be used in parallel. If additional treatment is desired, the tanks can be placed in series or as pre-treatment for other methods.

Implementation:

- Tanks are delivered to the site by the vendor, who can provide assistance with set-up and operation.
- Tank size will depend on flow volume, constituents of concern, and residency period required. Vendors should be consulted to appropriately size tank.
- Treatment capacity (i.e., volume and number of tanks) should provide at a minimum the required volume for discrete particle settling for treatment design flows.

Maintenance:

- Periodic cleaning is required based on visual inspection or reduced flow.
- Oil and grease disposal should be conducted by a licensed waste disposal company.

Dewatering Tanks



Description:

- A dewatering tank removes debris and sediment. Flow enters the tank through the top, passes through a fabric filter, and is discharged through the bottom of the tank. The filter separates the solids from the liquids.

Appropriate Applications:

- The tank removes trash, gravel, sand, and silt, some visible oil and grease, and some metals (removed with sediment). To achieve high levels of flow, multiple tanks can be used in parallel. If additional treatment is desired, the tanks can be placed in series or as pre-treatment for other methods.

Implementation:

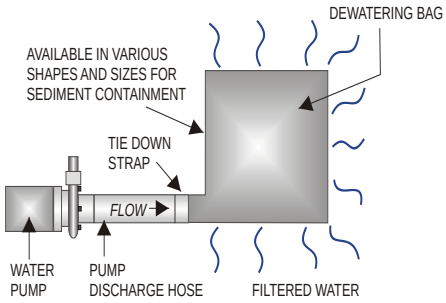
- Tanks are delivered to the site by the vendor, who can provide assistance with set-up and operation.
- Tank size will depend on flow volume, constituents of concern, and residency period required. Vendors should be consulted to appropriately size tank.

Maintenance:

- Periodic cleaning is required based on visual inspection or reduced flow.
- Oil and grease disposal should be conducted by licensed waste disposal company.

Gravity Bag Filter





Description:

- A gravity bag filter, also referred to as a dewatering bag, is a square or rectangular bag made of non-woven geotextile fabric that collects gravel, sand, silt, and fines.

Appropriate Applications:

- Effective for the removal of sediments (gravel, sand, silt, and fines). Some metals are removed with the sediment.

Implementation:

- Water is pumped into one side of the bag and seeps through the top, bottom, and sides of the bag.
- Place filter bag on pavement or a gravel bed or paved surface. Avoid placing a dewatering bag on unprotected bare soil. If placing the bag on bare soil is unavoidable, a secondary barrier should be used, such as a rock filter bed placed beneath and beyond the edges of the bag to, prevent erosion and capture sediments that escape the bag.
- Perimeter control around the downstream end of the bag should be implemented. Secondary sediment controls are important especially in the initial stages of discharge, which tend to allow fines to pass through the bag.

Maintenance:

- Inspection of the flow conditions, bag condition, bag capacity, and the secondary barrier (as applicable) is required.
- Replace the bag when it no longer filters sediment or passes water at a reasonable rate.
- Caution should be taken when removing and disposing of the bag, to prevent the release of captured sediment
- Properly dispose of the bag offsite. If sediment is removed from the bag prior to disposal (bags can potentially be reused depending upon their condition), dispose of sediment in accordance with the general maintenance procedures described at the end of this BMP Fact Sheet.

Sand Media Particulate Filter





Description:

- Water is treated by passing it through canisters filled with sand media. Generally, sand filters provide a final level of treatment. They are often used as a secondary or higher level of treatment after a significant amount of sediment and other pollutants have been removed using other methods.

Appropriate Applications:

- Effective for the removal of trash, gravel, sand, and silt and some metals, as well as the reduction of biochemical oxygen demand (BOD) and turbidity.
- Sand filters can be used for stand-alone treatment or in conjunction with bag and cartridge filtration if further treatment is required.
- Sand filters can also be used to provide additional treatment to water treated via settling or basic filtration.

Implementation:

- The filters require delivery to the site and initial set up. The vendor can provide assistance with installation and operation.

Maintenance:

- The filters require regular service to monitor and maintain the level of the sand media. If subjected to high loading rates, filters can plug quickly.
- Venders generally provide data on maximum head loss through the filter. The filter should be monitored daily while in use, and cleaned when head loss reaches target levels.
- If cleaned by backwashing, the backwash water may need to be hauled away for disposal, or returned to the upper end of the treatment train for another pass through the series of dewatering BMPs.

Pressurized Bag Filter





Description:

- A pressurized bag filter is a unit composed of single filter bags made from polyester felt material. The water filters through the unit and is discharged through a header. Vendors provide bag filters in a variety of configurations. Some units include a combination of bag filters and cartridge filters for enhanced contaminant removal.

Appropriate Applications:

- Effective for the removal of sediment (sand and silt) and some metals, as well as the reduction of BOD, turbidity, and hydrocarbons. Oil absorbent bags are available for hydrocarbon removal.

- Filters can be used to provide secondary treatment to water treated via settling or basic filtration.

Implementation:

- The filters require delivery to the site and initial set up. The vendor can provide assistance with installation and operation.

Maintenance:

- The filter bags require replacement when the pressure differential equals or exceeds the manufacturer's recommendation.

Cartridge Filter



Description:

- Cartridge filters provide a high degree of pollutant removal by utilizing a number of individual cartridges as part of a larger filtering unit. They are often used as a secondary or higher (polishing) level of treatment after a significant amount of sediment and other pollutants are removed. Units come with various cartridge configurations (for use in series with bag filters) or with a larger single cartridge filtration unit (with multiple filters within).

Appropriate Applications:

- Effective for the removal of sediment (sand, silt, and some clays) and metals, as well as the reduction of BOD, turbidity, and hydrocarbons. Hydrocarbons can effectively be removed with special resin cartridges.

- Filters can be used to provide secondary treatment to water treated via settling or basic filtration.

Implementation:

- The filters require delivery to the site and initial set up. The vendor can provide assistance.

Maintenance:

- The cartridges require replacement when the pressure differential equals or exceeds the manufacturer's recommendation.

Costs

- Sediment control costs vary considerably depending on the dewatering and sediment treatment system that is selected. Pressurized filters tend to be more expensive than gravity settling, but are often more effective. Simple tanks are generally rented on a long-term basis (one or more months) and can range from $360 per month for a 1,000 gallon tank to $2,660 per month for a 10,000 gallon tank. Mobilization and demobilization costs vary considerably.

Inspection and Maintenance

- Inspect and verify that dewatering BMPs are in place and functioning prior to the commencement of activities requiring dewatering.

- Inspect dewatering BMPs daily while dewatering activities are being conducted.

- Inspect all equipment before use. Monitor dewatering operations to ensure they do not cause offsite discharge or erosion.
- Sample dewatering discharges as required by the General Permit.
- Unit-specific maintenance requirements are included with the description of each unit.
- Sediment removed during the maintenance of a dewatering device may be either spread onsite and stabilized, or disposed of at a disposal site as approved by the owner.
- Sediment that is commingled with other pollutants should be disposed of in accordance with all applicable laws and regulations and as approved by the owner.

References

Blueprint for a Clean Bay: Best Management Practices to Prevent Stormwater Pollution from Construction Related Activities; Santa Clara Valley Nonpoint Source Pollution Control Program, 1995.

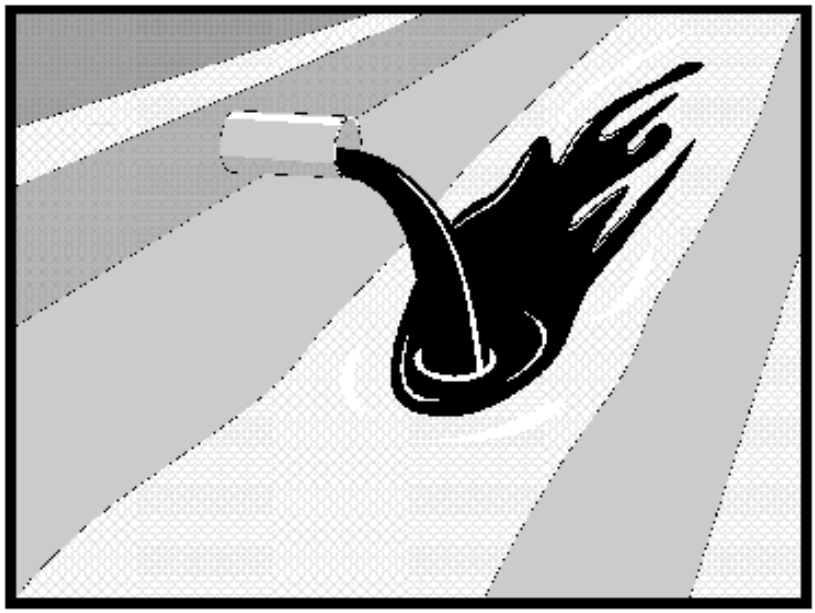
Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), March 2003; Updated March 2004.

Stormwater Management for Construction Activities, Developing Pollution Prevention Plans and Best Management Practices, EPA 832-R-92005; USEPA, April 1992.

Labor Surcharge & Equipment Rental Rates, April 1, 2002 through March 31, 2003, California Department of Transportation (Caltrans).

Erosion and Sediment Control Manual, Oregon Department of Environmental Quality, February 2005.

Illicit Connection / Discharge NS-6



Description and Purpose

Procedures and practices designed for construction contractors to recognize illicit connections or illegally dumped or discharged materials on a construction site and report incidents.

Suitable Applications

This best management practice (BMP) applies to all construction projects. Illicit connection/discharge and reporting is applicable anytime an illicit connection or discharge is discovered or illegally dumped material is found on the construction site.

Limitations

Illicit connections and illegal discharges or dumping, for the purposes of this BMP, refer to discharges and dumping caused by parties other than the contractor. If pre-existing hazardous materials or wastes are known to exist onsite, they should be identified in the SWPPP and handled as set forth in the SWPPP.

Implementation

Planning

- Review the SWPPP. Pre-existing areas of contamination should be identified and documented in the SWPPP.
- Inspect site before beginning the job for evidence of illicit connections, illegal dumping or discharges. Document any pre-existing conditions and notify the owner.

Categories

EC	Erosion Control	
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	☑
WM	Waste Management and Materials Pollution Control	

Legend:

☑ **Primary Objective**

☒ **Secondary Objective**

Targeted Constituents

Sediment	
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	☑
Oil and Grease	☑
Organics	☑

Potential Alternatives

None

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- Inspect site regularly during project execution for evidence of illicit connections, illegal dumping or discharges.
- Observe site perimeter for evidence for potential of illicitly discharged or illegally dumped material, which may enter the job site.

Identification of Illicit Connections and Illegal Dumping or Discharges

- **General –** unlabeled and unidentifiable material should be treated as hazardous.
- **Solids** - Look for debris, or rubbish piles. Solid waste dumping often occurs on roadways with light traffic loads or in areas not easily visible from the traveled way.
- **Liquids** - signs of illegal liquid dumping or discharge can include:
  - Visible signs of staining or unusual colors to the pavement or surrounding adjacent soils
  - Pungent odors coming from the drainage systems
  - Discoloration or oily substances in the water or stains and residues detained within ditches, channels or drain boxes
  - Abnormal water flow during the dry weather season
- **Urban Areas** - Evidence of illicit connections or illegal discharges is typically detected at storm drain outfall locations or at manholes. Signs of an illicit connection or illegal discharge can include:
  - Abnormal water flow during the dry weather season
  - Unusual flows in sub drain systems used for dewatering
  - Pungent odors coming from the drainage systems
  - Discoloration or oily substances in the water or stains and residues detained within ditches, channels or drain boxes
  - Excessive sediment deposits, particularly adjacent to or near active offsite construction projects
- **Rural Areas** - Illicit connections or illegal discharges involving irrigation drainage ditches are detected by visual inspections. Signs of an illicit discharge can include:
  - Abnormal water flow during the non-irrigation season
  - Non-standard junction structures
  - Broken concrete or other disturbances at or near junction structures

Reporting

Notify the owner of any illicit connections and illegal dumping or discharge incidents at the time of discovery. For illicit connections or discharges to the storm drain system, notify the local stormwater management agency. For illegal dumping, notify the local law enforcement agency.

Cleanup and Removal

The responsibility for cleanup and removal of illicit or illegal dumping or discharges will vary by location. Contact the local stormwater management agency for further information.

Costs

Costs to look for and report illicit connections and illegal discharges and dumping are low. The best way to avoid costs associated with illicit connections and illegal discharges and dumping is to keep the project perimeters secure to prevent access to the site, to observe the site for vehicles that should not be there, and to document any waste or hazardous materials that exist onsite before taking possession of the site.

Inspection and Maintenance

- Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, inspect BMPs in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Inspect the site regularly to check for any illegal dumping or discharge.
- Prohibit employees and subcontractors from disposing of non-job related debris or materials at the construction site.
- Notify the owner of any illicit connections and illegal dumping or discharge incidents at the time of discovery.

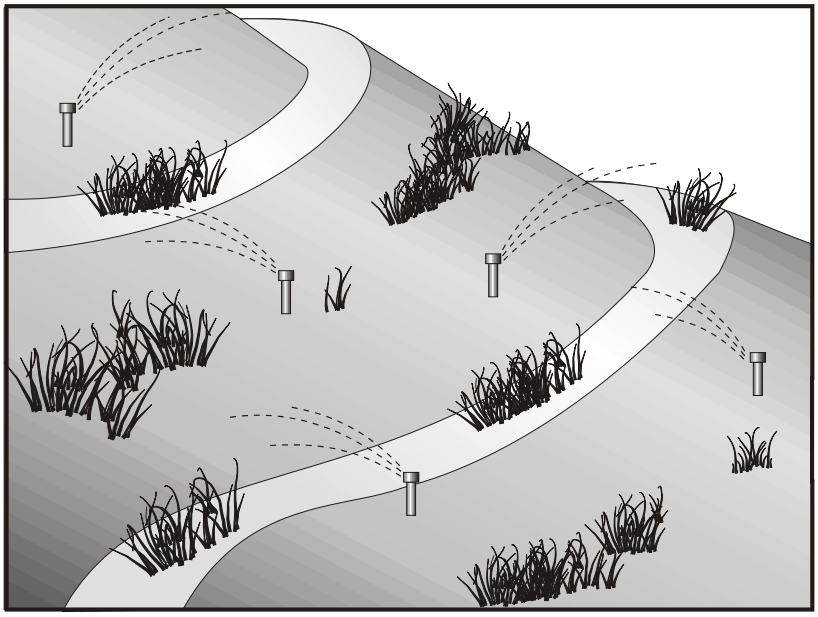
References

Blueprint for a Clean Bay: Best Management Practices to Prevent Stormwater Pollution from Construction Related Activities; Santa Clara Valley Nonpoint Source Pollution Control Program, 1995.

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Stormwater Management for Construction Activities, Developing Pollution Prevention Plans and Best Management Practices, EPA 832-R-92005; USEPA, April 1992.

Potable Water / Irrigation NS-7



Categories

EC	Erosion Control	
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	☑
WM	Waste Management and Materials Pollution Control	

Legend:

☑ **Primary Objective**

☒ **Secondary Objective**

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	
Metals	☑
Bacteria	
Oil and Grease	
Organics	☑

Potential Alternatives

None

Description and Purpose

Potable Water/Irrigation consists of practices and procedures to manage the discharge of potential pollutants generated during discharges from irrigation water lines, landscape irrigation, lawn or garden watering, planned and unplanned discharges from potable water sources, water line flushing, and hydrant flushing.

Suitable Applications

Implement this BMP whenever potable water or irrigation water discharges occur at or enter a construction site.

Limitations

None identified.

Implementation

- Direct water from offsite sources around or through a construction site, where feasible, in a way that minimizes contact with the construction site.
- Discharges from water line flushing should be reused for landscaping purposes where feasible.
- Shut off the water source to broken lines, sprinklers, or valves as soon as possible to prevent excess water flow.
- Protect downstream stormwater drainage systems and watercourses from water pumped or bailed from trenches excavated to repair water lines.

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- Inspect irrigated areas within the construction limits for excess watering. Adjust watering times and schedules to ensure that the appropriate amount of water is being used and to minimize runoff. Consider factors such as soil structure, grade, time of year, and type of plant material in determining the proper amounts of water for a specific area.

Costs

Cost to manage potable water and irrigation are low and generally considered to be a normal part of related activities.

Inspection and Maintenance

- Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, inspect BMPs in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events..
- Inspect BMPs subject to non-stormwater discharges daily while non-stormwater discharges occur.
- Repair broken water lines as soon as possible.
- Inspect irrigated areas regularly for signs of erosion and/or discharge.

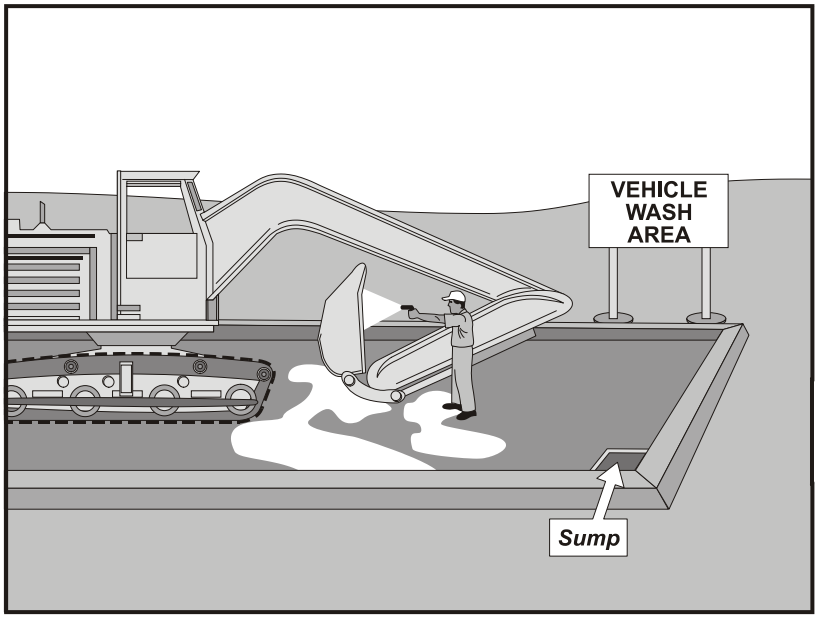
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Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Stormwater Management for Construction Activities, Developing Pollution Prevention Plans and Best Management Practices, EPA 832-R-92005; USEPA, April 1992.

Vehicle and Equipment Cleaning NS-8



Categories

EC	Erosion Control	
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	☑
WM	Waste Management and Materials Pollution Control	

Legend:

☑ **Primary Objective**

☒ **Secondary Objective**

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	
Metals	
Bacteria	
Oil and Grease	☑
Organics	☑

Potential Alternatives

None

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Description and Purpose

Vehicle and equipment cleaning procedures and practices eliminate or reduce the discharge of pollutants to stormwater from vehicle and equipment cleaning operations. Procedures and practices include but are not limited to: using offsite facilities; washing in designated, contained areas only; eliminating discharges to the storm drain by infiltrating the wash water; and training employees and subcontractors in proper cleaning procedures.

Suitable Applications

These procedures are suitable on all construction sites where vehicle and equipment cleaning is performed.

Limitations

Even phosphate-free, biodegradable soaps have been shown to be toxic to fish before the soap degrades. Sending vehicles/equipment offsite should be done in conjunction with TC-1, Stabilized Construction Entrance/Exit.

Implementation

Other options to washing equipment onsite include contracting with either an offsite or mobile commercial washing business. These businesses may be better equipped to handle and dispose of the wash waters properly. Performing this work offsite can also be economical by eliminating the need for a separate washing operation onsite.

If washing operations are to take place onsite, then:

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- Use phosphate-free, biodegradable soaps.
- Educate employees and subcontractors on pollution prevention measures.
- Do not permit steam cleaning onsite. Steam cleaning can generate significant pollutant concentrates.
- Cleaning of vehicles and equipment with soap, solvents or steam should not occur on the project site unless resulting wastes are fully contained and disposed of. Resulting wastes should not be discharged or buried, and must be captured and recycled or disposed according to the requirements of WM-10, Liquid Waste Management or WM-6, Hazardous Waste Management, depending on the waste characteristics. Minimize use of solvents. Use of diesel for vehicle and equipment cleaning is prohibited.
- All vehicles and equipment that regularly enter and leave the construction site must be cleaned offsite.
- When vehicle and equipment washing and cleaning must occur onsite, and the operation cannot be located within a structure or building equipped with appropriate disposal facilities, the outside cleaning area should have the following characteristics:
  - Located away from storm drain inlets, drainage facilities, or watercourses
  - Paved with concrete or asphalt and bermed to contain wash waters and to prevent runon and runoff
  - Configured with a sump to allow collection and disposal of wash water
  - No discharge of wash waters to storm drains or watercourses
  - Used only when necessary
- When cleaning vehicles and equipment with water:
  - Use as little water as possible. High-pressure sprayers may use less water than a hose and should be considered
  - Use positive shutoff valve to minimize water usage
  - Facility wash racks should discharge to a sanitary sewer, recycle system or other approved discharge system and must not discharge to the storm drainage system, watercourses, or to groundwater

Costs

Cleaning vehicles and equipment at an offsite facility may reduce overall costs for vehicle and equipment cleaning by eliminating the need to provide similar services onsite. When onsite cleaning is needed, the cost to establish appropriate facilities is relatively low on larger, long-duration projects, and moderate to high on small, short-duration projects.

Inspection and Maintenance

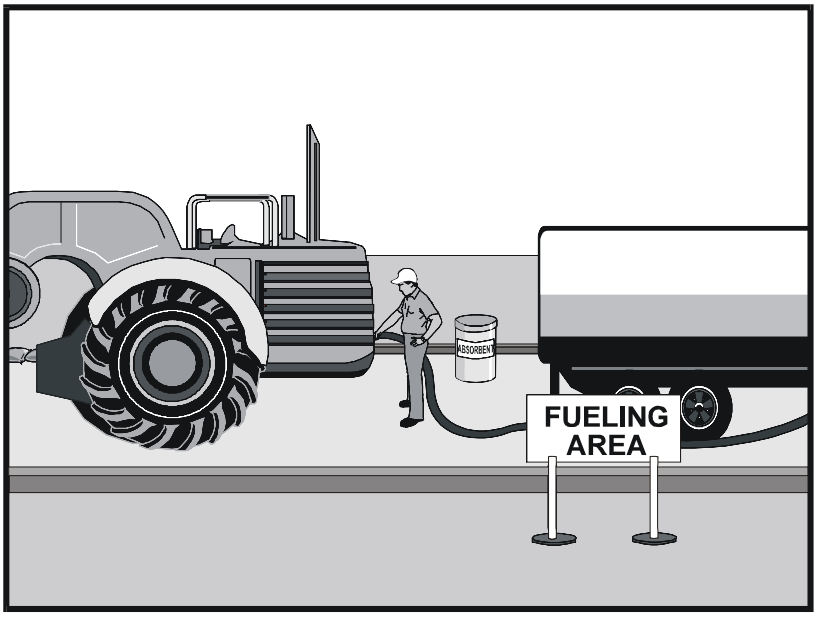
- Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, inspect BMPs in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Inspect BMPs subject to non-stormwater discharges daily while non-stormwater discharges occur.
- Inspection and maintenance is minimal, although some berm repair may be necessary.
- Monitor employees and subcontractors throughout the duration of the construction project to ensure appropriate practices are being implemented.
- Inspect sump regularly and remove liquids and sediment as needed.
- Prohibit employees and subcontractors from washing personal vehicles and equipment on the construction site.

References

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Swisher, R.D. Surfactant Biodegradation, Marcel Decker Corporation, 1987.

Vehicle and Equipment Fueling NS-9



Categories

EC	Erosion Control	
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	☑
WM	Waste Management and Materials Pollution Control	

Legend:

☑ **Primary Objective**

☒ **Secondary Objective**

Targeted Constituents

Sediment	
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	☑
Organics	

Potential Alternatives

None

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Description and Purpose

Vehicle equipment fueling procedures and practices are designed to prevent fuel spills and leaks, and reduce or eliminate contamination of stormwater. This can be accomplished by using offsite facilities, fueling in designated areas only, enclosing or covering stored fuel, implementing spill controls, and training employees and subcontractors in proper fueling procedures.

Suitable Applications

These procedures are suitable on all construction sites where vehicle and equipment fueling takes place.

Limitations

Onsite vehicle and equipment fueling should only be used where it is impractical to send vehicles and equipment offsite for fueling. Sending vehicles and equipment offsite should be done in conjunction with TC-1, Stabilized Construction Entrance/ Exit.

Implementation

- Use offsite fueling stations as much as possible. These businesses are better equipped to handle fuel and spills properly. Performing this work offsite can also be economical by eliminating the need for a separate fueling area at a site.
- Discourage "topping-off" of fuel tanks.

- Absorbent spill cleanup materials and spill kits should be available in fueling areas and on fueling trucks, and should be disposed of properly after use.
- Drip pans or absorbent pads should be used during vehicle and equipment fueling, unless the fueling is performed over an impermeable surface in a dedicated fueling area.
- Use absorbent materials on small spills. Do not hose down or bury the spill. Remove the adsorbent materials promptly and dispose of properly.
- Avoid mobile fueling of mobile construction equipment around the site; rather, transport the equipment to designated fueling areas. With the exception of tracked equipment such as bulldozers and large excavators, most vehicles should be able to travel to a designated area with little lost time.
- Train employees and subcontractors in proper fueling and cleanup procedures.
- When fueling must take place onsite, designate an area away from drainage courses to be used. Fueling areas should be identified in the SWPPP.
- Dedicated fueling areas should be protected from stormwater runon and runoff, and should be located at least 50 ft away from downstream drainage facilities and watercourses. Fueling must be performed on level-grade areas.
- Protect fueling areas with berms and dikes to prevent runon, runoff, and to contain spills.
- Nozzles used in vehicle and equipment fueling should be equipped with an automatic shutoff to control drips. Fueling operations should not be left unattended.
- Use vapor recovery nozzles to help control drips as well as air pollution where required by Air Quality Management Districts (AQMD).
- Federal, state, and local requirements should be observed for any stationary above ground storage tanks.

Costs

- All of the above measures are low cost except for the capital costs of above ground tanks that meet all local environmental, zoning, and fire codes.

Inspection and Maintenance

- Inspect BMPs in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Vehicles and equipment should be inspected each day of use for leaks. Leaks should be repaired immediately or problem vehicles or equipment should be removed from the project site.
- Keep ample supplies of spill cleanup materials onsite.

- Immediately clean up spills and properly dispose of contaminated soil and cleanup materials.

References

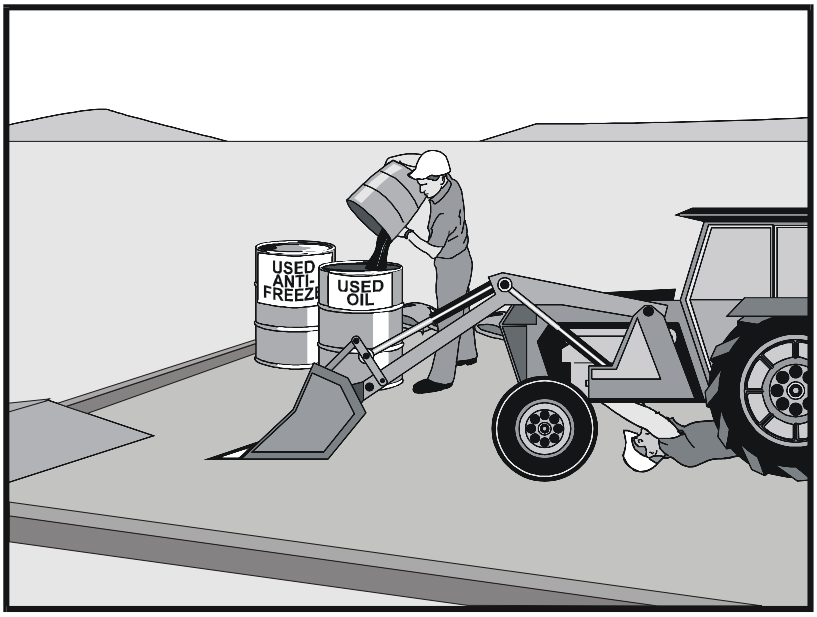
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Vehicle & Equipment Maintenance NS-10



Categories

EC	Erosion Control	
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	☑
WM	Waste Management and Materials Pollution Control	

Legend:

☑ **Primary Objective**

☒ **Secondary Objective**

Targeted Constituents

Sediment	
Nutrients	☑
Trash	☑
Metals	
Bacteria	
Oil and Grease	☑
Organics	☑

Potential Alternatives

None

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Description and Purpose

Prevent or reduce the contamination of stormwater resulting from vehicle and equipment maintenance by running a "dry and clean site". The best option would be to perform maintenance activities at an offsite facility. If this option is not available then work should be performed in designated areas only, while providing cover for materials stored outside, checking for leaks and spills, and containing and cleaning up spills immediately. Employees and subcontractors must be trained in proper procedures.

Suitable Applications

These procedures are suitable on all construction projects where an onsite yard area is necessary for storage and maintenance of heavy equipment and vehicles.

Limitations

Onsite vehicle and equipment maintenance should only be used where it is impractical to send vehicles and equipment offsite for maintenance and repair. Sending vehicles/equipment offsite should be done in conjunction with TC-1, Stabilized Construction Entrance/Exit.

Outdoor vehicle or equipment maintenance is a potentially significant source of stormwater pollution. Activities that can contaminate stormwater include engine repair and service, changing or replacement of fluids, and outdoor equipment storage and parking (engine fluid leaks). For further information on vehicle or equipment servicing, see NS-8,

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CALIFORNIA STORMWATER QUALITY ASSOCIATION

Vehicle and Equipment Cleaning, and NS-9, Vehicle and Equipment Fueling.

Implementation

- Use offsite repair shops as much as possible. These businesses are better equipped to handle vehicle fluids and spills properly. Performing this work offsite can also be economical by eliminating the need for a separate maintenance area.
- If maintenance must occur onsite, use designated areas, located away from drainage courses. Dedicated maintenance areas should be protected from stormwater runon and runoff, and should be located at least 50 ft from downstream drainage facilities and watercourses.
- Drip pans or absorbent pads should be used during vehicle and equipment maintenance work that involves fluids, unless the maintenance work is performed over an impermeable surface in a dedicated maintenance area.
- Place a stockpile of spill cleanup materials where it will be readily accessible.
- All fueling trucks and fueling areas are required to have spill kits and/or use other spill protection devices.
- Use adsorbent materials on small spills. Remove the absorbent materials promptly and dispose of properly.
- Inspect onsite vehicles and equipment daily at startup for leaks, and repair immediately.
- Keep vehicles and equipment clean; do not allow excessive build-up of oil and grease.
- Segregate and recycle wastes, such as greases, used oil or oil filters, antifreeze, cleaning solutions, automotive batteries, hydraulic and transmission fluids. Provide secondary containment and covers for these materials if stored onsite.
- Train employees and subcontractors in proper maintenance and spill cleanup procedures.
- Drip pans or plastic sheeting should be placed under all vehicles and equipment placed on docks, barges, or other structures over water bodies when the vehicle or equipment is planned to be idle for more than 1 hour.
- For long-term projects, consider using portable tents or covers over maintenance areas if maintenance cannot be performed offsite.
- Consider use of new, alternative greases and lubricants, such as adhesive greases, for chassis lubrication and fifth-wheel lubrication.
- Properly dispose of used oils, fluids, lubricants, and spill cleanup materials.
- Do not place used oil in a dumpster or pour into a storm drain or watercourse.
- Properly dispose of or recycle used batteries.
- Do not bury used tires.

- Repair leaks of fluids and oil immediately.

Listed below is further information if you must perform vehicle or equipment maintenance onsite.

Safer Alternative Products

- Consider products that are less toxic or hazardous than regular products. These products are often sold under an "environmentally friendly" label.
- Consider use of grease substitutes for lubrication of truck fifth-wheels. Follow manufacturers label for details on specific uses.
- Consider use of plastic friction plates on truck fifth-wheels in lieu of grease. Follow manufacturers label for details on specific uses.

Waste Reduction

Parts are often cleaned using solvents such as trichloroethylene, trichloroethane, or methylene chloride. Many of these cleaners are listed in California Toxic Rule as priority pollutants. These materials are harmful and must not contaminate stormwater. They must be disposed of as a hazardous waste. Reducing the number of solvents makes recycling easier and reduces hazardous waste management costs. Often, one solvent can perform a job as well as two different solvents. Also, if possible, eliminate or reduce the amount of hazardous materials and waste by substituting non-hazardous or less hazardous materials. For example, replace chlorinated organic solvents with non-chlorinated solvents. Non-chlorinated solvents like kerosene or mineral spirits are less toxic and less expensive to dispose of properly. Check the list of active ingredients to see whether it contains chlorinated solvents. The "chlor" term indicates that the solvent is chlorinated. Also, try substituting a wire brush for solvents to clean parts.

Recycling and Disposal

Separating wastes allows for easier recycling and may reduce disposal costs. Keep hazardous wastes separate, do not mix used oil solvents, and keep chlorinated solvents (like,-trichloroethane) separate from non-chlorinated solvents (like kerosene and mineral spirits). Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around. Provide cover and secondary containment until these materials can be removed from the site.

Oil filters can be recycled. Ask your oil supplier or recycler about recycling oil filters.

Do not dispose of extra paints and coatings by dumping liquid onto the ground or throwing it into dumpsters. Allow coatings to dry or harden before disposal into covered dumpsters.

Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries, even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

Costs

All of the above are low cost measures. Higher costs are incurred to setup and maintain onsite maintenance areas.

Inspection and Maintenance

- Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, inspect BMPs in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Inspect BMPs subject to non-stormwater discharges daily while non-stormwater discharges occur.
- Keep ample supplies of spill cleanup materials onsite.
- Maintain waste fluid containers in leak proof condition.
- Vehicles and equipment should be inspected on each day of use. Leaks should be repaired immediately or the problem vehicle(s) or equipment should be removed from the project site.
- Inspect equipment for damaged hoses and leaky gaskets routinely. Repair or replace as needed.

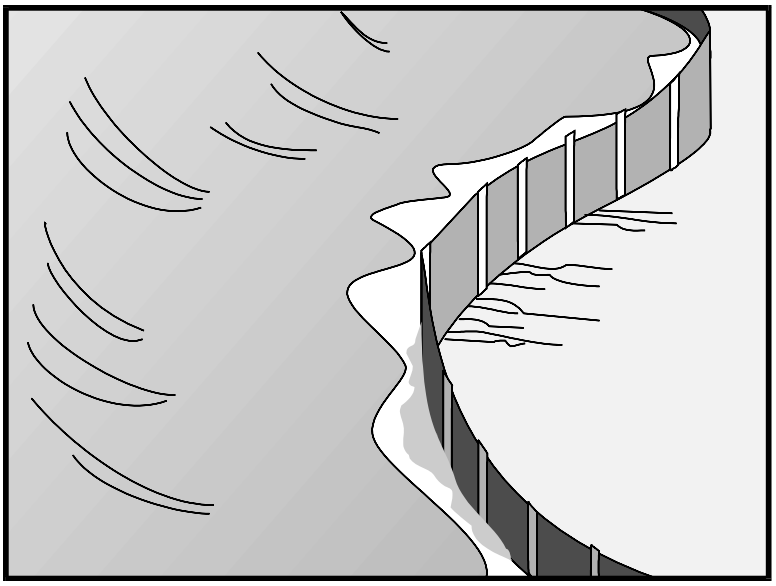
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Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Silt Fence SE-1



Categories

EC	Erosion Control	
SE	Sediment Control	☑
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

☑ **Primary Category**

☒ **Secondary Category**

Description and Purpose

A silt fence is made of a woven geotextile that has been entrenched, attached to supporting poles, and sometimes backed by a plastic or wire mesh for support. The silt fence detains water, promoting sedimentation of coarse sediment behind the fence. Silt fence does not retain soil fine particles like clays or silts.

Suitable Applications

Silt fences are suitable for perimeter control, placed below areas where sheet flows discharge from the site. They could also be used as interior controls below disturbed areas where runoff may occur in the form of sheet and rill erosion and around inlets within disturbed areas (SE-10). Silt fences should not be used in locations where the flow is concentrated. Silt fences should always be used in combination with erosion controls. Suitable applications include:

- At perimeter of a project.
- Below the toe or down slope of exposed and erodible slopes.
- Along streams and channels.
- Around temporary spoil areas and stockpiles.
- Around inlets.
- Below other small cleared areas.

Targeted Constituents

Sediment (coarse sediment)	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

SE-5 Fiber Rolls

SE-6 Gravel Bag Berm SE-12 Manufactured Linear Sediment Controls

SE-13 Compost Socks and Berms

SE-14 Biofilter Bags

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Limitations

- Do not use in streams, channels, drain inlets, or anywhere flow is concentrated.
- Do not use in locations where ponded water may cause a flooding hazard.
- Do not use silt fence to divert water flows or place across any contour line.
- Improperly installed fences are subject to failure from undercutting, overtopping, or collapsing.
- Must be trenched and keyed in.
- Not intended for use as a substitute for Fiber Rolls (SE-5), when fiber rolls are being used as a slope interruption device.
- Do not use on slopes subject to creeping, slumping, or landslides.

Implementation

General

A silt fence is a temporary sediment barrier consisting of woven geotextile stretched across and attached to supporting posts, trenched-in, and, depending upon the strength of fabric used, supported with plastic or wire mesh fence. Silt fences trap coarse sediment by intercepting and detaining sediment-laden runoff from disturbed areas in order to promote sedimentation behind the fence.

The following layout and installation guidance can improve performance and should be followed:

- Silt fence should be used in combination with erosion controls up-slope in order to provide the most effective sediment control.
- Silt fence alone is not effective at reducing turbidity. (Barrett and Malina, 2004)
- Designers should consider diverting sediment laden water to a temporary sediment basin or trap. (EPA, 2012)
- Use principally in areas where sheet flow occurs.
- Install along a level contour, so water does not pond more than 1.5 ft at any point along the silt fence.
- Provide sufficient room for runoff to pond behind the fence and to allow sediment removal equipment to pass between the silt fence and toes of slopes or other obstructions. About 1200 ft^2 of ponding area should be provided for every acre draining to the fence.
- Efficiency of silt fences is primarily dependent on the detention time of the runoff behind the control. (Barrett and Malina, 2004)
- The drainage area above any fence should not exceed a quarter of an acre. (Rule of Thumb-100-feet of silt fence per 10,000 square feet of disturbed area.) (EPA 2012)

- The maximum length of slope draining to any point along the silt fence should be 100 ft per foot of silt fence.
- Turn the ends of the filter fence uphill to prevent stormwater from flowing around the fence.
- Leave an undisturbed or stabilized area immediately down slope from the fence where feasible.
- Silt fences should remain in place until the disturbed area draining to the silt fence is permanently stabilized, after which, the silt fence fabric and posts should be removed and properly disposed.
- J-Hooks, which have ends turning up the slope to break up long runs of fence and provide multiple storage areas that work like mini-retention areas, may be used to increase the effectiveness of silt fence.
- Be aware of local regulations regarding the type and installation requirements of silt fence, which may differ from those presented in this fact sheet.

Design and Layout

In areas where high winds are anticipated the fence should be supported by a plastic or wire mesh. The geotextile fabric of the silt fence should contain ultraviolet inhibitors and stabilizers to provide longevity equivalent to the project life or replacement schedule.

- Layout in accordance with the attached figures.
- For slopes that contain a high number of rocks or large dirt clods that tend to dislodge, it may be necessary to protect silt fence from rocks (e.g., rockfall netting) ensure the integrity of the silt fence installation.

Standard vs. Heavy Duty Silt Fence

Standard Silt Fence

- Generally applicable in cases where the area draining to fence produces moderate sediment loads.

Heavy Duty Silt Fence

- Heavy duty silt fence usually has 1 or more of the following characteristics, not possessed by standard silt fence.
  - Fabric is reinforced with wire backing or additional support.
  - Posts are spaced closer than pre-manufactured, standard silt fence products.
- Use is generally limited to areas affected by high winds.
- Area draining to fence produces moderate sediment loads.

Materials

Standard Silt Fence

- Silt fence material should be woven geotextile with a minimum width of 36 in. The fabric should conform to the requirements in ASTM designation D6461.
- Wooden stakes should be commercial quality lumber of the size and shape shown on the plans. Each stake should be free from decay, splits or cracks longer than the

thickness of the stake or other defects that would weaken the stakes and cause the stakes to be structurally unsuitable.

- Staples used to fasten the fence fabric to the stakes should be not less than 1.75 in. long and should be fabricated from 15 gauge or heavier wire. The wire used to fasten the tops of the stakes together when joining two sections of fence should be 9 gauge or heavier wire. Galvanizing of the fastening wire will not be required.

Heavy-Duty Silt Fence

- Some silt fence has a wire backing to provide additional support, and there are products that may use prefabricated plastic holders for the silt fence and use metal posts instead of wood stakes.

Installation Guidelines – Traditional Method

Silt fences are to be constructed on a level contour. Sufficient area should exist behind the fence for ponding to occur without flooding or overtopping the fence.

- A trench should be excavated approximately 6 in. wide and 6 in. deep along the line of the proposed silt fence (trenches should not be excavated wider or deeper than necessary for proper silt fence installation).
- Bottom of the silt fence should be keyed-in a minimum of 12 in.
- Posts should be spaced a maximum of 6 ft apart and driven securely into the ground a minimum of 18 in. or 12 in. below the bottom of the trench.
- When standard strength geotextile is used, a plastic or wire mesh support fence should be fastened securely to the upslope side of posts using heavy–duty wire staples at least 1 in. long. The mesh should extend into the trench.
- When extra-strength geotextile and closer post spacing are used, the mesh support fence may be eliminated.
- Woven geotextile should be purchased in a long roll, then cut to the length of the barrier. When joints are necessary, geotextile should be spliced together only at a support post, with a minimum 6 in. overlap and both ends securely fastened to the post.
- The trench should be backfilled with native material and compacted.
- Construct the length of each reach so that the change in base elevation along the reach does not exceed 1/3 the height of the barrier; in no case should the reach exceed 500 ft.
- Cross barriers should be a minimum of 1/3 and a maximum of ½ the height of the linear barrier.
- See typical installation details at the end of this fact sheet.

Installation Guidelines - Static Slicing Method

- Static Slicing is defined as insertion of a narrow blade pulled behind a tractor, similar to a plow blade, at least 10 inches into the soil while at the same time pulling silt geotextile fabric into the ground through the opening created by the blade to the depth of the blade. Once the geotextile is installed, the soil is compacted using tractor tires.
- This method will not work with pre-fabricated, wire backed silt fence.
- Benefits:
    - Ease of installation (most often done with a 2 person crew).
    - Minimal soil disturbance.
    - Better level of compaction along fence, less susceptible to undercutting
    - Uniform installation.
- Limitations:
    - Does not work in shallow or rocky soils.
    - Complete removal of geotextile material after use is difficult.
    - Be cautious when digging near potential underground utilities.

Costs

- It should be noted that costs vary greatly across regions due to available supplies and labor costs.
- Average annual cost for installation using the traditional silt fence installation method (assumes 6 month useful life) is $7 per linear foot based on vendor research. Range of cost is $3.50 - $9.10 per linear foot.

Inspection and Maintenance

- BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Repair undercut silt fences.
- Repair or replace split, torn, slumping, or weathered fabric. The lifespan of silt fence fabric is generally 5 to 8 months.
- Silt fences that are damaged and become unsuitable for the intended purpose should be removed from the site of work, disposed, and replaced with new silt fence barriers.
- Sediment that accumulates in the BMP should be periodically removed in order to maintain BMP effectiveness. Sediment should be removed when the sediment accumulation reaches 1/3 of the barrier height.
- Silt fences should be left in place until the upgradient area is permanently stabilized. Until then, the silt fence should be inspected and maintained regularly.

- Remove silt fence when upgradient areas are stabilized. Fill and compact post holes and anchor trench, remove sediment accumulation, grade fence alignment to blend with adjacent ground, and stabilize disturbed area.

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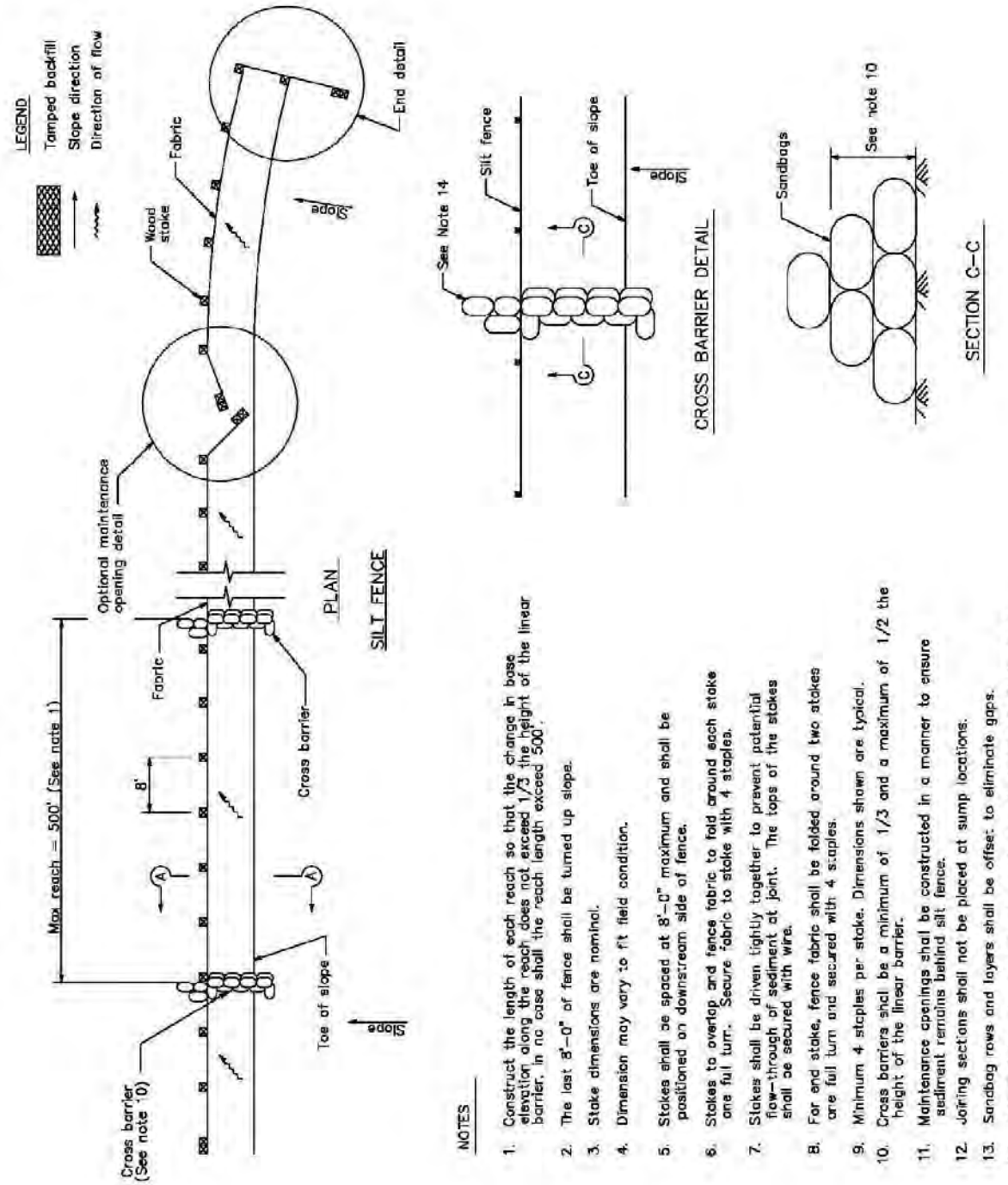
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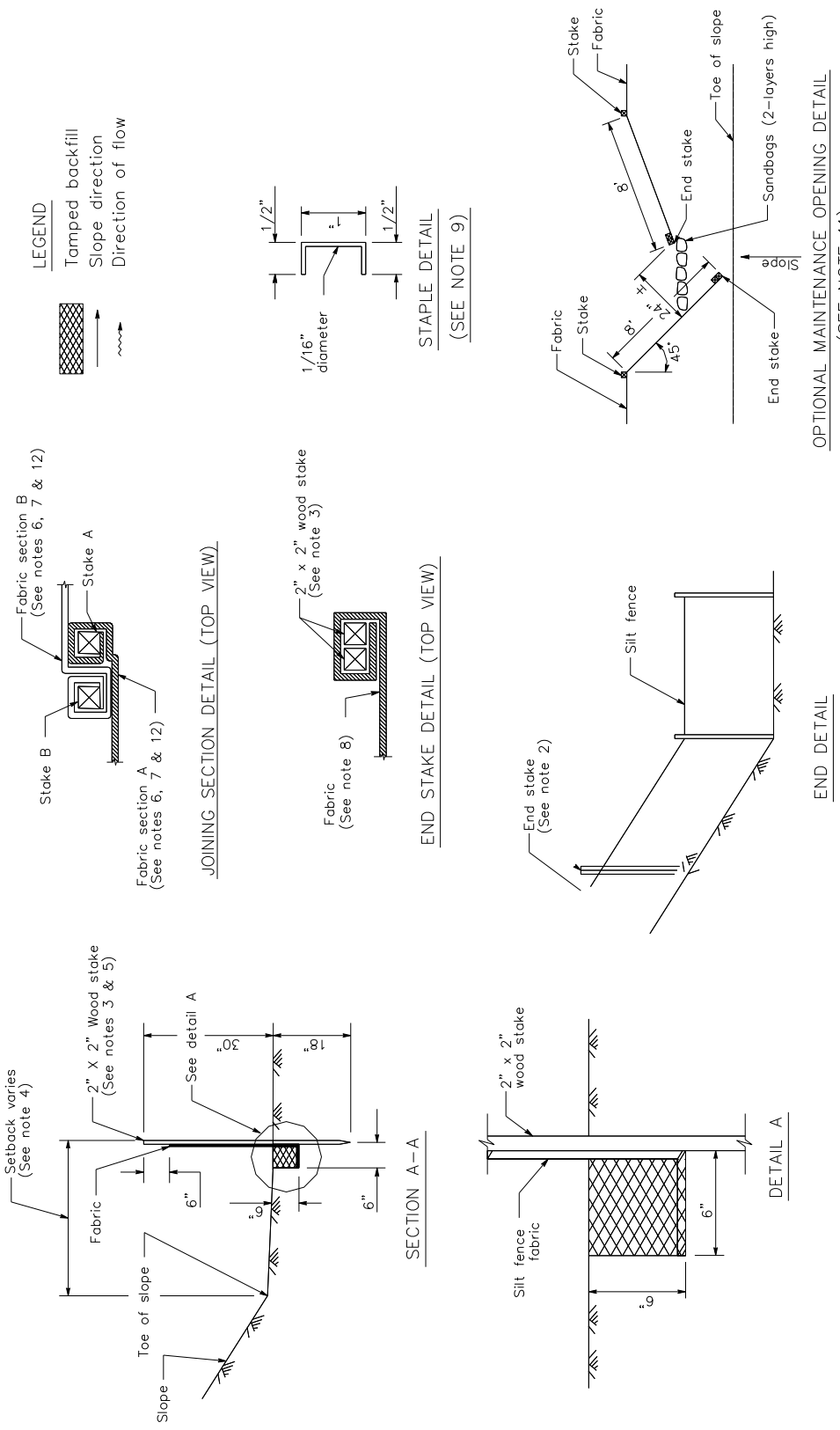
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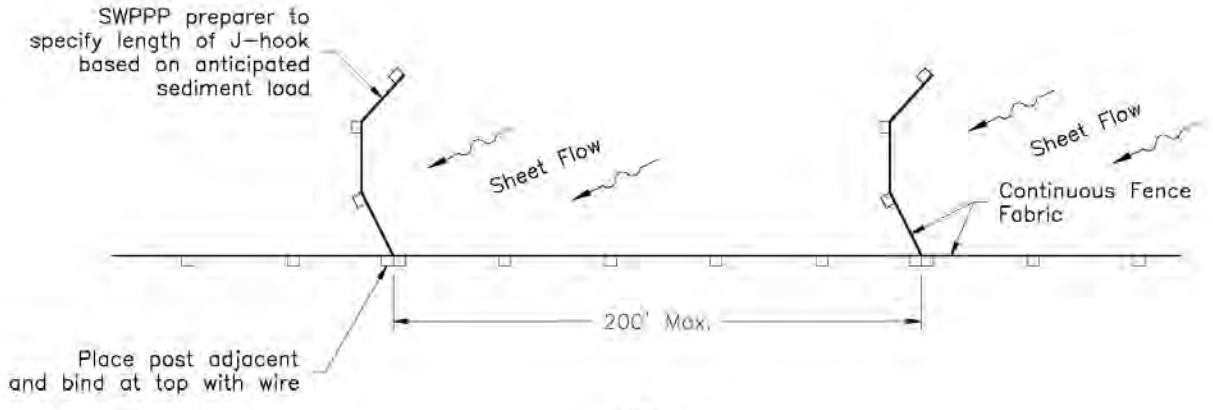
Silt Fence SE-1



NOTES

1. Construct the length of each reach so that the change in base elevation along the reach does not exceed 1/3 the height of the linear barrier, in no case shall the reach length exceed 500'.
2. The last 8'-0" of fence shall be turned up slope.
3. Stake dimensions are nominal.
4. Dimension may vary to fit field condition.
5. Stakes shall be spaced at 8'-0" maximum and shall be positioned on downstream side of fence.
6. Stakes to overlap and fence fabric to fold around each stake one full turn. Secure fabric to stake with 4 staples.
7. Stakes shall be driven tightly together to prevent potential flow-through of sediment at joint. The tops of the stakes shall be secured with wire.
8. For end stake, fence fabric shall be folded around two stakes one full turn and secured with 4 staples.
9. Minimum 4 staples per stake. Dimensions shown are typical.
10. Cross barriers shall be a minimum of 1/3 and a maximum of 1/2 the height of the linear barrier.
11. Maintenance openings shall be constructed in a manner to ensure sediment remains behind silt fence.
12. Joining sections shall not be placed at sump locations.
13. Sandbag rows and layers shall be offset to eliminate gaps.
14. Add 3-4 bags to cross barrier on downgradient side of silt fence as needed to prevent bypass or undermining and as allowable based on site limits of disturbance.

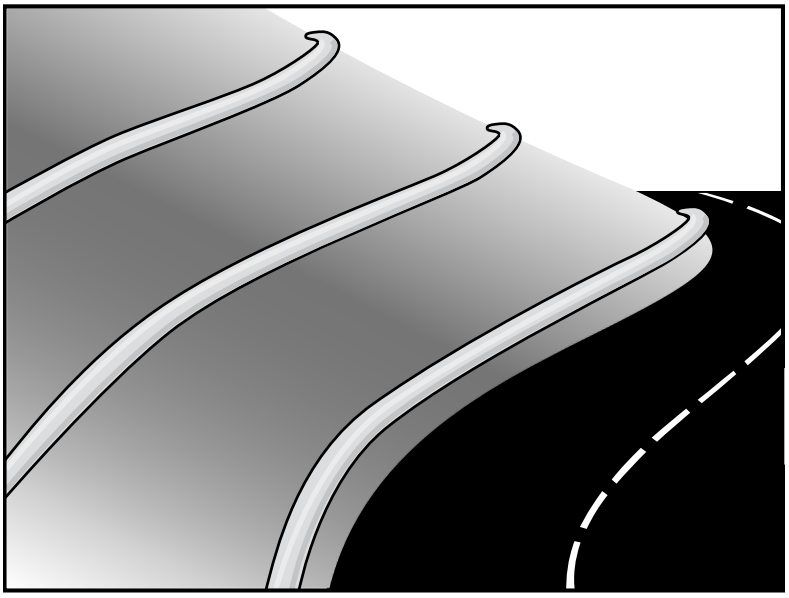

LEGEND
Tamped backfill
Slope direction
Direction of flow
1/2"
1"
1/2"
1/16" diameter
STAPLE DETAIL
(SEE NOTE 9)
Stake
Fabric
Toe of slope
8'
End stake
Sandbags (2-layers high)
Slope
Fabric
Stake
8'
4'
2'
45°
End stake
OPTIONAL MAINTENANCE OPENING DETAIL
(SEE NOTE 11)
Fabric section B
(See notes 6, 7 & 12)
Stake A
Stake B
Fabric section A
(See notes 6, 7 & 12)
JOINING SECTION DETAIL (TOP VIEW)
2" x 2" wood stake
(See note 3)
Fabric
(See note 8)
END STAKE DETAIL (TOP VIEW)
Silt fence
End stake
(See note 2)
END DETAIL
Setback varies
(See note 4)
2" X 2" Wood stake
(See notes 3 & 5)
See detail A
30"
18"
Fabric
6"
6"
6"
Toe of slope
Slope
SECTION A-A
2" x 2"
wood stake
Silt fence
fabric
6"
6"
DETAIL A


SWPPP preparer to specify length of J-hook based on anticipated sediment load
Sheet Flow
Sheet Flow
Continuous Fence Fabric
200' Max.
Place post adjacent and bind at top with wire

Plan

J-HOOK

Fiber Rolls SE-5



Categories

EC	Erosion Control	☒
SE	Sediment Control	☑
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:
☑ **Primary Category**
☒ **Secondary Category**

Description and Purpose

A fiber roll consists of straw, coir, or other biodegradable materials bound into a tight tubular roll wrapped by netting, which can be photodegradable or natural. Additionally, gravel core fiber rolls are available, which contain an imbedded ballast material such as gravel or sand for additional weight when staking the rolls are not feasible (such as use as inlet protection). When fiber rolls are placed at the toe and on the face of slopes along the contours, they intercept runoff, reduce its flow velocity, release the runoff as sheet flow, and provide removal of sediment from the runoff (through sedimentation). By interrupting the length of a slope, fiber rolls can also reduce sheet and rill erosion until vegetation is established.

Suitable Applications

Fiber rolls may be suitable:

- Along the toe, top, face, and at grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow.
- At the end of a downward slope where it transitions to a steeper slope.
- Along the perimeter of a project.
- As check dams in unlined ditches with minimal grade.
- Down-slope of exposed soil areas.
- At operational storm drains as a form of inlet protection.

Targeted Constituents

Sediment	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

SE-1 Silt Fence

SE-6 Gravel Bag Berm

SE-8 Sandbag Barrier

SE-12 Manufactured Linear Sediment Controls

SE-14 Biofilter Bags

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- Around temporary stockpiles.

Limitations

- Fiber rolls are not effective unless trenched in and staked.
- Not intended for use in high flow situations.
- Difficult to move once saturated.
- If not properly staked and trenched in, fiber rolls could be transported by high flows.
- Fiber rolls have a very limited sediment capture zone.
- Fiber rolls should not be used on slopes subject to creep, slumping, or landslide.
- Rolls typically function for 12-24 months depending upon local conditions.

Implementation

Fiber Roll Materials

- Fiber rolls should be prefabricated.
- Fiber rolls may come manufactured containing polyacrylamide (PAM), a flocculating agent within the roll. Fiber rolls impregnated with PAM provide additional sediment removal capabilities and should be used in areas with fine, clayey or silty soils to provide additional sediment removal capabilities. Monitoring may be required for these installations.
- Fiber rolls are made from weed free rice straw, flax, or a similar agricultural material bound into a tight tubular roll by netting.
- Typical fiber rolls vary in diameter from 9 in. to 20 in. Larger diameter rolls are available as well.

Installation

- Locate fiber rolls on level contours spaced as follows:
  - Slope inclination of 4:1 (H:V) or flatter: Fiber rolls should be placed at a maximum interval of 20 ft.
  - Slope inclination between 4:1 and 2:1 (H:V): Fiber Rolls should be placed at a maximum interval of 15 ft. (a closer spacing is more effective).
  - Slope inclination 2:1 (H:V) or greater: Fiber Rolls should be placed at a maximum interval of 10 ft. (a closer spacing is more effective).
- Prepare the slope before beginning installation.
- Dig small trenches across the slope on the contour. The trench depth should be ¼ to 1/3 of the thickness of the roll, and the width should equal the roll diameter, in order to provide area to backfill the trench.

- It is critical that rolls are installed perpendicular to water movement, and parallel to the slope contour.
- Start building trenches and installing rolls from the bottom of the slope and work up.
- It is recommended that pilot holes be driven through the fiber roll. Use a straight bar to drive holes through the roll and into the soil for the wooden stakes.
- Turn the ends of the fiber roll up slope to prevent runoff from going around the roll.
- Stake fiber rolls into the trench.
  - Drive stakes at the end of each fiber roll and spaced 4 ft maximum on center.
  - Use wood stakes with a nominal classification of 0.75 by 0.75 in. and minimum length of 24 in.
- If more than one fiber roll is placed in a row, the rolls should be overlapped, not abutted.
- See typical fiber roll installation details at the end of this fact sheet.

Removal

- Fiber rolls can be left in place or removed depending on the type of fiber roll and application (temporary vs. permanent installation). Typically, fiber rolls encased with plastic netting are used for a temporary application because the netting does not biodegrade. Fiber rolls used in a permanent application are typically encased with a biodegradeable material and are left in place. Removal of a fiber roll used in a permanent application can result in greater disturbance.
- Temporary installations should only be removed when up gradient areas are stabilized per General Permit requirements, and/or pollutant sources no longer present a hazard. But, they should also be removed before vegetation becomes too mature so that the removal process does not disturb more soil and vegetation than is necessary.

Costs

Material costs for regular fiber rolls range from $20 - $30 per 25 ft roll.

Material costs for PAM impregnated fiber rolls range between 7.00-$9.00 per linear foot, based upon vendor research.

Inspection and Maintenance

- BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Repair or replace split, torn, unraveling, or slumping fiber rolls.
- If the fiber roll is used as a sediment capture device, or as an erosion control device to maintain sheet flows, sediment that accumulates in the BMP should be periodically removed

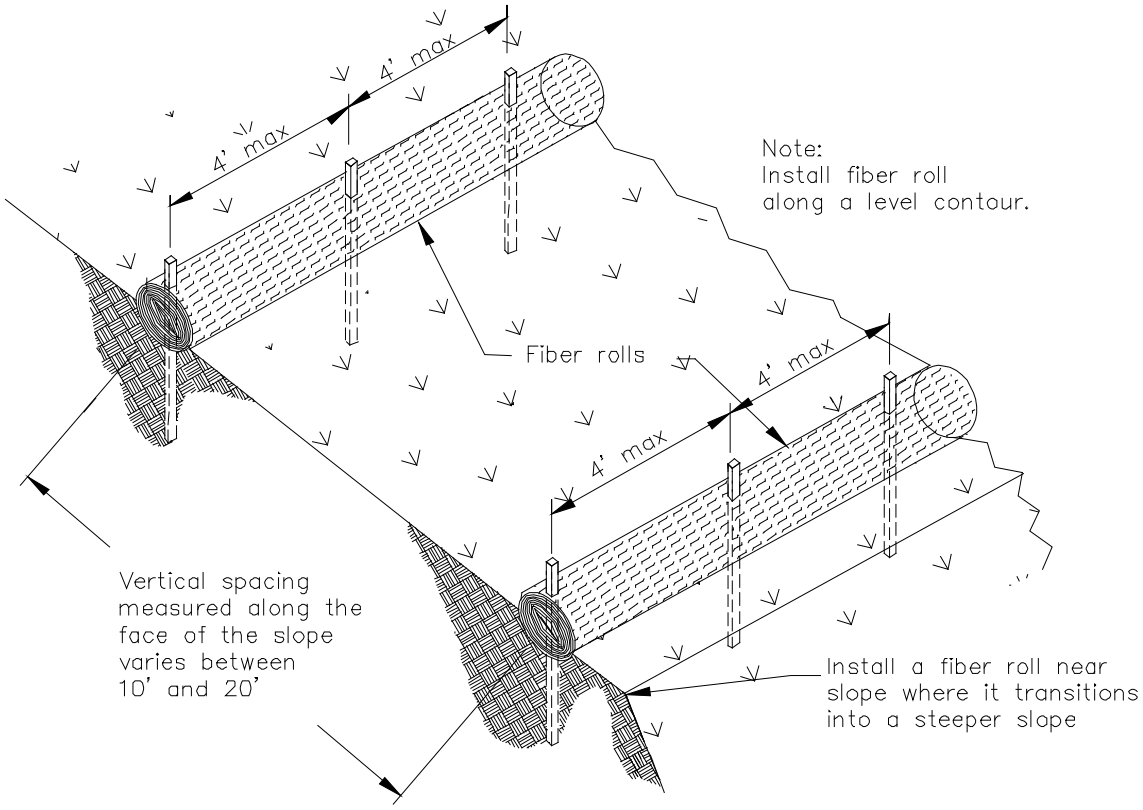
in order to maintain BMP effectiveness. Sediment should be removed when sediment accumulation reaches one-third the designated sediment storage depth.

- If fiber rolls are used for erosion control, such as in a check dam, sediment removal should not be required as long as the system continues to control the grade. Sediment control BMPs will likely be required in conjunction with this type of application.
- Repair any rills or gullies promptly.

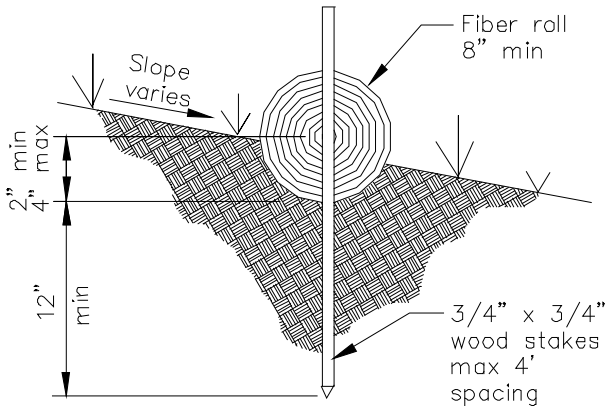
References

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), March 2003.

Erosion and Sediment Control Manual, Oregon Department of Environmental Quality, February 2005.

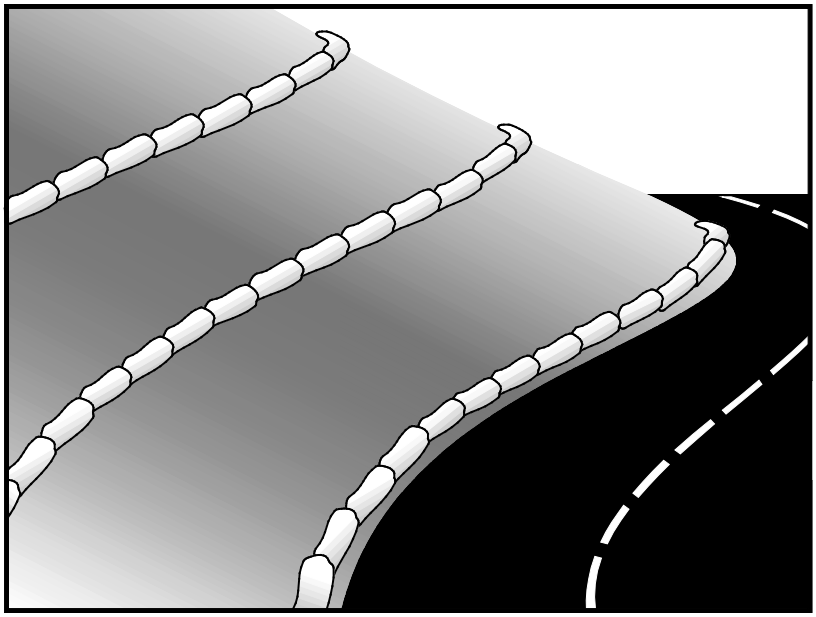


TYPICAL FIBER ROLL INSTALLATION
N.T.S.



ENTRENCHMENT DETAIL
N.T.S.

Gravel Bag Berm SE-6



Description and Purpose

A gravel bag berm is a series of gravel-filled bags placed on a level contour to intercept sheet flows. Gravel bags pond sheet flow runoff, allowing sediment to settle out, and release runoff slowly as sheet flow, preventing erosion.

Suitable Applications

Gravel bag berms may be suitable:

- As a linear sediment control measure:
  - Below the toe of slopes and erodible slopes
  - As sediment traps at culvert/pipe outlets
  - Below other small cleared areas
  - Along the perimeter of a site
  - Down slope of exposed soil areas
  - Around temporary stockpiles and spoil areas
  - Parallel to a roadway to keep sediment off paved areas
  - Along streams and channels
- As a linear erosion control measure:
  - Along the face and at grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow.

Categories

EC	Erosion Control	☒
SE	Sediment Control	☑
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

☑ **Primary Category**

☒ **Secondary Category**

Targeted Constituents

Sediment	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

SE-1 Silt Fence

SE-5 Fiber Roll

SE-8 Sandbag Barrier

SE-12 Temporary Silt Dike

SE-14 Biofilter Bags

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- At the top of slopes to divert runoff away from disturbed slopes.
- As chevrons (small check dams) across mildly sloped construction roads. For use check dam use in channels, see SE-4, Check Dams.

Limitations

- Gravel berms may be difficult to remove.
- Removal problems limit their usefulness in landscaped areas.
- Gravel bag berm may not be appropriate for drainage areas greater than 5 acres.
- Runoff will pond upstream of the berm, possibly causing flooding if sufficient space does not exist.
- Degraded gravel bags may rupture when removed, spilling contents.
- Installation can be labor intensive.
- Durability of gravel bags is somewhat limited and bags may need to be replaced when installation is required for longer than 6 months.
- Easily damaged by construction equipment.
- When used to detain concentrated flows, maintenance requirements increase.

Implementation

General

A gravel bag berm consists of a row of open graded gravel-filled bags placed on a level contour. When appropriately placed, a gravel bag berm intercepts and slows sheet flow runoff, causing temporary ponding. The temporary ponding allows sediment to settle. The open graded gravel in the bags is porous, which allows the ponded runoff to flow slowly through the bags, releasing the runoff as sheet flows. Gravel bag berms also interrupt the slope length and thereby reduce erosion by reducing the tendency of sheet flows to concentrate into rivulets, which erode rills, and ultimately gullies, into disturbed, sloped soils. Gravel bag berms are similar to sand bag barriers, but are more porous. Generally, gravel bag berms should be used in conjunction with temporary soil stabilization controls up slope to provide effective erosion and sediment control.

Design and Layout

- Locate gravel bag berms on level contours.
- When used for slope interruption, the following slope/sheet flow length combinations apply:
  - Slope inclination of 4:1 (H:V) or flatter: Gravel bags should be placed at a maximum interval of 20 ft, with the first row near the slope toe.
  - Slope inclination between 4:1 and 2:1 (H:V): Gravel bags should be placed at a maximum interval of 15 ft. (a closer spacing is more effective), with the first row near the slope toe.

Slope inclination 2:1 (H:V) or greater: Gravel bags should be placed at a maximum interval of 10 ft. (a closer spacing is more effective), with the first row near the slope toe.

- Turn the ends of the gravel bag barriers up slope to prevent runoff from going around the berm.
- Allow sufficient space up slope from the gravel bag berm to allow ponding, and to provide room for sediment storage.
- For installation near the toe of the slope, gravel bag barriers should be set back from the slope toe to facilitate cleaning. Where specific site conditions do not allow for a set-back, the gravel bag barrier may be constructed on the toe of the slope. To prevent flows behind the barrier, bags can be placed perpendicular to a berm to serve as cross barriers.
- Drainage area should not exceed 5 acres.
- In Non-Traffic Areas:
  - Height = 18 in. maximum
  - Top width = 24 in. minimum for three or more layer construction
  - Top width = 12 in. minimum for one or two layer construction
  - Side slopes = 2:1 (H:V) or flatter
- In Construction Traffic Areas:
  - Height = 12 in. maximum
  - Top width = 24 in. minimum for three or more layer construction.
  - Top width = 12 in. minimum for one or two layer construction.
  - Side slopes = 2:1 (H:V) or flatter.
- Butt ends of bags tightly.
- On multiple row, or multiple layer construction, overlap butt joints of adjacent row and row beneath.
- Use a pyramid approach when stacking bags.

Materials

- ***Bag Material:*** Bags should be woven polypropylene, polyethylene or polyamide fabric or burlap, minimum unit weight of 4 ounces/yd^2, Mullen burst strength exceeding 300 lb/in^2 in conformance with the requirements in ASTM designation D3786, and ultraviolet stability exceeding 70% in conformance with the requirements in ASTM designation D4355.

- ***Bag Size:*** Each gravel-filled bag should have a length of 18 in., width of 12 in., thickness of 3 in., and mass of approximately 33 lbs. Bag dimensions are nominal, and may vary based on locally available materials.

- ***Fill Material:*** Fill material should be 0.5 to 1 in. crushed rock, clean and free from clay, organic matter, and other deleterious material, or other suitable open graded, non-cohesive, porous gravel.

Costs

Material costs for gravel bags are average and are dependent upon material availability. $2.50-3.00 per filled gravel bag is standard based upon vendor research.

Inspection and Maintenance

- BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.

- Gravel bags exposed to sunlight will need to be replaced every two to three months due to degrading of the bags.

- Reshape or replace gravel bags as needed.

- Repair washouts or other damage as needed.

- Sediment that accumulates in the BMP should be periodically removed in order to maintain BMP effectiveness. Sediment should be removed when the sediment accumulation reaches one-third of the barrier height.

- Remove gravel bag berms when no longer needed and recycle gravel fill whenever possible and properly dispose of bag material. Remove sediment accumulation and clean, re-grade, and stabilize the area.

References

Handbook of Steel Drainage and Highway Construction, American Iron and Steel Institute, 1983.

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), March 2003.

Stormwater Pollution Plan Handbook, First Edition, State of California, Department of Transportation Division of New Technology, Materials and Research, October 1992.

Erosion and Sediment Control Manual, Oregon Department of Environmental Quality, February 2005.

Street Sweeping and Vacuuming SE-7



Categories

EC	Erosion Control	
SE	Sediment Control	☒
TC	Tracking Control	☑
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:
☑ **Primary Objective**
☒ **Secondary Objective**

Targeted Constituents

Sediment	☑
Nutrients	
Trash	☑
Metals	
Bacteria	
Oil and Grease	☑
Organics	

Potential Alternatives

None

Description and Purpose

Street sweeping and vacuuming includes use of self-propelled and walk-behind equipment to remove sediment from streets and roadways, and to clean paved surfaces in preparation for final paving. Sweeping and vacuuming prevents sediment from the project site from entering storm drains or receiving waters.

Suitable Applications

Sweeping and vacuuming are suitable anywhere sediment is tracked from the project site onto public or private paved streets and roads, typically at points of egress. Sweeping and vacuuming are also applicable during preparation of paved surfaces for final paving.

Limitations

Sweeping and vacuuming may not be effective when sediment is wet or when tracked soil is caked (caked soil may need to be scraped loose).

Implementation

- Controlling the number of points where vehicles can leave the site will allow sweeping and vacuuming efforts to be focused, and perhaps save money.
- Inspect potential sediment tracking locations daily.
- Visible sediment tracking should be swept or vacuumed on a daily basis.

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- Do not use kick brooms or sweeper attachments. These tend to spread the dirt rather than remove it.
- If not mixed with debris or trash, consider incorporating the removed sediment back into the project

Costs

Rental rates for self-propelled sweepers vary depending on hopper size and duration of rental. Expect rental rates from $58/hour (3 yd^3 hopper) to $88/hour (9 yd^3 hopper), plus operator costs. Hourly production rates vary with the amount of area to be swept and amount of sediment. Match the hopper size to the area and expect sediment load to minimize time spent dumping.

Inspection and Maintenance

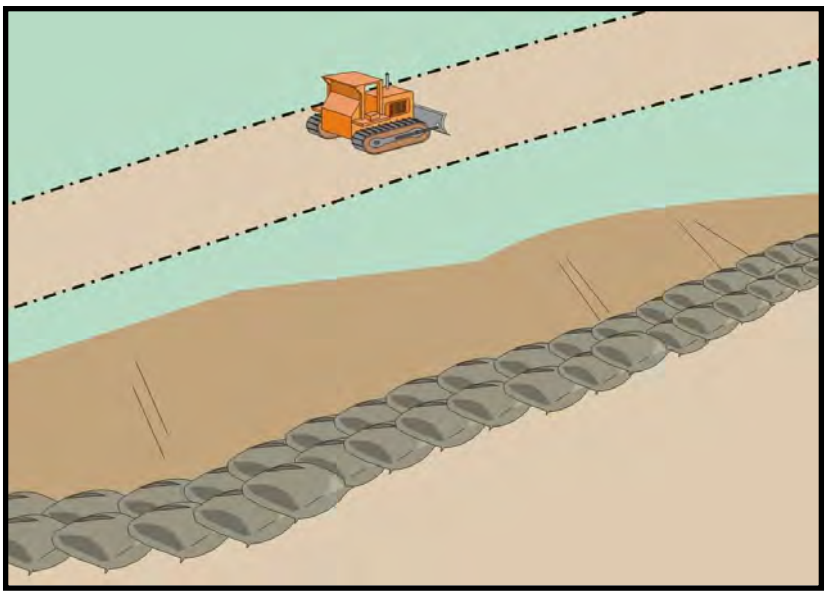
- Inspect BMPs in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- When actively in use, points of ingress and egress must be inspected daily.
- When tracked or spilled sediment is observed outside the construction limits, it must be removed at least daily. More frequent removal, even continuous removal, may be required in some jurisdictions.
- Be careful not to sweep up any unknown substance or any object that may be potentially hazardous.
- Adjust brooms frequently; maximize efficiency of sweeping operations.
- After sweeping is finished, properly dispose of sweeper wastes at an approved dumpsite.

References

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Labor Surcharge and Equipment Rental Rates, State of California Department of Transportation (Caltrans), April 1, 2002 – March 31, 2003.

Sandbag Barrier SE-8



Categories

EC	Erosion Control	☒
SE	Sediment Control	☑
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:
☑ **Primary Category**
☒ **Secondary Category**

Description and Purpose

A sandbag barrier is a series of sand-filled bags placed on a level contour to intercept or to divert sheet flows. Sandbag barriers placed on a level contour pond sheet flow runoff, allowing sediment to settle out.

Suitable Applications

Sandbag barriers may be a suitable control measure for the applications described below. It is important to consider that sand bags are less porous than gravel bags and ponding or flooding can occur behind the barrier. Also, sand is easily transported by runoff if bags are damaged or ruptured. The SWPPP Preparer should select the location of a sandbag barrier with respect to the potential for flooding, damage, and the ability to maintain the BMP.

- As a linear sediment control measure:
  - Below the toe of slopes and erodible slopes.
  - As sediment traps at culvert/pipe outlets.
  - Below other small cleared areas.
  - Along the perimeter of a site.
  - Down slope of exposed soil areas.
  - Around temporary stockpiles and spoil areas.
  - Parallel to a roadway to keep sediment off paved areas.
  - Along streams and channels.

Targeted Constituents

Sediment	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

SE-1 Silt Fence

SE-5 Fiber Rolls

SE-6 Gravel Bag Berm

SE-12 Manufactured Linear Sediment Controls

SE-14 Biofilter Bags

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- As linear erosion control measure:
  - Along the face and at grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow.
  - At the top of slopes to divert runoff away from disturbed slopes.
  - As check dams across mildly sloped construction roads.

Limitations

- It is necessary to limit the drainage area upstream of the barrier to 5 acres.
- Sandbags are not intended to be used as filtration devices.
- Easily damaged by construction equipment.
- Degraded sandbags may rupture when removed, spilling sand.
- Installation can be labor intensive.
- Durability of sandbags is somewhat limited and bags will need to be replaced when there are signs of damage or wear.
- Burlap should not be used for sandbags.

Implementation

General

A sandbag barrier consists of a row of sand-filled bags placed on a level contour. When appropriately placed, a sandbag barrier intercepts and slows sheet flow runoff, causing temporary ponding. The temporary ponding allows sediment to settle. Sand-filled bags have limited porosity, which is further limited as the fine sand tends to quickly plug with sediment, limiting or completely blocking the rate of flow through the barrier. If a porous barrier is desired, consider SE-1, Silt Fence, SE-5, Fiber Rolls, SE-6, Gravel Bag Berms or SE-14, Biofilter Bags. Sandbag barriers also interrupt the slope length and thereby reduce erosion by reducing the tendency of sheet flows to concentrate into rivulets which erode rills, and ultimately gullies, into disturbed, sloped soils. Sandbag barriers are similar to gravel bag berms, but less porous. Generally, sandbag barriers should be used in conjunction with temporary soil stabilization controls up slope to provide effective erosion and sediment control.

Design and Layout

- Locate sandbag barriers on a level contour.
- When used for slope interruption, the following slope/sheet flow length combinations apply:
  - Slope inclination of 4:1 (H:V) or flatter: Sandbags should be placed at a maximum interval of 20 ft, with the first row near the slope toe.
  - Slope inclination between 4:1 and 2:1 (H:V): Sandbags should be placed at a maximum interval of 15 ft. (a closer spacing is more effective), with the first row near the slope toe.

  - Slope inclination 2:1 (H:V) or greater: Sandbags should be placed at a maximum interval of 10 ft. (a closer spacing is more effective), with the first row near the slope toe.

- Turn the ends of the sandbag barrier up slope to prevent runoff from going around the barrier.
- Allow sufficient space up slope from the barrier to allow ponding, and to provide room for sediment storage.
- For installation near the toe of the slope, sand bag barriers should be set back from the slope toe to facilitate cleaning. Where specific site conditions do not allow for a set-back, the sand bag barrier may be constructed on the toe of the slope. To prevent flows behind the barrier, bags can be placed perpendicular to a berm to serve as cross barriers.
- Drainage area should not exceed 5 acres.
- Butt ends of bags tightly.
- Overlap butt joints of row beneath with each successive row.
- Use a pyramid approach when stacking bags.
- In non-traffic areas
  - Height = 18 in. maximum
  - Top width = 24 in. minimum for three or more layer construction
  - Side slope = 2:1 (H:V) or flatter
- In construction traffic areas
  - Height = 12 in. maximum
  - Top width = 24 in. minimum for three or more layer construction.
  - Side slopes = 2:1 (H:V) or flatter.
- See typical sandbag barrier installation details at the end of this fact sheet.

Materials

- ***Sandbag Material:*** Sandbag should be woven polypropylene, polyethylene or polyamide fabric, minimum unit weight of 4 ounces/yd^2, Mullen burst strength exceeding 300 lb/in^2 in conformance with the requirements in ASTM designation D3786, and ultraviolet stability exceeding 70% in conformance with the requirements in ASTM designation D4355. Use of burlap is not an acceptable substitute, as sand can more easily mobilize out of burlap.
- ***Sandbag Size:*** Each sand-filled bag should have a length of 18 in., width of 12 in., thickness of 3 in., and mass of approximately 33 lbs. Bag dimensions are nominal, and may vary based on locally available materials.

- ***Fill Material:*** All sandbag fill material should be non-cohesive, Class 3 (Caltrans Standard Specification, Section 25) or similar permeable material free from clay and deleterious material, such as recycled concrete or asphalt.

Costs

Empty sandbags cost $0.25 - $0.75. Average cost of fill material is $8 per yd^3. Additional labor is required to fill the bags. Pre-filled sandbags are more expensive at $1.50 - $2.00 per bag. These costs are based upon vendor research.

Inspection and Maintenance

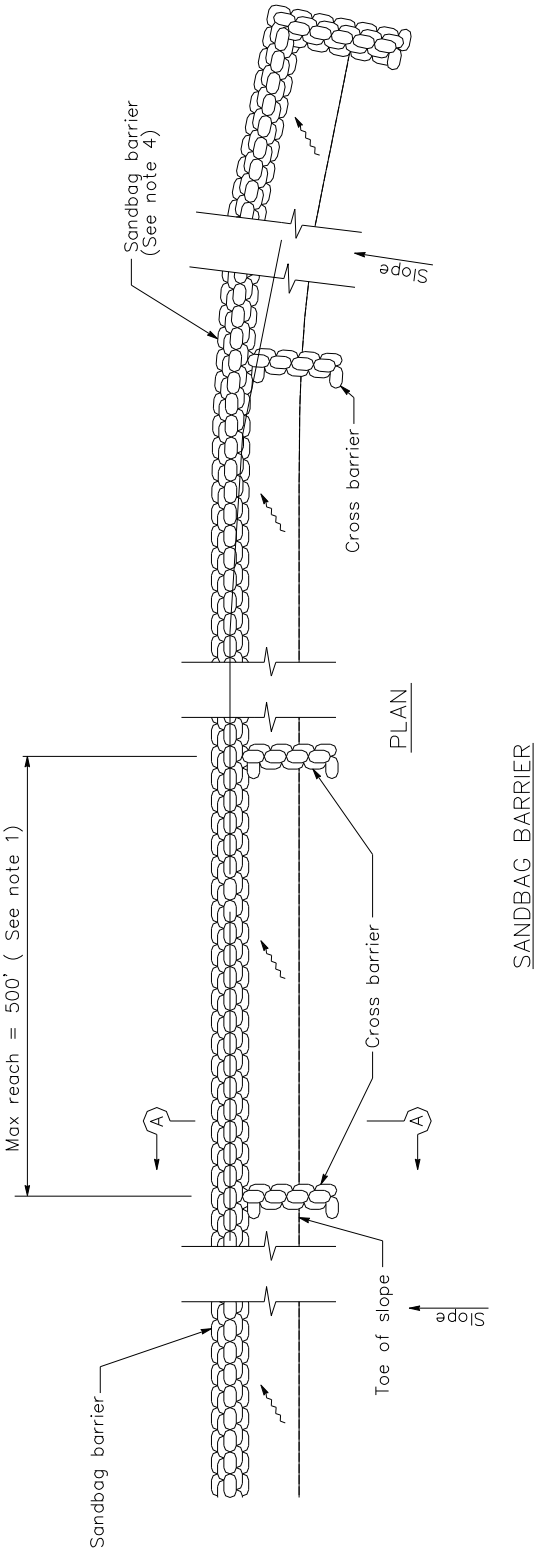
- BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Sandbags exposed to sunlight will need to be replaced every two to three months due to degradation of the bags.
- Reshape or replace sandbags as needed.
- Repair washouts or other damage as needed.
- Sediment that accumulates behind the BMP should be periodically removed in order to maintain BMP effectiveness. Sediment should be removed when the sediment accumulation reaches one-third of the barrier height.
- Remove sandbags when no longer needed and recycle sand fill whenever possible and properly dispose of bag material. Remove sediment accumulation, and clean, re-grade, and stabilize the area.

References

Standard Specifications for Construction of Local Streets and Roads, California Department of Transportation (Caltrans), July 2002.

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), March 2003.

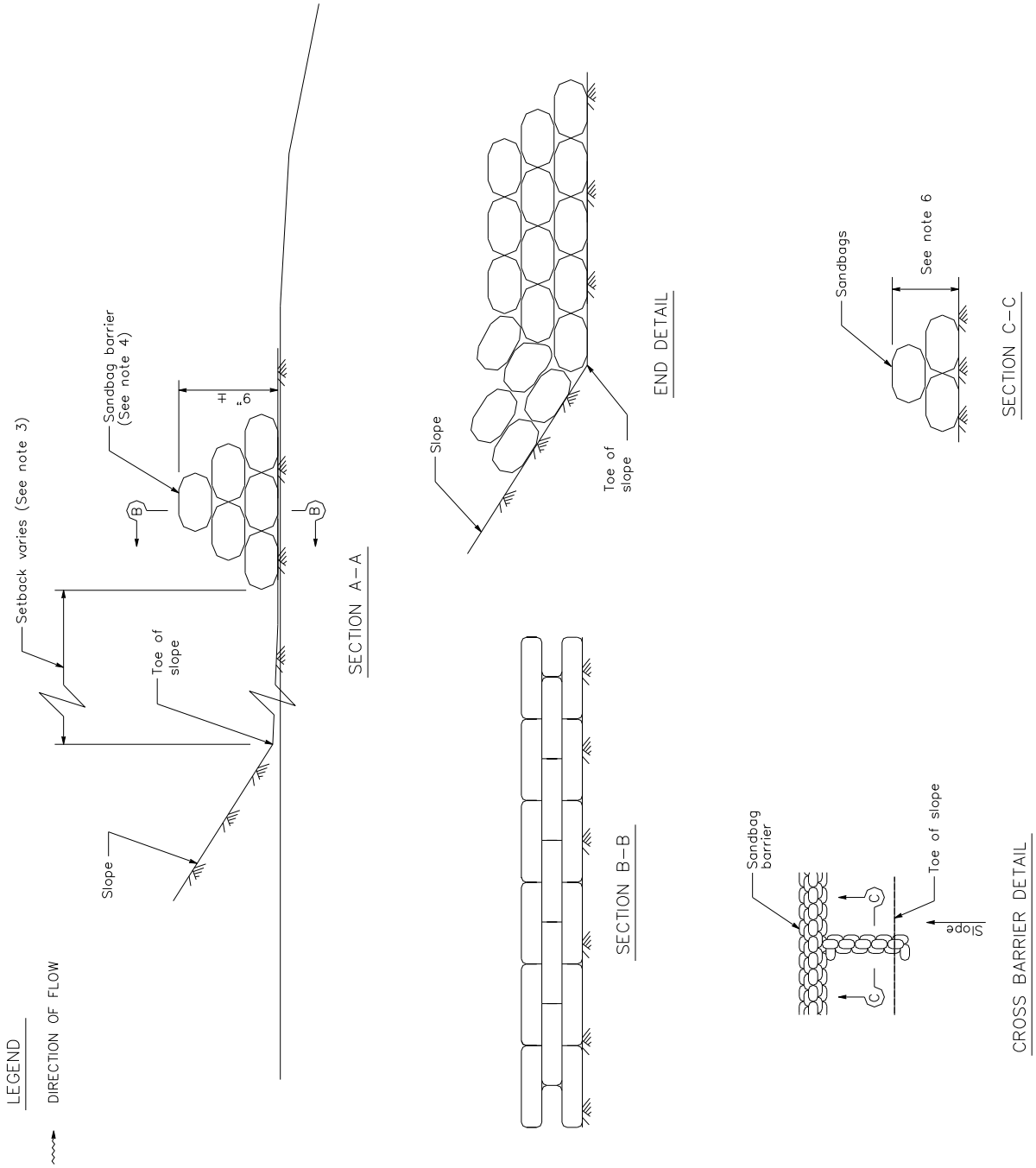
Erosion and Sediment Control Manual, Oregon Department of Environmental Quality, February 2005.



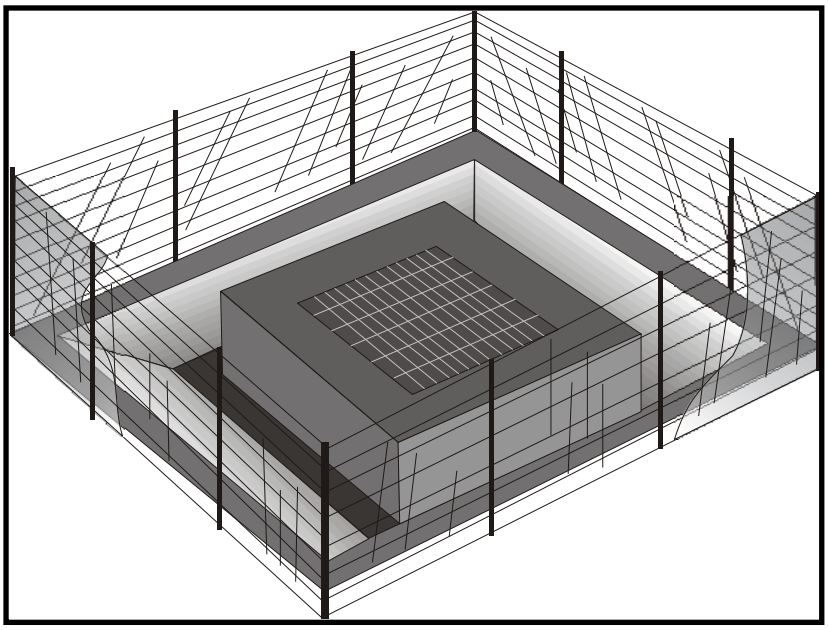
SANDBAG BARRIER

NOTES

1. Construct the length of each reach so that the change in base elevation along the reach does not exceed 1/2 the height of the linear barrier. In no case shall the reach length exceed 500'.
2. Place sandbags tightly.
3. Dimension may vary to fit field condition.
4. Sandbag barrier shall be a minimum of 3 bags high.
5. The end of the barrier shall be turned up slope.
6. Cross barriers shall be a min of 1/2 and a max of 2/3 the height of the linear barrier.
7. Sandbag rows and layers shall be staggered to eliminate gaps.


LEGEND
DIRECTION OF FLOW
Setback varies (See note 3)
Sandbag barrier (See note 4)
H
B
B
Toe of slope
Slope
SECTION A–A
Slope
Toe of slope
END DETAIL
SECTION B–B
Sandbags
See note 6
SECTION C–C
Sandbag barrier
C
C
Toe of slope
Slope
CROSS BARRIER DETAIL

Storm Drain Inlet Protection SE-10



Categories

EC	Erosion Control	
SE	Sediment Control	☑
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

☑ **Primary Category**

☒ **Secondary Category**

Targeted Constituents

Sediment	☑
Nutrients	
Trash	☒
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

SE-1 Silt Fence

SE-5 Fiber Rolls

SE-6 Gravel Bag Berm

SE-8 Sandbag Barrier

SE-14 Biofilter Bags

SE-13 Compost Socks and Berms

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Description and Purpose

Storm drain inlet protection consists of a sediment filter or an impounding area in, around or upstream of a storm drain, drop inlet, or curb inlet. Storm drain inlet protection measures temporarily pond runoff before it enters the storm drain, allowing sediment to settle. Some filter configurations also remove sediment by filtering, but usually the ponding action results in the greatest sediment reduction. Temporary geotextile storm drain inserts attach underneath storm drain grates to capture and filter storm water.

Suitable Applications

- Every storm drain inlet receiving runoff from unstabilized or otherwise active work areas should be protected. Inlet protection should be used in conjunction with other erosion and sediment controls to prevent sediment-laden stormwater and non-stormwater discharges from entering the storm drain system.

Limitations

- Drainage area should not exceed 1 acre.
- In general straw bales should not be used as inlet protection.
- Requires an adequate area for water to pond without encroaching into portions of the roadway subject to traffic.
- Sediment removal may be inadequate to prevent sediment discharges in high flow conditions or if runoff is heavily sediment laden. If high flow conditions are expected, use

other onsite sediment trapping techniques in conjunction with inlet protection.

- Frequent maintenance is required.
- Limit drainage area to 1 acre maximum. For drainage areas larger than 1 acre, runoff should be routed to a sediment-trapping device designed for larger flows. See BMPs SE-2, Sediment Basin, and SE-3, Sediment Traps.
- Excavated drop inlet sediment traps are appropriate where relatively heavy flows are expected, and overflow capability is needed.

Implementation

General

Inlet control measures presented in this handbook should not be used for inlets draining more than one acre. Runoff from larger disturbed areas should be first routed through SE-2, Sediment Basin or SE-3, Sediment Trap and/or used in conjunction with other drainage control, erosion control, and sediment control BMPs to protect the site. Different types of inlet protection are appropriate for different applications depending on site conditions and the type of inlet. Alternative methods are available in addition to the methods described/shown herein such as prefabricated inlet insert devices, or gutter protection devices.

Design and Layout

Identify existing and planned storm drain inlets that have the potential to receive sediment-laden surface runoff. Determine if storm drain inlet protection is needed and which method to use.

- The key to successful and safe use of storm drain inlet protection devices is to know where runoff that is directed toward the inlet to be protected will pond or be diverted as a result of installing the protection device.
  - Determine the acceptable location and extent of ponding in the vicinity of the drain inlet. The acceptable location and extent of ponding will influence the type and design of the storm drain inlet protection device.
  - Determine the extent of potential runoff diversion caused by the storm drain inlet protection device. Runoff ponded by inlet protection devices may flow around the device and towards the next downstream inlet. In some cases, this is acceptable; in other cases, serious erosion or downstream property damage can be caused by these diversions. The possibility of runoff diversions will influence whether or not storm drain inlet protection is suitable; and, if suitable, the type and design of the device.
- The location and extent of ponding, and the extent of diversion, can usually be controlled through appropriate placement of the inlet protection device. In some cases, moving the inlet protection device a short distance upstream of the actual inlet can provide more efficient sediment control, limit ponding to desired areas, and prevent or control diversions.
- Seven types of inlet protection are presented below. However, it is recognized that other effective methods and proprietary devices exist and may be selected.

- Silt Fence: Appropriate for drainage basins with less than a 5% slope, sheet flows, and flows under 0.5 cfs.

- Excavated Drop Inlet Sediment Trap: An excavated area around the inlet to trap sediment (SE-3).

- Gravel bag barrier: Used to create a small sediment trap upstream of inlets on sloped, paved streets. Appropriate for sheet flow or when concentrated flow may exceed 0.5 cfs, and where overtopping is required to prevent flooding.

- Block and Gravel Filter: Appropriate for flows greater than 0.5 cfs.

- Temporary Geotextile Storm drain Inserts: Different products provide different features. Refer to manufacturer details for targeted pollutants and additional features.

- Biofilter Bag Barrier: Used to create a small retention area upstream of inlets and can be located on pavement or soil. Biofilter bags slowly filter runoff allowing sediment to settle out. Appropriate for flows under 0.5 cfs.

- Compost Socks: Allow filtered run-off to pass through the compost while retaining sediment and potentially other pollutants (SE-13). Appropriate for flows under 1.0 cfs.

- Select the appropriate type of inlet protection and design as referred to or as described in this fact sheet.

- Provide area around the inlet for water to pond without flooding structures and property.

- Grates and spaces around all inlets should be sealed to prevent seepage of sediment-laden water.

- Excavate sediment sumps (where needed) 1 to 2 ft with 2:1 side slopes around the inlet.

Installation

- ***DI Protection Type 1 - Silt Fence -*** Similar to constructing a silt fence; see BMP SE-1, Silt Fence. Do not place fabric underneath the inlet grate since the collected sediment may fall into the drain inlet when the fabric is removed or replaced and water flow through the grate will be blocked resulting in flooding. See typical Type 1 installation details at the end of this fact sheet.

  1. Excavate a trench approximately 6 in. wide and 6 in. deep along the line of the silt fence inlet protection device.

  2. Place 2 in. by 2 in. wooden stakes around the perimeter of the inlet a maximum of 3 ft apart and drive them at least 18 in. into the ground or 12 in. below the bottom of the trench. The stakes should be at least 48 in.

  3. Lay fabric along bottom of trench, up side of trench, and then up stakes. See SE-1, Silt Fence, for details. The maximum silt fence height around the inlet is 24 in.

  4. Staple the filter fabric (for materials and specifications, see SE-1, Silt Fence) to wooden stakes. Use heavy-duty wire staples at least 1 in. in length.

5. Backfill the trench with gravel or compacted earth all the way around.

- ***DI Protection Type 2 - Excavated Drop Inlet Sediment Trap -*** Install filter fabric fence in accordance with DI Protection Type 1. Size excavated trap to provide a minimum storage capacity calculated at the rate 67 yd^3/acre of drainage area. See typical Type 2 installation details at the end of this fact sheet.

- ***DI Protection Type 3 - Gravel bag -*** Flow from a severe storm should not overtop the curb. In areas of high clay and silts, use filter fabric and gravel as additional filter media. Construct gravel bags in accordance with SE-6, Gravel Bag Berm. Gravel bags should be used due to their high permeability. See typical Type 3 installation details at the end of this fact sheet.

  1. Construct on gently sloping street.

  2. Leave room upstream of barrier for water to pond and sediment to settle.

  3. Place several layers of gravel bags – overlapping the bags and packing them tightly together.

  4. Leave gap of one bag on the top row to serve as a spillway. Flow from a severe storm (e.g., 10 year storm) should not overtop the curb.

- ***DI Protection Type 4 – Block and Gravel Filter -*** Block and gravel filters are suitable for curb inlets commonly used in residential, commercial, and industrial construction. See typical Type 4 installation details at the end of this fact sheet.

  1. Place hardware cloth or comparable wire mesh with 0.5 in. openings over the drop inlet so that the wire extends a minimum of 1 ft beyond each side of the inlet structure. If more than one strip is necessary, overlap the strips. Place woven geotextile over the wire mesh.

  2. Place concrete blocks lengthwise on their sides in a single row around the perimeter of the inlet, so that the open ends face outward, not upward. The ends of adjacent blocks should abut. The height of the barrier can be varied, depending on design needs, by stacking combinations of blocks that are 4 in., 8 in., and 12 in. wide. The row of blocks should be at least 12 in. but no greater than 24 in. high.

  3. Place wire mesh over the outside vertical face (open end) of the concrete blocks to prevent stone from being washed through the blocks. Use hardware cloth or comparable wire mesh with 0.5 in. opening.

  4. Pile washed stone against the wire mesh to the top of the blocks. Use 0.75 to 3 in.

- ***DI Protection Type 5 – Temporary Geotextile Insert (proprietary)*** – Many types of temporary inserts are available. Most inserts fit underneath the grate of a drop inlet or inside of a curb inlet and are fastened to the outside of the grate or curb. These inserts are removable and many can be cleaned and reused. Installation of these inserts differs between manufacturers. Please refer to manufacturer instruction for installation of proprietary devices.

- ***DI Protection Type 6 - Biofilter bags*** – Biofilter bags may be used as a substitute for gravel bags in low-flow situations. Biofilter bags should conform to specifications detailed in SE-14, Biofilter bags.

    1. Construct in a gently sloping area.
    2. Biofilter bags should be placed around inlets to intercept runoff flows.
    3. All bag joints should overlap by 6 in.
    4. Leave room upstream for water to pond and for sediment to settle out.
    5. Stake bags to the ground as described in the following detail. Stakes may be omitted if bags are placed on a paved surface.

- ***DI Protection Type 7 – Compost Socks*** – A compost sock can be assembled on site by filling a mesh sock (e.g., with a pneumatic blower). Compost socks do not require special trenching compared to other sediment control methods (e.g., silt fence). Compost socks should conform to specification detailed in SE-13, Compost Socks and Berms.

Costs

- Average annual cost for installation and maintenance of DI Type 1-4 and 6 (one year useful life) is $200 per inlet.
- Temporary geotextile inserts are proprietary and cost varies by region. These inserts can often be reused and may have greater than 1 year of use if maintained and kept undamaged. Average cost per insert ranges from $50-75 plus installation, but costs can exceed $100. This cost does not include maintenance.
- See SE-13 for Compost Sock cost information.

Inspection and Maintenance

- BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Silt Fences. If the fabric becomes clogged, torn, or degrades, it should be replaced. Make sure the stakes are securely driven in the ground and are in good shape (i.e., not bent, cracked, or splintered, and are reasonably perpendicular to the ground). Replace damaged stakes. At a minimum, remove the sediment behind the fabric fence when accumulation reaches one-third the height of the fence or barrier height.
- Gravel Filters. If the gravel becomes clogged with sediment, it should be carefully removed from the inlet and either cleaned or replaced. Since cleaning gravel at a construction site may be difficult, consider using the sediment-laden stone as fill material and put fresh stone around the inlet. Inspect bags for holes, gashes, and snags, and replace bags as needed. Check gravel bags for proper arrangement and displacement.

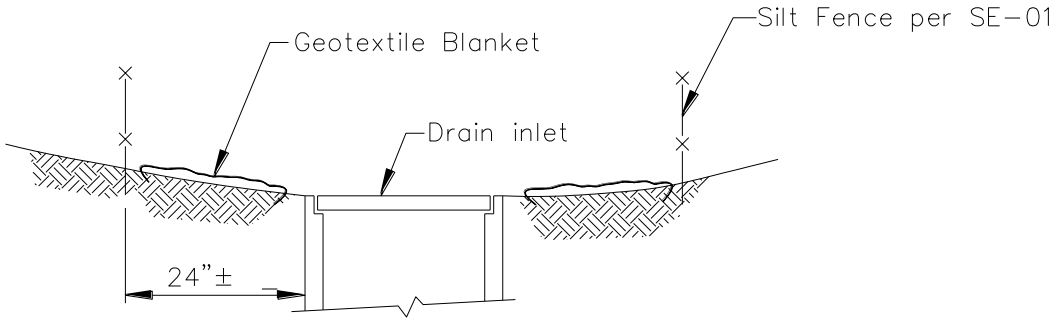
- Sediment that accumulates in the BMP should be periodically removed in order to maintain BMP effectiveness. Sediment should be removed when the sediment accumulation reaches one-third of the barrier height.
- Inspect and maintain temporary geotextile insert devices according to manufacturer's specifications.
- Remove storm drain inlet protection once the drainage area is stabilized.
    - Clean and regrade area around the inlet and clean the inside of the storm drain inlet, as it should be free of sediment and debris at the time of final inspection.

References

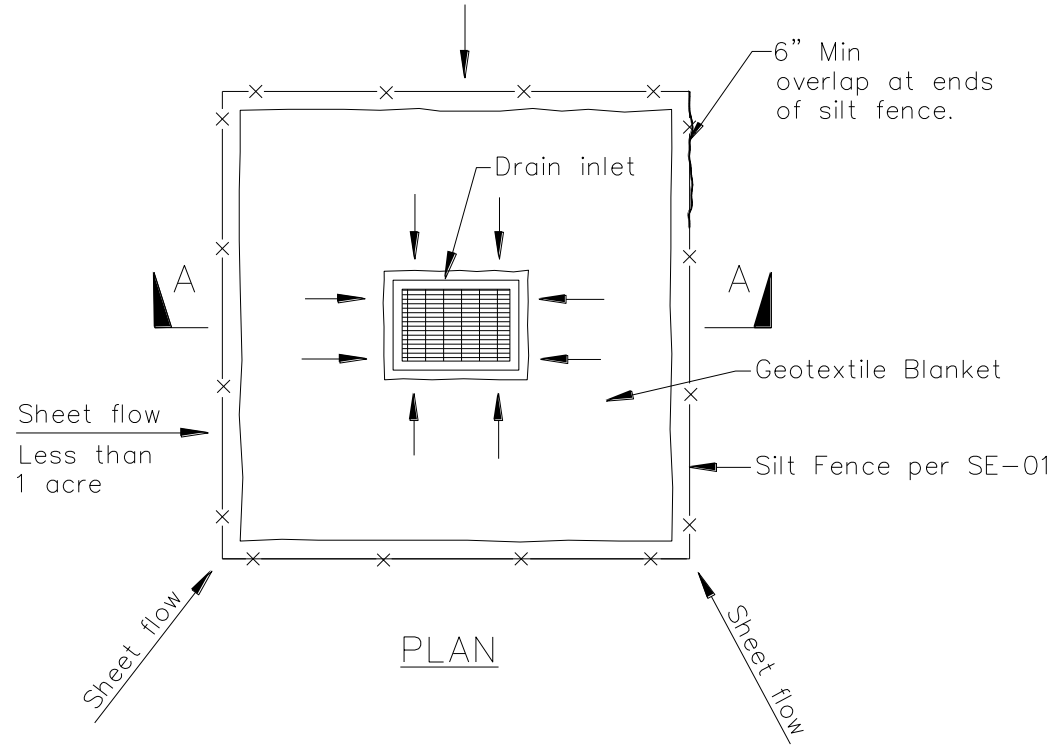
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SECTION A–A

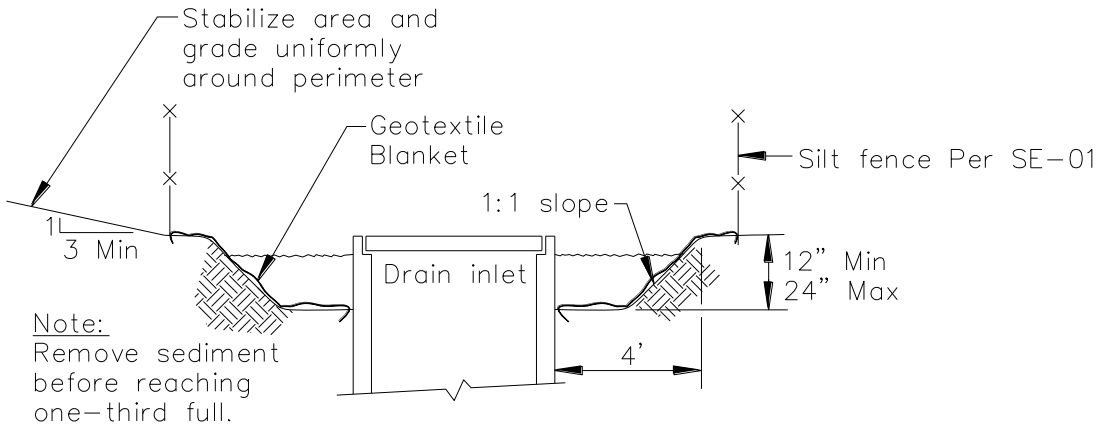


PLAN

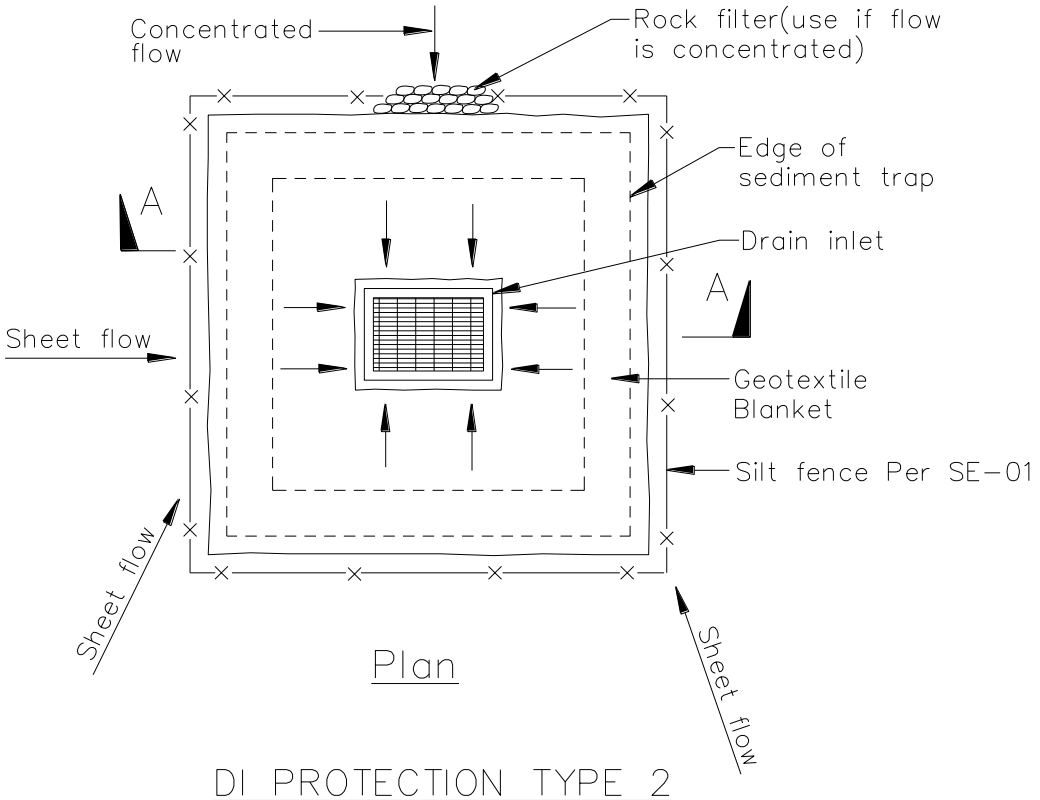
DI PROTECTION TYPE 1
NOT TO SCALE

NOTES:

1. For use in areas where grading has been completed and final soil stabilization and seeding are pending.
2. Not applicable in paved areas.
3. Not applicable with concentrated flows.



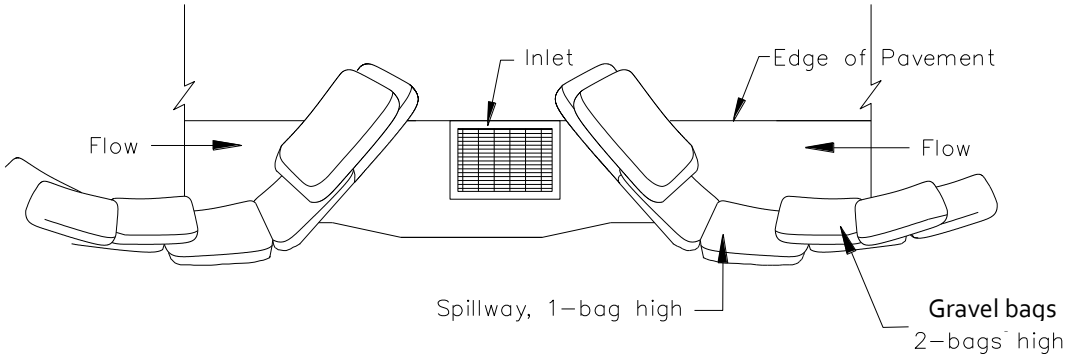
Section A–A



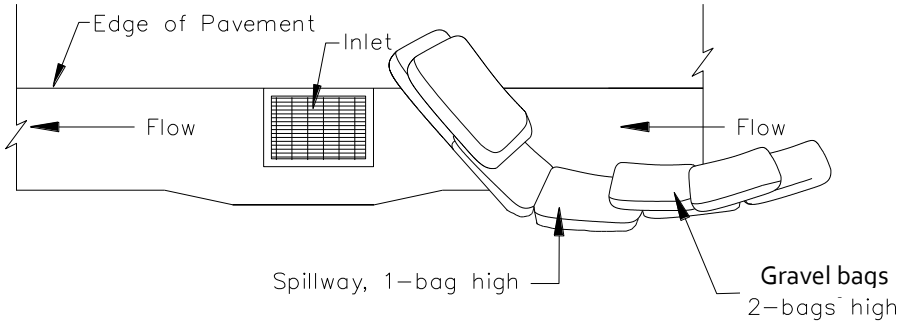
Plan

DI PROTECTION TYPE 2
NOT TO SCALE

Notes
1. For use in cleared and grubbed and in graded areas.
2. Shape basin so that longest inflow area faces longest length of trap.
3. For concentrated flows, shape basin in 2:1 ratio with length oriented towards direction of flow.



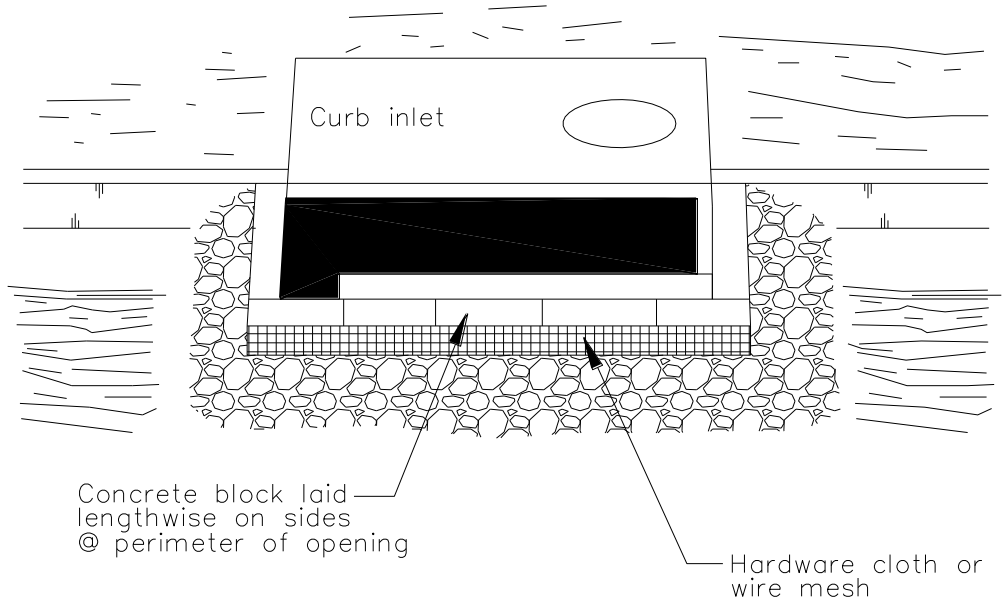
TYPICAL PROTECTION FOR INLET ON SUMP

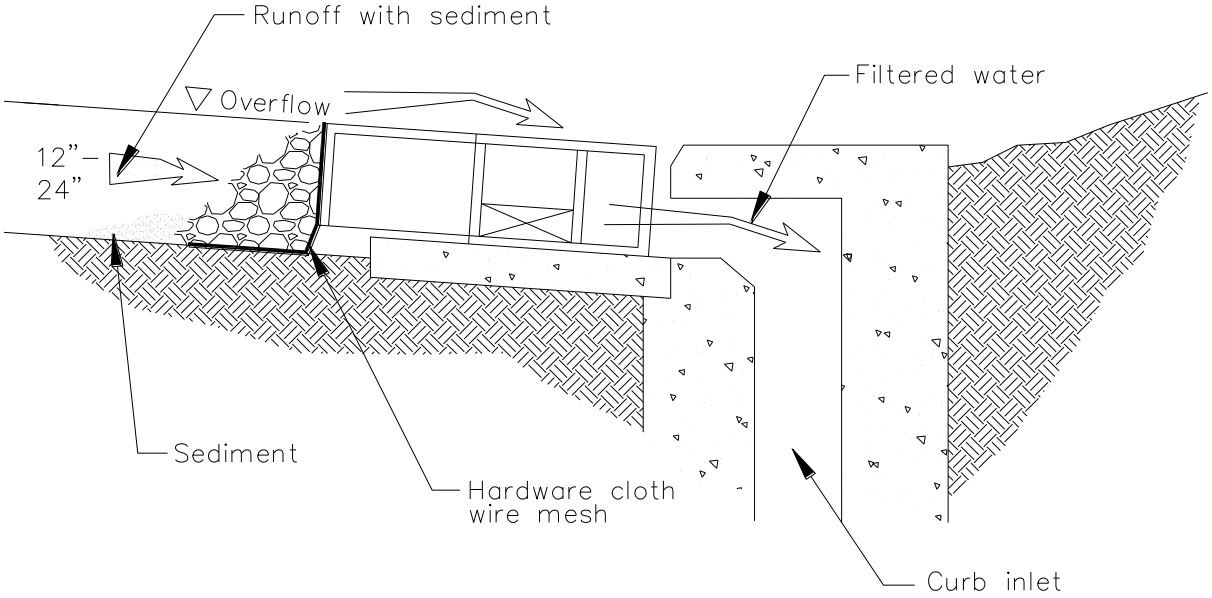


TYPICAL PROTECTION FOR INLET ON GRADE

NOTES:

1. Intended for short-term use.
2. Use to inhibit non-storm water flow.
3. Allow for proper maintenance and cleanup.
4. Bags must be removed after adjacent operation is completed
5. Not applicable in areas with high silts and clays without filter fabric.
6. Protection can be effective even if it is not immediately adjacent to the inlet provided that the inlet is protected from potential sources of pollution.

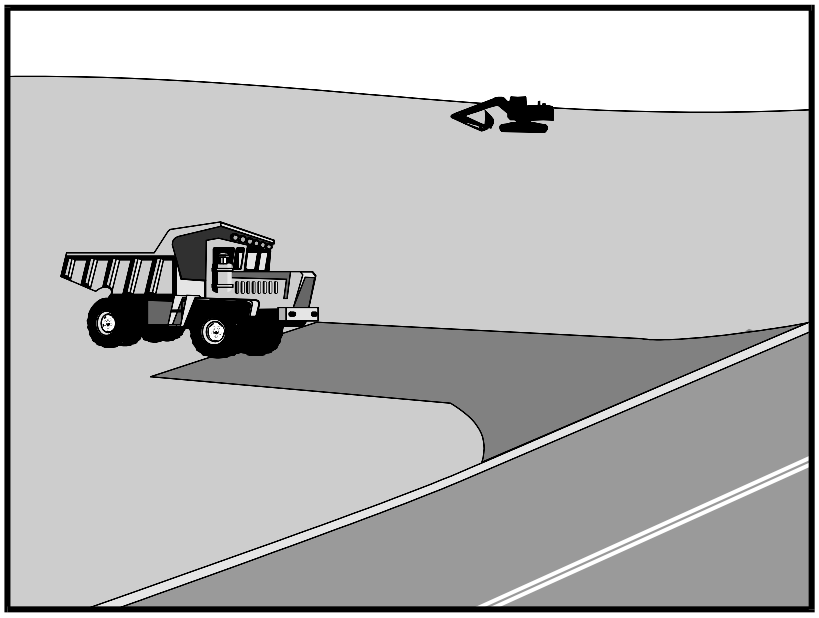




DI PROTECTION – TYPE 4

NOT TO SCALE

Stabilized Construction Entrance / Exit TC-1



Categories

EC	Erosion Control	☒
SE	Sediment Control	☒
TC	Tracking Control	☑
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

☑ **Primary Objective**

☒ **Secondary Objective**

Targeted Constituents

Sediment	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

None

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Description and Purpose

A stabilized construction access is defined by a point of entrance/exit to a construction site that is stabilized to reduce the tracking of mud and dirt onto public roads by construction vehicles.

Suitable Applications

Use at construction sites:

- Where dirt or mud can be tracked onto public roads.
- Adjacent to water bodies.
- Where poor soils are encountered.
- Where dust is a problem during dry weather conditions.

Limitations

- Entrances and exits require periodic top dressing with additional stones.
- This BMP should be used in conjunction with street sweeping on adjacent public right of way.
- Entrances and exits should be constructed on level ground only.
- Stabilized construction entrances are rather expensive to construct and when a wash rack is included, a sediment trap of some kind must also be provided to collect wash water runoff.

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Implementation

General

A stabilized construction entrance is a pad of aggregate underlain with filter cloth located at any point where traffic will be entering or leaving a construction site to or from a public right of way, street, alley, sidewalk, or parking area. The purpose of a stabilized construction entrance is to reduce or eliminate the tracking of sediment onto public rights of way or streets. Reducing tracking of sediments and other pollutants onto paved roads helps prevent deposition of sediments into local storm drains and production of airborne dust.

Where traffic will be entering or leaving the construction site, a stabilized construction entrance should be used. NPDES permits require that appropriate measures be implemented to prevent tracking of sediments onto paved roadways, where a significant source of sediments is derived from mud and dirt carried out from unpaved roads and construction sites.

Stabilized construction entrances are moderately effective in removing sediment from equipment leaving a construction site. The entrance should be built on level ground. Advantages of the Stabilized Construction Entrance/Exit is that it does remove some sediment from equipment and serves to channel construction traffic in and out of the site at specified locations. Efficiency is greatly increased when a washing rack is included as part of a stabilized construction entrance/exit.

Design and Layout

- Construct on level ground where possible.
- Select 3 to 6 in. diameter stones.
- Use minimum depth of stones of 12 in. or as recommended by soils engineer.
- Construct length of 50 ft or maximum site will allow, and 10 ft minimum width or to accommodate traffic.
- Rumble racks constructed of steel panels with ridges and installed in the stabilized entrance/exit will help remove additional sediment and to keep adjacent streets clean.
- Provide ample turning radii as part of the entrance.
- Limit the points of entrance/exit to the construction site.
- Limit speed of vehicles to control dust.
- Properly grade each construction entrance/exit to prevent runoff from leaving the construction site.
- Route runoff from stabilized entrances/exits through a sediment trapping device before discharge.
- Design stabilized entrance/exit to support heaviest vehicles and equipment that will use it.

- Select construction access stabilization (aggregate, asphaltic concrete, concrete) based on longevity, required performance, and site conditions. Do not use asphalt concrete (AC) grindings for stabilized construction access/roadway.
- If aggregate is selected, place crushed aggregate over geotextile fabric to at least 12 in. depth, or place aggregate to a depth recommended by a geotechnical engineer. A crushed aggregate greater than 3 in. but smaller than 6 in. should be used.
- Designate combination or single purpose entrances and exits to the construction site.
- Require that all employees, subcontractors, and suppliers utilize the stabilized construction access.
- Implement SE-7, Street Sweeping and Vacuuming, as needed.
- All exit locations intended to be used for more than a two-week period should have stabilized construction entrance/exit BMPs.

Inspection and Maintenance

- Inspect and verify that activity–based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMPs are under way, inspect BMPs in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Inspect local roads adjacent to the site daily. Sweep or vacuum to remove visible accumulated sediment.
- Remove aggregate, separate and dispose of sediment if construction entrance/exit is clogged with sediment.
- Keep all temporary roadway ditches clear.
- Check for damage and repair as needed.
- Replace gravel material when surface voids are visible.
- Remove all sediment deposited on paved roadways within 24 hours.
- Remove gravel and filter fabric at completion of construction

Costs

Average annual cost for installation and maintenance may vary from $1,200 to $4,800 each, averaging $2,400 per entrance. Costs will increase with addition of washing rack, and sediment trap. With wash rack, costs range from $1,200 - $6,000 each, averaging $3,600 per entrance.

References

Manual of Standards of Erosion and Sediment Control Measures, Association of Bay Area Governments, May 1995.

National Management Measures to Control Nonpoint Source Pollution from Urban Areas, USEPA Agency, 2002.

Proposed Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters, Work Group Working Paper, USEPA, April 1992.

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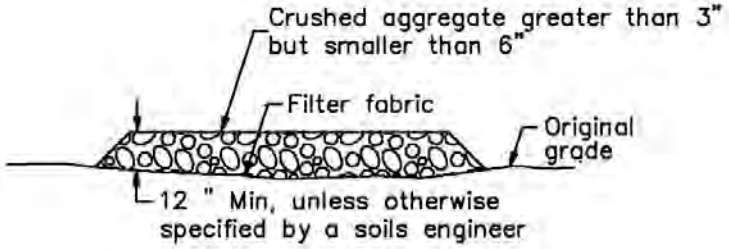
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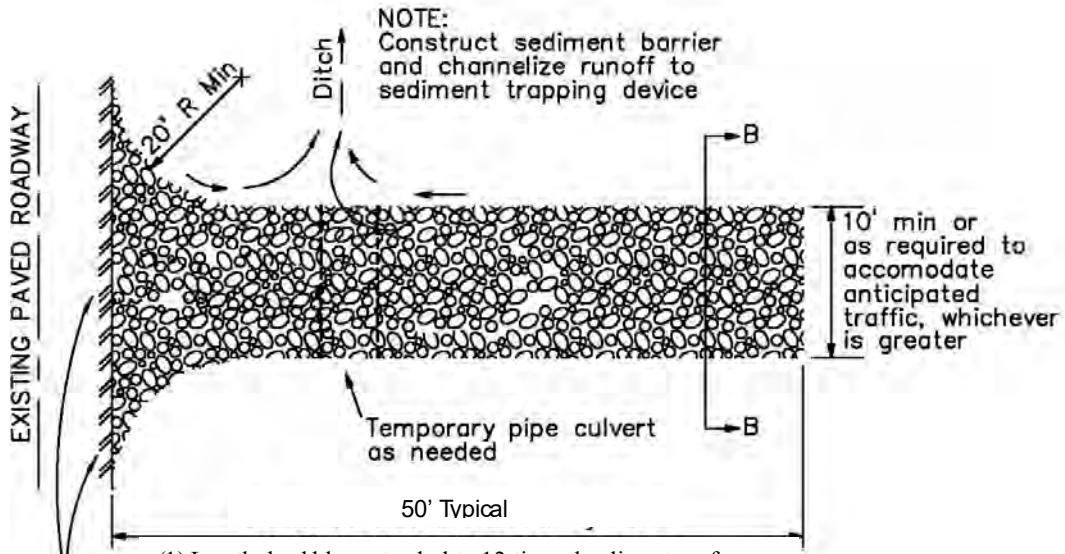
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Water Quality Management Plan for the Lake Tahoe Region, Volume II, Handbook of Management Practices, Tahoe Regional Planning Agency, November 1988.

Stabilized Construction Entrance / Exit TC-1



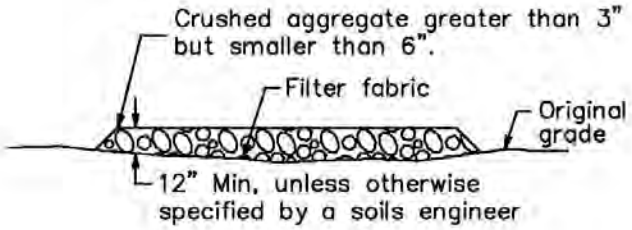
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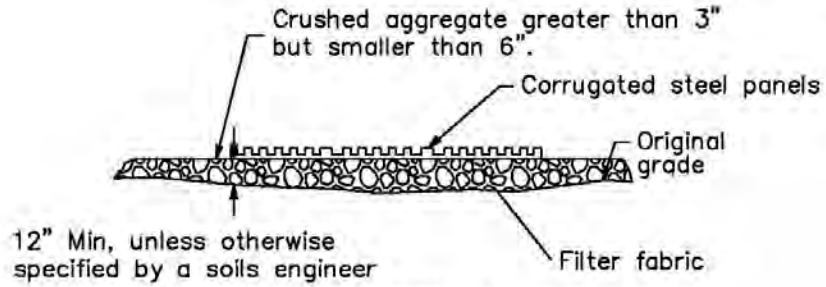
(1) Length should be extended to 12 times the diameter of the largest construction vehicle tire.
(2) On small sites length should be the maximum allowed by site.

PLAN
NTS

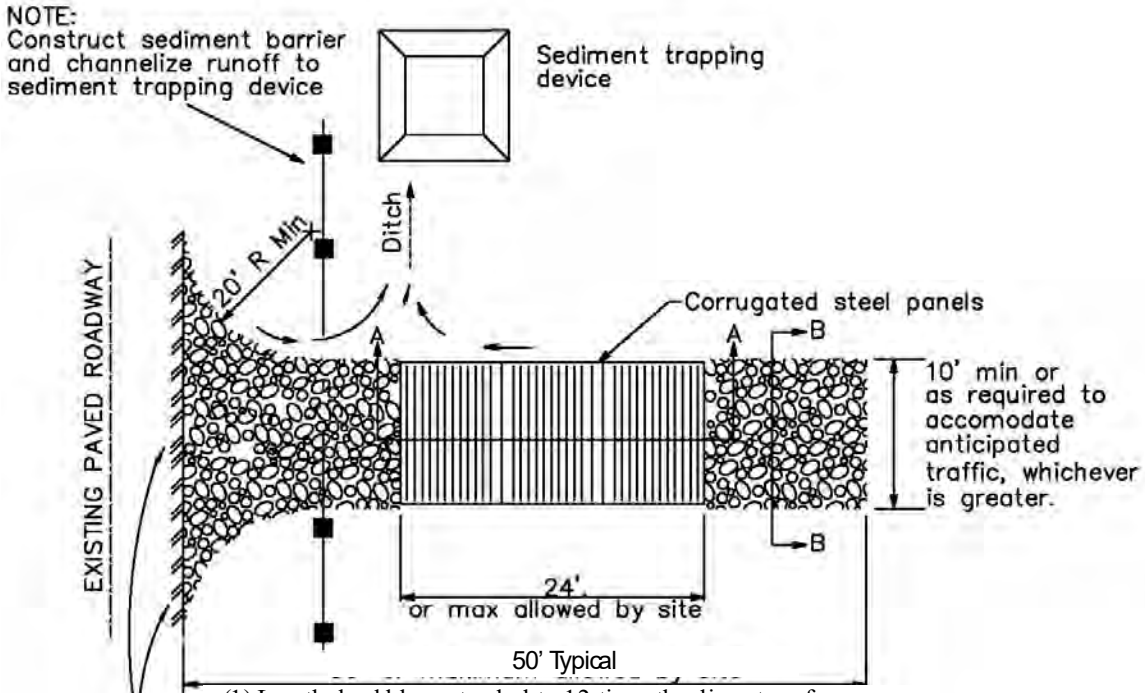
Stabilized Construction Entrance / Exit TC-1



SECTION B–B
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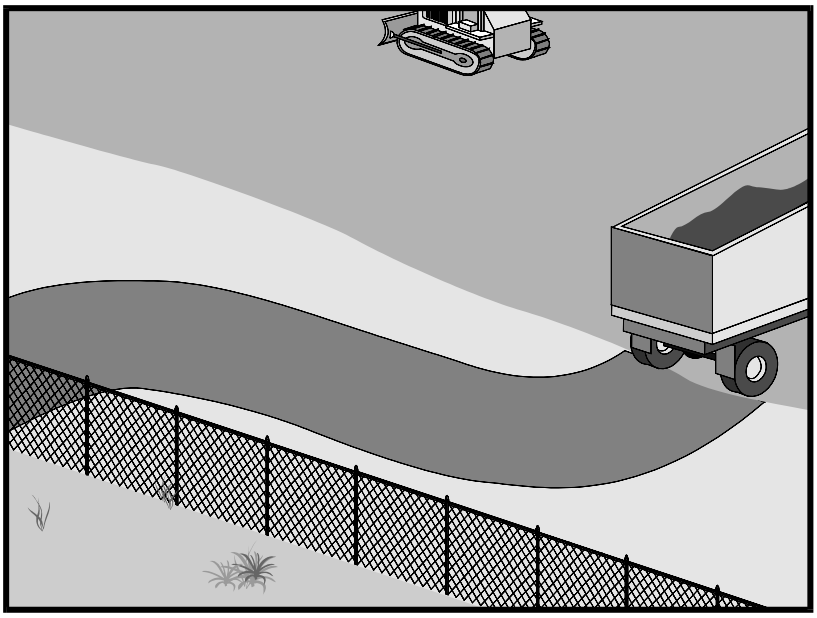
SECTION A–A
NOT TO SCALE



(1) Length should be extended to 12 times the diameter of the largest construction vehicle tire.
(2) On small sites length should be the maximum allowed by site.

PLAN
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Stabilized Construction Roadway TC-2



Description and Purpose

Access roads, subdivision roads, parking areas, and other onsite vehicle transportation routes should be stabilized immediately after grading, and frequently maintained to prevent erosion and control dust.

Suitable Applications

This BMP should be applied for the following conditions:

- Temporary Construction Traffic:
  - Phased construction projects and offsite road access
  - Construction during wet weather
- Construction roadways and detour roads:
  - Where mud tracking is a problem during wet weather
  - Where dust is a problem during dry weather
  - Adjacent to water bodies
  - Where poor soils are encountered

Limitations

- The roadway must be removed or paved when construction is complete.

Categories

EC	Erosion Control	☒
SE	Sediment Control	☒
TC	Tracking Control	☑
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

☑ **Primary Objective**

☒ **Secondary Objective**

Targeted Constituents

Sediment	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

None

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- Certain chemical stabilization methods may cause stormwater or soil pollution and should not be used. See WE-1, Wind Erosion Control.
- Management of construction traffic is subject to air quality control measures. Contact the local air quality management agency.
- Materials will likely need to be removed prior to final project grading and stabilization.
- Use of this BMP may not be applicable to very short duration projects.

Implementation

General

Areas that are graded for construction vehicle transport and parking purposes are especially susceptible to erosion and dust. The exposed soil surface is continually disturbed, leaving no opportunity for vegetative stabilization. Such areas also tend to collect and transport runoff waters along their surfaces. During wet weather, they often become muddy quagmires that generate significant quantities of sediment that may pollute nearby streams or be transported offsite on the wheels of construction vehicles. Dirt roads can become so unstable during wet weather that they are virtually unusable.

Efficient construction road stabilization not only reduces onsite erosion but also can significantly speed onsite work, avoid instances of immobilized machinery and delivery vehicles, and generally improve site efficiency and working conditions during adverse weather

Installation/Application Criteria

Permanent roads and parking areas should be paved as soon as possible after grading. As an alternative where construction will be phased, the early application of gravel or chemical stabilization may solve potential erosion and stability problems. Temporary gravel roadway should be considered during the rainy season and on slopes greater than 5%.

Temporary roads should follow the contour of the natural terrain to the maximum extent possible. Slope should not exceed 15%. Roadways should be carefully graded to drain transversely. Provide drainage swales on each side of the roadway in the case of a crowned section or one side in the case of a super elevated section. Simple gravel berms without a trench can also be used.

Installed inlets should be protected to prevent sediment laden water from entering the storm sewer system (SE-10, Storm Drain Inlet Protection). In addition, the following criteria should be considered.

- Road should follow topographic contours to reduce erosion of the roadway.
- The roadway slope should not exceed 15%.
- Chemical stabilizers or water are usually required on gravel or dirt roads to prevent dust (WE-1, Wind Erosion Control).
- Properly grade roadway to prevent runoff from leaving the construction site.
- Design stabilized access to support heaviest vehicles and equipment that will use it.

- Stabilize roadway using aggregate, asphalt concrete, or concrete based on longevity, required performance, and site conditions. The use of cold mix asphalt or asphalt concrete (AC) grindings for stabilized construction roadway is not allowed.
- Coordinate materials with those used for stabilized construction entrance/exit points.
- If aggregate is selected, place crushed aggregate over geotextile fabric to at least 12 in. depth. A crushed aggregate greater than 3 in. but smaller than 6 in. should be used.

Inspection and Maintenance

- Inspect and verify that activity–based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, inspect BMPs in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Keep all temporary roadway ditches clear.
- When no longer required, remove stabilized construction roadway and re-grade and repair slopes.
- Periodically apply additional aggregate on gravel roads.
- Active dirt construction roads are commonly watered three or more times per day during the dry season.

Costs

Gravel construction roads are moderately expensive, but cost is often balanced by reductions in construction delay. No additional costs for dust control on construction roads should be required above that needed to meet local air quality requirements.

References

Blueprint for a Clean Bay: Best Management Practices to Prevent Stormwater Pollution from Construction Related Activities; Santa Clara Valley Nonpoint Source Pollution Control Program, 1995.

Coastal Nonpoint Pollution Control Program; Program Development and Approval Guidance, Working Group, Working Paper; USEPA, April 1992.

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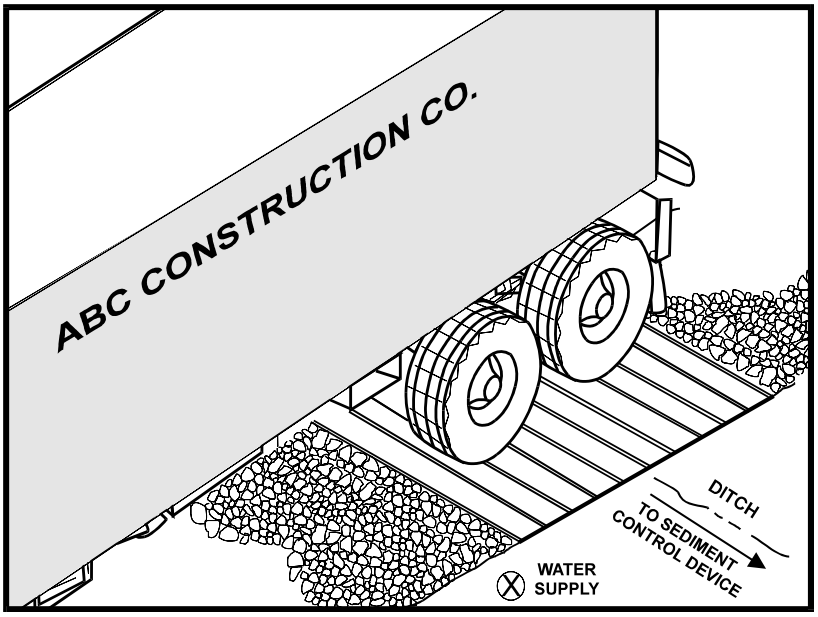
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Virginia Erosion and Sedimentation Control Handbook, Virginia Department of Conservation and Recreation, Division of Soil and Water Conservation, 1991.

Water Quality Management Plan for the Lake Tahoe Region, Volume II, Handbook of Management Practices, Tahoe Regional Planning Agency, November 1988.

Entrance/Outlet Tire Wash TC-3



Description and Purpose

A tire wash is an area located at stabilized construction access points to remove sediment from tires and under carriages and to prevent sediment from being transported onto public roadways.

Suitable Applications

Tire washes may be used on construction sites where dirt and mud tracking onto public roads by construction vehicles may occur.

Limitations

- The tire wash requires a supply of wash water.
- A turnout or doublewide exit is required to avoid having entering vehicles drive through the wash area.
- Do not use where wet tire trucks leaving the site leave the road dangerously slick.

Implementation

- Incorporate with a stabilized construction entrance/exit. See TC-1, Stabilized Construction Entrance/Exit.
- Construct on level ground when possible, on a pad of coarse aggregate greater than 3 in. but smaller than 6 in. A geotextile fabric should be placed below the aggregate.
- Wash rack should be designed and constructed/manufactured for anticipated traffic loads.

Categories

EC	Erosion Control	
SE	Sediment Control	☒
TC	Tracking Control	☑
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

☑ **Primary Objective**

☒ **Secondary Objective**

Targeted Constituents

Sediment	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

TC-1 Stabilized Construction Entrance/Exit

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- Provide a drainage ditch that will convey the runoff from the wash area to a sediment trapping device. The drainage ditch should be of sufficient grade, width, and depth to carry the wash runoff.
- Use hoses with automatic shutoff nozzles to prevent hoses from being left on.
- Require that all employees, subcontractors, and others that leave the site with mud caked tires and undercarriages to use the wash facility.
- Implement SC-7, Street Sweeping and Vacuuming, as needed.

Costs

Costs are low for installation of wash rack.

Inspection and Maintenance

- Inspect and verify that activity–based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, inspect BMPs in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Inspect BMPs subject to non-stormwater discharge daily while non-stormwater discharges occur.
- Remove accumulated sediment in wash rack and/or sediment trap to maintain system performance.
- Inspect routinely for damage and repair as needed.

References

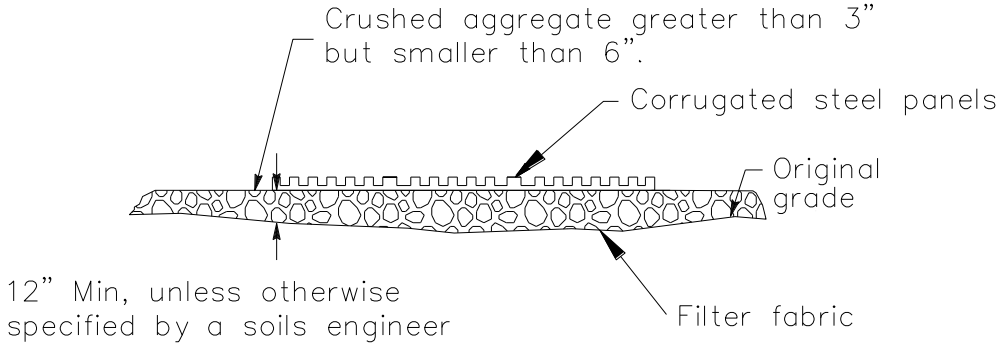
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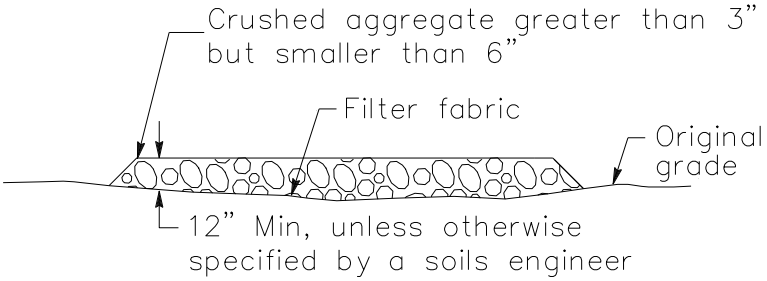
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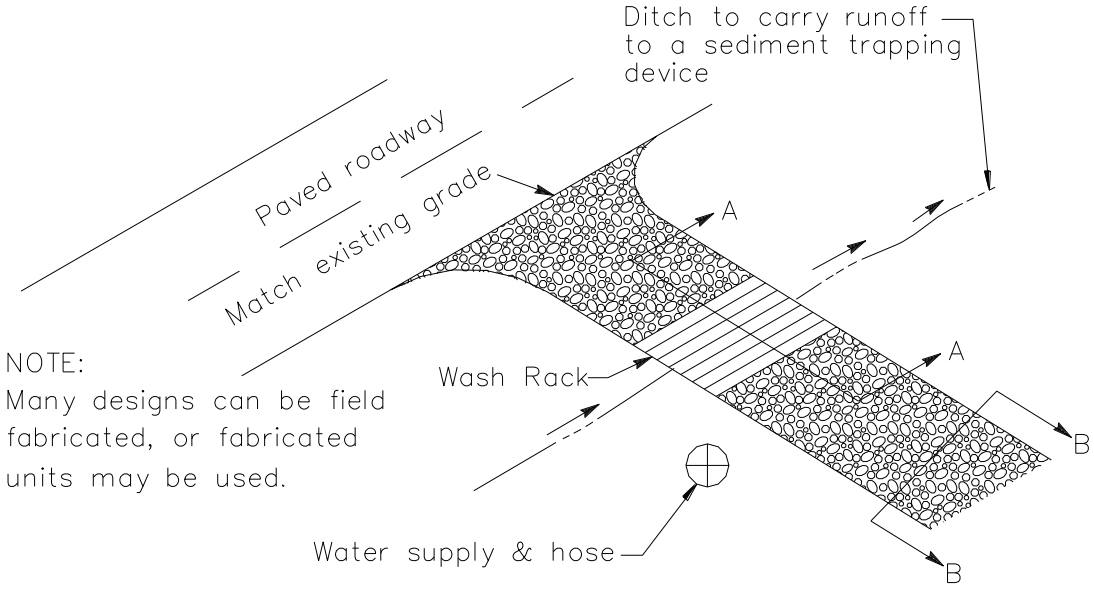
Stormwater Management for Construction Activities, Developing Pollution Prevention Plans and Best Management Practices, EPA 832-R-92005; USEPA, April 1992.



SECTION A–A
NOT TO SCALE

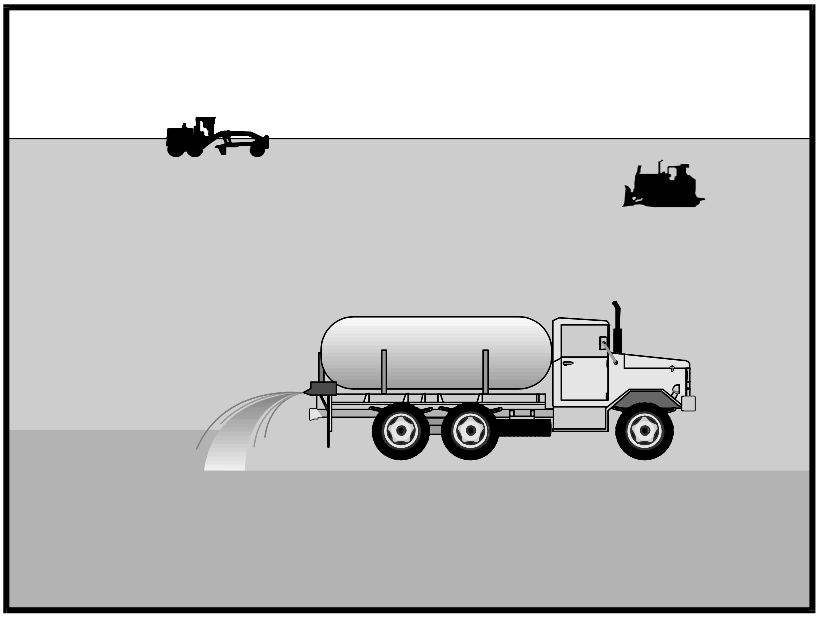


SECTION B–B
NTS



TYPICAL TIRE WASH
NOT TO SCALE

Wind Erosion Control WE-1



Categories

EC	Erosion Control	
SE	Sediment Control	☒
TC	Tracking Control	
WE	Wind Erosion Control	☑
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

☑ **Primary Category**

☒ **Secondary Category**

Targeted Constituents

Sediment	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

EC-5 Soil Binders

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Description and Purpose

Wind erosion or dust control consists of applying water or other chemical dust suppressants as necessary to prevent or alleviate dust nuisance generated by construction activities. Covering small stockpiles or areas is an alternative to applying water or other dust palliatives.

California's Mediterranean climate, with a short "wet" season and a typically long, hot "dry" season, allows the soils to thoroughly dry out. During the dry season, construction activities are at their peak, and disturbed and exposed areas are increasingly subject to wind erosion, sediment tracking and dust generated by construction equipment. Site conditions and climate can make dust control more of an erosion problem than water based erosion. Additionally, many local agencies, including Air Quality Management Districts, require dust control and/or dust control permits in order to comply with local nuisance laws, opacity laws (visibility impairment) and the requirements of the Clean Air Act. Wind erosion control is required to be implemented at all construction sites greater than 1 acre by the General Permit.

Suitable Applications

Most BMPs that provide protection against water-based erosion will also protect against wind-based erosion and dust control requirements required by other agencies will generally meet wind erosion control requirements for water quality protection. Wind erosion control BMPs are suitable during the following construction activities:

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- Construction vehicle traffic on unpaved roads
- Drilling and blasting activities
- Soils and debris storage piles
- Batch drop from front-end loaders
- Areas with unstabilized soil
- Final grading/site stabilization

Limitations

- Watering prevents dust only for a short period (generally less than a few hours) and should be applied daily (or more often) to be effective.
- Over watering may cause erosion and track-out.
- Oil or oil-treated subgrade should not be used for dust control because the oil may migrate into drainageways and/or seep into the soil.
- Chemical dust suppression agents may have potential environmental impacts. Selected chemical dust control agents should be environmentally benign.
- Effectiveness of controls depends on soil, temperature, humidity, wind velocity and traffic.
- Chemical dust suppression agents should not be used within 100 feet of wetlands or water bodies.
- Chemically treated subgrades may make the soil water repellant, interfering with long-term infiltration and the vegetation/re-vegetation of the site. Some chemical dust suppressants may be subject to freezing and may contain solvents and should be handled properly.
- In compacted areas, watering and other liquid dust control measures may wash sediment or other constituents into the drainage system.
- If the soil surface has minimal natural moisture, the affected area may need to be pre-wetted so that chemical dust control agents can uniformly penetrate the soil surface.

Implementation

Dust Control Practices

Dust control BMPs generally stabilize exposed surfaces and minimize activities that suspend or track dust particles. The following table presents dust control practices that can be applied to varying site conditions that could potentially cause dust. For heavily traveled and disturbed areas, wet suppression (watering), chemical dust suppression, gravel asphalt surfacing, temporary gravel construction entrances, equipment wash-out areas, and haul truck covers can be employed as dust control applications. Permanent or temporary vegetation and mulching can be employed for areas of occasional or no construction traffic. Preventive measures include minimizing surface areas to be disturbed, limiting onsite vehicle traffic to 15 mph or less, and controlling the number and activity of vehicles on a site at any given time.

Chemical dust suppressants include: mulch and fiber based dust palliatives (e.g. paper mulch with gypsum binder), salts and brines (e.g. calcium chloride, magnesium chloride), non-petroleum based organics (e.g. vegetable oil, lignosulfonate), petroleum based organics (e.g. asphalt emulsion, dust oils, petroleum resins), synthetic polymers (e.g. polyvinyl acetate, vinyls, acrylic), clay additives (e.g. bentonite, montimorillonite) and electrochemical products (e.g. enzymes, ionic products).

Site Condition	Dust Control Practices							
	Permanent Vegetation	Mulching	Wet Suppression (Watering)	Chemical Dust Suppression	Gravel or Asphalt	Temporary Gravel Construction Entrances/Equipment Wash Down	Synthetic Covers	Minimize Extent of Disturbed Area
Disturbed Areas not Subject to Traffic	x	x	x	x	x			x
Disturbed Areas Subject to Traffic			x	x	x	x		x
Material Stockpiles		x	x	x			x	x
Demolition			x			x	x	
Clearing/ Excavation			x	x				x
Truck Traffic on Unpaved Roads			x	x	x	x	x	
Tracking					x	x		

Additional preventive measures include:

- Schedule construction activities to minimize exposed area (see EC-1, Scheduling).
- Quickly treat exposed soils using water, mulching, chemical dust suppressants, or stone/gravel layering.
- Identify and stabilize key access points prior to commencement of construction.
- Minimize the impact of dust by anticipating the direction of prevailing winds.
- Restrict construction traffic to stabilized roadways within the project site, as practicable.
- Water should be applied by means of pressure-type distributors or pipelines equipped with a spray system or hoses and nozzles that will ensure even distribution.
- All distribution equipment should be equipped with a positive means of shutoff.
- Unless water is applied by means of pipelines, at least one mobile unit should be available at all times to apply water or dust palliative to the project.
- If reclaimed waste water is used, the sources and discharge must meet California Department of Health Services water reclamation criteria and the Regional Water Quality

Control Board (RWQCB) requirements. Non-potable water should not be conveyed in tanks or drain pipes that will be used to convey potable water and there should be no connection between potable and non-potable supplies. Non-potable tanks, pipes, and other conveyances should be marked, "NON-POTABLE WATER - DO NOT DRINK."

- Pave or chemically stabilize access points where unpaved traffic surfaces adjoin paved roads.
- Provide covers for haul trucks transporting materials that contribute to dust.
- Provide for rapid clean up of sediments deposited on paved roads. Furnish stabilized construction road entrances and wheel wash areas.
- Stabilize inactive areas of construction sites using temporary vegetation or chemical stabilization methods.

For chemical stabilization, there are many products available for chemically stabilizing gravel roadways and stockpiles. If chemical stabilization is used, the chemicals should not create any adverse effects on stormwater, plant life, or groundwater and should meet all applicable regulatory requirements.

Costs

Installation costs for water and chemical dust suppression vary based on the method used and the length of effectiveness. Annual costs may be high since some of these measures are effective for only a few hours to a few days.

Inspection and Maintenance

- Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities.
- BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Check areas protected to ensure coverage.
- Most water-based dust control measures require frequent application, often daily or even multiple times per day. Obtain vendor or independent information on longevity of chemical dust suppressants.

References

Best Management Practices and Erosion Control Manual for Construction Sites, Flood Control District of Maricopa County, Arizona, September 1992.

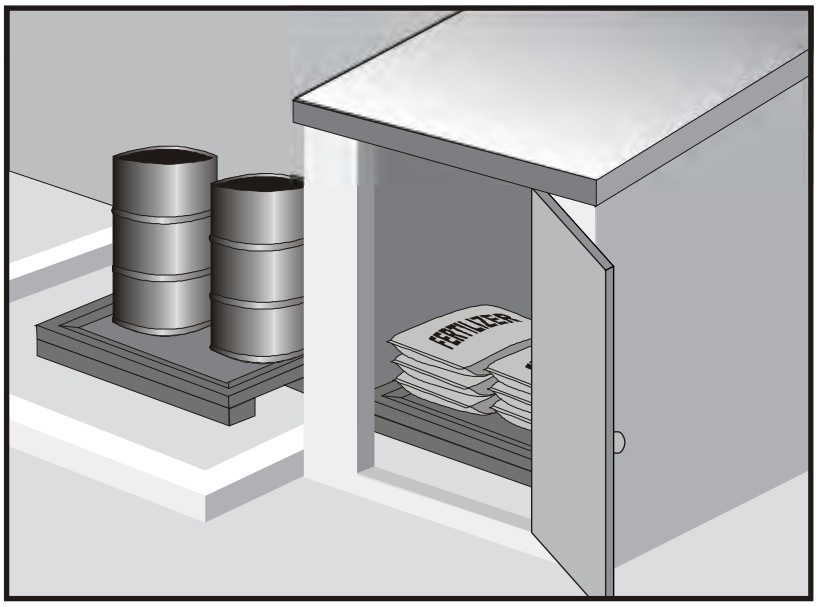
California Air Pollution Control Laws, California Air Resources Board, updated annually.

Construction Manual, Chapter 4, Section 10, "Dust Control"; Section 17, "Watering"; and Section 18, "Dust Palliative", California Department of Transportation (Caltrans), July 2001.

Prospects for Attaining the State Ambient Air Quality Standards for Suspended Particulate Matter (PM10), Visibility Reducing Particles, Sulfates, Lead, and Hydrogen Sulfide, California Air Resources Board, April 1991.

Stormwater Quality Handbooks Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), March 2003.

Material Delivery and Storage WM-1



Categories

EC	Erosion Control	
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	☑

Legend:

☑ **Primary Category**

☒ **Secondary Category**

Description and Purpose

Prevent, reduce, or eliminate the discharge of pollutants from material delivery and storage to the stormwater system or watercourses by minimizing the storage of hazardous materials onsite, storing materials in watertight containers and/or a completely enclosed designated area, installing secondary containment, conducting regular inspections, and training employees and subcontractors.

This best management practice covers only material delivery and storage. For other information on materials, see WM-2, Material Use, or WM-4, Spill Prevention and Control. For information on wastes, see the waste management BMPs in this section.

Suitable Applications

These procedures are suitable for use at all construction sites with delivery and storage of the following materials:

- Soil stabilizers and binders
- Pesticides and herbicides
- Fertilizers
- Detergents
- Plaster
- Petroleum products such as fuel, oil, and grease

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	
Oil and Grease	☑
Organics	☑

Potential Alternatives

None

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- Asphalt and concrete components
- Hazardous chemicals such as acids, lime, glues, adhesives, paints, solvents, and curing compounds
- Concrete compounds
- Other materials that may be detrimental if released to the environment

Limitations

- Space limitation may preclude indoor storage.
- Storage sheds often must meet building and fire code requirements.

Implementation

The following steps should be taken to minimize risk:

- Chemicals must be stored in water tight containers with appropriate secondary containment or in a storage shed.
- When a material storage area is located on bare soil, the area should be lined and bermed.
- Use containment pallets or other practical and available solutions, such as storing materials within newly constructed buildings or garages, to meet material storage requirements.
- Stack erodible landscape material on pallets and cover when not in use.
- Contain all fertilizers and other landscape materials when not in use.
- Temporary storage areas should be located away from vehicular traffic.
- Material Safety Data Sheets (MSDS) should be available on-site for all materials stored that have the potential to effect water quality.
- Construction site areas should be designated for material delivery and storage.
- Material delivery and storage areas should be located away from waterways, if possible.
    - Avoid transport near drainage paths or waterways.
    - Surround with earth berms or other appropriate containment BMP. See EC-9, Earth Dikes and Drainage Swales.
    - Place in an area that will be paved.
- Storage of reactive, ignitable, or flammable liquids must comply with the fire codes of your area. Contact the local Fire Marshal to review site materials, quantities, and proposed storage area to determine specific requirements. See the Flammable and Combustible Liquid Code, NFPA30.
- An up to date inventory of materials delivered and stored onsite should be kept.

- Hazardous materials storage onsite should be minimized.
- Hazardous materials should be handled as infrequently as possible.
- Keep ample spill cleanup supplies appropriate for the materials being stored. Ensure that cleanup supplies are in a conspicuous, labeled area.
- Employees and subcontractors should be trained on the proper material delivery and storage practices.
- Employees trained in emergency spill cleanup procedures must be present when dangerous materials or liquid chemicals are unloaded.
- If significant residual materials remain on the ground after construction is complete, properly remove and dispose of materials and any contaminated soil. See WM-7, Contaminated Soil Management. If the area is to be paved, pave as soon as materials are removed to stabilize the soil.

Material Storage Areas and Practices

- Liquids, petroleum products, and substances listed in 40 CFR Parts 110, 117, or 302 should be stored in approved containers and drums and should not be overfilled. Containers and drums should be placed in temporary containment facilities for storage.
- A temporary containment facility should provide for a spill containment volume able to contain precipitation from a 25 year storm event, plus the greater of 10% of the aggregate volume of all containers or 100% of the capacity of the largest container within its boundary, whichever is greater.
- A temporary containment facility should be impervious to the materials stored therein for a minimum contact time of 72 hours.
- A temporary containment facility should be maintained free of accumulated rainwater and spills. In the event of spills or leaks, accumulated rainwater and spills should be collected and placed into drums. These liquids should be handled as a hazardous waste unless testing determines them to be non-hazardous. All collected liquids or non-hazardous liquids should be sent to an approved disposal site.
- Sufficient separation should be provided between stored containers to allow for spill cleanup and emergency response access.
- Incompatible materials, such as chlorine and ammonia, should not be stored in the same temporary containment facility.
- Materials should be covered prior to, and during rain events.
- Materials should be stored in their original containers and the original product labels should be maintained in place in a legible condition. Damaged or otherwise illegible labels should be replaced immediately.

- Bagged and boxed materials should be stored on pallets and should not be allowed to accumulate on the ground. To provide protection from wind and rain throughout the rainy season, bagged and boxed materials should be covered during non-working days and prior to and during rain events.
- Stockpiles should be protected in accordance with WM-3, Stockpile Management.
- Materials should be stored indoors within existing structures or completely enclosed storage sheds when available.
- Proper storage instructions should be posted at all times in an open and conspicuous location.
- An ample supply of appropriate spill clean up material should be kept near storage areas.
- Also see WM-6, Hazardous Waste Management, for storing of hazardous wastes.

Material Delivery Practices

- Keep an accurate, up-to-date inventory of material delivered and stored onsite.
- Arrange for employees trained in emergency spill cleanup procedures to be present when dangerous materials or liquid chemicals are unloaded.

Spill Cleanup

- Contain and clean up any spill immediately.
- Properly remove and dispose of any hazardous materials or contaminated soil if significant residual materials remain on the ground after construction is complete. See WM-7, Contaminated Soil Management.
- See WM-4, Spill Prevention and Control, for spills of chemicals and/or hazardous materials.
- If spills or leaks of materials occur that are not contained and could discharge to surface waters, non-visible sampling of site discharge may be required. Refer to the General Permit or to your project specific Construction Site Monitoring Plan to determine if and where sampling is required.

Cost

- The largest cost of implementation may be in the construction of a materials storage area that is covered and provides secondary containment.

Inspection and Maintenance

- BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Keep storage areas clean and well organized, including a current list of all materials onsite.
- Inspect labels on containers for legibility and accuracy.

- Repair or replace perimeter controls, containment structures, covers, and liners as needed to maintain proper function.

References

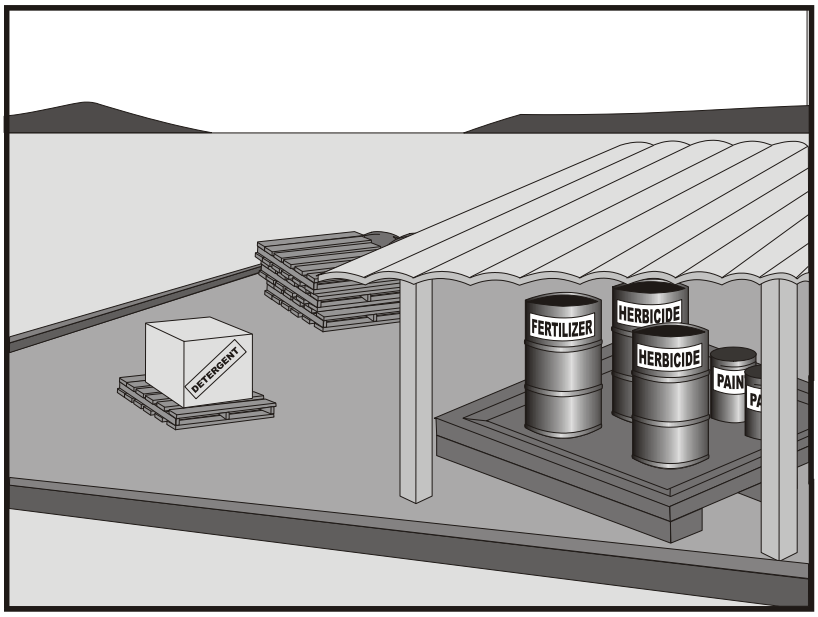
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Coastal Nonpoint Pollution Control Program: Program Development and Approval Guidance, Working Group Working Paper; USEPA, April 1992.

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Stormwater Management for Construction Activities; Developing Pollution Prevention Plans and Best Management Practice, EPA 832-R-92005; USEPA, April 1992.

Material Use WM-2



Categories

EC	Erosion Control	
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	☑

Legend:

☑ **Primary Category**

☒ **Secondary Category**

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	
Oil and Grease	☑
Organics	☑

Potential Alternatives

None

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Description and Purpose

Prevent or reduce the discharge of pollutants to the storm drain system or watercourses from material use by using alternative products, minimizing hazardous material use onsite, and training employees and subcontractors.

Suitable Applications

This BMP is suitable for use at all construction projects. These procedures apply when the following materials are used or prepared onsite:

- Pesticides and herbicides
- Fertilizers
- Detergents
- Petroleum products such as fuel, oil, and grease
- Asphalt and other concrete components
- Other hazardous chemicals such as acids, lime, glues, adhesives, paints, solvents, and curing compounds
- Other materials that may be detrimental if released to the environment

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Limitations

Safer alternative building and construction products may not be available or suitable in every instance.

Implementation

The following steps should be taken to minimize risk:

- Minimize use of hazardous materials onsite.
- Follow manufacturer instructions regarding uses, protective equipment, ventilation, flammability, and mixing of chemicals.
- Train personnel who use pesticides. The California Department of Pesticide Regulation and county agricultural commissioners license pesticide dealers, certify pesticide applicators, and conduct onsite inspections.
- The preferred method of termiticide application is soil injection near the existing or proposed structure foundation/slab; however, if not feasible, soil drench application of termiticides should follow EPA label guidelines and the following recommendations (most of which are applicable to most pesticide applications):
  - Do not treat soil that is water-saturated or frozen.
  - Application shall not commence within 24-hours of a predicted precipitation event with a 40% or greater probability. Weather tracking must be performed on a daily basis prior to termiticide application and during the period of termiticide application.
  - Do not allow treatment chemicals to runoff from the target area. Apply proper quantity to prevent excess runoff. Provide containment for and divert stormwater from application areas using berms or diversion ditches during application.
  - Dry season: Do not apply within 10 feet of storm drains. Do not apply within 25 feet of aquatic habitats (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes or ponds; estuaries; and commercial fish farm ponds).
  - Wet season: Do not apply within 50 feet of storm drains or aquatic habitats (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes or ponds; estuaries; and commercial fish farm ponds) unless a vegetative buffer is present (if so, refer to dry season requirements).
  - Do not make on-grade applications when sustained wind speeds are above 10 mph (at application site) at nozzle end height.
  - Cover treatment site prior to a rain event in order to prevent run-off of the pesticide into non-target areas. The treated area should be limited to a size that can be backfilled and/or covered by the end of the work shift. Backfilling or covering of the treated area shall be done by the end of the same work shift in which the application is made.
  - The applicator must either cover the soil him/herself or provide written notification of the above requirement to the contractor on site and to the person commissioning the

application (if different than the contractor). If notice is provided to the contractor or the person commissioning the application, then they are responsible under the Federal Insecticide Fungicide, and Rodenticide Act (FIFRA) to ensure that: 1) if the concrete slab cannot be poured over the treated soil within 24 hours of application, the treated soil is covered with a waterproof covering (such as polyethylene sheeting), and 2) the treated soil is covered if precipitation is predicted to occur before the concrete slab is scheduled to be poured.

- Do not over-apply fertilizers, herbicides, and pesticides. Prepare only the amount needed. Follow the recommended usage instructions. Over-application is expensive and environmentally harmful. Unless on steep slopes, till fertilizers into the soil rather than hydraulic application. Apply surface dressings in several smaller applications, as opposed to one large application, to allow time for infiltration and to avoid excess material being carried offsite by runoff. Do not apply these chemicals before predicted rainfall.
- Train employees and subcontractors in proper material use.
- Supply Material Safety Data Sheets (MSDS) for all materials.
- Dispose of latex paint and paint cans, used brushes, rags, absorbent materials, and drop cloths, when thoroughly dry and are no longer hazardous, with other construction debris.
- Do not remove the original product label; it contains important safety and disposal information. Use the entire product before disposing of the container.
- Mix paint indoors or in a containment area. Never clean paintbrushes or rinse paint containers into a street, gutter, storm drain, or watercourse. Dispose of any paint thinners, residue, and sludge(s) that cannot be recycled, as hazardous waste.
- For water-based paint, clean brushes to the extent practicable, and rinse to a drain leading to a sanitary sewer where permitted, or contain for proper disposal off site. For oil-based paints, clean brushes to the extent practicable, and filter and reuse thinners and solvents.
- Use recycled and less hazardous products when practical. Recycle residual paints, solvents, non-treated lumber, and other materials.
- Use materials only where and when needed to complete the construction activity. Use safer alternative materials as much as possible. Reduce or eliminate use of hazardous materials onsite when practical.
- Document the location, time, chemicals applied, and applicator's name and qualifications.
- Keep an ample supply of spill clean up material near use areas. Train employees in spill clean up procedures.
- Avoid exposing applied materials to rainfall and runoff unless sufficient time has been allowed for them to dry.
- Discontinue use of erodible landscape material within 2 days prior to a forecasted rain event and materials should be covered and/or bermed.

- Provide containment for material use areas such as masons' areas or paint mixing/preparation areas to prevent materials/pollutants from entering stormwater.

Costs

All of the above are low cost measures.

Inspection and Maintenance

- Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities.
- BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Ensure employees and subcontractors throughout the job are using appropriate practices.

References

Blueprint for a Clean Bay: Best Management Practices to Prevent Stormwater Pollution from Construction Related Activities; Santa Clara Valley Nonpoint Source Pollution Control Program, 1995.

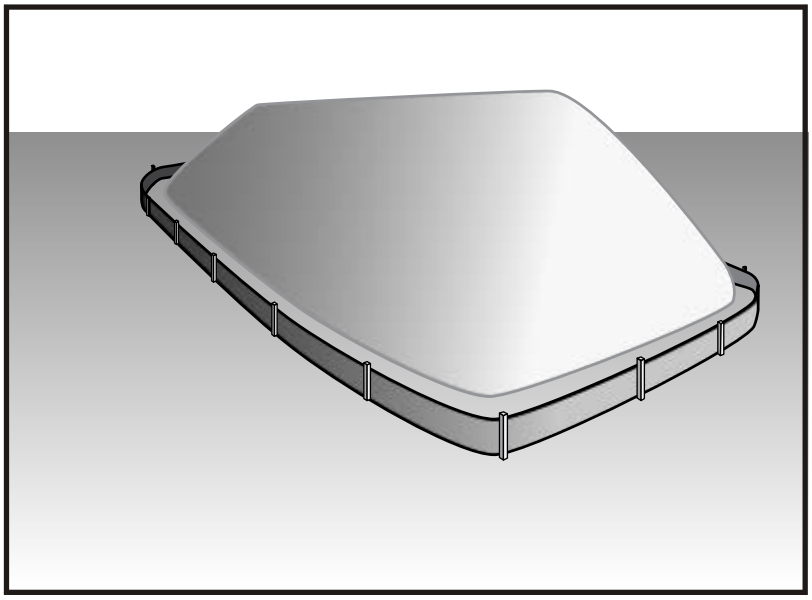
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Comments on Risk Assessments Risk Reduction Options for Cypermethrin: Docket No. OPP–2005–0293; California Stormwater Quality Association (CASQA) letter to USEPA, 2006.Environmental Hazard and General Labeling for Pyrethroid Non-Agricultural Outdoor Products, EPA-HQ-OPP-2008-0331-0021; USEPA, 2008.

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), March 2003.

Stormwater Management for Construction Activities; Developing Pollution Prevention Plans and Best Management Practice, EPA 832-R-92005; USEPA, April 1992.

Stockpile Management WM-3



Categories		
EC	Erosion Control	
SE	Sediment Control	☒
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	☒
WM	Waste Management and Materials Pollution Control	☑

Legend:
☑ **Primary Category**
☒ **Secondary Category**

Targeted Constituents	
Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	
Oil and Grease	☑
Organics	☑

Potential Alternatives

None

Description and Purpose

Stockpile management procedures and practices are designed to reduce or eliminate air and stormwater pollution from stockpiles of soil, soil amendments, sand, paving materials such as portland cement concrete (PCC) rubble, asphalt concrete (AC), asphalt concrete rubble, aggregate base, aggregate sub base or pre-mixed aggregate, asphalt minder (so called "cold mix" asphalt), and pressure treated wood.

Suitable Applications

Implement in all projects that stockpile soil and other loose materials.

Limitations

- Plastic sheeting as a stockpile protection is temporary and hard to manage in windy conditions. Where plastic is used, consider use of plastic tarps with nylon reinforcement which may be more durable than standard sheeting.
- Plastic sheeting can increase runoff volume due to lack of infiltration and potentially cause perimeter control failure.
- Plastic sheeting breaks down faster in sunlight.
- The use of Plastic materials and photodegradable plastics should be avoided.

Implementation

Protection of stockpiles is a year-round requirement. To properly manage stockpiles:

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- On larger sites, a minimum of 50 ft separation from concentrated flows of stormwater, drainage courses, and inlets is recommended.
- After 14 days of inactivity, a stockpile is non-active and requires further protection described below. All stockpiles are required to be protected as non-active stockpiles immediately if they are not scheduled to be used within 14 days.
- Protect all stockpiles from stormwater runon using temporary perimeter sediment barriers such as compost berms (SE-13), temporary silt dikes (SE-12), fiber rolls (SE-5), silt fences (SE-1), sandbags (SE-8), gravel bags (SE-6), or biofilter bags (SE-14). Refer to the individual fact sheet for each of these controls for installation information.
- Implement wind erosion control practices as appropriate on all stockpiled material. For specific information, see WE-1, Wind Erosion Control.
- Manage stockpiles of contaminated soil in accordance with WM-7, Contaminated Soil Management.
- Place bagged materials on pallets and under cover.
- Ensure that stockpile coverings are installed securely to protect from wind and rain.
- Some plastic covers withstand weather and sunlight better than others. Select cover materials or methods based on anticipated duration of use.

Protection of Non-Active Stockpiles

A stockpile is considered non-active if it either is not used for 14 days or if it is scheduled not to be used for 14 days or more. Stockpiles need to be protected immediately if they are not scheduled to be used within 14 days. Non-active stockpiles of the identified materials should be protected as follows:

Soil stockpiles

- Soil stockpiles should be covered or protected with soil stabilization measures and a temporary perimeter sediment barrier at all times.
- Temporary vegetation should be considered for topsoil piles that will be stockpiled for extended periods.

Stockpiles of Portland cement concrete rubble, asphalt concrete, asphalt concrete rubble, aggregate base, or aggregate sub base

- Stockpiles should be covered and protected with a temporary perimeter sediment barrier at all times.

Stockpiles of "cold mix"

- Cold mix stockpiles should be placed on and covered with plastic sheeting or comparable material at all times and surrounded by a berm.

Stockpiles of fly ash, stucco, hydrated lime

- Stockpiles of materials that may raise the pH of runoff (i.e., basic materials) should be covered with plastic and surrounded by a berm.

Stockpiles/Storage of wood (Pressure treated with chromated copper arsenate or ammoniacal copper zinc arsenate

- Treated wood should be covered with plastic sheeting or comparable material at all times and surrounded by a berm.

Protection of Active Stockpiles

A stockpile is active when it is being used or is scheduled to be used within 14 days of the previous use. Active stockpiles of the identified materials should be protected as follows:

- All stockpiles should be covered and protected with a temporary linear sediment barrier prior to the onset of precipitation.
- Stockpiles of "cold mix" and treated wood, and basic materials should be placed on and covered with plastic sheeting or comparable material and surrounded by a berm prior to the onset of precipitation.
- The downstream perimeter of an active stockpile should be protected with a linear sediment barrier or berm and runoff should be diverted around or away from the stockpile on the upstream perimeter.

Costs

For cost information associated with stockpile protection refer to the individual erosion or sediment control BMP fact sheet considered for implementation (For example, refer to SE-1 Silt Fence for installation of silt fence around the perimeter of a stockpile.)

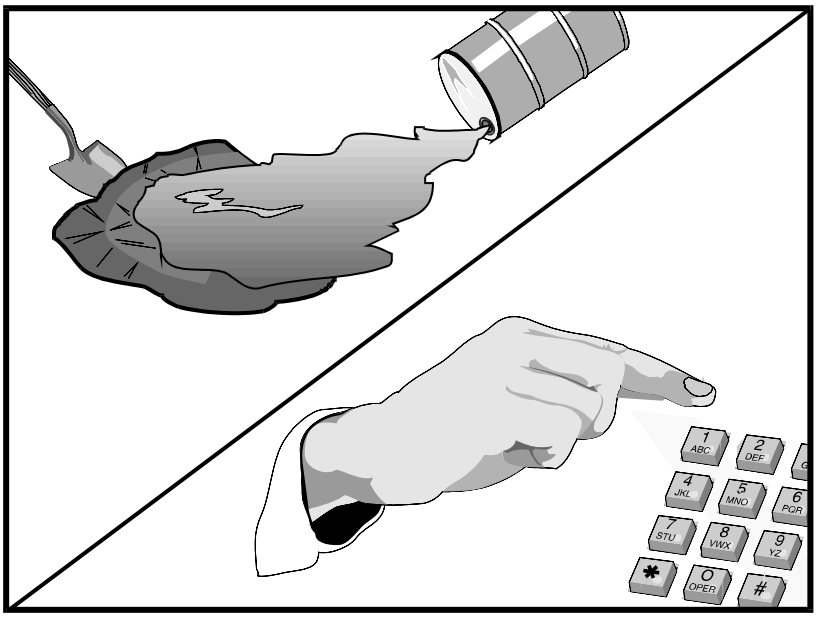
Inspection and Maintenance

- Stockpiles must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- It may be necessary to inspect stockpiles covered with plastic sheeting more frequently during certain conditions (for example, high winds or extreme heat).
- Repair and/or replace perimeter controls and covers as needed to keep them functioning properly.
- Sediment shall be removed when it reaches one-third of the barrier height.

References

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), March 2003.

Spill Prevention and Control WM-4



Description and Purpose

Prevent or reduce the discharge of pollutants to drainage systems or watercourses from leaks and spills by reducing the chance for spills, stopping the source of spills, containing and cleaning up spills, properly disposing of spill materials, and training employees.

This best management practice covers only spill prevention and control. However, WM-1, Materials Delivery and Storage, and WM-2, Material Use, also contain useful information, particularly on spill prevention. For information on wastes, see the waste management BMPs in this section.

Suitable Applications

This BMP is suitable for all construction projects. Spill control procedures are implemented anytime chemicals or hazardous substances are stored on the construction site, including the following materials:

- Soil stabilizers/binders
- Dust palliatives
- Herbicides
- Growth inhibitors
- Fertilizers
- Deicing/anti-icing chemicals

Categories

EC	Erosion Control	
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	☑

Legend:

☑ **Primary Objective**

☒ **Secondary Objective**

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	
Oil and Grease	☑
Organics	☑

Potential Alternatives

None

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- Fuels
- Lubricants
- Other petroleum distillates

Limitations

- In some cases it may be necessary to use a private spill cleanup company.
- This BMP applies to spills caused by the contractor and subcontractors.
- Procedures and practices presented in this BMP are general. Contractor should identify appropriate practices for the specific materials used or stored onsite

Implementation

The following steps will help reduce the stormwater impacts of leaks and spills:

Education

- Be aware that different materials pollute in different amounts. Make sure that each employee knows what a "significant spill" is for each material they use, and what is the appropriate response for "significant" and "insignificant" spills.
- Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.
- Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).
- Establish a continuing education program to indoctrinate new employees.
- Have contractor's superintendent or representative oversee and enforce proper spill prevention and control measures.

General Measures

- To the extent that the work can be accomplished safely, spills of oil, petroleum products, substances listed under 40 CFR parts 110,117, and 302, and sanitary and septic wastes should be contained and cleaned up immediately.
- Store hazardous materials and wastes in covered containers and protect from vandalism.
- Place a stockpile of spill cleanup materials where it will be readily accessible.
- Train employees in spill prevention and cleanup.
- Designate responsible individuals to oversee and enforce control measures.
- Spills should be covered and protected from stormwater runon during rainfall to the extent that it doesn't compromise clean up activities.
- Do not bury or wash spills with water.

- Store and dispose of used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose in conformance with the provisions in applicable BMPs.
- Do not allow water used for cleaning and decontamination to enter storm drains or watercourses. Collect and dispose of contaminated water in accordance with WM-10, Liquid Waste Management.
- Contain water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.
- Place proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.
- Keep waste storage areas clean, well organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners should be repaired or replaced as needed to maintain proper function.

Cleanup

- Clean up leaks and spills immediately.
- Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be sent to either a certified laundry (rags) or disposed of as hazardous waste.
- Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly. See the waste management BMPs in this section for specific information.

Minor Spills

- Minor spills typically involve small quantities of oil, gasoline, paint, etc. which can be controlled by the first responder at the discovery of the spill.
- Use absorbent materials on small spills rather than hosing down or burying the spill.
- Absorbent materials should be promptly removed and disposed of properly.
- Follow the practice below for a minor spill:
  - Contain the spread of the spill.
  - Recover spilled materials.
  - Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills

- Semi-significant spills still can be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc. This response may require the cessation of all other activities.

- Spills should be cleaned up immediately:
  - Contain spread of the spill.
  - Notify the project foreman immediately.
  - If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (absorbent materials, cat litter and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.
  - If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.
  - If the spill occurs during rain, cover spill with tarps or other material to prevent contaminating runoff.

Significant/Hazardous Spills

- For significant or hazardous spills that cannot be controlled by personnel in the immediate vicinity, the following steps should be taken:
  - Notify the local emergency response by dialing 911. In addition to 911, the contractor will notify the proper county officials. It is the contractor's responsibility to have all emergency phone numbers at the construction site.
  - Notify the Governor's Office of Emergency Services Warning Center, (916) 845-8911.
  - For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110,119, and 302, the contractor should notify the National Response Center at (800) 424-8802.
  - Notification should first be made by telephone and followed up with a written report.
  - The services of a spills contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until the appropriate and qualified staffs have arrived at the job site.
  - Other agencies which may need to be consulted include, but are not limited to, the Fire Department, the Public Works Department, the Coast Guard, the Highway Patrol, the City/County Police Department, Department of Toxic Substances, California Division of Oil and Gas, Cal/OSHA, etc.

Reporting

- Report significant spills to local agencies, such as the Fire Department; they can assist in cleanup.
- Federal regulations require that any significant oil spill into a water body or onto an adjoining shoreline be reported to the National Response Center (NRC) at 800-424-8802 (24 hours).

Use the following measures related to specific activities:

Vehicle and Equipment Maintenance

- If maintenance must occur onsite, use a designated area and a secondary containment, located away from drainage courses, to prevent the runon of stormwater and the runoff of spills.
- Regularly inspect onsite vehicles and equipment for leaks and repair immediately
- Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment onsite.
- Always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.
- Place drip pans or absorbent materials under paving equipment when not in use.
- Use absorbent materials on small spills rather than hosing down or burying the spill. Remove the absorbent materials promptly and dispose of properly.
- Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around
- Oil filters disposed of in trashcans or dumpsters can leak oil and pollute stormwater. Place the oil filter in a funnel over a waste oil-recycling drum to drain excess oil before disposal. Oil filters can also be recycled. Ask the oil supplier or recycler about recycling oil filters.
- Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

Vehicle and Equipment Fueling

- If fueling must occur onsite, use designate areas, located away from drainage courses, to prevent the runon of stormwater and the runoff of spills.
- Discourage "topping off" of fuel tanks.
- Always use secondary containment, such as a drain pan, when fueling to catch spills/ leaks.

Costs

Prevention of leaks and spills is inexpensive. Treatment and/ or disposal of contaminated soil or water can be quite expensive.

Inspection and Maintenance

- Inspect and verify that activity–based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, inspect BMPs in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.

- Inspect BMPs subject to non-stormwater discharge daily while non-stormwater discharges occur.
- Keep ample supplies of spill control and cleanup materials onsite, near storage, unloading, and maintenance areas.
- Update your spill prevention and control plan and stock cleanup materials as changes occur in the types of chemicals onsite.

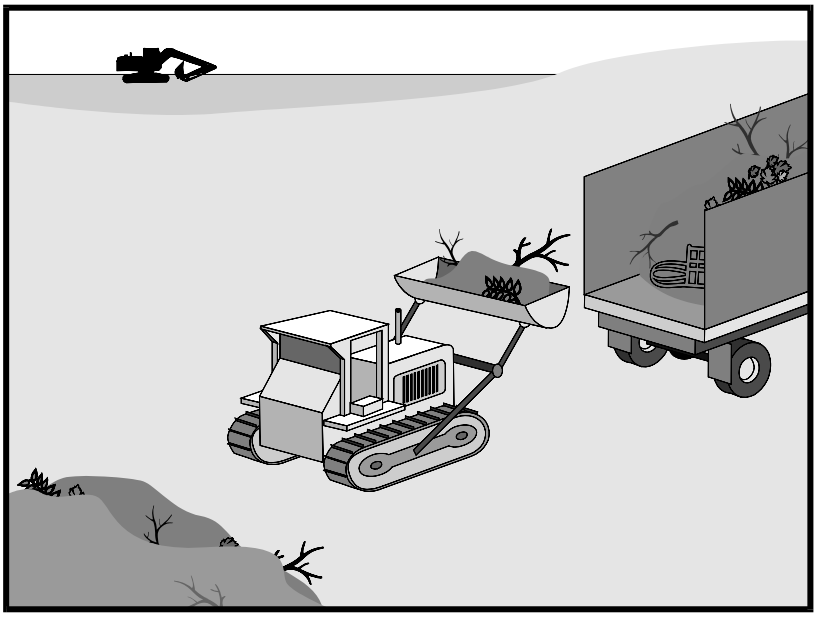
References

Blueprint for a Clean Bay: Best Management Practices to Prevent Stormwater Pollution from Construction Related Activities; Santa Clara Valley Nonpoint Source Pollution Control Program, 1995.

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Stormwater Management for Construction Activities; Developing Pollution Prevention Plans and Best Management Practice, EPA 832-R-92005; USEPA, April 1992.

Solid Waste Management WM-5



Categories

EC	Erosion Control	
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	☑

Legend:

☑ **Primary Objective**

☒ **Secondary Objective**

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	
Oil and Grease	☑
Organics	☑

Potential Alternatives

None

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Description and Purpose

Solid waste management procedures and practices are designed to prevent or reduce the discharge of pollutants to stormwater from solid or construction waste by providing designated waste collection areas and containers, arranging for regular disposal, and training employees and subcontractors.

Suitable Applications

This BMP is suitable for construction sites where the following wastes are generated or stored:

- Solid waste generated from trees and shrubs removed during land clearing, demolition of existing structures (rubble), and building construction
- Packaging materials including wood, paper, and plastic
- Scrap or surplus building materials including scrap metals, rubber, plastic, glass pieces, and masonry products
- Domestic wastes including food containers such as beverage cans, coffee cups, paper bags, plastic wrappers, and cigarettes
- Construction wastes including brick, mortar, timber, steel and metal scraps, pipe and electrical cuttings, non-hazardous equipment parts, styrofoam and other materials used to transport and package construction materials

- Highway planting wastes, including vegetative material, plant containers, and packaging materials

Limitations

Temporary stockpiling of certain construction wastes may not necessitate stringent drainage related controls during the non-rainy season or in desert areas with low rainfall.

Implementation

The following steps will help keep a clean site and reduce stormwater pollution:

- Select designated waste collection areas onsite.
- Inform trash-hauling contractors that you will accept only watertight dumpsters for onsite use. Inspect dumpsters for leaks and repair any dumpster that is not watertight.
- Locate containers in a covered area or in a secondary containment.
- Provide an adequate number of containers with lids or covers that can be placed over the container to keep rain out or to prevent loss of wastes when it is windy.
- Cover waste containers at the end of each work day and when it is raining.
- Plan for additional containers and more frequent pickup during the demolition phase of construction.
- Collect site trash daily, especially during rainy and windy conditions.
- Remove this solid waste promptly since erosion and sediment control devices tend to collect litter.
- Make sure that toxic liquid wastes (used oils, solvents, and paints) and chemicals (acids, pesticides, additives, curing compounds) are not disposed of in dumpsters designated for construction debris.
- Do not hose out dumpsters on the construction site. Leave dumpster cleaning to the trash hauling contractor.
- Arrange for regular waste collection before containers overflow.
- Clean up immediately if a container does spill.
- Make sure that construction waste is collected, removed, and disposed of only at authorized disposal areas.

Education

- Have the contractor's superintendent or representative oversee and enforce proper solid waste management procedures and practices.
- Instruct employees and subcontractors on identification of solid waste and hazardous waste.
- Educate employees and subcontractors on solid waste storage and disposal procedures.

- Hold regular meetings to discuss and reinforce disposal procedures (incorporate into regular safety meetings).
- Require that employees and subcontractors follow solid waste handling and storage procedures.
- Prohibit littering by employees, subcontractors, and visitors.
- Minimize production of solid waste materials wherever possible.

Collection, Storage, and Disposal

- Littering on the project site should be prohibited.
- To prevent clogging of the storm drainage system, litter and debris removal from drainage grates, trash racks, and ditch lines should be a priority.
- Trash receptacles should be provided in the contractor's yard, field trailer areas, and at locations where workers congregate for lunch and break periods.
- Litter from work areas within the construction limits of the project site should be collected and placed in watertight dumpsters at least weekly, regardless of whether the litter was generated by the contractor, the public, or others. Collected litter and debris should not be placed in or next to drain inlets, stormwater drainage systems, or watercourses.
- Dumpsters of sufficient size and number should be provided to contain the solid waste generated by the project.
- Full dumpsters should be removed from the project site and the contents should be disposed of by the trash hauling contractor.
- Construction debris and waste should be removed from the site biweekly or more frequently as needed.
- Construction material visible to the public should be stored or stacked in an orderly manner.
- Stormwater runon should be prevented from contacting stored solid waste through the use of berms, dikes, or other temporary diversion structures or through the use of measures to elevate waste from site surfaces.
- Solid waste storage areas should be located at least 50 ft from drainage facilities and watercourses and should not be located in areas prone to flooding or ponding.
- Except during fair weather, construction and highway planting waste not stored in watertight dumpsters should be securely covered from wind and rain by covering the waste with tarps or plastic.
- Segregate potentially hazardous waste from non-hazardous construction site waste.
- Make sure that toxic liquid wastes (used oils, solvents, and paints) and chemicals (acids, pesticides, additives, curing compounds) are not disposed of in dumpsters designated for construction debris.

- For disposal of hazardous waste, see WM-6, Hazardous Waste Management. Have hazardous waste hauled to an appropriate disposal and/or recycling facility.

- Salvage or recycle useful vegetation debris, packaging and surplus building materials when practical. For example, trees and shrubs from land clearing can be used as a brush barrier, or converted into wood chips, then used as mulch on graded areas. Wood pallets, cardboard boxes, and construction scraps can also be recycled.

Costs

All of the above are low cost measures.

Inspection and Maintenance

- Inspect and verify that activity–based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, inspect BMPs in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.

- Inspect BMPs subject to non-stormwater discharge daily while non-stormwater discharges occur

- Inspect construction waste area regularly.

- Arrange for regular waste collection.

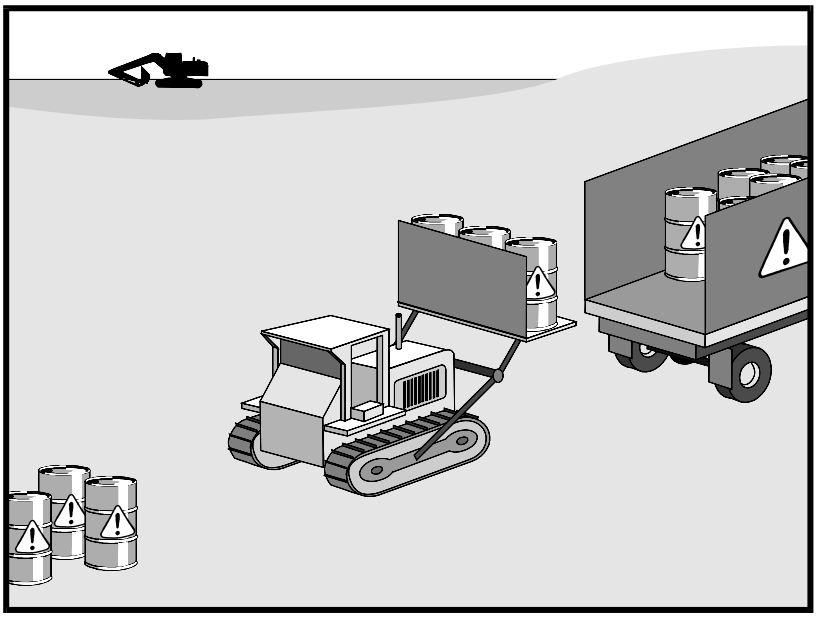
References

Processes, Procedures and Methods to Control Pollution Resulting from All Construction Activity, 430/9-73-007, USEPA, 1973.

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Stormwater Management for Construction Activities; Developing Pollution Prevention Plans and Best Management Practice, EPA 832-R-92005; USEPA, April 1992.

Hazardous Waste Management WM-6



Description and Purpose

Prevent or reduce the discharge of pollutants to stormwater from hazardous waste through proper material use, waste disposal, and training of employees and subcontractors.

Suitable Applications

This best management practice (BMP) applies to all construction projects. Hazardous waste management practices are implemented on construction projects that generate waste from the use of:

- Petroleum Products
- Asphalt Products
- Concrete Curing Compounds
- Pesticides
- Palliatives
- Acids
- Septic Wastes
- Paints
- Stains
- Solvents
- Wood Preservatives
- Roofing Tar
- Any materials deemed a hazardous waste in California, Title 22 Division 4.5, or listed in 40 CFR Parts 110, 117, 261, or 302

Categories

EC	Erosion Control	
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	☑

Legend:

☑ **Primary Objective**

☒ **Secondary Objective**

Targeted Constituents

Sediment	
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	☑
Oil and Grease	☑
Organics	☑

Potential Alternatives

None

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In addition, sites with existing structures may contain wastes, which must be disposed of in accordance with federal, state, and local regulations. These wastes include:

- Sandblasting grit mixed with lead-, cadmium-, or chromium-based paints
- Asbestos
- PCBs (particularly in older transformers)

Limitations

- Hazardous waste that cannot be reused or recycled must be disposed of by a licensed hazardous waste hauler.
- Nothing in this BMP relieves the contractor from responsibility for compliance with federal, state, and local laws regarding storage, handling, transportation, and disposal of hazardous wastes.
- This BMP does not cover aerially deposited lead (ADL) soils. For ADL soils refer to WM-7, Contaminated Soil Management.

Implementation

The following steps will help reduce stormwater pollution from hazardous wastes:

Material Use

- Wastes should be stored in sealed containers constructed of a suitable material and should be labeled as required by Title 22 CCR, Division 4.5 and 49 CFR Parts 172, 173, 178, and 179.
- All hazardous waste should be stored, transported, and disposed as required in Title 22 CCR, Division 4.5 and 49 CFR 261-263.
- Waste containers should be stored in temporary containment facilities that should comply with the following requirements:
  - Temporary containment facility should provide for a spill containment volume equal to 1.5 times the volume of all containers able to contain precipitation from a 25 year storm event, plus the greater of 10% of the aggregate volume of all containers or 100% of the capacity of the largest tank within its boundary, whichever is greater.
  - Temporary containment facility should be impervious to the materials stored there for a minimum contact time of 72 hours.
  - Temporary containment facilities should be maintained free of accumulated rainwater and spills. In the event of spills or leaks, accumulated rainwater and spills should be placed into drums after each rainfall. These liquids should be handled as a hazardous waste unless testing determines them to be non-hazardous. Non-hazardous liquids should be sent to an approved disposal site.
  - Sufficient separation should be provided between stored containers to allow for spill cleanup and emergency response access.

- Incompatible materials, such as chlorine and ammonia, should not be stored in the same temporary containment facility.

- Throughout the rainy season, temporary containment facilities should be covered during non-working days, and prior to rain events. Covered facilities may include use of plastic tarps for small facilities or constructed roofs with overhangs.

- Drums should not be overfilled and wastes should not be mixed.

- Unless watertight, containers of dry waste should be stored on pallets.

- Do not over-apply herbicides and pesticides. Prepare only the amount needed. Follow the recommended usage instructions. Over application is expensive and environmentally harmful. Apply surface dressings in several smaller applications, as opposed to one large application. Allow time for infiltration and avoid excess material being carried offsite by runoff. Do not apply these chemicals just before it rains. People applying pesticides must be certified in accordance with federal and state regulations.

- Paint brushes and equipment for water and oil based paints should be cleaned within a contained area and should not be allowed to contaminate site soils, watercourses, or drainage systems. Waste paints, thinners, solvents, residues, and sludges that cannot be recycled or reused should be disposed of as hazardous waste. When thoroughly dry, latex paint and paint cans, used brushes, rags, absorbent materials, and drop cloths should be disposed of as solid waste.

- Do not clean out brushes or rinse paint containers into the dirt, street, gutter, storm drain, or stream. "Paint out" brushes as much as possible. Rinse water-based paints to the sanitary sewer. Filter and reuse thinners and solvents. Dispose of excess oil-based paints and sludge as hazardous waste.

- The following actions should be taken with respect to temporary contaminant:

  - Ensure that adequate hazardous waste storage volume is available.

  - Ensure that hazardous waste collection containers are conveniently located.

  - Designate hazardous waste storage areas onsite away from storm drains or watercourses and away from moving vehicles and equipment to prevent accidental spills.

  - Minimize production or generation of hazardous materials and hazardous waste on the job site.

  - Use containment berms in fueling and maintenance areas and where the potential for spills is high.

  - Segregate potentially hazardous waste from non-hazardous construction site debris.

  - Keep liquid or semi-liquid hazardous waste in appropriate containers (closed drums or similar) and under cover.

- Clearly label all hazardous waste containers with the waste being stored and the date of accumulation.
- Place hazardous waste containers in secondary containment.
- Do not allow potentially hazardous waste materials to accumulate on the ground.
- Do not mix wastes.
- Use all of the product before disposing of the container.
- Do not remove the original product label; it contains important safety and disposal information.

Waste Recycling Disposal

- Select designated hazardous waste collection areas onsite.
- Hazardous materials and wastes should be stored in covered containers and protected from vandalism.
- Place hazardous waste containers in secondary containment.
- Do not mix wastes, this can cause chemical reactions, making recycling impossible and complicating disposal.
- Recycle any useful materials such as used oil or water-based paint.
- Make sure that toxic liquid wastes (used oils, solvents, and paints) and chemicals (acids, pesticides, additives, curing compounds) are not disposed of in dumpsters designated for construction debris.
- Arrange for regular waste collection before containers overflow.
- Make sure that hazardous waste (e.g., excess oil-based paint and sludge) is collected, removed, and disposed of only at authorized disposal areas.

Disposal Procedures

- Waste should be disposed of by a licensed hazardous waste transporter at an authorized and licensed disposal facility or recycling facility utilizing properly completed Uniform Hazardous Waste Manifest forms.
- A Department of Health Services certified laboratory should sample waste to determine the appropriate disposal facility.
- Properly dispose of rainwater in secondary containment that may have mixed with hazardous waste.
- Attention is directed to "Hazardous Material", "Contaminated Material", and "Aerially Deposited Lead" of the contract documents regarding the handling and disposal of hazardous materials.

Education

- Educate employees and subcontractors on hazardous waste storage and disposal procedures.
- Educate employees and subcontractors on potential dangers to humans and the environment from hazardous wastes.
- Instruct employees and subcontractors on safety procedures for common construction site hazardous wastes.
- Instruct employees and subcontractors in identification of hazardous and solid waste.
- Hold regular meetings to discuss and reinforce hazardous waste management procedures (incorporate into regular safety meetings).
- The contractor's superintendent or representative should oversee and enforce proper hazardous waste management procedures and practices.
- Make sure that hazardous waste is collected, removed, and disposed of only at authorized disposal areas.
- Warning signs should be placed in areas recently treated with chemicals.
- Place a stockpile of spill cleanup materials where it will be readily accessible.
- If a container does spill, clean up immediately.

Costs

All of the above are low cost measures.

Inspection and Maintenance

- Inspect and verify that activity–based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, inspect BMPs in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events..
- Inspect BMPs subject to non-stormwater discharge daily while non-stormwater discharges occur
- Hazardous waste should be regularly collected.
- A foreman or construction supervisor should monitor onsite hazardous waste storage and disposal procedures.
- Waste storage areas should be kept clean, well organized, and equipped with ample cleanup supplies as appropriate for the materials being stored.
- Perimeter controls, containment structures, covers, and liners should be repaired or replaced as needed to maintain proper function.

- Hazardous spills should be cleaned up and reported in conformance with the applicable Material Safety Data Sheet (MSDS) and the instructions posted at the project site.
- The National Response Center, at (800) 424-8802, should be notified of spills of federal reportable quantities in conformance with the requirements in 40 CFR parts 110, 117, and 302. Also notify the Governors Office of Emergency Services Warning Center at (916) 845-8911.
- A copy of the hazardous waste manifests should be provided.

References

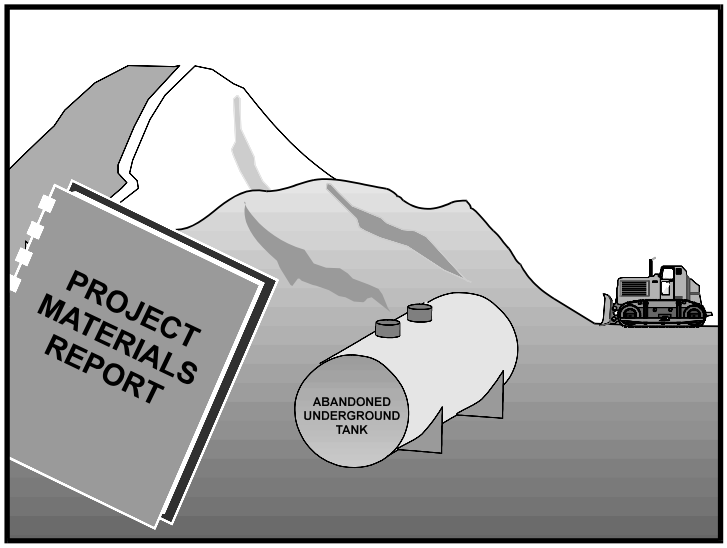
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Contaminated Soil Management WM-7



Categories		
EC	Erosion Control	
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	☑

Legend:
☑ **Primary Objective**
☒ **Secondary Objective**

Description and Purpose

Prevent or reduce the discharge of pollutants to stormwater from contaminated soil and highly acidic or alkaline soils by conducting pre-construction surveys, inspecting excavations regularly, and remediating contaminated soil promptly.

Suitable Applications

Contaminated soil management is implemented on construction projects in highly urbanized or industrial areas where soil contamination may have occurred due to spills, illicit discharges, aerial deposition, past use and leaks from underground storage tanks.

Limitations

Contaminated soils that cannot be treated onsite must be disposed of offsite by a licensed hazardous waste hauler. The presence of contaminated soil may indicate contaminated water as well. See NS-2, Dewatering Operations, for more information.

The procedures and practices presented in this BMP are general. The contractor should identify appropriate practices and procedures for the specific contaminants known to exist or discovered onsite.

Implementation

Most owners and developers conduct pre-construction environmental assessments as a matter of routine. Contaminated soils are often identified during project planning and development with known locations identified in the plans, specifications and in the SWPPP. The contractor should review applicable reports and investigate appropriate call-outs in the

Targeted Constituents	
Sediment	
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	☑
Oil and Grease	☑
Organics	☑

Potential Alternatives

None

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CALIFORNIA STORMWATER QUALITY ASSOCIATION

plans, specifications, and SWPPP. Recent court rulings holding contractors liable for cleanup costs when they unknowingly move contaminated soil highlight the need for contractors to confirm a site assessment is completed before earth moving begins.

The following steps will help reduce stormwater pollution from contaminated soil:

- Conduct thorough, pre-construction inspections of the site and review documents related to the site. If inspection or reviews indicated presence of contaminated soils, develop a plan before starting work.
- Look for contaminated soil as evidenced by discoloration, odors, differences in soil properties, abandoned underground tanks or pipes, or buried debris.
- Prevent leaks and spills. Contaminated soil can be expensive to treat and dispose of properly. However, addressing the problem before construction is much less expensive than after the structures are in place.
- The contractor may further identify contaminated soils by investigating:
  - Past site uses and activities
  - Detected or undetected spills and leaks
  - Acid or alkaline solutions from exposed soil or rock formations high in acid or alkaline forming elements
  - Contaminated soil as evidenced by discoloration, odors, differences in soil properties, abandoned underground tanks or pipes, or buried debris.
  - Suspected soils should be tested at a certified laboratory.

Education

- Have employees and subcontractors complete a safety training program which meets 29 CFR 1910.120 and 8 CCR 5192 covering the potential hazards as identified, prior to performing any excavation work at the locations containing material classified as hazardous.
- Educate employees and subcontractors in identification of contaminated soil and on contaminated soil handling and disposal procedures.
- Hold regular meetings to discuss and reinforce disposal procedures (incorporate into regular safety meetings).

Handling Procedures for Material with Aerially Deposited Lead (ADL)

- Materials from areas designated as containing (ADL) may, if allowed by the contract special provisions, be excavated, transported, and used in the construction of embankments and/or backfill.
- Excavation, transportation, and placement operations should result in no visible dust.
- Caution should be exercised to prevent spillage of lead containing material during transport.

- Quality should be monitored during excavation of soils contaminated with lead.

Handling Procedures for Contaminated Soils

- Minimize onsite storage. Contaminated soil should be disposed of properly in accordance with all applicable regulations. All hazardous waste storage will comply with the requirements in Title 22, CCR, Sections 66265.250 to 66265.260.
- Test suspected soils at an approved certified laboratory.
- Work with the local regulatory agencies to develop options for treatment or disposal if the soil is contaminated.
- Avoid temporary stockpiling of contaminated soils or hazardous material.
- Take the following precautions if temporary stockpiling is necessary:
  - Cover the stockpile with plastic sheeting or tarps.
  - Install a berm around the stockpile to prevent runoff from leaving the area.
  - Do not stockpile in or near storm drains or watercourses.
- Remove contaminated material and hazardous material on exteriors of transport vehicles and place either into the current transport vehicle or into the excavation prior to the vehicle leaving the exclusion zone.
- Monitor the air quality continuously during excavation operations at all locations containing hazardous material.
- Procure all permits and licenses, pay all charges and fees, and give all notices necessary and incident to the due and lawful prosecution of the work, including registration for transporting vehicles carrying the contaminated material and the hazardous material.
- Collect water from decontamination procedures and treat or dispose of it at an appropriate disposal site.
- Collect non-reusable protective equipment, once used by any personnel, and dispose of at an appropriate disposal site.
- Install temporary security fence to surround and secure the exclusion zone. Remove fencing when no longer needed.
- Excavate, transport, and dispose of contaminated material and hazardous material in accordance with the rules and regulations of the following agencies (the specifications of these agencies supersede the procedures outlined in this BMP):
  - United States Department of Transportation (USDOT)
  - United States Environmental Protection Agency (USEPA)
  - California Environmental Protection Agency (CAL-EPA)

- California Division of Occupation Safety and Health Administration (CAL-OSHA)
- Local regulatory agencies

Procedures for Underground Storage Tank Removals

- Prior to commencing tank removal operations, obtain the required underground storage tank removal permits and approval from the federal, state, and local agencies that have jurisdiction over such work.
- To determine if it contains hazardous substances, arrange to have tested, any liquid or sludge found in the underground tank prior to its removal.
- Following the tank removal, take soil samples beneath the excavated tank and perform analysis as required by the local agency representative(s).
- The underground storage tank, any liquid or sludge found within the tank, and all contaminated substances and hazardous substances removed during the tank removal and transported to disposal facilities permitted to accept such waste.

Water Control

- All necessary precautions and preventive measures should be taken to prevent the flow of water, including ground water, from mixing with hazardous substances or underground storage tank excavations. Such preventative measures may consist of, but are not limited to, berms, cofferdams, grout curtains, freeze walls, and seal course concrete or any combination thereof.
- If water does enter an excavation and becomes contaminated, such water, when necessary to proceed with the work, should be discharged to clean, closed top, watertight transportable holding tanks, treated, and disposed of in accordance with federal, state, and local laws.

Costs

Prevention of leaks and spills is inexpensive. Treatment or disposal of contaminated soil can be quite expensive.

Inspection and Maintenance

- Inspect and verify that activity–based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, inspect BMPs in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Arrange for contractor's Water Pollution Control Manager, foreman, and/or construction supervisor to monitor onsite contaminated soil storage and disposal procedures.
- Monitor air quality continuously during excavation operations at all locations containing hazardous material.
- Coordinate contaminated soils and hazardous substances/waste management with the appropriate federal, state, and local agencies.

- Implement WM-4, Spill Prevention and Control, to prevent leaks and spills as much as possible.

References

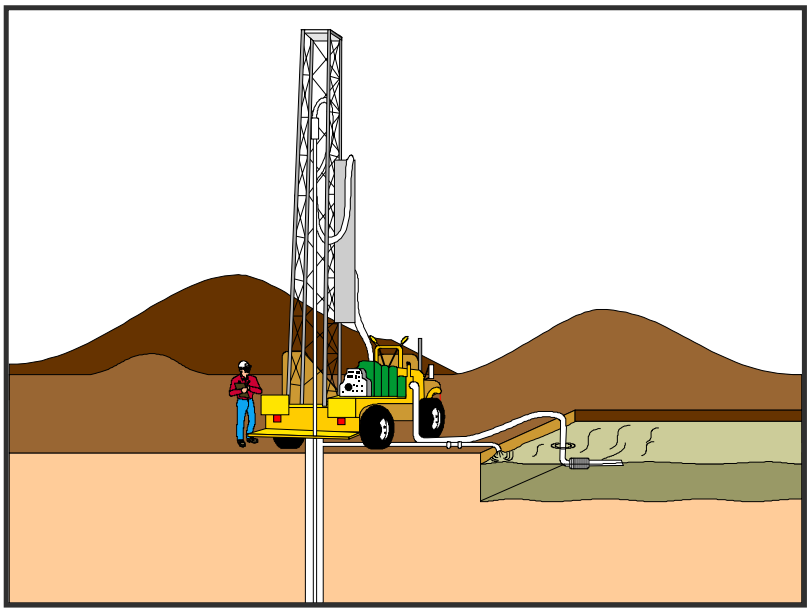
Blueprint for a Clean Bay: Best Management Practices to Prevent Stormwater Pollution from Construction Related Activities; Santa Clara Valley Nonpoint Source Pollution Control Program, 1995.

Processes, Procedures and Methods to Control Pollution Resulting from All Construction Activity, 430/9-73-007, USEPA, 1973.

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Stormwater Management for Construction Activities; Developing Pollution Prevention Plans and Best Management Practice, EPA 832-R-92005; USEPA, April 1992.

Liquid Waste Management WM-10



Categories

EC	Erosion Control	
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	☑

Legend:

☑ **Primary Objective**

☒ **Secondary Objective**

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	
Oil and Grease	☑
Organics	

Potential Alternatives

None

Description and Purpose

Liquid waste management includes procedures and practices to prevent discharge of pollutants to the storm drain system or to watercourses as a result of the creation, collection, and disposal of non-hazardous liquid wastes.

Suitable Applications

Liquid waste management is applicable to construction projects that generate any of the following non-hazardous by-products, residuals, or wastes:

- Drilling slurries and drilling fluids
- Grease-free and oil-free wastewater and rinse water
- Dredgings
- Other non-stormwater liquid discharges not permitted by separate permits

Limitations

- Disposal of some liquid wastes may be subject to specific laws and regulations or to requirements of other permits secured for the construction project (e.g., NPDES permits, Army Corps permits, Coastal Commission permits, etc.).
- Liquid waste management does not apply to dewatering operations (NS-2 Dewatering Operations), solid waste management (WM-5, Solid Waste Management), hazardous wastes (WM-6, Hazardous Waste Management), or

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concrete slurry residue (WM-8, Concrete Waste Management).

- Typical permitted non-stormwater discharges can include: water line flushing; landscape irrigation; diverted stream flows; rising ground waters; uncontaminated pumped ground water; discharges from potable water sources; foundation drains; irrigation water; springs; water from crawl space pumps; footing drains; lawn watering; flows from riparian habitats and wetlands; and discharges or flows from emergency fire fighting activities.

Implementation

General Practices

- Instruct employees and subcontractors how to safely differentiate between non-hazardous liquid waste and potential or known hazardous liquid waste.
- Instruct employees, subcontractors, and suppliers that it is unacceptable for any liquid waste to enter any storm drainage device, waterway, or receiving water.
- Educate employees and subcontractors on liquid waste generating activities and liquid waste storage and disposal procedures.
- Hold regular meetings to discuss and reinforce disposal procedures (incorporate into regular safety meetings).
- Verify which non-stormwater discharges are permitted by the statewide NPDES permit; different regions might have different requirements not outlined in this permit.
- Apply NS-8, Vehicle and Equipment Cleaning for managing wash water and rinse water from vehicle and equipment cleaning operations.

Containing Liquid Wastes

- Drilling residue and drilling fluids should not be allowed to enter storm drains and watercourses and should be disposed of.
- If an appropriate location is available, drilling residue and drilling fluids that are exempt under Title 23, CCR § 2511(g) may be dried by infiltration and evaporation in a containment facility constructed in conformance with the provisions concerning the Temporary Concrete Washout Facilities detailed in WM-8, Concrete Waste Management.
- Liquid wastes generated as part of an operational procedure, such as water-laden dredged material and drilling mud, should be contained and not allowed to flow into drainage channels or receiving waters prior to treatment.
- Liquid wastes should be contained in a controlled area such as a holding pit, sediment basin, roll-off bin, or portable tank.
- Containment devices must be structurally sound and leak free.
- Containment devices must be of sufficient quantity or volume to completely contain the liquid wastes generated.

- Precautions should be taken to avoid spills or accidental releases of contained liquid wastes. Apply the education measures and spill response procedures outlined in WM-4, Spill Prevention and Control.

- Containment areas or devices should not be located where accidental release of the contained liquid can threaten health or safety or discharge to water bodies, channels, or storm drains.

Capturing Liquid Wastes

- Capture all liquid wastes that have the potential to affect the storm drainage system (such as wash water and rinse water from cleaning walls or pavement), before they run off a surface.

- Do not allow liquid wastes to flow or discharge uncontrolled. Use temporary dikes or berms to intercept flows and direct them to a containment area or device for capture.

- Use a sediment trap (SE-3, Sediment Trap) for capturing and treating sediment laden liquid waste or capture in a containment device and allow sediment to settle.

Disposing of Liquid Wastes

- A typical method to handle liquid waste is to dewater the contained liquid waste, using procedures such as described in NS-2, Dewatering Operations, and SE-2, Sediment Basin, and dispose of resulting solids per WM-5, Solid Waste Management.

- Methods of disposal for some liquid wastes may be prescribed in Water Quality Reports, NPDES permits, Environmental Impact Reports, 401 or 404 permits, and local agency discharge permits, etc. Review the SWPPP to see if disposal methods are identified.

- Liquid wastes, such as from dredged material, may require testing and certification whether it is hazardous or not before a disposal method can be determined.

- For disposal of hazardous waste, see WM-6, Hazardous Waste Management.

- If necessary, further treat liquid wastes prior to disposal. Treatment may include, though is not limited to, sedimentation, filtration, and chemical neutralization.

Costs

Prevention costs for liquid waste management are minimal. Costs increase if cleanup or fines are involved.

Inspection and Maintenance

- Inspect and verify that activity–based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, inspect weekly during the rainy season and of two-week intervals in the non-rainy season to verify continued BMP implementation.

- Inspect BMPs subject to non-stormwater discharge daily while non-stormwater discharges occur.

- Remove deposited solids in containment areas and capturing devices as needed and at the completion of the task. Dispose of any solids as described in WM-5, Solid Waste Management.
- Inspect containment areas and capturing devices and repair as needed.

References

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

APPENDIX F

Inspection Forms

BMP INSPECTION REPORT

Date and Time of Inspection:	Date Report Written:

Inspection Type: (Circle one)	Weekly *Complete Parts I,II,III and VII*	Pre-Storm *Complete Parts I,II,III,IV and VII*	During Rain Event *Complete Parts I, II, III, V, and VII*	Post-Storm *Complete Parts I,II,III,VI and VII*

Part I. General Information

Site Information

Construction Site Name:	
Construction stage and completed activities:	Approximate area of site that is exposed:

Photos Taken: (Circle one)	Yes	No	Photo Reference IDs:

Weather

Estimate storm beginning: (date and time)	Estimate storm duration: (hours)
Estimate time since last storm: (days or hours)	Rain gauge reading and location: (in)

Is a “Qualifying Event” predicted or did one occur (i.e., 0.5” rain with 48-hrs or greater between events)? (Y/N)
If yes, summarize forecast:

Exemption Documentation (explanation required if inspection could not be conducted). Visual inspections are not required outside of business hours or during dangerous weather conditions such as flooding or electrical storms.

Inspector Information

Inspector Name:	Inspector Title:
Signature:	Date:

Part II. BMP Observations. Describe deficiencies in Part III.			
Minimum BMPs for Risk Level __2_ Sites	Failures or other short comings (yes, no, N/A)	Action Required (yes/no)	Action Implemented (Date)
Good Housekeeping for Construction Materials			
Inventory of products (excluding materials designed to be outdoors)			
Stockpiled construction materials not actively in use are covered and bermed			
All chemicals are stored in watertight containers with appropriate secondary containment, or in a completely enclosed storage shed			
Construction materials are minimally exposed to precipitation			
BMPs preventing the off-site tracking of materials are implemented and properly effective			
Good Housekeeping for Waste Management			
Wash/rinse water and materials are prevented from being disposed into the storm drain system			
Portable toilets are contained to prevent discharges of waste			
Sanitation facilities are clean and with no apparent for leaks and spills			
Equipment is in place to cover waste disposal containers at the end of business day and during rain events			
Discharges from waste disposal containers are prevented from discharging to the storm drain system / receiving water			
Stockpiled waste material is securely protected from wind and rain if not actively in use			
Procedures are in place for addressing hazardous and non-hazardous spills			
Appropriate spill response personnel are assigned and trained			
Equipment and materials for cleanup of spills is available onsite			
Washout areas (e.g., concrete) are contained appropriately to prevent discharge or infiltration into the underlying soil			
Good Housekeeping for Vehicle Storage and Maintenance			
Measures are in place to prevent oil, grease, or fuel from leaking into the ground, storm drains, or surface waters			
All equipment or vehicles are fueled, maintained, and stored in a designated area with appropriate BMPs			
Vehicle and equipment leaks are cleaned immediately and disposed of properly			

Part II. BMP Observations Continued. Describe deficiencies in Part III.			
Minimum BMPs for Risk Level _2_ Sites	Adequately designed, implemented and effective (yes, no, N/A)	Action Required (yes/no)	Action Implemented (Date)
Good Housekeeping for Landscape Materials			
Stockpiled landscape materials such as mulches and topsoil are contained and covered when not actively in use			
Erodible landscape material has not been applied 2 days before a forecasted rain event or during an event			
Erodible landscape materials are applied at quantities and rates in accordance with manufacturer recommendations			
Bagged erodible landscape materials are stored on pallets and covered			
Good Housekeeping for Air Deposition of Site Materials			
Good housekeeping measures are implemented onsite to control the air deposition of site materials and from site operations			
Non-Stormwater Management			
Non-Stormwater discharges are properly controlled			
Vehicles are washed in a manner to prevent non-stormwater discharges to surface waters or drainage systems			
Streets are cleaned in a manner to prevent unauthorized non-stormwater discharges to surface waters or drainage systems.			
Erosion Controls			
Wind erosion controls are effectively implemented			
Effective soil cover is provided for disturbed areas inactive (i.e., not scheduled to be disturbed for 14 days) as well as finished slopes, open space, utility backfill, and completed lots			
The use of plastic materials is limited in cases when a more sustainable, environmentally friendly alternative exists.			
Sediment Controls			
Perimeter controls are established and effective at controlling erosion and sediment discharges from the site			
Entrances and exits are stabilized to control erosion and sediment discharges from the site			
Sediment basins are properly maintained	N/A		
Linear sediment control along toe of slope, face of slope an at grade breaks (Risk Level 2 & 3 Only)			
Limit construction activity to and from site to entrances and exits that employ effective controls to prevent offsite tracking (Risk Level 2 & 3 Only)			

Ensure all storm, drain inlets and perimeter controls, runoff control BMPs and pollutants controls at entrances and exits are maintained and protected from activities the reduce their effectiveness (Risk Level 2 & 3 Only)			
Inspect all immediate access roads daily (Risk Level 2 & 3 Only)			
Run-On and Run-Off Controls			
Run-on to the site is effectively managed and directed away from all disturbed areas.	N/A		
Other			
Are the project SWPPP and BMP plan up to date, available on-site and being properly implemented?			

Part III. Descriptions of BMP Deficiencies		
Deficiency	**Repairs Implemented: Note - Repairs must begin within 72 hours of identification and, complete repairs as soon as possible.**	
	Start Date	**Action**
1.		
2.		
3.		
4.		

Part IV. Additional Pre-Storm Observations. **Note the presence or absence of floating and suspended materials, sheen, discoloration, turbidity, odors, and source(s) of pollutants(s).**	
	Yes, No, N/A
Do stormwater storage and containment areas have adequate freeboard? If no, complete Part III.	
Are drainage areas free of spills, leaks, or uncontrolled pollutant sources? If no, complete Part VII and describe below.	
Notes:	
Are stormwater storage and containment areas free of leaks? If no, complete Parts III and/or VII and describe below.	

Notes:	

Part V. Additional During Storm Observations. **If BMPs cannot be inspected during inclement weather, list the results of visual inspections at all relevant outfalls, discharge points, and downstream locations. Note odors or visible sheen on the surface of discharges. Complete Part VII (Corrective Actions) as needed.**	
Outfall, Discharge Point, or Other Downstream Location	
Location	Description
Location	Description
Location	Description
Location	Description
Location	Description
Location	Description
Location	Description
Location	Description

Part VI. Additional Post-Storm Observations. **Visually observe (inspect) stormwater discharges at all discharge locations within two business days (48 hours) after each qualifying rain event, and observe (inspect) the discharge of stored or contained stormwater that is derived from and discharged subsequent to a qualifying rain event producing precipitation of ½ inch or more at the time of discharge. Complete Part VII (Corrective Actions) as needed.**

Discharge Location, Storage or Containment Area	Visual Observation

Part VII. Additional Corrective Actions Required. **Identify additional corrective actions not included with BMP Deficiencies (Part III) above. Note if SWPPP change is required.**

Required Actions	Implementation Date

APPENDIX G

Training Reporting Form

Trained Contractor Personnel Log

Stormwater Management Training Log and Documentation

Project Name: _____
WDID #: _____

Stormwater Management Topic: (check as appropriate)

☐ Erosion Control
☐ Sediment Control
☐ Wind Erosion Control
☐ Tracking Control
☐ Non-Stormwater Management
☐ Waste Management and Materials Pollution Control
☐ Stormwater Sampling

Specific Training Objective: _____

Location: _____ Date: _____

Instructor:_____ Telephone: _____

Course Length (hours): _____

Attendee Roster (Attach additional forms if necessary)

Name	Company	Phone

As needed, add proof of external training (e.g., course completion certificates, credentials for QSP, QSD).

APPENDIX H

Documentation of Authorized Representatives

for Permit-related Signatures

Authorization of Approved Signatories

Project Name: _____

WDID #: _____

Name of Personnel	Project Role	Company	Signature	Date

_____ _____

LRP's Signature Date

_____ _____

LRP Name and Title Telephone Number

CSMP Attachment 1

Weather Reports

CSMP Attachment 2

Rain Gauge Log Sheet

Rain Gauge Log Sheet

Construction Site Name:

WDID #:

Rain Gauge Location (if not on-site):

Date (mm/dd/yy)	Time (24-hr)	Initials	Rainfall Depth (Inches)	Notes:

CSMP Attachment 3

Monitoring Records

CSMP Attachment 4

Effluent Sampling Field Log Sheet

Risk Level 1, 2, 3 ***Visual Inspection Field Log Sheet***						
Date and Time of Inspection:				Report Date:		
Inspection Type:	☐ Weekly	☐ Before predicted rain	☐ During rain event	☐ Following qualifying rain event	☐ Contained stormwater release	☐ Quarterly non-stormwater
Site Information						
Site Name:			Approximate Exposed Area:			
Construction stage:						
Weather and Observations						
Date Rain Predicted to Occur:				Predicted % chance of rain:		
Estimated Storm Beginning _____ (date and time)		Estimated Storm Duration _____ (hours)		Estimate time since last storm: _____ (days or hours)		Rain gauge reading: _____ (inches)
Exemption Applied[1]? Yes ☐ No ☐						
Observations: If yes identify location						
Odors	Yes ☐ No ☐					
Floating material	Yes ☐ No ☐					
Suspended Material	Yes ☐ No ☐					
Sheen	Yes ☐ No ☐					
Discolorations	Yes ☐ No ☐					
Turbidity	Yes ☐ No ☐					
Site Inspections						
Outfalls or BMPs Evaluated			**Deficiencies Noted**			
(add additional sheets or attached detailed BMP Inspection Checklists)						
Photos Taken:	Yes ☐		No ☐	Photo Reference IDs:		

[1] Sampling or inspection is not required under the following conditions: 1) During dangerous weather conditions such as flooding and electrical storms; 2) Outside of scheduled site business hours. If monitoring (visual monitoring or sample collection) of the site is unsafe because of the dangerous conditions noted above, then the QSP shall document the conditions for why an exception to performing the monitoring was necessary. The exemption documentation shall be filed in CSMP Attachment 3 "Monitoring Records".

Corrective Actions Identified (note if SWPPP/REAP change is needed)			
Inspector Information			
Inspector Name:		Inspector Title:	
Signature:			Date:
Risk Level 2 ***Effluent Sampling Field Log Sheets***			
Construction Site Name:		Date:	Time Start: Time End:
Sampler:			
Sampling Event Type:	☐ Stormwater	☐ Non-stormwater	☐ Non-visible pollutant
Field Meter Calibration			
pH Meter ID No./Desc.: Calibration Date/Time:		Turbidity Meter ID No./Desc.: Calibration Date/Time:	
Field pH and Turbidity Measurements			
Discharge Location Description	pH	Turbidity	Time
Grab Samples Collected			
Discharge Location Description	Sample Type		Time
Additional Sampling Notes:			

CSMP Attachment 5

Chain of Custody

CHAIN OF CUSTODY RECORD
NON-VISIBLE POLLUTANT SAMPLING

GSI ENVIRONMENTAL

Construction Site:					ANALYSIS REQUESTED			REMARKS
WIDID:								
Address:					TPH (EPA 8015 B)	Asbestos (EPA 100.1)	Oil + Grease (EPA 1664)	**Note:** 1) Samples should only be collected when a breach, leakage, malfunction, or spills is observed; the leak or spill has not been cleaned up prior to the rain event; and there is the potential for discharge of non-visible pollutants to surface water or drainage system. 2) Only the analysis(es) that is(are) associated with the breach, leakage, malfunction or spill should be requested.
Facility Contact:								
Sampled by (print name):								
Sample Date:								
Signature:								
Sample Location	**Time**	**Field Temperature (°F)**	**Field pH (s.u.)**	**Containers**				
Example				1 L glass bottle - - H_2SO_4			**X**	
				500 mL amber glass - unpreserved	**X**			
				1 L plastic bottle - unpreserved		**X**		
				1 L glass bottle - - H_2SO_4				
				500 mL amber glass - unpreserved				
				1 L plastic bottle - unpreserved				
				1 L glass bottle - - H_2SO_4				
				500 mL amber glass - unpreserved				
				1 L plastic bottle - unpreserved				
				1 L glass bottle - - H_2SO_4				
				500 mL amber glass - unpreserved				
				1 L plastic bottle - unpreserved				
				1 L glass bottle - - H_2SO_4				
				500 mL amber glass - unpreserved				
				1 L plastic bottle - unpreserved				

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

Exhibit A

Construction General Permit Order 2009-0009-DWQ

(As amended by 2010-0014-DWQ and 2012-0006-DWQ)

State Water Resources Control Board
Division of Water Quality
1001 I Street • Sacramento, California 95814 • (916) 341-5455
Mailing Address: P.O. Box 100 • Sacramento, California • 95812-0100
Fax (916) 341-5463 • http://www.waterboards.ca.gov

Linda S. Adams
Secretary for
Environmental Protection

Arnold Schwarzenegger
Governor

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I. BACKGROUND

A. History

In 1972, the Federal Water Pollution Control Act (also referred to as the Clean Water Act [CWA]) was amended to provide that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The 1987 amendments to the CWA added Section 402(p), which establishes a framework for regulating municipal and industrial storm water discharges under the NPDES Program. On November 16, 1990, the U.S. Environmental Protection Agency (USEPA) published final regulations that established storm water permit application requirements for specified categories of industries. The regulations provide that discharges of storm water to waters of the United States from construction projects that encompass five or more acres of soil disturbance are effectively prohibited unless the discharge is in compliance with an NPDES Permit. Regulations (Phase II Rule) that became final on December 8, 1999 lowered the permitting threshold from five acres to one acre.

While federal regulations allow two permitting options for storm water discharges (Individual Permits and General Permits), the State Water Board has elected to adopt only one statewide General Permit at this time that will apply to most storm water discharges associated with construction activity.

On August 19, 1999, the State Water Board reissued the General Construction Storm Water Permit (Water Quality Order 99-08-DWQ). On December 8, 1999 the State Water Board amended Order 99-08-DWQ to apply to sites as small as one acre.

The General Permit accompanying this fact sheet regulates storm water runoff from construction sites. Regulating many storm water discharges under one permit will greatly reduce the administrative burden associated with permitting individual storm water discharges. To obtain coverage under this General Permit, dischargers shall electronically file the Permit Registration Documents (PRDs), which includes a Notice of Intent (NOI), Storm Water Pollution Prevention Plan (SWPPP), and other compliance related documents required by this General Permit and mail the appropriate permit fee to the State Water Board. It is expected that as the storm water program develops, the Regional Water Quality Control Boards (Regional Water Boards) may issue General Permits or Individual Permits containing more specific permit provisions. When this occurs, this General Permit will no longer regulate those dischargers.

B. Legal Challenges and Court Decisions

1. Early Court Decisions

Shortly after the passage of the CWA, the USEPA promulgated regulations exempting most storm water discharges from the NPDES permit requirements. (See 40 C.F.R. § 125.4 (1975); see also *Natural Resources Defense Council v. Costle* (D.C. Cir. 1977) 568 F.2d 1369, 1372 (*Costle*); *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159, 1163 (*Defenders of Wildlife*).) When environmental groups challenged this exemption in federal court, the District of Columbia Court of Appeals invalidated the regulation, holding that the USEPA "does not have authority to exempt categories of point sources from the permit requirements of [CWA] § 402." (*Costle*, 568 F.2d at 1377.) The *Costle* court rejected the USEPA's argument that effluent-based storm sewer regulation was administratively infeasible because of the variable nature of storm water pollution and the number of affected storm sewers throughout the country. (*Id.* at 1377-82.) Although the court acknowledged the practical problems relating to storm sewer regulation, the court found the USEPA had the flexibility under the CWA to design regulations that would overcome these problems. (*Id.* at 1379-83.) In particular, the court pointed to general permits and permits based on requiring best management practices (BMPs).

During the next 15 years, the USEPA made numerous attempts to reconcile the statutory requirement of point source regulation with the practical problem of regulating possibly millions of diverse point source discharges of storm water. (See *Defenders of Wildlife*, 191 F.3d at 1163; see also Gallagher, Clean Water Act in Environmental Law Handbook (Sullivan, edit., 2003)
p. 300 (Environmental Law Handbook); Eisen, *Toward a Sustainable Urbanism: Lessons from Federal Regulation of Urban Storm Water Runoff* (1995) 48 Wash. U.J. Urb. & Contemp. L.1, 40-41 [Regulation of Urban Storm Water Runoff].)

In 1987, Congress amended the CWA to require NPDES permits for storm water discharges. (See CWA § 402(p), 33 U.S.C. § 1342(p); *Defenders of Wildlife,* 191 F.3d at 1163; *Natural Resources Defense Council v. USEPA* (9th Cir. 1992) 966 F.2d 1292, 1296.) In these amendments, enacted as part of the Water Quality Act of 1987, Congress distinguished between industrial and municipal storm water discharges. With respect to industrial storm water discharges, Congress provided that NPDES permits "shall meet all applicable provisions of this section and section 1311 [requiring the USEPA to establish effluent limitations under specific timetables]." (CWA § 402(p)(3)(A), 33 U.S.C. § 1342(p)(3)(A); see also *Defenders of Wildlife,* 191 F.3d at 1163-64.)

In 1990, USEPA adopted regulations specifying what activities were considered "industrial" and thus required discharges of storm water associated with those activities to obtain coverage under NPDES permits. (55 Fed. Reg. 47,990 (1990); 40 C.F.R. § 122.26(b)(14).) Construction activities, deemed a subset of the industrial activities category, must also be regulated by an NPDES permit. (40 C.F.R. § 122.26(b)(14)(x)). In 1999, USEPA issued regulations for "Phase II" of storm water regulation, which required most small construction sites (1-5 acres) to be regulated under the NPDES program. (64 Fed. Reg. 68,722; 40 C.F.R. § 122.26(b)(15)(i).)

2. Court Decisions on Public Participation

Two recent federal court opinions have vacated USEPA rules that denied meaningful public review of NPDES permit conditions. On January 14, 2003, the Ninth Circuit Court of Appeals held that certain aspects of USEPA's Phase II regulations governing MS4s were invalid primarily because the general permit did not contain express requirements for public participation. (*Environmental Defense Center v. USEPA* (9th Cir. 2003) 344 F.3d 832.) Specifically, the court determined that applications for general permit coverage (including the Notice of Intent (NOI) and Storm Water Management Program (SWMP)) must be made available to the public, the applications must be reviewed and determined to meet the applicable standard by the permitting authority before coverage commences, and there must be a process to accommodate public hearings. (*Id.* at 852-54.) Similarly, on February 28, 2005, the Second Circuit Court of Appeals held that the USEPA's confined animal feeding operation (CAFO) rule violated the CWA because it allowed dischargers to write their own nutrient management plans without public review. (*Waterkeeper Alliance v. USEPA* (2d Cir. 2005) 399 F.3d 486.) Although neither decision involved the issuance of construction storm water permits, the State Water Board's Office of Chief Counsel has recommended that the new General Permit address the courts' rulings where feasible[1].

[1] In *Texas Independent Producers and Royalty Owners Assn. v. USEPA* (7th Cir. 2005) 410 F.3d 964, the Seventh Circuit Court of Appeals held that the USEPA's construction general permit was not required to provide the public with the opportunity for a public hearing on the Notice of Intent or Storm Water Pollution Prevention Plan. The Seventh Circuit briefly discussed why it agreed with the Ninth Circuit's dissent in *Environmental Defense Center*, but

The CWA and the USEPA's regulations provide states with the discretion to formulate permit terms, including specifying best management practices (BMPs), to achieve strict compliance with federal technology-based and water quality-based standards. (*Natural Resources Defense Council v. USEPA* (9th Cir. 1992) 966 F.2d 1292, 1308.) Accordingly, this General Permit has developed specific BMPs as well as numeric action levels (NALs) in order to achieve these minimum federal standards. In addition, the General Permit requires a SWPPP and REAP (another dynamic, site-specific plan) to be developed but has removed all language requiring the discharger to implement these plans – instead, the discharger is required to comply with specific requirements. By requiring the dischargers to implement these specific BMPs and NALs, this General Permit ensures that the dischargers do not "write their own permits." As a result this General Permit does not require each discharger's SWPPP and REAP to be reviewed and approved by the Regional Water Boards.

This General Permit also requires dischargers to electronically file all permit-related compliance documents. These documents include, but are not limited to, NOIs, SWPPPs, annual reports, Notice of Terminations (NOTs), and numeric action level (NAL) exceedance reports. Electronically submitted compliance information is immediately available to the public, as well as the Regional Water Quality Control Board (Regional Water Board) offices, via the Internet. In addition, this General Permit enables public review and hearings on permit applications when appropriate. Under this General Permit, the public clearly has a meaningful opportunity to participate in the permitting process.

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generally did not discuss the substantive holdings in *Environmental Defense Center* and *Waterkeeper Alliance*, because neither court addressed the initial question of whether the plaintiffs had standing to challenge the permits at issue. However, notwithstanding the Seventh Circuit's decision, it is not binding or controlling on the State Water Board because California is located within the Ninth Circuit.

C. Blue Ribbon Panel of Experts and Feasibility of Numeric Effluent Limitations

In 2005 and 2006, the State Water Board convened an expert panel (panel) to address the feasibility of numeric effluent limitations (NELs) in California's storm water permits. Specifically, the panel was asked to address:

"Is it technically feasible to establish numeric effluent limitations, or some other quantifiable limit, for inclusion in storm water permits? How would such limitations or criteria be established, and what information and data would be required?"

"The answers should address industrial general permits, construction general permits, and area-wide municipal permits. The answers should also address both technology-based limitations or criteria and water quality-based limitations or criteria. In evaluating establishment of any objective criteria, the panel should address all of the following:

The ability of the State Water Board to establish appropriate objective limitations or criteria;

How compliance determinations would be made;

The ability of dischargers and inspectors to monitor for compliance; and

The technical and financial ability of dischargers to comply with the limitations or criteria."

Through a series of public participation processes (State Water Board meetings, State Water Board workshops, and the solicitation of written comments), a number of water quality, public process and overall program effectiveness problems were identified. Some of these problems are addressed through this General Permit.

D. Summary of Panel Findings on Construction Activities

The panel's final report can be downloaded and viewed through links at www.waterboards.ca.gov or by clicking here[2].

The panel made the following observations:

"Limited field studies indicate that traditional erosion and sediment controls are highly variable in performance, resulting in highly variable turbidity levels in the site discharge."

"Site-to-site variability in runoff turbidity from undeveloped sites can also be quite large in many areas of California, particularly in more arid regions with less natural vegetative cover and steep slopes."

[2] http://www.waterboards.ca.gov/stormwtr/docs/numeric/swpanel_final_report.pdf

"Active treatment technologies involving the use of polymers with relatively large storage systems now exist that can provide much more consistent and very low discharge turbidity. However, these technologies have as yet only been applied to larger construction sites, generally five acres or greater. Furthermore, toxicity has been observed at some locations, although at the vast majority of sites, toxicity has not occurred. There is also the potential for an accidental large release of such chemicals with their use."

"To date most of the construction permits have focused on TSS and turbidity, but have not addressed other, potentially significant pollutants such as phosphorus and an assortment of chemicals used at construction sites."

"Currently, there is no required training or certification program for contractors, preparers of soil erosion and sediment control Storm Water Pollution Prevention Plans, or field inspectors."

"The quality of storm water discharges from construction sites that effectively employ BMPs likely varies due to site conditions such as climate, soil, and topography."

"The States of Oregon and Washington have recently adopted similar concepts to the Action Levels described earlier."

In addition, the panel made the following conclusions:

"It is the consensus of the Panel that active treatment technologies make Numeric Limits technically feasible for pollutants commonly associated with storm water discharges from construction sites (e.g. TSS and turbidity) for larger construction sites. Technical practicalities and cost-effectiveness may make these technologies less feasible for smaller sites, including small drainages within a larger site, as these technologies have seen limited use at small construction sites. If chemical addition is not permitted, then Numeric Limits are not likely feasible."

"The Board should consider Numeric Limits or Action Levels for other pollutants of relevance to construction sites, but in particular pH. It is of particular concern where fresh concrete or wash water from cement mixers/equipment is exposed to storm water."

"The Board should consider the phased implementation of Numeric Limits and Action Levels, commensurate with the capacity of the dischargers and support industry to respond."

E. How the Panel's Findings are Used in this General Permit

The State Water Board carefully considered the findings of the panel and related public comments. The State Water Board also reviewed and considered the comments regarding statewide storm water policy and the reissuance of the Industrial General Permit. From the input received the State Water Board identified some permit and program performance gaps that are addressed in this General Permit. The Summary of Significant Changes (below) in this General Permit are a direct result of this process.

F. Summary of Significant Changes in This General Permit

The State Water Board has significant changes to Order 99-08-DWQ. This General Permit differs from Order 99-08-DWQ in the following significant ways:

Rainfall Erosivity Waiver: this General Permit includes the option allowing a small construction site (>1 and <5 acres) to self-certify if the rainfall erosivity value (R value) for their site's given location and time frame compute to be less than or equal to 5.

Technology-Based Numeric Action Levels: this General Permit includes NALs for pH and turbidity.

Risk-Based Permitting Approach: this General Permit establishes three levels of risk possible for a construction site. Risk is calculated in two parts: 1) Project Sediment Risk, and 2) Receiving Water Risk.

Minimum Requirements Specified: this General Permit imposes more minimum BMPs and requirements that were previously only required as elements of the SWPPP or were suggested by guidance.

Project Site Soil Characteristics Monitoring and Reporting: this General Permit provides the option for dischargers to monitor and report the soil characteristics at their project location. The primary purpose of this requirement is to provide better risk determination and eventually better program evaluation.

Effluent Monitoring and Reporting: this General Permit requires effluent monitoring and reporting for pH and turbidity in storm water discharges. The purpose of this monitoring is to evaluate whether NALs and NELs for Active Treatment Systems included in this General Permit are exceeded.

Receiving Water Monitoring and Reporting: this General Permit requires some Risk Level 3 and LUP Type 3 dischargers to monitor receiving waters and conduct bioassessments.

Post-Construction Storm Water Performance Standards: this General Permit specifies runoff reduction requirements for all sites not covered by a Phase I or Phase II MS4 NPDES permit, to avoid, minimize and/or mitigate post-construction storm water runoff impacts.

Rain Event Action Plan: this General Permit requires certain sites to develop and implement a Rain Event Action Plan (REAP) that must be designed to protect all exposed portions of the site within 48 hours prior to any likely precipitation event.

Annual Reporting: this General Permit requires all projects that are enrolled for more than one continuous three-month period to submit information and annually certify that their site is in compliance with these requirements. The primary purpose of this requirement is to provide information needed for overall program evaluation and pubic information.

Certification/Training Requirements for Key Project Personnel: this General Permit requires that key personnel (e.g., SWPPP preparers, inspectors, etc.) have specific training or certifications to ensure their level of knowledge and skills are adequate to ensure their ability to design and evaluate project specifications that will comply with General Permit requirements.

Linear Underground/Overhead Projects: this General Permit includes requirements for all Linear Underground/Overhead Projects (LUPs).

II. RATIONALE

A. General Permit Approach

A general permit for construction activities is an appropriate permitting approach for the following reasons:

1. A general permit is an efficient method to establish the essential regulatory requirements for a broad range of construction activities under differing site conditions;

2. A general permit is the most efficient method to handle the large number of construction storm water permit applications;

3. The application process for coverage under a general permit is far less onerous than that for individual permit and hence more cost effective;

4. A general permit is consistent with USEPA's four-tier permitting strategy, the purpose of which is to use the flexibility provided by the CWA in designing a workable and efficient permitting system; and

5. A general permit is designed to provide coverage for a group of related facilities or operations of a specific industry type or group of industries. It is appropriate when the discharge characteristics are sufficiently similar, and a standard set of permit requirements can effectively provide environmental protection and comply with water quality standards for discharges. In most cases, the general permit will provide sufficient and appropriate management requirements to protect the quality of receiving waters from discharges of storm water from construction sites.

There may be instances where a general permit is not appropriate for a specific construction project. A Regional Water Board may require any discharger otherwise covered under the General Permit to apply for and obtain an Individual Permit or apply for coverage under a more specific General Permit. The Regional Water Board must determine that this General Permit does not provide adequate assurance that water quality will be protected, or that there is a site-specific reason why an individual permit should be required.

B. Construction Activities Covered

1. **Construction activity subject to this General Permit:**

Any construction or demolition activity, including, but not limited to, clearing, grading, grubbing, or excavation, or any other activity that results in a land disturbance of equal to or greater than one acre.

Construction activity that results in land surface disturbances of less than one acre if the construction activity is part of a larger common plan of development or sale of one or more acres of disturbed land surface.

Construction activity related to residential, commercial, or industrial development on lands currently used for agriculture including, but not limited to, the construction of buildings related to agriculture that are considered industrial pursuant to USEPA regulations, such as dairy barns or food processing facilities.

Construction activity associated with LUPs including, but not limited to, those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities) and include, but are not limited to, underground utility mark-out, potholing, concrete

and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/or pavement repair or replacement, and stockpile/borrow locations.

Discharges of sediment from construction activities associated with oil and gas exploration, production, processing, or treatment operations or transmission facilities.[3]

Storm water discharges from dredge spoil placement that occur outside of U.S. Army Corps of Engineers jurisdiction[4] (upland sites) and that disturb one or more acres of land surface from construction activity are covered by this General Permit. Construction projects that intend to disturb one or more acres of land within the jurisdictional boundaries of a CWA § 404 permit should contact the appropriate Regional Water Board to determine whether this permit applies to the project.

2. Linear Underground/Overhead Projects (LUPs) subject to this General Permit:

Underground/overhead facilities typically constructed as LUPs include, but are not limited to, any conveyance, pipe, or pipeline for the transportation of any gaseous, liquid (including water, wastewater for domestic municipal services), liquescent, or slurry substance; any cable line or wire for the transmission of electrical energy; any cable line or wire for communications (e.g., telephone, telegraph, radio or television messages); and associated ancillary facilities. Construction activities associated with LUPs include, but are not limited to, those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities) and include, but are not limited to, underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/or pavement repair or replacement, and stockpile/borrow locations.

Water Quality Order 2003-0007-DWQ regulated construction activities associated with small LUPs that resulted in land disturbances greater than one acre, but less than five acres. These projects were considered non-traditional construction projects. Attachment A of this Order now regulates all construction activities from LUPs resulting in land disturbances greater than one acre.

3. Common Plan of Development or Sale

USEPA regulations include the term “common plan of development or sale” to ensure that acreage within a common project does not artificially escape the permit requirements because construction activities are phased, split among smaller parcels, or completed by different owners/developers. In the absence of an

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[3] Pursuant to the Ninth Circuit Court of Appeals’ decision in *NRDC v. EPA* (9th Cir. 2008) 526 F.3d 591, and subsequent denial of the USEPA’s petition for reconsideration in November 2008, oil and gas construction activities discharging storm water contaminated only with sediment are no longer exempt from the NPDES program.

[4] A construction site that includes a dredge and/or fill discharge to any water of the United States (e.g., wetland, channel, pond, or marine water) requires a CWA Section 404 permit from the U.S. Army Corps of Engineers and a CWA Section 401 Water Quality Certification from the Regional Water Board or State Water Board.

exact definition of “common plan of development or sale,” the State Water Board is required to exercise its regulatory discretion in providing a common sense interpretation of the term as it applies to construction projects and permit coverage. An overbroad interpretation of the term would render meaningless the clear “one acre” federal permitting threshold and would potentially trigger permitting of almost any construction activity that occurs within an area that had previously received area-wide utility or road improvements.

Construction projects generally receive grading and/or building permits (Local Permits) from local authorities prior to initiating construction activity. These Local Permits spell out the scope of the project, the parcels involved, the type of construction approved, etc. Referring to the Local Permit helps define “common plan of development or sale.” In cases such as tract home development, a Local Permit will include all phases of the construction project including rough grading, utility and road installation, and vertical construction. All construction activities approved in the Local Permit are part of the common plan and must remain under the General Permit until construction is completed. For custom home construction, Local Permits typically only approve vertical construction as the rough grading, utilities, and road improvements were already independently completed under the a previous Local Permit. In the case of a custom home site, the homeowner must submit plans and obtain a distinct and separate Local Permit from the local authority in order to proceed. It is not the intent of the State Water Board to require permitting for an individual homeowner building a custom home on a private lot of less than one acre if it is subject to a separate Local Permit. Similarly, the installation of a swimming pool, deck, or landscaping that disturbs less than one acre that was not part of any previous Local Permit are not required to be permitted.

The following are several examples of construction activity of less than one acre that would require permit coverage:

a. A landowner receives a building permit(s) to build tract homes on a 100-acre site split into 200 one-third acre parcels, (the remaining acreage consists of streets and parkways) which are sold to individual homeowners as they are completed. The landowner completes and sells all the parcels except for two. Although the remaining two parcels combined are less than one acre, the landowner must continue permit coverage for the two parcels.

b. One of the parcels discussed above is sold to another owner who intends to complete the construction as already approved in the Local Permit. The new landowner must file Permit Registration Documents (PRDs) to complete the construction even if the new landowner is required to obtain a separate Local Permit.

c. Landowner in (1) above purchases 50 additional one half-acre parcels adjacent to the original 200-acre project. The landowner seeks a Local Permit (or amendment to existing Local permit) to build on 20 parcels while leaving the remaining 30 parcels for future development. The landowner must amend PRDs to include the 20 parcels 14 days prior to commencement of construction activity on those parcels.

C. Construction Activities Not Covered

1. Traditional Construction Projects Not Covered

This General Permit does not apply to the following construction activity:

a. Routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the facility.

b. Disturbances to land surfaces solely related to agricultural operations such as disking, harrowing, terracing and leveling, and soil preparation.

c. Discharges of storm water from areas on tribal lands; construction on tribal lands is regulated by a federal permit.

d. Discharges of storm water within the Lake Tahoe Hydrologic Unit. The Lahontan Regional Water Board has adopted its own permit to regulate storm water discharges from construction activity in the Lake Tahoe Hydrologic Unit (Regional Water Board 6SLT). Owners of construction projects in this watershed must apply for the Lahontan Regional Water Board permit rather than the statewide Construction General Permit. Construction projects within the Lahontan region must also comply with the Lahontan Region Project Guideline for Erosion Control (R6T-2005-0007 Section), which can be found at **http://www.waterboards.ca.gov/lahontan/Adopted_Orders/2005/r6t_2005_0007.pdf**

e. Construction activity that disturbs less than one acre of land surface, unless part of a larger common plan of development or the sale of one or more acres of disturbed land surface.

f. Construction activity covered by an individual NPDES Permit for storm water discharges.

g. Landfill construction activity that is subject to the Industrial General Permit.

h. Construction activity that discharges to Combined Sewer Systems.

i. Conveyances that discharge storm water runoff combined with municipal sewage.

j. Discharges of storm water identified in CWA § 402(*l*)(2), 33 U.S.C. § 1342(*l*)(2).

2. **Linear Projects Not Covered**

a. LUP construction activity does not include linear routine maintenance projects. Routine maintenance projects are projects associated with operations and maintenance activities that are conducted on existing lines and facilities and within existing right-of-way, easements, franchise agreements, or other legally binding agreements of the discharger. Routine maintenance projects include, but are not limited to projects that are conducted to:

i. Maintain the original purpose of the facility or hydraulic capacity.

ii. Update existing lines[5] and facilities to comply with applicable codes, standards, and regulations regardless if such projects result in increased capacity.

iii. Repairing leaks.

[5]Update existing lines includes replacing existing lines with new materials or pipes.

Routine maintenance does not include construction of new[6] lines or facilities resulting from compliance with applicable codes, standards, and regulations.

Routine maintenance projects do not include those areas of maintenance projects that are outside of an existing right-of-way, franchise, easements, or agreements. When a project must secure new areas, those areas may be subject to this General Permit based on the area of disturbed land outside the original right-of-way, easement, or agreement.

b. LUP construction activity does not include field activities associated with the planning and design of a project (e.g., activities associated with route selection).

c. Tie-ins conducted immediately adjacent to "energized" or "pressurized" facilities by the discharger are not considered construction activities where all other LUP construction activities associated with the tie-in are covered by an NOI and SWPPP of a third party or municipal agency.

3. **EPA's Small Construction Rainfall Erosivity Waiver**

EPA's Storm Water Phase II Final Rule provides the option for a Small Construction Rainfall Erosivity Waiver. This waiver applies to small construction sites between 1 and 5 acres, and allows permitting authorities to waive those sites that do not have adverse water quality impacts.

Dischargers eligible for this waiver are exempt from Construction General Permit Coverage. In order to obtain the waiver, the discharger must certify to the State Water Board that small construction activity will occur only when the rainfall erosivity factor is less than 5 ("R" in the Revised Universal Soil Loss Equation). The period of construction activity begins at initial earth disturbance and ends with final stabilization. Where vegetation will be used for final stabilization, the date of installation of a practice that provides interim non-vegetative stabilization can be used for the end of the construction period. The operator must agree (as a condition waiver eligibility) to periodically inspect and properly maintain the area until the criteria for final stabilization as defined in the General Permit have been met. If use of this interim stabilization eligibility condition was relied on to qualify for the waiver, signature on the waiver with a certification statement constitutes acceptance of and commitment to complete the final stabilization process. The discharger must submit a waiver certification to the State Board prior to commencing construction activities.

USEPA funded a cooperative agreement with Texas A&M University to develop an online rainfall erosivity calculator. Dischargers can access the calculator from EPA's website at: www.epa.gov/npdes/stormwater/cgp. Use of the calculator allows the discharger to determine potential eligibility for the rainfall erosivity waiver. It may also be useful in determining the time periods during which construction activity could be waived from permit coverage.

[6]New lines are those that are not associated with existing facilities and are not part of a project to update or replace existing lines.

D. Obtaining and Terminating Permit Coverage

The appropriate Legally Responsible Person (LRP) must obtain coverage under this General Permit. To obtain coverage, the LRP or the LRP's Approved Signatory must file Permit Registration Documents (PRDs) prior to the commencement of construction activity. Failure to obtain coverage under this General Permit for storm water discharges to waters of the United States is a violation of the CWA and the California Water Code.

To obtain coverage under this General Permit, LRPs must electronically file the PRDs, which include a Notice of Intent (NOI), Storm Water Pollution Prevention Plan (SWPPP), and other documents required by this General Permit, and mail the appropriate permit fee to the State Water Board. It is expected that as the storm water program develops, the Regional Water Boards may issue General Permits or Individual Permits that contain more specific permit provisions. When this occurs, this General Permit will no longer regulate those dischargers that obtain coverage under Individual Permits.

Any information provided to the Regional Water Board shall comply with the Homeland Security Act and any other federal law that concerns security in the United States; any information that does not comply should not be submitted.

The application requirements of the General Permit establish a mechanism to clearly identify the responsible parties, locations, and scope of operations of dischargers covered by the General Permit and to document the discharger's knowledge of the General Permit's requirements.

This General Permit provides a grandfathering exception to existing dischargers subject to Water Quality Order No. 99-08-DWQ. Construction projects covered under Water Quality Order No. 99-08-DWQ shall obtain permit coverage at Risk Level 1. LUP projects covered under Water Quality Order No. 2003-0007-DWQ shall obtain permit coverage at LUP Type 1. The Regional Water Boards have the authority to require Risk Determination to be performed on projects currently covered under Water Quality Order No. 99-08-DWQ and 2003-0007-DWQ where they deem necessary.

LRPs must file a Notice of Termination (NOT) with the Regional Water Board when construction is complete and final stabilization has been reached or ownership has been transferred. The discharger must certify that all State and local requirements have been met in accordance with this General Permit. In order for construction to be found complete, the discharger must install post-construction storm water management measures and establish a long-term maintenance plan. This requirement is intended to ensure that the post-construction conditions at the project site do not cause or contribute to direct or indirect water quality impacts (i.e., pollution and/or hydromodification) upstream and downstream. Specifically, the discharger must demonstrate compliance with the post-construction standards set forth in this General Permit (Section XIII). The discharger is responsible for all compliance issues including all annual fees until the NOT has been filed and approved by the local Regional Water Board.

E. Discharge Prohibitions

This General Permit authorizes the discharge of storm water to surface waters from construction activities that result in the disturbance of one or more acres of land, provided that the discharger satisfies all permit conditions set forth in the Order. This General Permit prohibits the discharge of pollutants other than storm water and non-storm water discharges authorized by this General Permit or another NPDES permit. This General Permit also prohibits all discharges which contain a hazardous substance in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges. In addition, this General Permit incorporates discharge prohibitions contained in water quality control plans, as implemented by the nine Regional Water Boards. Discharges to Areas of Special Biological Significance (ASBS) are prohibited unless covered by an exception that the State Water Board has approved.

Non-storm water discharges include a wide variety of sources, including improper dumping, spills, or leakage from storage tanks or transfer areas. Non-storm water discharges may contribute significant pollutant loads to receiving waters. Measures to control spills, leakage, and dumping, and to prevent illicit connections during construction must be addressed through structural as well as non-structural BMPs. The State Water Board recognizes, however, that certain non-storm water discharges may be necessary for the completion of construction projects. Authorized non-storm water discharges may include those from de-chlorinated potable water sources such as: fire hydrant flushing, irrigation of vegetative erosion control measures, pipe flushing and testing, water to control dust, uncontaminated ground water dewatering, and other discharges not subject to a separate general NPDES permit adopted by a region. Therefore this General Permit authorizes such discharges provided they meet the following conditions.

These authorized non-storm water discharges must:

1. be infeasible to eliminate;
2. comply with BMPs as described in the SWPPP;
3. filter or treat, using appropriate technology, all dewatering discharges from sedimentation basins;
4. meet the NALs for pH and turbidity; and
5. not cause or contribute to a violation of water quality standards.

Additionally, authorized non-storm water discharges must not be used to clean up failed or inadequate construction or post-construction BMPs designed to keep materials onsite. Authorized non-storm water dewatering discharges may require a permit because some Regional Water Boards have adopted General Permits for dewatering discharges.

This General Permit prohibits the discharge of storm water that causes or threatens to cause pollution, contamination, or nuisance.

F. Effluent Standards for All Types of Discharges

1. Technology-Based Effluent Limitations

Permits for storm water discharges associated with construction activity must meet all applicable provisions of Sections 301 and 402 of the CWA. These provisions require controls of pollutant discharges that utilize best available technology economically achievable (BAT) for toxic pollutants and non conventional pollutants and best conventional pollutant control technology (BCT) for conventional pollutants. Additionally, these provisions require controls of pollutant discharges to reduce pollutants and any more stringent controls necessary to meet water quality standards. The USEPA has already established such limitations, known as effluent limitation guidelines (ELGs), for some industrial categories. This is not the case with construction discharges. In instances where there are no ELGs the permit writer is to use best professional judgment (BPJ) to establish requirements that the discharger must meet using BAT/BCT technology. This General Permit contains only narrative effluent limitations and does not contain numeric effluent limitations, except for Active Treatment Systems (ATS).

Order No. 2009-0009-DWQ, as originally adopted by the State Water Board on September 2, 2009, contained numeric effluent limitations for pH (within the range of 6.0 and 9.0 pH units) and turbidity (500 NTU) that applied only to Risk Level 3 and LUP Type 3 construction sites. The State Water Board adopted the numeric effluent limitations as technology-based effluent limitations based upon its best professional judgment. The California Building Industry Association, the Building Industry Legal Defense

Foundation, and the California Business Properties Association (petitioners) challenged Order No. 2009-0009-DWQ in *California Building Industry Association et al. v. State Water Resources Control Board*. On December 27, 2011, the Superior Court issued a judgment and writ of mandamus. The Superior Court ruled in favor of the State Water Board on almost all of the issues the petitioners raised, but the Superior Court invalidated the numeric effluent limitations for pH and turbidity for Risk Level 3 and LUP Type 3 sites because it determined that the State Water Board did not have sufficient BMP performance data to support those numeric effluent limitations. Therefore, the Superior Court concluded that the State Water Board did not comply with the federal regulations that apply to the use of best professional judgment. In invalidating the numeric effluent limitations, the Superior Court also suspended two ancillary requirements (a compliance storm event provision and receiving water monitoring at Risk Level 3 and LUP Type 3 sites that violated the numeric effluent limitations) that related solely to the invalidated numeric effluent limitations.

As a result of the Superior Court's writ of mandamus, this Order no longer contains numeric effluent limitations for pH and turbidity, except for ATS. In addition, as a result of the Superior Court's writ of mandamus, the receiving water monitoring requirements for Risk Level 3 and LUP Type 3 sites were suspended until the State Water Board amended this Order to restore the receiving water monitoring requirements. As amended, this Order now requires Risk Level 3 and LUP Type 3 Dischargers with direct discharges to surface waters to conduct receiving water monitoring whenever their effluent exceeds specified receiving water monitoring triggers. The receiving water monitoring triggers were established at the same levels as the previous numeric effluent limitations (effluent pH outside the range of 6.0 and 9.0 pH units or turbidity exceeding 500 NTU). In restoring the receiving water monitoring requirements, the State Water Board determined that it was appropriate to require receiving water monitoring for these types of sites with direct discharges to surface waters that exceeded the receiving water monitoring triggers under any storm event scenarios, because these sites represent the highest threat to receiving water quality. An exceedance of a receiving water monitoring trigger does not constitute a violation of this General Permit. These receiving water monitoring requirements take effect on the effective date of the amendment to this Order.

BAT/BCT technologies not only include passive systems such as conventional runoff and sediment control, but also treatment systems such as coagulation/flocculation using sand filtration, when appropriate. Such technologies allow for effective treatment of soil particles less 0.02 mm (medium silt) in diameter. The discharger must install structural controls, as necessary, such as erosion and sediment controls that meet BAT and BCT to achieve compliance with water quality standards. The narrative effluent limitations constitute compliance with the requirements of the CWA.

Because the permit is an NPDES permit, there is no legal requirement to address the factors set forth in Water Code sections 13241 and 13263, unless the permit is more stringent than what federal law requires. (See *City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613, 618, 627.) None of the requirements in this permit are more stringent than the minimum federal requirements, which include technology-based requirements achieving BAT/BCT and strict compliance with water quality standards. The inclusion of numeric effluent limitations (NELs) in the permit for Active Treatment Systems does not cause the permit to be more stringent than current federal law. NELs and best management practices are simply two different methods of achieving the same federal requirement: strict compliance with state water quality standards. Federal law authorizes both narrative and numeric effluent limitations to meet state water quality standards. The use of NELs to achieve compliance with water quality standards is not a more stringent requirement than the use of BMPs. (State Water Board Order No. WQ 2006-0012 (*Boeing*).) Accordingly, the State Water Board does not need to take into account the factors in Water Code sections 13241 and 13263.

The State Water Board has concluded that the establishment of BAT/BCT will not create or aggravate other environmental problems through increases in air pollution, solid waste generation, or energy consumption. While there may be a slight increase in non-water quality impacts due to the implementation of additional monitoring or the construction of additional BMPs, these impacts will be negligible in comparison with the construction activities taking place on site and would be justified by the water quality benefits associated with compliance.

pH Receiving Water Monitoring Trigger

Given the potential contaminants, the minimum standard method for control of pH in runoff requires the use of preventive measures such as avoiding concrete pours during rainy weather, covering concrete and directing flow away from fresh concrete if a pour occurs during rain, covering scrap drywall and stucco materials when stored outside and potentially exposed to rain, and other housekeeping measures. If necessary, pH-impaired storm water from construction sites can be treated in a filter or settling pond or basin, with additional natural or chemical treatment required to meet pH limits set forth in this permit. The basin or pond acts as a collection point and holds storm water for a sufficient period for the contaminants to be settled out, either naturally or artificially, and allows any additional treatment to take place. The State Water Board considers these techniques to be equivalent to BCT. In determining the pH concentration trigger for discharges, the State Water Board used BPJ to set these limitations.

The chosen trigger was established by calculating three standard deviations above and below the mean pH of runoff from highway construction sites[7] in California. Proper implementation of BMPs should result in discharges that are within the range of 6.0 to 9.0 pH Units.

Turbidity Receiving Water Monitoring Trigger

The Turbidity receiving water monitoring trigger of 500 NTU is a technology-based trigger and was developed using three different analyses aimed at finding the appropriate threshold to set the technology-based limit to ensure environmental protection, effluent quality and cost-effectiveness. The analyses fell into three, main types: (1) an ecoregion-specific dataset developed by Simon et. al. (2004) [8]; (2) Statewide Regional Water Quality Control Board enforcement data; and (3) published, peer-reviewed studies and reports on in-situ performance of best management practices in terms of erosion and sediment control on active construction sites.

A 1:3 relationship between turbidity (expressed as NTU) and suspended sediment concentration (expressed as mg/L) is assumed based on a review of suspended sediment and turbidity data from three gages used in the USGS National Water Quality Assessment Program:

USGS 11074000 SANTA ANA R BL PRADO DAM CA
USGS 11447650 SACRAMENTO R A FREEPORT CA
USGS 11303500 SAN JOAQUIN R NR VERNALIS CA

The receiving water monitoring trigger represents staff determination that the trigger value is the most practicable based on available data. The turbidity receiving water monitoring trigger represents a bridge between the narrative effluent limitations and receiving water limitations. To support this receiving water monitoring trigger, State Water Board staff analyzed construction site discharge information (monitoring data, estimates) and receiving water monitoring information.

Since the turbidity receiving water monitoring trigger represents an appropriate threshold level expected at a site, compliance with this value does not necessarily represent compliance with either the narrative effluent limitations (as enforced through the BAT/BCT standard) or the receiving water limitations. In the San Diego region, some inland surface waters have a receiving water objective for turbidity equal to 20 NTU. Obviously a discharge up to, but not exceeding, the turbidity receiving water monitoring trigger of

[7] Caltrans Construction Sites Runoff Characterization Study, 2002. Available at: http://www.dot.ca.gov/hq/env/stormwater/pdf/CTSW-RT-02-055.pdf.

500 NTU may still cause or contribute to the exceedance of the 20 NTU standard. Most of the waters of the State are protected by turbidity objectives based on background conditions**.**

Table 1 - Regional Water Board Basin Plans, Water Quality Objectives for Turbidity

REGIONAL WATER BOARD	WQ Objective	Background/Natural Turbidity	Maximum Increase
1	Based on background	All levels	20%
2	Based on background	> 50 NTU	10%
3	Based on background	0-50 JTU 50-100 JTU > 100 JTU	20% 10 NTU 10%
4	Based on background	0-50 NTU > 50 NTU	20% 10%
5	Based on background	0-5 NTU 5-50 NTU 50-100 NTU >100 NTU	1 NTU 20% 10 NTU 10%
6	Based on background	All levels	10%
7	Based on background	N/A	N/A
8	Based on background	0-50 NTU 50-100 NTU >100 NTU	20% 10 NTU 10%
9	Inland Surface Waters, 20 NTU All others, based on background	 0-50 NTU 50-100 NTU >100 NTU	 20% 10 NTU 10%

Table 2 shows the suspended sediment concentrations at the 1.5 year flow recurrence interval for the 12 ecoregions in California from Simon et. al (2004).

Table 2 - Results of Ecoregion Analysis

Ecoregion	Percent of California Land Area	Median Suspended Sediment Concentration (mg/L)
1	9.1	874
4	0.2	120
5	8.8	35.6
6	20.7	1530
7	7.7	122
8	3.0	47.4
9	9.4	284
13	5.2	143
14	21.7	5150
78	8.1	581
80	2.4	199
81	3.7	503
Area-weighted average		1633

If a 1:3 relationship between turbidity and suspended sediment is assumed, the median turbidity is 544 NTU.

The following table is composed of turbidity readings measured in NTUs from administrative civil liability (ACL) actions for construction sites from 2003 - 2009. This data was derived from the complete listing of construction-related ACLs for the six year period. All ACLs were reviewed and those that included turbidimeter readings at the point of storm water discharge were selected for this dataset.

Table 3 – ACL Sampling Data taken by Regional Water Board Staff

WDID#	Region	Discharger	Turbidity (NTU)
5S34C331884	5S	Bradshaw Interceptor Section 6B	1800
5S05C325110	5S	Bridalwood Subdivision	1670
5S48C336297	5S	Cheyenne at Browns Valley	1629
5R32C314271	5R	Grizzly Ranch Construction	1400
6A090406008	6T	El Dorado County Department of Transportation, Angora Creek	97.4
5S03C346861	5S	TML Development, LLC	1600
6A31C325917	6T	Northstar Village	See Subdata Set

Subdata Set - Turbidity for point of storm water runoff discharge at Northstar Village

Date	Turbidity (NTU)	Location
10/5/2006	900	Middle Martis Creek
11/2/2006	190	Middle Martis Creek
01/04/2007	36	West Fork, West Martis Creek
02/08/2007	180	Middle Martis Creek
02/09/2007	130	Middle Martis Creek
02/09/2007	290	Middle Martis Creek
02/09/2007	100	West Fork, West Martis Creek
02/10/2007	28	Middle Martis Creek
02/10/2007	23	Middle Martis Creek
02/10/2007	32	Middle Martis Creek
02/10/2007	12	Middle Martis Creek
02/10/2007	60	West Fork, West Martis Creek
02/10/2007	34	West Fork, West Martis Creek

A 95% confidence interval for mean turbidity in an ACL order was constructed. The data set used was a small sample size, so the 500 NTU (the value derived as the receiving water monitoring trigger for this General Permit) needed to be verified as a possible population mean. In this case, the population refers to a hypothetical population of turbidity measurements of which our sample of 20 represents. A t-distribution was assumed due to the small sample size:

Mean: 512.23 NTU
Standard Deviation: 686.85
Margin of Error: 321.45
Confidence Interval: 190.78 NTU (Low)
833.68 NTU (High)

Based on a constructed 95% confidence interval, an ACL order turbidity measurement will be between 190.78 – 833.68 NTU. 500 NTU falls within this range. Using the same data set, a small-sample hypothesis test was also performed to test if the ACL turbidity data set contains enough information to cast doubt on choosing a 500 NTU as a mean. 500 NTU was again chosen due to its proposed use as an acceptable value. The test was carried out using a 95% confidence interval. Results indicated that the ACL turbidity data set *does not* contain significant sample evidence to reject the claim of 500 NTU as an acceptable mean for the ACL turbidity population.

There are not many published, peer-reviewed studies and reports on in-situ performance of best management practices in terms of erosion and sediment control on active construction sites. The most often cited study is a report titled, "Improving the Cost Effectiveness of Highway Construction Site Erosion and Pollution Control" (Horner, Guedry, and Kortenhof 1990, http://www.wsdot.wa.gov/Research/Reports/200/200.1.htm). In a comment letter summarizing this report sent to the State Water Board, the primary author, Dr. Horner, states:

"The most effective erosion control product was wood fiber mulch applied at two different rates along with a bonding agent and grass seed in sufficient time before the tests to achieve germination. Plots treated in this way reduced influent turbidity by more than 97 percent and discharged effluent exhibiting mean and maximum turbidity values of 21 and 73 NTU, respectively. Some other mulch and blanket materials performed nearly as well. These tests demonstrated the control ability of widely available BMPs over a very broad range of erosion potential."

Other technologies studied in this report produced effluent quality at or near 100 NTU. It is the BPJ of the State Water Board staff that erosion control, while preferred, is not always an option on construction sites and that technology performance in a controlled study showing effluent quality directly leaving a BMP is always easier and cheaper to control than effluent being discharged from the project (edge of property, etc.). As a result, it is the BPJ of the State Water Board staff that it is not cost effective or feasible, at this time, for all risk level and type 3 sites in California to achieve effluent discharges with turbidity values that are less than 100 NTU.

To summarize, the analysis showed that: (1) results of the Simon et. al dataset reveals turbidity values in background receiving water in California's ecoregions range from 16 NTU to 1716 NTU (with a mean of 544 NTU); (2) based on a constructed 95% confidence interval, construction sites will be subject to administrative civil liability (ACL) when their turbidity measurement falls between 190.78 – 833.68 NTU; and (3) sites with highly controlled discharges employing and maintaining good erosion control practices can discharge effluent from the BMP with turbidity values less than 100 NTU. State Water Board staff has determined, using its BPJ, that it is most cost effective to set the receiving water monitoring trigger for turbidity at 500 NTU.

i. ***Compliance Storm Event***

While this General Permit no longer contains "compliance storm event" exceptions from technology-based NELs, the "compliance storm event" exception from the ATS NELs remain in effect. See Section K of this Fact Sheet, and Attachment F of this General Permit for more information.

a. **TMDLs and Waste Load Allocations**

Dischargers located within the watershed of a CWA § 303(d) impaired water body, for which a TMDL for sediment has been adopted by the Regional Water Board or USEPA, must comply with the approved TMDL if it identifies "construction activity" or land disturbance as a source of sediment. If it does, the

TMDL should include a specific waste load allocation for this activity/source. The discharger, in this case, may be required by a separate Regional Water Board order to implement additional BMPs, conduct additional monitoring activities, and/or comply with an applicable waste load allocation and implementation schedule. If a specific waste load allocation has been established that would apply to a specific discharge, the Regional Water Board may adopt an order requiring specific implementation actions necessary to meet that allocation. In the instance where an approved TMDL has specified a general waste load allocation to construction storm water discharges, but no specific requirements for construction sites have been identified in the TMDL, dischargers must consult with the state TMDL authority[9] to confirm that adherence to a SWPPP that meets the requirements of the General Permit will be consistent with the approved TMDL.

2. Determining Compliance with Effluent Standards

a. Technology-Based Numeric Action Levels (NALs)

This General Permit contains technology-based NALs for pH and turbidity, and requirements for effluent monitoring at all Risk level 2 & 3, and LUP Type 2 & 3 sites. Numeric action levels are essentially numeric benchmark values for certain parameters that, if exceeded in effluent sampling, trigger the discharger to take actions. Exceedance of an NAL does not itself constitute a violation of the General Permit. If the discharger fails to take the corrective action required by the General Permit, though, that may consititute a violation.

The primary purpose of NALs is to assist dischargers in evaluating the effectiveness of their on-site measures. Construction sites need to employ many different systems that must work together to achieve compliance with the permit's requirements. The NALs chosen should indicate whether the systems are working as intended.

Another purpose of NALs is to provide information regarding construction activities and water quality impacts. This data will provide the State and Regional Water Boards and the rest of the storm water community with more information about levels and types of pollutants present in runoff and how effective the dischargers BMPs are at reducing pollutants in effluent. The State Water Board also hopes to learn more about the linkage between effluent and receiving water quality. In addition, these requirements will provide information on the mechanics needed to establish compliance monitoring programs at construction sites in future permit deliberations.

i. *pH*

The chosen limits were established by calculating one standard deviation above and below the mean pH of runoff from highway construction sites[10] in California. Proper implementation of BMPs should result in discharges that are within the range of 6.5 to 8.5 pH Units.

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[9] http://www.waterboards.ca.gov/tmdl/tmdl.html.
[10] Caltrans Construction Sites Runoff Characterization Study, 2002. Available at: http://www.dot.ca.gov/hq/env/stormwater/pdf/CTSW-RT-02-055.pdf.

The Caltrans study included 33 highway construction sites throughout California over a period of four years, which included 120 storm events. All of these sites had BMPs in place that would be generally implemented at all types of construction sites in California.

ii. ***Turbidity***

BPJ was used to develop an NAL that can be used as a learning tool to help dischargers improve their site controls, and to provide meaningful information on the effectiveness of storm water controls. A statewide turbidity NAL has been set at 250 NTU.

G. Receiving Water Limitations

Construction-related activities that cause or contribute to an exceedance of water quality standards must be addressed. The dynamic nature of construction activity gives the discharger the ability to quickly identify and monitor the source of the exceedances. This is because when storm water mobilizes sediment, it provides visual cues as to where corrective actions should take place and how effective they are once implemented.

This General Permit requires that storm water discharges and authorized non-storm water discharges must not contain pollutants that cause or contribute to an exceedance of any applicable water quality objective or water quality standards. The monitoring requirements in this General Permit for sampling and analysis procedures will help determine whether BMPs installed and maintained are preventing pollutants in discharges from the construction site that may cause or contribute to an exceedance of water quality standards.

Water quality standards consist of designated beneficial uses of surface waters and the adoption of ambient criteria necessary to protect those uses. When adopted by the State Water Board or a Regional Water Board, the ambient criteria are termed "water quality objectives." If storm water runoff from construction sites contains pollutants, there is a risk that those pollutants could enter surface waters and cause or contribute to an exceedance of water quality standards. For that reason, dischargers should be aware of the applicable water quality standards in their receiving waters. (The best method to ensure compliance with receiving water limitations is to implement BMPs that prevent pollutants from contact with storm water or from leaving the construction site in runoff.)

In California, water quality standards are published in the Basin Plans adopted by each Regional Water Board, the California Toxics Rule (CTR), the National Toxics Rule (NTR), and the Ocean Plan.

Dischargers can determine the applicable water quality standards by contacting Regional Water Board staff or by consulting one of the following sources. The actual Basin Plans that contain the water quality standards can be viewed at the website of the appropriate Regional Water Board. (http://www.waterboards.ca.gov/regions.html), the State Water Board site for statewide plans (http://www.waterboards.ca.gov/plnspols/index.html), or the USEPA regulations for the NTR and CTR (40 C.F.R. §§ 131.36-38). Basin Plans and statewide plans are also available by mail from the appropriate Regional Water Board or the State Water Board. The USEPA regulations are available at http://www.epa.gov/. Additional information concerning water quality standards can be accessed through http://www.waterboards.ca.gov/stormwtr/gen_const.html.

H. Training Qualifications and Requirements

The Blue Ribbon Panel (BRP) made the following observation about the lack of industry-specific training requirements:

"Currently, there is no required training or certification program for contractors, preparers of soil erosion and sediment control Storm Water Pollution Prevention Plans, or field inspectors."

Order 99-08-DWQ required that all dischargers train their employees on how to comply with the permit, but it did not specificy a curriculum or certification program. This has resulted in inconsistent implementation by all affected parties - the dischargers, the local governments where the construction activity occurs, and the regulators required to enforce 99-08-DWQ. This General Permit requires Qualified SWPPP Developers and practitioners to obtain appropriate training, and makes this curriculum mandatory two years after adoption, to allow time for course completion. The State and Regional Water Board are working with many stakeholders to develop the curriculum and mechanisms needed to develop and deliver the courses.

To ensure that the preparation, implementation, and oversight of the SWPPP is sufficient for effective pollution prevention, the Qualified SWPPP Developer and Qualified SWPPP Practitioners responsible for creating, revising, overseeing, and implementing the SWPPP must attend a State Water Board-sponsored or approved Qualified SWPPP Developer and Qualified SWPPP Practitioner training course.

I. Sampling, Monitoring, Reporting and Record Keeping

1. Traditional Construction Monitoring Requirements

This General Permit requires visual monitoring at all sites, and effluent water quality at all Risk Level 2 & 3 sites. It requires receiving water monitoring at some Risk Level 3 sites. All sites are required to submit annual reports, which contain various types of information, depending on the site characteristics and events. A summary of the monitoring and reporting requirements is found in Table 4.

Table 4 - Required Monitoring Elements for Risk Levels

	Visual	Non-visible Pollutant	Effluent	Receiving Water
Risk Level 1	three types required for all Risk Levels: non-storm water, pre-rain and post-rain	As needed for all Risk Levels (see below)	where applicable	not required
Risk Level 2			pH, turbidity	not required
Risk Level 3			pH, turbidity	(if Receiving Water Monitoring Trigger exceeded) pH, turbidity and SSC. Bioassessment for sites 30 acres or larger.

a. Visual

All dischargers are required to conduct quarterly, non-storm water visual inspections. For these inspections, the discharger must visually observe each drainage area for the presence of (or indications of prior) unauthorized and authorized non-storm water discharges and their sources. For storm-related inspections, dischargers must visually observe storm water discharges at all discharge locations within two business days after a qualifying event. For this requirement, a qualifying rain event is one producing precipitation of ½ inch or more of discharge. Dischargers must conduct a post-storm event inspection to (1) identify whether BMPs were adequately designed, implemented, and effective, and (2) identify any additional BMPs necessary and revise the SWPPP accordingly. Dischargers must maintain on-site records of all visual observations, personnel performing the observations, observation dates, weather conditions, locations observed, and corrective actions taken in response to the observations.

b. Non-Visible Pollutant Monitoring

This General Permit requires that all dischargers develop a sampling and analysis strategy for monitoring pollutants that are not visually detectable in storm water. Monitoring for non-visible pollutants must be required at any construction site when the exposure of construction materials occurs and where a discharge can cause or contribute to an exceedance of a water quality objective.

Of significant concern for construction discharges are the pollutants found in materials used in large quantities at construction sites throughout California and exposed throughout the rainy season, such as cement, flyash, and other recycled materials or by-products of combustion. The water quality standards that apply to these materials will depend on their composition. Some of the more common storm water pollutants from construction activity are not CTR pollutants. Examples of non-visible pollutants include glyphosate (herbicides), diazinon and chlorpyrifos (pesticides), nutrients (fertilizers), and molybdenum (lubricants). The use of diazinon and chlorpyrifos is a common practice among landscaping professionals and may trigger sampling and analysis requirements if these materials come into contact with storm water. High pH values from cement and gypsum, high pH and SSC from wash waters, and chemical/fecal contamination from portable toilets, also are not CTR pollutants. Although some of these constituents do have numeric water quality objectives in individual Basin Plans, many do not and are subject only to narrative water quality standards (i.e. not causing toxicity). Dischargers are encouraged to discuss these issues with Regional Water Board staff and other storm water quality professionals.

The most effective way to avoid the sampling and analysis requirements, and to ensure permit compliance, is to avoid the exposure of construction materials to precipitation and storm water runoff. Materials that are not exposed do not have the potential to enter storm water runoff, and therefore receiving waters sampling is not required. Preventing contact between storm water and construction materials is one of the most important BMPs at any construction site.

Preventing or eliminating the exposure of pollutants at construction sites is not always possible. Some materials, such as soil amendments, are designed to be used in a manner that will result in exposure to storm water. In these cases, it is important to make sure that these materials are applied according to the manufacturer's instructions and at a time when they are unlikely to be washed away. Other construction materials can be exposed when storage, waste disposal or the application of the material is done in a manner not protective of water quality. For these situations, sampling is required unless there is capture and containment of all storm water that has been exposed. In cases where construction materials may be exposed to storm water, but the storm water is contained and is not allowed to run off the site, sampling will only be required when inspections show that the containment failed or is breached, resulting in potential exposure or discharge to receiving waters.

The discharger must develop a list of potential pollutants based on a review of potential sources, which will include construction materials soil amendments, soil treatments, and historic contamination at the site. The discharger must review existing environmental and real estate documentation to determine the potential for pollutants that could be present on the construction site as a result of past land use activities.

Good sources of information on previously existing pollution and past land uses include:

i. Environmental Assessments;

ii. Initial Studies;

iii. Phase 1 Assessments prepared for property transfers; and

iv. Environmental Impact Reports or Environmental Impact Statements prepared under the requirements of the National Environmental Policy Act or the California Environmental Quality Act.

In some instances, the results of soil chemical analyses may be available and can provide additional information on potential contamination.

The potential pollutant list must include all non-visible pollutants that are known or should be known to occur on the construction site including, but not limited to, materials that:

i. are being used in construction activities;

ii. are stored on the construction site;

iii. were spilled during construction operations and not cleaned up;

iv. were stored (or used) in a manner that created the potential for a release of the materials during past land use activities;

v. were spilled during previous land use activities and not cleaned up; or

vi. were applied to the soil as part of past land use activities.

C. Effluent Monitoring

Federal regulations[11] require effluent monitoring for discharges subject to NALs. Subsequently, all Risk Level 2 and 3 dischargers must perform sampling and analysis of effluent discharges to characterize discharges associated with construction activity from the entire area disturbed by the project. Dischargers must collect samples of stored or contained storm water that is discharged subsequent to a storm event producing precipitation of ½ inch or more at the time of discharge.

Table 5 - Storm Water Effluent Monitoring Requirements by Risk Level

	Frequency	Effluent Monitoring (Section E, below)
Risk Level 1	when applicable	non-visible pollutant parameters (if applicable)
Risk Level 2	Minimum of 3 samples per day during qualifying rain event characterizing discharges associated with construction activity from the entire project disturbed area.	pH, turbidity, and non-visible pollutant parameters (if applicable)
Risk Level 3	Minimum of 3 samples per day during qualifying rain event characterizing discharges associated with construction activity from the entire project disturbed area.	pH, turbidity, and non-visible pollutant parameters if applicable

Risk Level 1 dischargers must analyze samples for:

i. any parameters indicating the presence of pollutants identified in the pollutant source assessment required in Attachment C contained in the General Permit.

[11] 40 C.F.R. § 122.44.

Risk Level 2 dischargers must analyze samples for:

i. pH and turbidity;

ii. any parameters indicating the presence of pollutants identified in the pollutant source assessment required in Attachment D contained in the General Permit, and

iii. any additional parameters for which monitoring is required by the Regional Water Board.

Risk Level 3 dischargers must analyze samples for:

i. pH, turbidity;

ii. any parameters indicating the presence of pollutants identified in the pollutant source assessment required in Attachment E contained in the General Permit, and

iii. any additional parameters for which monitoring is required by the Regional Water Board.

2. Linear Monitoring and Sampling Requirements

Attachment A, establishes minimum monitoring and reporting requirements for all LUPs. It establishes different monitoring requirements depending on project complexity and risk to water quality. The monitoring requirements for Type 1 LUPs are less than Type 2 & 3 projects because Type 1 projects have a lower potential to impact water quality.

A discharger shall prepare a monitoring program prior to the start of construction and immediately implement the program at the start of construction for LUPs. The monitoring program must be implemented at the appropriate level to protect water quality at all times throughout the life of the project.

a. Type 1 LUP Monitoring Requirements

A discharger must conduct daily visual inspections of Type 1 LUPs during working hours while construction activities are occurring. Inspections are to be conducted by qualified personnel and can be conducted in conjunction with other daily activities. Inspections will be conducted to ensure the BMPs are adequate, maintained, and in place at the end of the construction day. The discharger will revise the SWPPP, as appropriate, based on the results of the daily inspections. Inspections can be discontinued in non-active construction areas where soil disturbing activities have been completed and final stabilization has been achieved (e.g., trench has been paved, substructures have been installed, and successful final vegetative cover or other stabilization criteria have been met).

A discharger shall implement the monitoring program for inspecting Type 1 LUPs. This program requires temporary and permanent stabilization BMPs after active construction is completed. Inspection activities will continue until adequate permanent stabilization has been established and will continue in areas where re-vegetation is chosen until minimum vegetative coverage has been established. Photographs shall be taken during site inspections and submitted to the State Water Board.

b. Type 2 & 3 LUP Monitoring Requirements

A discharger must conduct daily visual inspections of Type 2 & 3 LUPs during working hours while construction activities are occurring. Inspections are to be conducted by qualified personnel and can be in conjunction with other daily activities.

All dischargers of Type 2 & 3 LUPs are required to conduct inspections by qualified personnel of the construction site during normal working hours prior to all anticipated storm events and after actual storm events. During extended storm events, the discharger shall conduct inspections during normal working hours for each 24-hour period. Inspections can be discontinued in non-active construction areas where soil disturbing activities have been completed and final stabilization has been achieved (e.g., trench has been paved, substructures installed, and successful vegetative cover or other stabilization criteria have been met).

The goals of these inspections are (1) to identify areas contributing to a storm water discharge; (2) to evaluate whether measures to reduce pollutant loadings identified in the SWPPP are adequate and properly installed and functioning in accordance with the terms of the General Permit; and (3) to determine whether additional control practices or corrective maintenance activities are needed. Equipment, materials, and workers must be available for rapid response to failures and emergencies. All corrective maintenance to BMPs shall be performed as soon as possible, depending upon worker safety.

All dischargers shall develop and implement a monitoring program for inspecting Type 2 & 3 LUPs that require temporary and permanent stabilization BMPs after active construction is completed. Inspections will be conducted to ensure the BMPs are adequate and maintained. Inspection activities will continue until adequate permanent stabilization has been established and will continue in areas where revegetation is chosen until minimum vegetative coverage has been established.

A log of inspections conducted before, during, and after the storm events must be maintained in the SWPPP. The log will provide the date and time of the inspection and who conducted the inspection. Photographs must be taken during site inspections and submitted to the State Water Board.

C. Sampling Requirements for all LUP Project Types

LUPs are also subject to sampling and analysis requirements for visible pollutants (i.e., sedimentation/siltation, turbidity) and for non-visible pollutants.

Sampling for visible pollutants is required for Type 2 & 3 LUPs.

Non-visible pollutant monitoring is required for pollutants associated with construction sites and activities that (1) are not visually detectable in storm water discharges, and (2) are known or should be known to occur on the construction site, and (3) could cause or contribute to an exceedance of water quality objectives in the receiving waters. Sample collection for non-visible pollutants must only be required (1) during a storm event when pollutants associated with construction activities may be discharged with storm water runoff due to a spill, or in the event there was a breach, malfunction, failure, and/or leak of any BMP, and (2) when the discharger has failed to adequately clean the area of material and pollutants. Failure to implement appropriate BMPs will trigger the same sampling requirements as those required for a breach, malfunction and/or leak, or when the discharger has failed to implement appropriate BMPs prior to the next storm event.

Additional monitoring parameters may be required by the Regional Water Boards.

It is not anticipated that many LUPs will be required to collect samples for pollutants not visually detected in runoff due to the nature and character of the construction site and activities as previously described in this fact sheet. Most LUPs are constructed in urban areas with public access (e.g., existing roadways, road shoulders, parking areas, etc.). This raises a concern regarding the potential contribution of pollutants from vehicle use and/or from normal activities of the public (e.g., vehicle washing, landscape fertilization, pest spraying, etc.) in runoff from the project site. Since the dischargers are not the land owners of the project area and are not able to control the presence of these pollutants in the storm water that runs through their projects, it is not the intent of this General Permit to require dischargers to sample for these pollutants. This General Permit does not require the discharger to sample for these types of pollutants except where the discharger has brought materials onsite that contain these pollutants and when a condition (e.g., breach, failure, etc.) described above occurs.

3. Receiving Water Monitoring

In order to ensure that receiving water limitations are met, discharges subject to receiving water monitoring triggers (i.e., Risk Level 3 and LUP Type 3 sites) or numeric effluent limitations (i.e., Risk Level 3 and LUP Type 3 sites utilizing ATS with direct discharges into receiving waters) must also monitor the downstream receiving water(s) for turbidity, SSC, and pH (if applicable) when a receiving water monitoring trigger or NEL is exceeded.

a. Bioassessment Monitoring

This General Permit requires a bioassessment of receiving waters for dischargers of Risk Level 3 or LUP Type 3 construction projects equal to or larger than 30 acres with direct discharges into receiving waters. Benthic macroinvertebrate samples will be taken upstream and downstream of the site's discharge point in the receiving water. Bioassessments measure the quality of the stream by analyzing the aquatic life present. Higher levels of appropriate aquatic species tend to indicate a healthy stream; whereas low levels of organisms can indicate stream degradation. Active construction sites have the potential to discharge large amounts of sediment and pollutants into receiving waters. Requiring a bioassessment for large project sites, with the most potential to impact water quality, provides a snapshot of the health of the receiving water prior to initiation of construction activities. This snapshot can be used in comparison to the health of the receiving water after construction has commenced.

Each ecoregion (biologically and geographically related area) in the State has a specific yearly peak time where stream biota is in a stable and abundant state. This time of year is called an Index Period. The bioassessment requirements in this General Permit, requires benthic macroinvertebrate sampling within a sites index period. The State Water Board has developed a map designating index periods for the ecoregions in the State (see State Water Board Website).

This General Permit requires the bioassessment methods to be in accordance with the Surface Water Ambient Monitoring Program (SWAMP) in order to provide data consistency within the state as well as generate useable biological stream data.

Table 6 - Receiving Water Monitoring Requirements

	Receiving Water Monitoring Parameters
Risk Level 1 /LUP Type 1	not required
Risk Level 2 / LUP Type 2	not required
Risk Level 3 / LUP Type 3	If Receiving Water Monitoring Trigger exceeded: pH (if applicable), turbidity, and SSC. Bioassessment for sites 30 acres or larger.

4. Reporting Requirements

a. NAL Exceedance Report

All Risk Level 3 and LUP Type 3 dischargers must electronically submit all storm event sampling results to the State And Regional Boards, via the electronic data system, no later than 10 days after the conclusion of the storm event.

b. Annual Report

All dischargers must prepare and electronically submit an annual report no later than September 1 of each year using the Storm water Multi-Application Reporting and Tracking System (SMARTS). The

Annual Report must include a summary and evaluation of all sampling and analysis results, original laboratory reports, chain of custody forms, a summary of all corrective actions taken during the compliance year, and identification of any compliance activities or corrective actions that were not implemented.

5. Record Keeping

According to 40 C.F.R. Parts 122.21(p) and 122.41(j), the discharger is required to retain paper or electronic copies of all records required by this General Permit for a period of at least three years from the date generated or the date submitted to the State Water Board or Regional Water Boards. A discharger must retain records for a period beyond three years as directed by Regional Water Board.

J. Risk Determination

1. Traditional Projects

a. Overall Risk Determination

There are two major requirements related to site planning and risk determination in this General Permit. The project's overall risk is broken up into two elements – (1) project sediment risk (the relative amount of sediment that can be discharged, given the project and location details) and (2) receiving water risk (the risk sediment discharges pose to the receiving waters).

Project Sediment Risk:
Project Sediment Risk is determined by multiplying the R, K, and LS factors from the Revised Universal Soil Loss Equation (RUSLE) to obtain an estimate of project-related bare ground soil loss expressed in tons/acre. The RUSLE equation is as follows:

A = (R)(K)(LS)(C)(P)

Where: A = the rate of sheet and rill erosion
R = rainfall-runoff erosivity factor
K = soil erodibility factor
LS = length-slope factor
C = cover factor (erosion controls)
P = management operations and support practices (sediment controls)

The C and P factors are given values of 1.0 to simulate bare ground conditions.

There is a map option and a manual calculation option for determining soil loss. For the map option, the R factor for the project is calculated using the online calculator at http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm. The product of K and LS are shown on Figure 1. To determine soil loss in tons per acre, the discharger multiplies the R factor times the value for K times LS from the map.

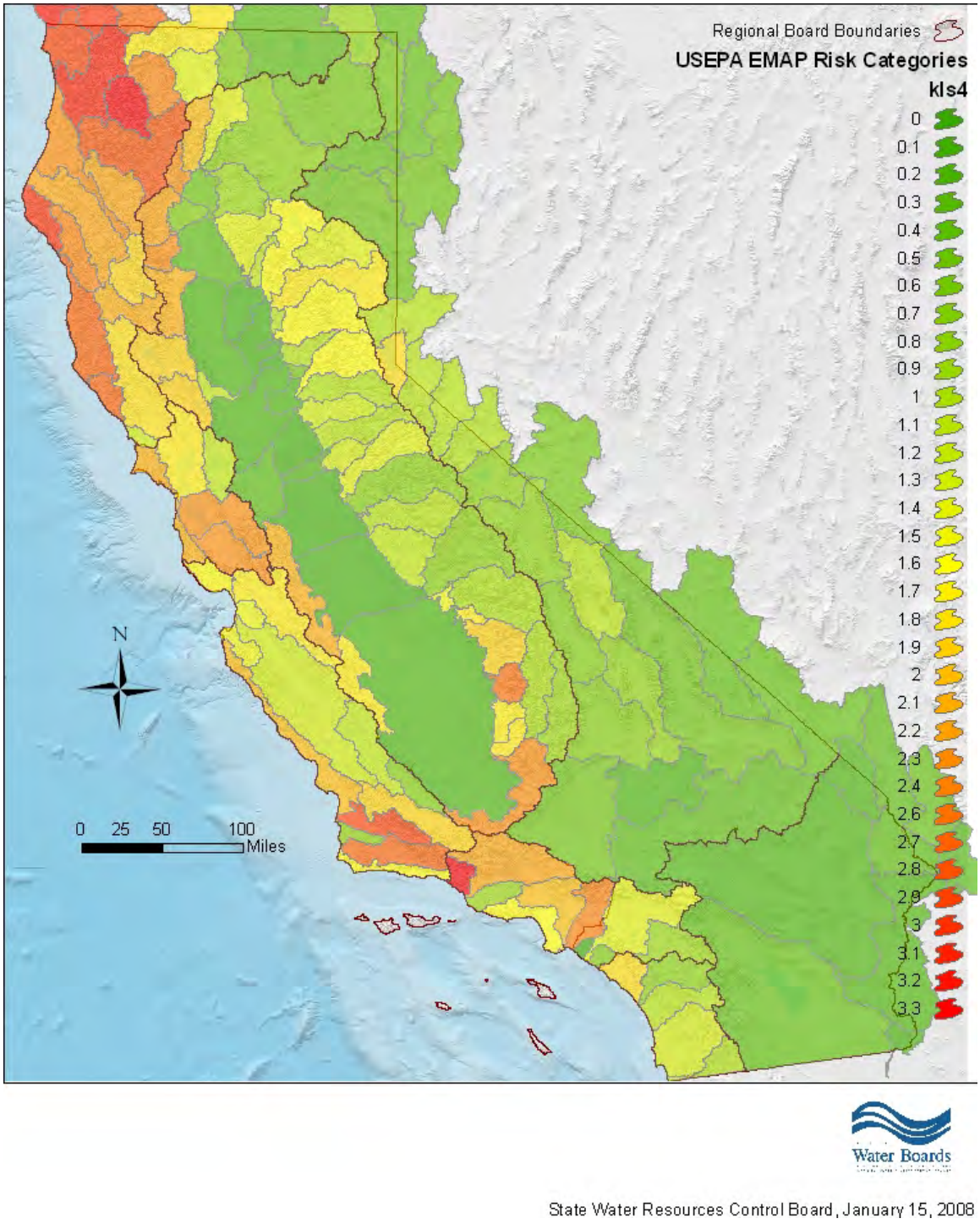


Figure 1 -Statewide Map of K * LS

For the manual calculation option, the R factor for the project is calculated using the online calculator at http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm. The K and LS factors are determined using Appendix 1.

Soil loss of less than 15 tons/acre is considered **low** sediment risk.
Soil loss between 15 and 75 tons/acre is **medium** sediment risk.
Soil loss over 75 tons/acre is considered **high** sediment risk.

The soil loss values and risk categories were obtained from mean and standard deviation RKLS values from the USEPA EMAP program. High risk is the mean RKLS value plus two standard deviations. Low risk is the mean RKLS value minus two standard deviations.

Receiving Water Risk:
Receiving water risk is based on whether a project drains to a sediment-sensitive waterbody. A sediment-sensitive waterbody is either

on the most recent 303d list for waterbodies impaired for sediment;
has a USEPA-approved Total Maximum Daily Load implementation plan for sediment; **or**
has the beneficial uses of COLD, SPAWN, and MIGRATORY.

A project that meets at least one of the three criteria has a high receiving water risk. A list of sediment-sensitive waterbodies will be posted on the State Water Board's website. It is anticipated that an interactive map of sediment sensitive water bodies in California will be available in the future.

The Risk Levels have been altered by eliminating the possibility of a Risk Level 4, and expanding the constraints for Risk Levels 1, 2, and 3. Therefore, projects with high receiving water risk and high sediment risk will be considered a Risk Level 3 risk to water quality.

In response to public comments, the Risk Level requirements have also been changed such that Risk Level 1 projects will be subject to minimum BMP and visual monitoring requirements, Risk Level 2 projects will be subject to NALs and some additional monitoring requirements, and Risk Level 3 projects will be subject to NALs, and more rigorous monitoring requirements such as receiving water monitoring and in some cases bioassessment.

Table 7 - Combined Risk Level Matrix

Combined Risk Level Matrix				
Receiving Water Risk		Sediment Risk		
		Low	Medium	High
	Low	Level 1	Level 2	
	High	Level 2		Level 3

b. Effluent Standards

All dischargers are subject to the narrative effluent limitations specified in the General Permit. The narrative effluent limitations require storm water discharges associated with construction activity to meet all applicable provisions of Sections 301 and 402 of the CWA. These provisions require controls of pollutant discharges that utilize BAT and BCT to reduce pollutants and any more stringent controls necessary to meet water quality standards.

Risk Level 2 dischargers that pose a medium risk to water quality are subject to technology-based NALs for pH and turbidity. Risk Level 3 dischargers that pose a high risk to water quality are also subject to technology-based NALs for pH and turbidity.

c. Good Housekeeping

Proper handling and managing of construction materials can help minimize threats to water quality. The discharger must consider good housekeeping measures for: construction materials, waste management, vehicle storage & maintenance, landscape materials, and potential pollutant sources. Examples include; conducting an inventory of products used, implementing proper storage & containment, and properly cleaning all leaks from equipment and vehicles.

d. Non-Storm Water Management

Non-storm water discharges directly connected to receiving waters or the storm drain system have the potential to negatively impact water quality. The discharger must implement measures to control all non-storm water discharges during construction, and from dewatering activities associated with construction. Examples include; properly washing vehicles in contained areas, cleaning streets, and minimizing irrigation runoff.

e. Erosion Control

The best way to minimize the risk of creating erosion and sedimentation problems during construction is to disturb as little of the land surface as possible by fitting the development to the terrain. When development is tailored to the natural contours of the land, little grading is necessary and, consequently, erosion potential is lower.[14] Other effective erosion control measures include: preserving existing vegetation where feasible, limiting disturbance, and stabilizing and re-vegetating disturbed areas as soon as possible after grading or construction activities. Particular attention must be paid to large, mass-graded sites where the potential for soil exposure to the erosive effects of rainfall and wind is great and where there is potential for significant sediment discharge from the site to surface waters. Until permanent vegetation is established, soil cover is the most cost-effective and expeditious method to protect soil particles from detachment and transport by rainfall. Temporary soil stabilization can be the single most important factor in reducing erosion at construction sites. The discharger is required to consider measures such as: covering disturbed areas with mulch, temporary seeding, soil stabilizers, binders, fiber rolls or blankets, temporary vegetation, and permanent seeding. These erosion control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed. Erosion control BMPs should be the primary means of preventing storm water contamination, and sediment control techniques should be used to capture any soil that becomes eroded.[12]

Risk Level 3 dischargers pose a higher risk to water quality and are therefore additionally required to ensure that post-construction soil loss is equivalent to or less than the pre-construction levels.

f. Sediment Control

Sediment control BMPs should be the secondary means of preventing storm water contamination. When erosion control techniques are ineffective, sediment control techniques should be used to capture any soil that becomes eroded. The discharger is required to consider perimeter control measures such as: installing silt fences or placing straw wattles below slopes. These sediment control measures are only

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[12] U.S. Environmental Protection Agency. 2007. Developing Your Storm Water Pollution Prevention Plan: A Guide for Construction Sites.

examples of what should be considered and should not preclude new or innovative approaches currently available or being developed.

Because Risk Level 2 and 3 dischargers pose a higher risk to water quality, additional requirements for the application of sediment controls are imposed on these projects. This General Permit also authorizes the Regional Water Boards to require Risk Level 3 dischargers to implement additional site-specific sediment control requirements if the implementation of other erosion or sediment controls are not adequately protecting the receiving waters.

g. Run-on and Runoff Control

Inappropriate management of run-on and runoff can result in excessive physical impacts to receiving waters from sediment and increased flows. The discharger is required to manage all run-on and runoff from a project site. Examples include: installing berms and other temporary run-on and runoff diversions.

Risk Level 1 dischargers with lower risks to impact water quality are not subject to the run-on and runoff control requirements unless an evaluation deems them necessary or visual inspections show that such controls are required.

h. Inspection, Maintenance and Repair

All measures must be periodically inspected, maintained and repaired to ensure that receiving water quality is protected. Frequent inspections coupled with thorough documentation and timely repair is necessary to ensure that all measures are functioning as intended.

i. Rain Event Action Plan (REAP)

A Rain Event Action Plan (REAP) is a written document, specific for each rain event. A REAP should be designed that when implemented it protects all exposed portions of the site within 48 hours of any likely precipitation event forecast of 50% or greater probability.

This General Permit requires Risk Level 2 and 3 dischargers to develop and implement a REAP designed to protect all exposed portions of their sites within 48 hours prior to any likely precipitation event. The REAP requirement is designed to ensure that the discharger has adequate materials, staff, and time to implement erosion and sediment control measures that are intended to reduce the amount of sediment and other pollutants generated from the active site. A REAP must be developed when there is likely a forecast of 50% or greater probability of precipitation in the project area. (The National Oceanic and Atmospheric Administration (NOAA) defines a chance of precipitation as a probability of precipitation of 30% to 50% chance of producing precipitation in the project area.[13] NOAA defines the probability of precipitation (PoP) as the likelihood of occurrence (expressed as a percent) of a measurable amount (0.01 inch or more) of liquid precipitation (or the water equivalent of frozen precipitation) during a specified period of time at any given point in the forecast area.) Forecasts are normally issued for 12-hour time periods. Descriptive terms for uncertainty and aerial coverage are used as follows:

Table 8 -National Oceanic and Atmospheric Administration (NOAA) Definition of Probability of Precipitation (PoP)

[13] http://www.crh.noaa.gov/lot/severe/wxterms.php.

PoP	Expressions of Uncertainty	Aerial Coverage
0%	none used	none used
10%	none used	isolated
20%	slight chance	isolated
30-50%	chance	scattered
60-70%	likely	numerous
80-100%	none used	none used

The discharger must obtain the precipitation forecast information from the National Weather Service Forecast Office (http://www.srh.noaa.gov/).

2. **Linear Projects**

a. **Linear Risk Determination**

LUPs vary in complexity and water quality concerns based on the type of project. This General Permit has varying application requirements based on the project's risk to water quality. Factors that lead to the characterization of the project include location, sediment risk, and receiving water risk.

Based on the location and complexity of a project area or project section area, LUPs are separated into project types. As described below, LUPs have been categorized into three project types.

i. ***Type 1 LUPs***

Type 1 LUPs are those construction projects where:

(1) 70 percent or more of the construction activity occurs on a paved surface and where areas disturbed during construction will be returned to preconstruction conditions or equivalent protection established at the end of the construction activities for the day, or

(2) greater than 30 percent of construction activities occur within the non-paved shoulders or land immediately adjacent to paved surfaces, or where construction occurs on unpaved improved roads, including their shoulders or land immediately adjacent to them where:

Areas disturbed during construction will be returned to pre-construction conditions or equivalent protection established at the end of the construction activities for the day to minimize the potential for erosion and sediment deposition, and

Areas where established vegetation was disturbed during construction will be stabilized and re-vegetated by the end of project. When required, adequate temporary stabilization Best Management Practices (BMPs) will be installed and maintained until vegetation is established to meet minimum cover requirements established in this General Permit for final stabilization.

Type 1 LUPs typically do not have a high potential to impact storm water quality because (1) these construction activities are not typically conducted during a rain event, (2) these projects are normally constructed over a short period of time[14], minimizing the duration that pollutants could potentially be exposed to rainfall; and (3) disturbed soils such as those from trench excavation are required to be hauled away, backfilled into the trench, and/or covered (e.g., metal plates, pavement, plastic covers over spoil piles) at the end of the construction day.

Type 1 LUPs are determined during the risk assessment found in Attachment A.1 to be 1) low sediment risk and low receiving water risk; 2) low sediment risk and medium receiving water risk; and 3) medium sediment risk and low receiving water risk.

This General Permit requires the discharger to ensure a SWPPP is developed for these construction activities that is specific to project type, location and characteristics.

ii. ***Type 2 LUPs:***

Type 2 projects are determined to have a combination of High, Medium, and Low project sediment risk along with High, Medium, and Low receiving water risk. Like Type 1 projects, Type 2 projects are typically constructed over a short period of time. However, these projects have a higher potential to impact water quality because they:

(1) typically occur outside the more urban/developed areas;

(2) have larger areas of soil disturbance that are not closed or restored at the end of the day;

(3) may have onsite stockpiles of soil, spoil and other materials;

(4) cross or occur in close proximity to a wide variety of sensitive resources that may include, but are not limited to, steep topography and/or water bodies; and

(5) have larger areas of disturbed soils that may be exposed for a longer time interval before final stabilization, cleanup and/or reclamation occurs.

This General Permit requires the discharger to develop and implement a SWPPP for these construction activities that are specific for project type, location and characteristics.

iii. ***Type 3 LUPs:***

[14] Short period of time refers to a project duration of weeks to months, but typically less than one year in duration.

Type 3 projects are determined to have a combination of High and Medium project sediment risk along with High and Medium receiving water risk. Similar to Type 2 projects, Type 3 projects have a higher potential to impact water quality because they:

(1) typically occur outside of the more urban/developed areas;

(2) have larger areas of soil disturbance that are not closed or restored at the end of the day;

(3) may have onsite stockpiles of soil, spoil and other materials;

(4) cross or occur in close proximity to a wide variety of sensitive resources that may include, but are not limited to, steep topography and/or water bodies; and

(5) have larger areas of disturbed soils that may be exposed for a longer time interval before final stabilization, cleanup and/or reclamation occurs.

This General Permit requires the discharger to develop and implement a SWPPP for these construction activities that are specific for project type, location, and characteristics.

b. Linear Effluent Standards

All LUPs are subject to the narrative effluent limitations specified in the General Permit.

Type 2 and Type 3 projects are subject to technology-based NALs for pH and turbidity.

c. Linear Good Housekeeping

Improper use and handling of construction materials could potentially cause a threat to water quality. In order to ensure proper site management of these construction materials, all LUP dischargers must comply with a minimum set of Good Housekeeping measures specified in Attachment A of this General Permit.

d. Linear Non-Storm Water Management

In order to ensure control of all non-storm water discharges during construction, all LUP dischargers must comply with the Non-Storm Water Management measures specified in Attachment A of this General Permit.

e. Linear Erosion Control

This General Permit requires all LUP dischargers to implement effective wind erosion control measures, and soil cover for inactive areas. Type 3 LUPs posing a higher risk to water quality are additionally required to ensure the post-construction soil loss is equivalent to or less than the pre-construction levels.

f. Linear Sediment Control

In order to ensure control and containment of all sediment discharges, all LUP dischargers must comply with the general Sediment Control measures specified in Attachment A or this General Permit. Additional requirements for sediment controls are imposed on Type 2 & 3 LUPs due to their higher risk to water quality.

g. Linear Run-on and Runoff Control

Discharges originating outside of a project's perimeter and flowing onto the property can adversely affect the quantity and quality of discharges originating from a project site. In order to ensure proper management of run-on and runoff, all LUPs must comply with the run-on and runoff control measures specified in Attachment A of this General Permit. Due to the lower risk of impacting water quality, Type 1 LUPs are not required to implement run-on and runoff controls unless deemed necessary by the discharger.

h. Linear Inspection, Maintenance and Repair

Proper inspection, maintenance, and repair activities are important to ensure the effectiveness of on-site measures to control water quality. In order to ensure that inspection, maintenance, and repair activities are adequately performed, the all LUP dischargers a re required to comply with the Inspection, Maintenance, and Repair requirements specified in Attachment A of this General Permit.

K. ATS[15] Requirements

There are instances on construction sites where traditional erosion and sediment controls do not effectively control accelerated erosion. Under such circumstances, or under circumstances where storm water discharges leaving the site may cause or contribute to an exceedance of a water quality standard, the use of an Active Treatment System (ATS) may be necessary. Additionally, it may be appropriate to use an ATS when site constraints inhibit the ability to construct a correctly sized sediment basin, when clay and/or highly erosive soils are present, or when the site has very steep or long slope lengths.[16]

Although treatment systems have been in use in some form since the mid-1990s, the ATS industry in California is relatively young, and detailed regulatory standards have not yet been developed. Many developers are using these systems to treat storm water discharges from their construction sites. The new ATS requirements set forth in this General Permit are based on those in place for small wastewater treatment systems, ATS regulations from the Central Valley Regional Water Quality Control Board (September 2005 memorandum "2005/2006 Rainy Season – Monitoring Requirements for Storm Water Treatment Systems that Utilize Chemical Additives to Enhance Sedimentation"), the Construction Storm Water Program at the State of Washington's Department of Ecology, as well as recent advances in technology and knowledge of coagulant performance and aquatic safety.

The effective design of an ATS requires a detailed survey and analysis of site conditions. With proper planning, ATS performance can provide exceptional water quality discharge and prevent significant impacts to surface water quality, even under extreme environmental conditions.

These systems can be very effective in reducing the sediment in storm water runoff, but the systems that use additives/polymers to enhance sedimentation also pose a potential risk to water quality (e.g., operational failure, equipment failure, additive/polymer release, etc.). The State Water Board is concerned about the potential acute and chronic impacts that the polymers and other chemical additives may have on fish and aquatic organisms if released in sufficient quantities or concentrations. In addition

[15] An ATS is a treatment system that employs chemical coagulation, chemical flocculation, or electrocoagulation in order to reduce turbidity caused by fine suspended sediment.
[16] Pitt, R., S. Clark, and D. Lake. 2006. Construction Site Erosion and Sediment Controls: Planning, Design, and Performance. DEStech Publications. Lancaster, PA. 370pp.

to anecdotal evidence of polymer releases causing aquatic toxicity in California, the literature supports this concern.[17] For example, cationic polymers have been shown to bind with the negatively charged gills of fish, resulting in mechanical suffocation.[18] Due to the potential toxicity impacts, which may be caused by the release of additives/polymers into receiving waters, this General Permit establishes residual polymer monitoring and toxicity testing requirements have been established in this General Permit for discharges from construction sites that utilize an ATS in order to protect receiving water quality and beneficial uses.

The primary treatment process in an ATS is coagulation/flocculation. ATS's operate on the principle that the added coagulant is bound to suspended sediment, forming floc, which is gravitationally settled in tanks or a basin, or removed by sand filters. A typical installation utilizes an injection pump upstream from the clarifier tank, basin, or sand filters, which is electronically metered to both flow rate and suspended solids level of the influent, assuring a constant dose. The coagulant mixes and reacts with the influent, forming a dense floc. The floc may be removed by gravitational setting in a clarifier tank or basin, or by filtration. Water from the clarifier tank, basin, or sand filters may be routed through cartridge(s) and/or bag filters for final polishing. Vendor-specific systems use various methods of dose control, sediment/floc removal, filtration, etc., that are detailed in project-specific documentation. The particular coagulant/flocculant to be used for a given project is determined based on the water chemistry of the site because the coagulants are specific in their reactions with various types of sediments. Appropriate selection of dosage must be carefully matched to the characteristics of each site.

ATS's are operated in two differing modes, either Batch or Flow-Through. Batch treatment can be defined as Pump-Treat-Hold-Test-Release. In Batch treatment, water is held in a basin or tank, and is not discharged until treatment is complete. Batch treatment involves holding or recirculating the treated water in a holding basin or tank(s) until treatment is complete or the basin or storage tank(s) is full. In Flow-Through treatment, water is pumped into the ATS directly from the runoff collection system or storm water holding pond, where it is treated and filtered as it flows through the system, and is then directly discharged. "Flow-Through Treatment" is also referred to as "Continuous Treatment."

1. Effluent Standards

This General Permit establishes NELs for discharges from construction sites that utilize an ATS. These systems lend themselves to NELs for turbidity and pH because of their known reliable treatment. Advanced systems have been in use in some form since the mid-1990s. An ATS is considered reliable, can consistently produce a discharge of less than 10 NTU, and has been used successfully at many sites in several states since 1995 to reduce turbidity to very low levels.[19]

This General Permit contains "compliance storm event" exceptions from the technology-based NELs for ATS discharges. The rationale is that technology-based requirements are developed assuming a certain design storm. In the case of ATS the industry-standard design storm is 10-year, 24-hour (as stated in

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[17] RomØen, K., B. Thu, and Ø. Evensen. 2002. Immersion delivery of plasmid DNA II. A study of the potentials of a chitosan based delivery system in rainbow trout (*Oncorhynchus mykiss*) fry. *Journal of Controlled Release* **85**: 215-225.

[18] Bullock, G., V. Blazer, S. Tsukuda, and S. Summerfelt. 2000. Toxicity of acidified chitosan for cultured rainbow trout (*Oncorhynchus mykiss*). *Aquaculture* **185**:273-280.

[19] Currier, B., G. Minton, R. Pitt, L. Roesner, K. Schiff, M. Stenstrom, E. Strassler, and E. Strecker. 2006. The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities.

Attachment F of this General Permit), so the compliance storm event has been established as the 10-year 24-hour event as well to provide consistency.

2. **Training**

Operator training is critical to the safe and efficient operation and maintenance of the ATS, and to ensure that all State Water Board monitoring and sampling requirements are met. The General Permit requires that all ATS operators have training specific to using ATS's liquid coagulants.

L. Post-Construction Requirements

Under past practices, new and redevelopment construction activities have resulted in modified natural watershed and stream processes. This is caused by altering the terrain, modifying the vegetation and soil characteristics, introducing impervious surfaces such as pavement and buildings, increasing drainage density through pipes and channels, and altering the condition of stream channels through straightening, deepening, and armoring. These changes result in a drainage system where sediment transport capacity is increased and sediment supply is decreased. A receiving channel's response is dependent on dominant channel materials and its stage of adjustment.

Construction activity can lead to impairment of beneficial uses in two main ways. First, during the actual construction process, storm water discharges can negatively affect the chemical, biological, and physical properties of downstream receiving waters. Due to the disturbance of the landscape, the most likely pollutant is sediment, however pH and other non-visible pollutants are also of great concern. Second, after most construction activities are completed at a construction site, the finished project may result in significant modification of the site's response to precipitation. New development and redevelopment projects have almost always resulted in permanent post-construction water quality impacts because more precipitation ends up as runoff and less precipitation is intercepted, evapotranspired, and infiltrated.

General Permit 99-08-DWQ required the SWPPP to include a description of all post-construction BMPs on a site and a maintenance schedule. An effective storm water management strategy must address the full suite of storm events (water quality, channel protection, overbank flood protection, extreme flood protection) (Figure 2).

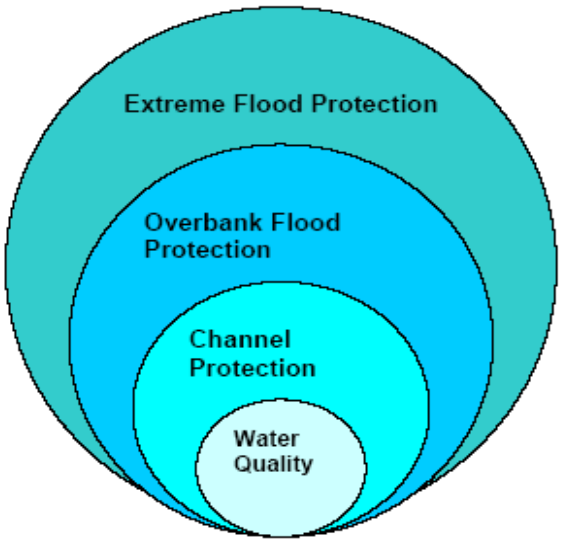


Figure 2 - Suite of Storm Events

The post-construction storm water performance standards in this General Permit specifically address water quality and channel protection events. Overbank flood protection and extreme flood protection events are traditionally dealt with in local drainage and flood protection ordinances. However, measures in this General Permit to address water quality and channel protection also reduce overbank and extreme flooding impacts. This General Permit aims to match post-construction runoff to pre-construction runoff for the 85th percentile storm event, which not only reduces the risk of impact to the receiving water's channel morphology but also provides some protection of water quality.

This General Permit clarifies that its runoff reduction requirements only apply to projects that lie outside of jurisdictions covered by a Standard Urban Storm water Management Plan (SUSMP) (or other more protective) post-construction requirements in either Phase I or Phase II permits.

Figures 3 and 4, below, show the General Permit enrollees (to Order 99-08-DWQ, as of March 10, 2008) overlaid upon a map with SUSMP (or more protective) areas in blue and purple. Areas without blue or purple indicate where the General Permit's runoff reduction requirements would actually apply.

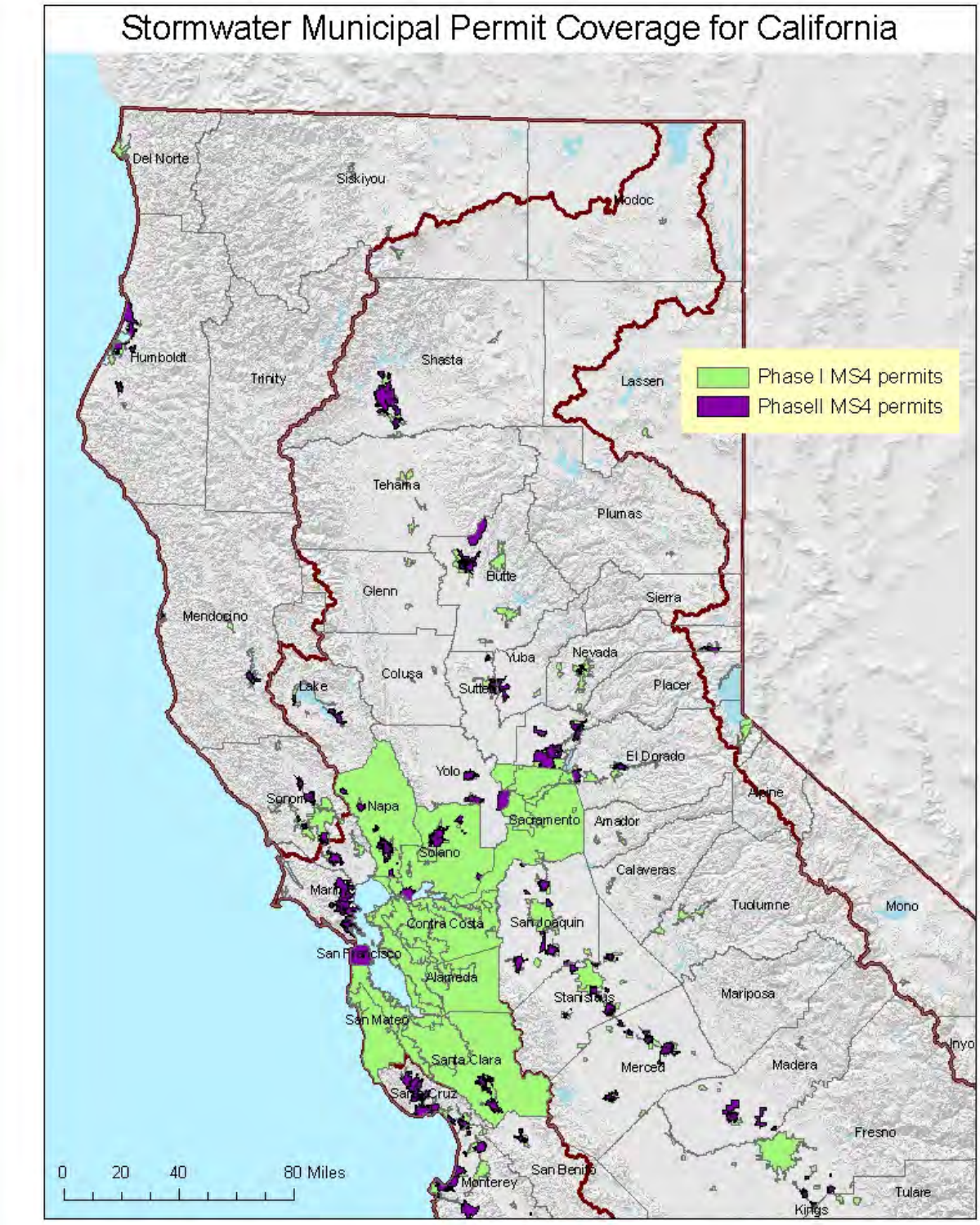


Figure 3 - Northern CA (2009) Counties / Cities With SUSMP-Plus Coverage



Figure 4 - Southern CA (2009) Counties / Cities With SUSMP-Plus Coverage

Water Quality:
This General Permit requires dischargers to replicate the pre-project runoff water balance (defined as the amount of rainfall that ends up as runoff) for the smallest storms up to the 85th percentile storm event, or the smallest storm event that generates runoff, whichever is larger. Contemporary storm water management generally routes these flows directly to the drainage system, increasing pollutant loads and potentially causing adverse effects on receiving waters. These smaller water quality events happen much more frequently than larger events and generate much higher pollutant loads on an annual basis. There are other adverse hydrological impacts that result from not designing according to the site's pre-construction water balance. In Maryland, Klein[20] noted that baseflow decreases as the extent of urbanization increases. Ferguson and Suckling[21] noted a similar relation in watersheds in Georgia. On Long Island, Spinello and Simmons[22] noted substantial decreases in base flow in intensely urbanized watersheds.

The permit emphasizes runoff reduction through on-site storm water reuse, interception, evapo-transpiration and infiltration through non-structural controls and conservation design measures (e.g., downspout disconnection, soil quality preservation/enhancement, interceptor trees). Employing these measures close to the source of runoff generation is the easiest and most cost-effective way to comply with the pre-construction water balance standard. Using low-tech runoff reduction techniques close to the source is consistent with a number of recommendations in the literature.[23] In many cases, BMPs implemented close to the source of runoff generation cost less than end-of the pipe measures.[24] Dischargers are given the option of using Appendix 2 to calculate the required runoff volume or a watershed process-based, continuous simulation model such as the EPA's Storm Water Management Model (SWMMM) or Hydrologic Simulation Program Fortran (HSPF). Such methods used by the discharger will be reviewed by the Regional Water Board upon NOT application.

Channel Protection:
In order to address channel protection, a basic understanding of fluvial geomorphic concepts is necessary. A dominant paradigm in fluvial geomorphology holds that streams adjust their channel dimensions (width and depth) in response to long-term changes in sediment supply and bankfull discharge (1.5 to 2 year recurrence interval). The bankfull stage corresponds to the discharge at which channel maintenance is the most effective, that is, the discharge at which the moving sediment, forming or removing bars, forming or changing bends and meanders, and generally doing work that results in the average morphologic characteristics of channels.[25] Lane (1955 as cited in Rosgen 1996[26]) showed the generalized relationship between sediment load, sediment size, stream discharge and stream slope in

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[20] Klein 1979 as cited in Delaware Department of Natural Resources (DDNR). 2004. Green Technology: The Delaware Urban Runoff Management Approach. Dover, DE. 117 pp.
[21] Ferguson and Suckling 1990 as cited Delaware Department of Natural Resources (DDNR). 2004. Green Technology: The Delaware Urban Runoff Management Approach. Dover, DE. 117 pp.
[22] Center for Watershed Protection (CWP). 2000. The Practice of Watershed Protection: Techniques for protecting our nation's streams, lakes, rivers, and estuaries. Ellicott City, MD. 741 pp.
[23] Bay Area Storm Water Management Agencies Association (BASMAA). 1997. Start at the Source: Residential Site Planning and Design Guidance Manual for Storm Water Quality Protection. Palo Alto, CA;
McCuen, R.H. 2003 Smart Growth: hydrologic perspective. Journal of Professional Issues in Engineering Education and Practice. Vol (129), pp.151-154;
Moglen, G.E. and S. Kim. 2007. Impervious imperviousness-are threshold based policies a good idea? Journal of the American Planning Association, Vol 73 No. 2. pp 161-171.
[24] Delaware Department of natural Resources (DDNR). 2004. Green technology: The Delaware urban Runoff Management Approcah. Dover, DE. 117 pp.
[25] Dunne, T and L.B. Leopold. 1978. Water in Environmental Planning. San Francisco W.H. Freeman and Company
[26] Rosgen. D.L. 1996. Applied River Morphology. Pagosa Springs. Wildland Hydrology

Figure 5. A change in any one of these variables sets up a series of mutual adjustments in the companion variables with a resulting direct change in the physical characteristics of the stream channel.

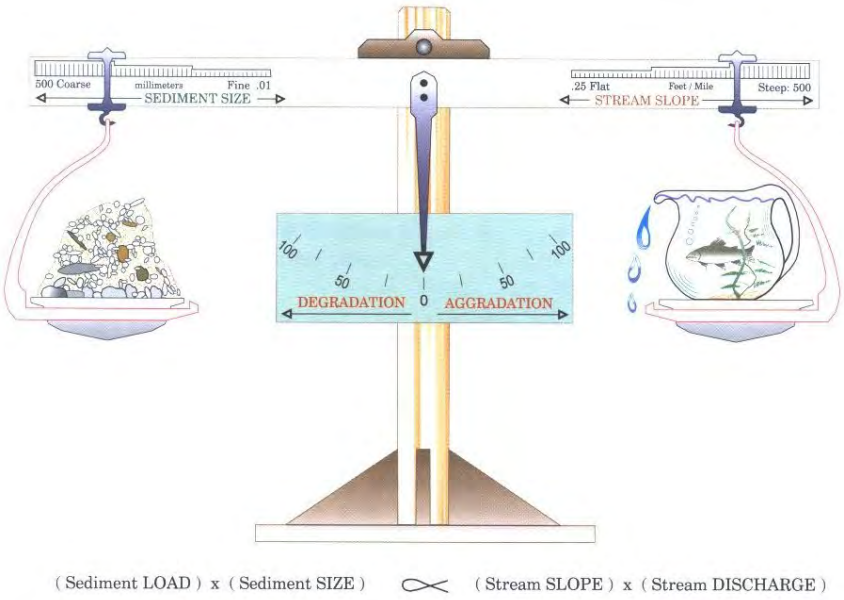


Figure 5 - Schematic of the Lane Relationship

After Lane (1955) as cited in Rosgen (1996)

Stream slope multiplied by stream discharge (the right side of the scale) is essentially an approximation of stream power, a unifying concept in fluvial geomorphology (Bledsoe 1999). Urbanization generally increases stream power and affects the resisting forces in a channel (sediment load and sediment size represented on the left side of the scale).

During construction, sediment loads can increase from 2 to 40,000 times over pre-construction levels.[27] Most of this sediment is delivered to stream channels during large, episodic rain events.[28] This increased sediment load leads to an initial aggradation phase where stream depths may decrease as sediment fills the channel, leading to a decrease in channel capacity and increase in flooding and overbank deposition. A degradation phase initiates after construction is completed.

Schumm et. al (1984) developed a channel evolution model that describes the series of adjustments from initial downcutting, to widening, to establishing new floodplains at lower elevations (Figure 6).

[27] Goldman S.J., K. Jackson, and T.A. Bursztynsky. 1986. Erosion and Sediment Control Handbook. McGraw Hill. San Francisco.
[28] Wolman 1967 as cited in Paul, M.P. and J.L. Meyer. 2001. Streams in the Urban Landscape. *Annu. Rev.Ecol. Syst.* 32: 333-365.

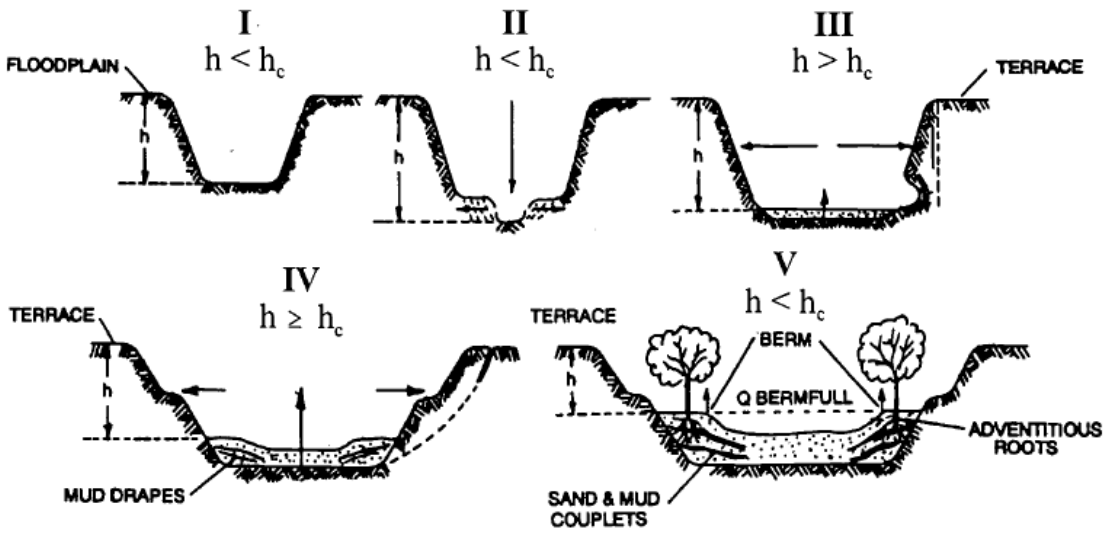


Figure 6 - Channel Changes Associated with Urbanization

After Incised Channel Evolution Sequence in Schumm et. al 1984

Channel incision (Stage II) and widening (Stages III and to a lesser degree, Stage IV) are due to a number of fundamental changes on the landscape. Connected impervious area and compaction of pervious surfaces increase the frequency and volume of bankfull discharges.[29] Increased drainage density (miles of stream length per square mile of watershed) also negatively impacts receiving stream channels.[30] Increased drainage density and hydraulic efficiency leads to an increase in the frequency and volume of bankfull discharges because the time of concentration is shortened. Flows from engineered pipes and channels are also often "sediment starved" and seek to replenish their sediment supply from the channel.

Encroachment of stream channels can also lead to an increase in stream slope, which leads to an increase in stream power. In addition, watershed sediment loads and sediment size (with size generally represented as the median bed and bank particle size, or d_{50}) decrease during urbanization.[31] This means

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[29] Booth, D. B. and C. R. Jackson. 1997. Urbanization of Aquatic Systems: Degradation Thresholds, Storm Water Detection, and the Limits of Mitigation. Journal of the American Water Resources Association Vol. 33, No.5, pp. 1077-1089.

[30] May, C.W. 1998. Cumulative effects of urbanization on small streams in the Puget Sound Lowland ecoregion. Conference proceedings from Puget Sound Research '98 held March 12, 13 1998 in Seattle, WA;
Santa Clara Valley Urban Runoff Pollution Prevention Program. 2002. Hydromodification Management Plan Literature Review. 80 pp.

[31] Finkenbine, J.K., D.S. Atwater, and D.S. Mavinic. 2000. Stream health after urbanization. *J. Am. Water Resour. Assoc.* 36:1149-60;

that even if pre- and post-development stream power are the same, more erosion will occur in the post-development stage because the smaller particles are less resistant (provided they are non-cohesive).

As shown in Stages II and III, the channel deepens and widens to accommodate the increased stream power [32]and decrease in sediment load and sediment size. Channels may actually narrow as entrained sediment from incision is deposited laterally in the channel. After incised channels begin to migrate laterally (Stage III), bank erosion begins, which leads to general channel widening.[33] At this point, a majority of the sediment that leaves a drainage area comes from within the channel, as opposed to the background and construction related hillslope contribution. Stage IV is characterized by more aggradation and localized bank instability. Stage V represents a new quasi-equilibrium channel morphology in balance with the new flow and sediment supply regime. In other words, stream power is in balance with sediment load and sediment size.

The magnitude of the channel morphology changes discussed above varies along a stream network as well as with the age of development, slope, geology (sand-bedded channels may cycle through the evolution sequence in a matter of decades whereas clay-dominated channels may take much longer), watershed sediment load and size, type of urbanization, and land use history. It is also dependent on a channel's stage in the channel evolution sequence when urbanization occurs. Management strategies

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Pizzuto, J.E. W.S. Hession, and M. McBride. 2000. Comparing gravel-bed rivers in paired urban and rural catchments of southeastern Pennsylvania. *Geology* 28:79-82.

[32] Hammer 1973 as cited in Delaware Department of Natural Resources (DDNR). 2004. Green Technology: The Delaware Urban Runoff Management Approach. Dover, DE. 117 pp;
Booth, D.B. 1990. Stream Channel Incision Following Drainage Basin Urbanization. *Water Resour. Bull.* 26:407-417.

[33] Trimble, S.W. 1997. Contribution of Stream Channel Erosion to Sediment Yield from an Urbanizing Watershed. *Science*: Vol. 278 (21), pp. 1442-1444.

must take into account a channel's stage of adjustment and account for future changes in the evolution of channel form (Stein and Zaleski 2005). [34]

Traditional structural water quality BMPs (e.g. detention basins and other devices used to store volumes of runoff) unless they are highly engineered to provide adequate flow duration control, do not adequately protect receiving waters from accelerated channel bed and bank erosion, do not address post-development increases in runoff volume, and do not mitigate the decline in benthic macroinvertebrate communities in the receiving waters[35] suggest that structural BMPs are not as effective in protecting aquatic communities as a continuous riparian buffer of native vegetation. This is supported by the findings of Zucker and White[36], where instream biological metrics were correlated with the extent of forested buffers.

This General Permit requires dischargers to maintain pre-development drainage densities and times of concentration in order to protect channels and encourages dischargers to implement setbacks to reduce channel slope and velocity changes that can lead to aquatic habitat degradation.

There are a number of other approaches for modeling fluvial systems, including statistical and physical models and simpler stream power models.[37] The use of these models in California is described in Stein and Zaleski (2005).[38] Rather than prescribe a specific one-size-fits-all modeling method in this permit, the State Water Board intends to develop a stream power and channel evolution model-based framework to assess channels and develop a hierarchy of suitable analysis methods and management strategies. In time, this framework may become a State Water Board water quality control policy.

Permit Linkage to Overbank and Extreme Flood Protection
Site design BMPs (e.g. rooftop and impervious disconnection, vegetated swales, setbacks and buffers) filter and settle out pollutants and provide for more infiltration than is possible for traditional centralized structural BMPs placed at the lowest point in a site. They provide source control for runoff and lead to a reduction in pollutant loads. When implemented, they also help reduce the magnitude and volume of larger, less frequent storm events (e.g., 10-yr, 24-hour storm and larger), thereby reducing the need for expensive flood control infrastructure. Nonstructural BMPs can also be a landscape amenity, instead of a large isolated structure requiring substantial area for ancillary access, buffering, screening and maintenance facilities.[25] The multiple benefits of using non-structural benefits will be critically important as the state's population increases and imposes strains upon our existing water resources.

Maintaining predevelopment drainage densities and times of concentration will help reduce post-development peak flows and volumes in areas not covered under a municipal permit. The most effective way to preserve drainage areas and maximize time of concentration is to implement landform grading,

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[34] Stein, E.S. and S. Zaleski. 2005.Managing runoff to protect natural stream: the latest developments on investigation and management of hydromodification in California. Southern California Coastal Water Research Project Technical Report 475. 26 pp.
[35] Horner, R.R. 2006. Investigation of the Feasibility and Benefits of Low-Impact Site Design Practices (LID) for the San Diego Region. Available at: http://www.projectcleanwater.org/pdf/permit/case-study_lid.pdf.
[36] Delaware Department of Natural Resources (DDNR). 2004. Green Technology: The Delaware Urban Runoff Management Approach. Dover, DE. 117 pp.
[37] Finlayson, D.P. and D.R. Montgomery. 2003. Modeling large-scale fluvial erosion in geographic information systems. Geomorphology (53), pp. 147-164).
[38] Stein, E.S. and S. Zaleski. 2005.Managing runoff to protect natural stream: the latest developments on investigation and management of hydromodification in California. Southern California Coastal Water Research Project Technical Report 475. 26 pp.

incorporate site design BMPs and implement distributed structural BMPs (e.g., bioretention cells, rain gardens, rain cisterns).

M. Storm Water Pollution Prevention Plans

USEPA's Construction General Permit requires that qualified personnel conduct inspections. USEPA defines qualified personnel as "a person knowledgeable in the principles and practice of erosion and sediment controls who possesses the skills to assess conditions at the construction site that could impact storm water quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of storm water discharges from the construction activity."[39] USEPA also suggests that qualified personnel prepare SWPPPs and points to numerous states that require certified professionals to be on construction sites at all times. States that currently have certification programs are Washington, Georgia, Florida, Delaware, Maryland, and New Jersey. The Permit 99-08-DWQ did not require that qualified personnel prepare SWPPPs or conduct inspections. However, to ensure that water quality is being protected, this General Permit requires that all SWPPPs be written, amended, and certified by a Qualified SWPPP Developer. A Qualified SWPPP Developer must possess one of the eight certifications and or registrations specified in this General Permit and effective two years after the adoption date of this General Permit, must have attended a State Water Board-sponsored or approved Qualified SWPPP Developer training course. Table 9 provides an overview of the criteria used in determining qualified certification titles for a QSD and QSP.

39 US Environmental Protection Agency. Stormwater Pollution Prevention Plans for Construction Activities. <http://cfpub.epa.gov/npdes/stormwater/swppp.cfm> and <http://www.epa.gov/npdes/pubs/sw_swppp_guide.pdf>.

Table 9 - Qualified SWPPP Developer/ Qualified SWPPP Practitioner Certification Criteria

Certification/ Title	Registered By	QSD/QSP	Certification Criteria
Professional Civil Engineer	California	Both	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites
Professional Geologist or Engineering Geologist	California	Both	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites
Landscape Architect	California	Both	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites
Professional Hydrologist	American Institute of Hydrology	Both	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites
Certified Professional in Erosion and Sediment Control™ (CPESC)	Enviro Cert International Inc.	Both	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites 5. Continuing Education
Certified Inspector of Sediment and Erosion Control™ (CISEC)	Certified Inspector of Sediment and Erosion Control, Inc.	QSP	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites 5. Continuing Education
Certified Erosion, Sediment and Storm Water Inspector™ (CESSWI)	Enviro Cert International Inc.	QSP	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites 5. Continuing Education
Certified Professional in Storm Water Quality™ (CPSWQ)	Enviro Cert International Inc.	Both	1. Approval Process 2. Code of Ethics 3. Accountability 4. Pre-requisites 5. Continuing Education

The previous versions of the General Permit required development and implementation of a SWPPP as the primary compliance mechanism. The SWPPP has two major objectives: (1) to help identify the sources of sediment and other pollutants that affect the quality of storm water discharges; and (2) to describe and ensure the implementation of BMPs to reduce or eliminate sediment and other pollutants in storm water and non-storm water discharges. The SWPPP must include BMPs that address source control, BMPs that address pollutant control, and BMPs that address treatment control.

This General Permit shifts some of the measures that were covered by this general requirement to specific permit requirements, each individually enforceable as a permit term. This General Permit emphasizes the use of appropriately selected, correctly installed and maintained pollution reduction BMPs. This approach provides the flexibility necessary to establish BMPs that can effectively address source control of pollutants during changing construction activities. These specific requirements also improve both the clarity and the enforceability of the General Permit so that the dischargers understand, and the public can determine whether the discharges are in compliance with, permit requirements.

The SWPPP must be implemented at the appropriate level to protect water quality at all times throughout the life of the project. The SWPPP must remain on the site during construction activities, commencing with the initial mobilization and ending with the termination of coverage under the General Permit. For LUPs the discharger shall make the SWPPP available at the construction site during working hours while construction is occurring and shall be made available upon request by a State or Municipal inspector. When the original SWPPP is retained by a crewmember in a construction vehicle and is not currently at the construction site, current copies of the BMPs and map/drawing will be left with the field crew and the original SWPPP shall be made available via a request by radio or telephone. Once construction activities are complete, until stabilization is achieved, the SWPPP shall be available from the SWPPP contact listed in the PRDs

A SWPPP must be appropriate for the type and complexity of a project and will be developed and implemented to address project specific conditions. Some projects may have similarities or complexities, yet each project is unique in its progressive state that requires specific description and selection of BMPs needed to address all possible generated pollutants

N. Regional Water Board Authorities

Because this General Permit will be issued to thousands of construction sites across the State, the Regional Water Boards retain discretionary authority over certain issues that may arise from the discharges in their respective regions. This General Permit does not grant the Regional Water Boards any authority they do not otherwise have; rather, it merely emphasizes that the Regional Water Boards can take specific actions related to this General Permit. For example, the Regional Water Boards will be enforcing this General Permit and may need to adjust some requirements for a discharger based on the discharger's compliance history.

Linda S. Adams
Secretary for
Environmental Protection

State Water Resources Control Board

Division of Water Quality
1001 I Street • Sacramento, California 95814 • (916) 341-5455
Mailing Address: P.O. Box 100 • Sacramento, California • 95812-0100
Fax (916) 341-5463 • http://www.waterboards.ca.gov

Arnold Schwarzenegger
Governor

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR
STORM WATER DISCHARGES
ASSOCIATED WITH CONSTRUCTION AND LAND DISTURBANCE
ACTIVITIES

ORDER NO. 2009-0009-DWQ
NPDES NO**. CAS000002**

This Order was adopted by the State Water Resources Control Board on:	**September 2, 2009**
This Order shall become effective on:	**July 1, 2010**
This Order shall expire on:	**September 2, 2014**

IT IS HEREBY ORDERED, that this Order supersedes Order No. 99-08-DWQ [as amended by Order No. 2010-0014-DWQ] except for enforcement purposes. The Discharger shall comply with the requirements in this Order to meet the provisions contained in Division 7 of the California Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act and regulations and guidelines adopted thereunder.

I, Jeanine Townsend, Clerk to the Board, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the State Water Resources Control Board, on September 2, 2009.

AYE: Vice Chair Frances Spivy-Weber
Board Member Arthur G. Baggett, Jr.
Board Member Tam M. Doduc

NAY: Chairman Charles R. Hoppin

ABSENT: None

ABSTAIN: None

Jeanine Townsend
Clerk to the Board

Linda S. Adams
Secretary for
Environmental Protection

State Water Resources Control Board

Division of Water Quality
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Arnold Schwarzenegger
Governor

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION AND LAND DISTURBANCE ACTIVITIES

ORDER NO. 2010-0014-DWQ
NPDES NO. CAS000002

Order No. 2009-0009-DWQ was adopted by the State Water Resources Control Board on:	**September 2, 2009**
Order No. 2009-0009-DWQ became effective on:	**July 1, 2010**
Order No. 2009-0009-DWQ shall expire on:	**September 2, 2014**
This Order, which amends Order No. 2009-0009-DWQ, was adopted by the State Water Resources Control Board on:	**November 16, 2010**
This Order shall become effective on:	**February 14, 2011**

IT IS HEREBY ORDERED that this Order amends Order No. 2009-0009-DWQ. Additions to Order No. 2009-0009-DWQ are reflected in blue-underline text and deletions are reflected in red-strikeout text.

IT IS FURTHER ORDERED that staff are directed to prepare and post a conformed copy of Order No. 2009-0009-DWQ incorporating the revisions made by this Order.

I, Jeanine Townsend, Clerk to the Board, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the State Water Resources Control Board, on **November 16, 2010.**

AYE: Chairman Charles R. Hoppin
Vice Chair Frances Spivy-Weber
Board Member Arthur G. Baggett, Jr.
Board Member Tam M. Doduc

NAY: None

ABSENT: None

ABSTAIN: None

Jeanine Townsend
Clerk to the Board

CALIFORNIA
Water Boards

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR
STORM WATER DISCHARGES
ASSOCIATED WITH CONSTRUCTION AND LAND DISTURBANCE ACTIVITIES

ORDER NO. 2012-0006-DWQ
NPDES NO. **CAS000002**

Order No. 2009-0009-DWQ was adopted by the State Water Resources Control Board on:	**September 2, 2009**
Order No. 2009-0009-DWQ became effective on:	**July 1, 2010**
Order No. 2010-0014-DWQ became effective on:	**February 14, 2011**
Order No. 2009-0009-DWQ as amended by 2010-0014-DWQ shall expire on:	**September 2, 2014**
This Order, which amends Order No. 2009-0009-DWQ as amended by 2010-0014-DWQ, was adopted by the State Water Resources Control Board on:	**July 17, 2012**
This Order No. 2012-0006-DWQ shall become effective on:	**July 17, 2012**

IT IS HEREBY ORDERED that this Order amends Order No. 2009-0009-DWQ. Additions to Order No. 2009-0009-DWQ are reflected in blue-underline text and deletions are reflected in red-strikeout text.

IT IS FURTHER ORDERED that staff are directed to prepare and post a conformed copy of Order No. 2009-000-DWQ incorporating the revisions made by this Order.

I, Jeanine Townsend, Clerk to the Board, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the State Water Resources Control Board, on July 17, 2012.

AYE:	Chairman Charles R. Hoppin Vice Chair Frances Spivy-Weber Board Member Tam M. Doduc Board Member Steven Moore Board Member Felicia Marcus
NAY:	None
ABSENT:	None
ABSTAIN:	None

Jeanine Townsend
Clerk to the Board

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LIST OF APPENDICES

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STATE WATER RESOURCES CONTROL BOARD
ORDER NO. 2009-0009-DWQ
[AS AMENDED BY ORDER NO. 2010-0014-DWQ]
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
GENERAL PERMIT NO. CAS000002

WASTE DISCHARGE REQUIREMENTS
FOR
DISCHARGES OF STORM WATER RUNOFF ASSOCIATED WITH CONSTRUCTION AND LAND DISTURBANCE ACTIVITIES

I. FINDINGS

A. General Findings

The State Water Resources Control Board (State Water Board) finds that:

1. The federal Clean Water Act (CWA) prohibits certain discharges of storm water containing pollutants except in compliance with a National Pollutant Discharge Elimination System (NPDES) permit (Title 33 United States Code (U.S.C.) §§ 1311 and 1342(p); also referred to as Clean Water Act (CWA) §§ 301 and 402(p)). The U.S. Environmental Protection Agency (U.S. EPA) promulgates federal regulations to implement the CWA's mandate to control pollutants in storm water runoff discharges. (Title 40 Code of Federal Regulations (C.F.R.) Parts 122, 123, and 124). The federal statutes and regulations require discharges to surface waters comprised of storm water associated with construction activity, including demolition, clearing, grading, and excavation, and other land disturbance activities (except operations that result in disturbance of less than one acre of total land area and which are not part of a larger common plan of development or sale), to obtain coverage under an NPDES permit. The NPDES permit must require implementation of Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to reduce or eliminate pollutants in storm water runoff. The NPDES permit must also include additional requirements necessary to implement applicable water quality standards.

2. This General Permit authorizes discharges of storm water associated with construction activity so long as the dischargers comply with all requirements, provisions, limitations and prohibitions in the permit. In addition, this General Permit regulates the discharges of storm water associated with construction activities from all Linear

Underground/Overhead Projects resulting in the disturbance of greater than or equal to one acre (Attachment A).

3. This General Permit regulates discharges of pollutants in storm water associated with construction activity (storm water discharges) to waters of the United States from construction sites that disturb one or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than one acre of land surface.

4. This General Permit does not preempt or supersede the authority of local storm water management agencies to prohibit, restrict, or control storm water discharges to municipal separate storm sewer systems or other watercourses within their jurisdictions.

5. This action to adopt a general NPDES permit is exempt from the provisions of Chapter 3 of the California Environmental Quality Act (CEQA) (Public Resources Code Section 21100, et seq.), pursuant to Section 13389 of the California Water Code.

6. Pursuant to 40 C.F.R. § 131.12 and State Water Board Resolution No. 68-16,[1] which incorporates the requirements of § 131.12 where applicable, the State Water Board finds that discharges in compliance with this General Permit will not result in the lowering of water quality standards, and are therefore consistent with those provisions. Compliance with this General Permit will result in improvements in water quality.

7. This General Permit serves as an NPDES permit in compliance with CWA § 402 and will take effect on July 1, 2010 by the State Water Board provided the Regional Administrator of the U.S. EPA has no objection. If the U.S. EPA Regional Administrator objects to its issuance, the General Permit will not become effective until such objection is withdrawn.

8. Following adoption and upon the effective date of this General Permit, the Regional Water Quality Control Boards (Regional Water Boards) shall enforce the provisions herein.

9. Regional Water Boards establish water quality standards in Basin Plans. The State Water Board establishes water quality standards in various statewide plans, including the California Ocean Plan. U.S. EPA establishes water quality standards in the National Toxic Rule (NTR) and the California Toxic Rule (CTR).

[1] Resolution No. 68-16 generally requires that existing water quality be maintained unless degradation is justified based on specific findings.

10. This General Permit does not authorize discharges of fill or dredged material regulated by the U.S. Army Corps of Engineers under CWA § 404 and does not constitute a waiver of water quality certification under CWA § 401.

11. The primary storm water pollutant at construction sites is excess sediment. Excess sediment can cloud the water, which reduces the amount of sunlight reaching aquatic plants, clog fish gills, smother aquatic habitat and spawning areas, and impede navigation in our waterways. Sediment also transports other pollutants such as nutrients, metals, and oils and greases.

12. Construction activities can impact a construction site's runoff sediment supply and transport characteristics. These modifications, which can occur both during and after the construction phase, are a significant cause of degradation of the beneficial uses established for water bodies in California. Dischargers can avoid these effects through better construction site design and activity practices.

13. This General Permit recognizes four distinct phases of construction activities. The phases are Grading and Land Development Phase, Streets and Utilities Phase, Vertical Construction Phase, and Final Landscaping and Site Stabilization Phase. Each phase has activities that can result in different water quality effects from different water quality pollutants. This General Permit also recognizes inactive construction as a category of construction site type.

14. Compliance with any specific limits or requirements contained in this General Permit does not constitute compliance with any other applicable requirements.

15. Following public notice in accordance with State and Federal laws and regulations, the State Water Board heard and considered all comments and testimony in a public hearing on 06/03/2009. The State Water Board has prepared written responses to all significant comments.

16. Construction activities obtaining coverage under the General Permit may have multiple discharges subject to requirements that are specific to general, linear, and/or active treatment system discharge types.

17. The State Water Board may reopen the permit if the U.S. EPA adopts a final effluent limitation guideline for construction activities.

B. Activities Covered Under the General Permit

18. Any construction or demolition activity, including, but not limited to, clearing, grading, grubbing, or excavation, or any other activity that results in a land disturbance of equal to or greater than one acre.

19. Construction activity that results in land surface disturbances of less than one acre if the construction activity is part of a larger common plan of development or the sale of one or more acres of disturbed land surface.

20. Construction activity related to residential, commercial, or industrial development on lands currently used for agriculture including, but not limited to, the construction of buildings related to agriculture that are considered industrial pursuant to U.S. EPA regulations, such as dairy barns or food processing facilities.

21. Construction activity associated with Linear Underground/Overhead Utility Projects (LUPs) including, but not limited to, those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities) and include, but are not limited to, underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/or pavement repair or replacement, and stockpile/borrow locations.

22. Discharges of sediment from construction activities associated with oil and gas exploration, production, processing, or treatment operations or transmission facilities.[2]

23. Storm water discharges from dredge spoil placement that occur outside of U.S. Army Corps of Engineers jurisdiction (upland sites) and that disturb one or more acres of land surface from construction activity are covered by this General Permit. Construction sites that intend to disturb one or more acres of land within the jurisdictional boundaries of

[2] Pursuant to the Ninth Circuit Court of Appeals' decision in *NRDC v. EPA* (9th Cir. 2008) 526 F.3d 591, and subsequent denial of the U.S. EPA's petition for reconsideration in November 2008, oil and gas construction activities discharging storm water contaminated only with sediment are no longer exempt from the NPDES program.

a CWA § 404 permit should contact the appropriate Regional Water Board to determine whether this permit applies to the site.

C. Activities Not Covered Under the General Permit

24. Routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the facility.

25. Disturbances to land surfaces solely related to agricultural operations such as disking, harrowing, terracing and leveling, and soil preparation.

26. Discharges of storm water from areas on tribal lands; construction on tribal lands is regulated by a federal permit.

27. Construction activity and land disturbance involving discharges of storm water within the Lake Tahoe Hydrologic Unit. The Lahontan Regional Water Board has adopted its own permit to regulate storm water discharges from construction activity in the Lake Tahoe Hydrologic Unit (Regional Water Board 6SLT). Owners of construction sites in this watershed must apply for the Lahontan Regional Water Board permit rather than the statewide Construction General Permit.

28. Construction activity that disturbs less than one acre of land surface, and that is not part of a larger common plan of development or the sale of one or more acres of disturbed land surface.

29. Construction activity covered by an individual NPDES Permit for storm water discharges.

30. Discharges from small (1 to 5 acre) construction activities with an approved Rainfall Erosivity Waiver authorized by U.S. EPA Phase II regulations certifying to the State Board that small construction activity will occur only when the Rainfall Erosivity Factor is less than 5 (“R” in the Revised Universal Soil Loss Equation).

31. Landfill construction activity that is subject to the Industrial General Permit.

32. Construction activity that discharges to Combined Sewer Systems.

33. Conveyances that discharge storm water runoff combined with municipal sewage.

34. Discharges of storm water identified in CWA § 402(*l*)(2), 33 U.S.C. § 1342(*l*)(2).

35. Discharges occurring in basins that are not tributary or hydrologically connected to waters of the United States (for more information contact your Regional Water Board).

D. Obtaining and Modifying General Permit Coverage

36. This General Permit requires all dischargers to electronically file all Permit Registration Documents (PRDs), Notices of Termination (NOT), changes of information, annual reporting, and other compliance documents required by this General Permit through the State Water Board's Storm water Multi-Application and Report Tracking System (SMARTS) website.

37. Any information provided to the Regional Water Board shall comply with the Homeland Security Act and any other federal law that concerns security in the United States; any information that does not comply should not be submitted.

38. This General Permit grants an exception from the Risk Determination requirements for existing sites covered under Water Quality Orders No. 99-08-DWQ, and No. 2003-0007-DWQ. For certain sites, adding additional requirements may not be cost effective. Construction sites covered under Water Quality Order No. 99-08-DWQ shall obtain permit coverage at the Risk Level 1. LUPs covered under Water Quality Order No. 2003-0007-DWQ shall obtain permit coverage as a Type 1 LUP. The Regional Water Boards have the authority to require Risk Determination to be performed on sites currently covered under Water Quality Orders No. 99-08-DWQ and No. 2003-0007-DWQ where they deem it necessary. The State Water Board finds that there are two circumstances when it may be appropriate for the Regional Water Boards to require a discharger that had filed an NOI under State Water Board Order No. 99-08-DWQ to recalculate the site's risk level. These circumstances are: (1) when the discharger has a demonstrated history of noncompliance with State Water Board Order No. 99-08-DWQ or; (2) when the discharger's site poses a significant risk of causing or contributing to an exceedance of a water quality standard without the implementation of the additional Risk Level 2 or 3 requirements.

E. Prohibitions

39. All discharges are prohibited except for the storm water and non-storm water discharges specifically authorized by this General Permit or another NPDES permit. Non-storm water discharges include a wide variety of sources, including improper dumping, spills, or leakage from storage tanks or transfer areas. Non-storm water discharges may

contribute significant pollutant loads to receiving waters. Measures to control spills, leakage, and dumping, and to prevent illicit connections during construction must be addressed through structural as well as non-structural Best Management Practices (BMPs)[3]. The State Water Board recognizes, however, that certain non-storm water discharges may be necessary for the completion of construction.

40. This General Permit prohibits all discharges which contain a hazardous substance in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.

41. This General Permit incorporates discharge prohibitions contained in water quality control plans, as implemented by the State Water Board and the nine Regional Water Boards.

42. Pursuant to the Ocean Plan, discharges to Areas of Special Biological Significance (ASBS) are prohibited unless covered by an exception that the State Water Board has approved.

43. This General Permit prohibits the discharge of any debris[4] from construction sites. Plastic and other trash materials can cause negative impacts to receiving water beneficial uses. The State Water Board encourages the use of more environmentally safe, biodegradable materials on construction sites to minimize the potential risk to water quality.

F. Training

44. In order to improve compliance with and to maintain consistent enforcement of this General Permit, all dischargers are required to appoint two positions - the Qualified SWPPP Developer (QSD) and the Qualified SWPPP Practitioner (QSP) - who must obtain appropriate training. Together with the key stakeholders, the State and Regional Water Boards are leading the development of this curriculum through a collaborative organization called The Construction General Permit (CGP) Training Team.

45. The Professional Engineers Act (Bus. & Prof. Code section 6700, et seq.) requires that all engineering work must be performed by a California licensed engineer.

[3] BMPs are scheduling of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the United States. BMPs also include treatment requirements, operating procedures, and practice to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

[4] Litter, rubble, discarded refuse, and remains of destroyed inorganic anthropogenic waste.

G. Determining and Reducing Risk

46. The risk of accelerated erosion and sedimentation from wind and water depends on a number of factors, including proximity to receiving water bodies, climate, topography, and soil type.

47. This General Permit requires dischargers to assess the risk level of a site based on both sediment transport and receiving water risk. This General Permit contains requirements for Risk Levels 1, 2 and 3, and LUP Risk Type 1, 2, and 3 (Attachment A). Risk levels are established by determining two factors: first, calculating the site's sediment risk; and second, receiving water risk during periods of soil exposure (i.e. grading and site stabilization). Both factors are used to determine the site-specific Risk Level(s). LUPs can be determined to be Type 1 based on the flowchart in Attachment A.1.

48. Although this General Permit does not mandate specific setback distances, dischargers are encouraged to set back their construction activities from streams and wetlands whenever feasible to reduce the risk of impacting water quality (e.g., natural stream stability and habitat function). Because there is a reduced risk to receiving waters when setbacks are used, this General Permit gives credit to setbacks in the risk determination and post-construction storm water performance standards. The risk calculation and runoff reduction mechanisms in this General Permit are expected to facilitate compliance with any Regional Water Board and local agency setback requirements, and to encourage voluntary setbacks wherever practicable.

49. Rain events can occur at any time of the year in California. Therefore, a Rain Event Action Plan (REAP) is necessary for Risk Level 2 and 3 traditional construction projects (LUPs exempt) to ensure that active construction sites have adequate erosion and sediment controls implemented prior to the onset of a storm event, even if construction is planned only during the dry season.

50. Soil particles smaller than 0.02 millimeters (mm) (i.e., finer than medium silt) do not settle easily using conventional measures for sediment control (i.e., sediment basins). Given their long settling time, dislodging these soils results in a significant risk that fine particles will be released into surface waters and cause unacceptable downstream impacts. If operated correctly, an Active Treatment System (ATS[5]) can prevent or reduce the release of fine particles from construction sites.

[5] An ATS is a treatment system that employs chemical coagulation, chemical flocculation, or electro coagulation in order to reduce turbidity caused by fine suspended sediment.

Use of an ATS can effectively reduce a site's risk of impacting receiving waters.

51. Dischargers located in a watershed area where a Total Maximum Daily Load (TMDL) has been adopted or approved by the Regional Water Board or U.S. EPA may be required by a separate Regional Water Board action to implement additional BMPs, conduct additional monitoring activities, and/or comply with an applicable waste load allocation and implementation schedule. Such dischargers may also be required to obtain an individual Regional Water Board permit specific to the area.

H. Effluent Standards

52. The State Water Board convened a blue ribbon panel of storm water experts that submitted a report entitled, "The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities," dated June 19, 2006. The panel concluded that numeric limits or action levels are technically feasible to control construction storm water discharges, provided that certain conditions are considered. The panel also concluded that numeric effluent limitations (NELs) are feasible for discharges from construction sites that utilize an ATS. The State Water Board has incorporated the expert panel's suggestions into this General Permit, which includes numeric action levels (NALs) for pH and turbidity, and special numeric limits for ATS discharges.

Determining Compliance with Numeric Limitations

53. This General Permit sets a pH NAL of 6.5 to 8.5, and a turbidity NAL of 250 NTU. The purpose of the NAL and its associated monitoring requirement is to provide operational information regarding the performance of the measures used at the site to minimize the discharge of pollutants and to protect beneficial uses and receiving waters from the adverse effects of construction-related storm water discharges. An exceedance of a NAL does not constitute a violation of this General Permit.

54. This General Permit requires dischargers with NAL exceedances to immediately implement additional BMPs and revise their Storm Water Pollution Prevention Plans (SWPPPs) accordingly to either prevent pollutants and authorized non-storm water discharges from contaminating storm water, or to substantially reduce the pollutants to levels consistently below the NALs. NAL exceedances are reported in the State Water Boards SMARTS system, and the discharger is

required to provide an NAL Exceedance Report when requested by a Regional Water Board.

I. Receiving Water Limitations

55. This General Permit requires all enrolled dischargers to determine the receiving waters potentially affected by their discharges and to comply with all applicable water quality standards, including any more stringent standards applicable to a water body.

J. Sampling, Monitoring, Reporting and Record Keeping

56. Visual monitoring of storm water and non-storm water discharges is required for all sites subject to this General Permit.

57. Records of all visual monitoring inspections are required to remain on-site during the construction period and for a minimum of three years.

58. For all Risk Level 3/LUP Type 3 and Risk Level 2/LUP Type 2 sites, this General Permit requires effluent monitoring for pH and turbidity. Sampling, analysis and monitoring requirements for effluent monitoring for pH and turbidity are contained in this General Permit.

59. Risk Level 3 and LUP Type 3 sites with effluent that exceeds the Receiving Water Monitoring Triggers contained in this General Permit and with direct discharges to receiving water are required to conduct receiving water monitoring. An exceedance of a Receiving Water Monitoring Trigger does not constitute a violation of this General Permit.

60. This General Permit establishes a 5 year, 24 hour (expressed in inches of rainfall) as an exemptions to the receiving water monitoring requirements for Risk Level 3 and LUP Type 3 dischargers.

61. If run-on is caused by a forest fire or any other natural disaster, then receiving water monitoring triggers do not apply.

62. For Risk Level 3 and LUP Type 3 sites larger than 30 acres and with direct discharges to receiving waters, this General Permit requires bioassessment sampling before and after site completion to determine if significant degradation to the receiving water's biota has occurred. Bioassessment sampling guidelines are contained in this General Permit.

63. A summary and evaluation of the sampling and analysis results will be submitted in the Annual Reports.

64. This General Permit contains sampling, analysis and monitoring requirements for non-visible pollutants at all sites subject to this General Permit.

65. Compliance with the General Permit relies upon dischargers to electronically self-report any discharge violations and to comply with any Regional Water Board enforcement actions.

66. This General Permit requires that all dischargers maintain a paper or electronic copy of all required records for three years from the date generated or date submitted, whichever is last. These records must be available at the construction site until construction is completed. For LUPs, these documents may be retained in a crew member's vehicle and made available upon request.

K. Active Treatment System (ATS) Requirements

67. Active treatment systems add chemicals to facilitate flocculation, coagulation and filtration of suspended sediment particles. The uncontrolled release of these chemicals to the environment can negatively affect the beneficial uses of receiving waters and/or degrade water quality (e.g., acute and chronic toxicity). Additionally, the batch storage and treatment of storm water through an ATS' can potentially cause physical impacts on receiving waters if storage volume is inadequate or due to sudden releases of the ATS batches and improperly designed outfalls.

68. If designed, operated and maintained properly an ATS can achieve very high removal rates of suspended sediment (measured as turbidity), albeit at sometimes significantly higher costs than traditional erosion/sediment control practices. As a result, this General Permit establishes NELs consistent with the expected level of typical ATS performance.

69. This General Permit requires discharges of storm water associated with construction activity that undergo active treatment to comply with special operational and effluent limitations to ensure that these discharges do not adversely affect the beneficial uses of the receiving waters or cause degradation of their water quality.

70. For ATS discharges, this General Permit establishes technology-based NELs for turbidity.

71. This General Permit establishes a 10 year, 24 hour (expressed in inches of rainfall) Compliance Storm Event exemption from the technology-based numeric effluent limitations for ATS discharges. Exceedances of the ATS turbidity NEL constitutes a violation of this General Permit.

L. Post-Construction Requirements

72. This General Permit includes performance standards for post-construction that are consistent with State Water Board Resolution No. 2005-0006, "Resolution Adopting the Concept of Sustainability as a Core Value for State Water Board Programs and Directing Its Incorporation," and 2008-0030, "Requiring Sustainable Water Resources Management." The requirement for all construction sites to match pre-project hydrology will help ensure that the physical and biological integrity of aquatic ecosystems are sustained. This "runoff reduction" approach is analogous in principle to Low Impact Development (LID) and will serve to protect related watersheds and waterbodies from both hydrologic-based and pollution impacts associated with the post-construction landscape.

73. LUP projects are not subject to post-construction requirements due to the nature of their construction to return project sites to pre-construction conditions.

M. Storm Water Pollution Prevention Plan Requirements

74. This General Permit requires the development of a site-specific SWPPP. The SWPPP must include the information needed to demonstrate compliance with all requirements of this General Permit, and must be kept on the construction site and be available for review. The discharger shall ensure that a QSD develops the SWPPP.

75. To ensure proper site oversight, this General Permit requires a Qualified SWPPP Practitioner to oversee implementation of the BMPs required to comply with this General Permit.

N. Regional Water Board Authorities

76. Regional Water Boards are responsible for implementation and enforcement of this General Permit. A general approach to permitting is not always suitable for every construction site and environmental circumstances. Therefore, this General Permit recognizes that Regional Water Boards must have some flexibility and authority to alter, approve, exempt, or rescind permit authority granted under this

General Permit in order to protect the beneficial uses of our receiving waters and prevent degradation of water quality.

IT IS HEREBY ORDERED that all dischargers subject to this General Permit shall comply with the following conditions and requirements (including all conditions and requirements as set forth in Attachments A, B, C, D, E and F)[6]:

II. CONDITIONS FOR PERMIT COVERAGE

A. Linear Underground/Overhead Projects (LUPs)

1. Linear Underground/Overhead Projects (LUPs) include, but are not limited to, any conveyance, pipe, or pipeline for the transportation of any gaseous, liquid (including water and wastewater for domestic municipal services), liquescent, or slurry substance; any cable line or wire for the transmission of electrical energy; any cable line or wire for communications (e.g. telephone, telegraph, radio or television messages); and associated ancillary facilities. Construction activities associated with LUPs include, but are not limited to, (a) those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment, and associated ancillary facilities); and include, but are not limited to, (b) underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/ or pavement repair or replacement, and stockpile/borrow locations.

2. The Legally Responsible Person is responsible for obtaining coverage under the General Permit where the construction of pipelines, utility lines, fiber-optic cables, or other linear underground/overhead projects will occur across several properties unless the LUP construction activities are covered under another construction storm water permit.

3. Only LUPs shall comply with the conditions and requirements in Attachment A, A.1 & A.2 of this Order. The balance of this Order is not applicable to LUPs except as indicated in Attachment A.

[6] These attachments are part of the General Permit itself and are not separate documents that are capable of being updated independently by the State Water Board.

B. Obtaining Permit Coverage Traditional Construction Sites

1. The Legally Responsible Person (LRP) (see Special Provisions, Electronic Signature and Certification Requirements, Section IV.I.1) must obtain coverage under this General Permit.

2. To obtain coverage, the LRP must electronically file Permit Registration Documents (PRDs) prior to the commencement of construction activity. Failure to obtain coverage under this General Permit for storm water discharges to waters of the United States is a violation of the CWA and the California Water Code.

3. PRDs shall consist of:

   a. Notice of Intent (NOI)
   b. Risk Assessment (Section VIII)
   c. Site Map
   d. Storm Water Pollution Prevention Plan (Section XIV)
   e. Annual Fee
   f. Signed Certification Statement

   Any information provided to the Regional Water Board shall comply with the Homeland Security Act and any other federal law that concerns security in the United States; any information that does not comply should not be submitted.

   Attachment B contains additional PRD information. Dischargers must electronically file the PRDs, and mail the appropriate annual fee to the State Water Board.

4. This permit is effective on July 1, 2010.

   a. **Dischargers Obtaining Coverage On or After July 1, 2010:** All dischargers requiring coverage on or after July 1, 2010, shall electronically file their PRDs prior to the commencement of construction activities, and mail the appropriate annual fee no later than seven days prior to the commencement of construction activities. Permit coverage shall not commence until the PRDs and the annual fee are received by the State Water Board, and a WDID number is assigned and sent by SMARTS.

   b. **Dischargers Covered Under 99-08-DWQ and 2003-0007-DWQ:** Existing dischargers subject to State Water Board Order No. 99-08-DWQ (existing dischargers) will continue coverage under 99-08-DWQ until July 1, 2010. After July 1, 2010, all NOIs subject to State Water Board Order No. 99-08-DWQ will be terminated.

Existing dischargers shall electronically file their PRDs no later than July 1, 2010. If an existing discharger's site acreage subject to the annual fee has changed, it shall mail a revised annual fee no less than seven days after receiving the revised annual fee notification, **or else lose permit coverage**. All existing dischargers shall be exempt from the risk determination requirements in Section VIII of this General Permit until two years after permit adoption. All existing dischargers are therefore subject to Risk Level 1 requirements regardless of their site's sediment and receiving water risks. However, a Regional Board retains the authority to require an existing discharger to comply with the Section VIII risk determination requirements.

5. The discharger is only considered covered by this General Permit upon receipt of a Waste Discharger Identification (WDID) number assigned and sent by the State Water Board Storm water Multi-Application and Report Tracking System (SMARTS). In order to demonstrate compliance with this General Permit, the discharger must obtain a WDID number and must present documentation of a valid WDID upon demand.

6. During the period this permit is subject to review by the U.S. EPA, the prior permit (State Water Board Order No. 99-08-DWQ) remains in effect. Existing dischargers under the prior permit will continue to have coverage under State Water Board Order No. 99-08-DWQ until this General Permit takes effect on July 1, 2010. Dischargers who complete their projects and electronically file an NOT prior to July 1, 2010, are not required to obtain coverage under this General Permit.

7. Small Construction Rainfall Erosivity Waiver

   EPA's Small Construction Erosivity Waiver applies to sites between one and five acres demonstrating that there are no adverse water quality impacts.

   Dischargers eligible for a Rainfall Erosivity Waiver based on low erosivity potential shall complete the electronic Notice of Intent (NOI) and Sediment Risk form through the State Water Board's SMARTS system, certifying that the construction activity will take place during a period when the value of the rainfall erosivity factor is less than five. Where the LRP changes or another LRP is added during construction, the new LRP must also submit a waiver certification through the SMARTS system.

   If a small construction site continues beyond the projected completion date given on the waiver certification, the LRP shall recalculate the

rainfall erosivity factor for the new project duration and submit this information through the SMARTS system. If the new R factor is below five (5), the discharger shall update through SMARTS all applicable information on the waiver certification and retain a copy of the revised waiver onsite. The LRP shall submit the new waiver certification 30 days prior to the projected completion date listed on the original waiver form to assure exemption from permitting requirements is uninterrupted. If the new R factor is five (5) or above, the LRP shall be required to apply for coverage under this Order.

8. In the case of a public emergency that requires immediate construction activities, a discharger shall submit a brief description of the emergency construction activity within five days of the onset of construction, and then shall submit all PRDs within thirty days.

C. Revising Permit Coverage for Change of Acreage or New Ownership

1. The discharger may reduce or increase the total acreage covered under this General Permit when a portion of the site is complete and/or conditions for termination of coverage have been met (See Section II.D Conditions for Termination of Coverage); when ownership of a portion of the site is sold to a different entity; or when new acreage, subject to this General Permit, is added to the site.

2. Within 30 days of a reduction or increase in total disturbed acreage, the discharger shall electronically file revisions to the PRDs that include:

   a. A revised NOI indicating the new project size;

   b. A revised site map showing the acreage of the site completed, acreage currently under construction, acreage sold/transferred or added, and acreage currently stabilized in accordance with the Conditions for Termination of Coverage in Section II.D below.

   c. SWPPP revisions, as appropriate; and

   d. Certification that any new landowners have been notified of applicable requirements to obtain General Permit coverage. The certification shall include the name, address, telephone number, and e-mail address of the new landowner.

   e. If the project acreage has increased, dischargers shall mail payment of revised annual fees within 14 days of receiving the revised annual fee notification.

3. The discharger shall continue coverage under the General Permit for any parcel that has not achieved "Final Stabilization" as defined in Section II.D.

4. When an LRP with active General Permit coverage transfers its LRP status to another person or entity that qualifies as an LRP, the existing LRP shall inform the new LRP of the General Permit's requirements. In order for the new LRP to continue the construction activity on its parcel of property, the new LRP, or the new LRP's approved signatory, must submit PRDs in accordance with this General Permit's requirements.

D. Conditions for Termination of Coverage

1. Within 90 days of when construction is complete or ownership has been transferred, the discharger shall electronically file a Notice of Termination (NOT), a final site map, and photos through the State Water Boards SMARTS system. Filing a NOT certifies that all General Permit requirements have been met. The Regional Water Board will consider a construction site complete only when all portions of the site have been transferred to a new owner, or all of the following conditions have been met:

   a. For purposes of "final stabilization," the site will not pose any additional sediment discharge risk than it did prior to the commencement of construction activity;

   b. There is no potential for construction-related storm water pollutants to be discharged into site runoff;

   c. Final stabilization has been reached;

   d. Construction materials and wastes have been disposed of properly;

   e. Compliance with the Post-Construction Standards in Section XIII of this General Permit has been demonstrated;

   f. Post-construction storm water management measures have been installed and a long-term maintenance plan[7] has been established; and

   g. All construction-related equipment, materials and any temporary BMPs no longer needed are removed from the site.

[7] For the purposes of this requirement a long-term maintenance plan will be designed for a minimum of five years, and will describe the procedures to ensure that the post-construction storm water management measures are adequately maintained.

2. The discharger shall certify that final stabilization conditions are satisfied in their NOT. Failure to certify shall result in continuation of permit coverage and annual billing.

3. The NOT must demonstrate through photos, RUSLE or RUSLE2, or results of testing and analysis that the site meets all of the conditions above (Section II.D.1) and the final stabilization condition (Section II.D.1.a) is attained by one of the following methods:

   a. "70% final cover method," no computational proof required

      OR:

   b. "RUSLE or RUSLE2 method," computational proof required

      OR:

   c. "Custom method", the discharger shall demonstrate in some other manner than a or b, above, that the site complies with the "final stabilization" requirement in Section II.D.1.a.

III. DISCHARGE PROHIBITIONS

A. Dischargers shall not violate any discharge prohibitions contained in applicable Basin Plans or statewide water quality control plans. Waste discharges to Areas of Special Biological Significance (ASBS) are prohibited by the California Ocean Plan, unless granted an exception issued by the State Water Board.

B. All discharges are prohibited except for the storm water and non-storm water discharges specifically authorized by this General Permit or another NPDES permit.

C. Authorized non-storm water discharges may include those from de-chlorinated potable water sources such as: fire hydrant flushing, irrigation of vegetative erosion control measures, pipe flushing and testing, water to control dust, uncontaminated ground water from dewatering, and other discharges not subject to a separate general NPDES permit adopted by a Regional Water Board. The discharge of non-storm water is authorized under the following conditions:

1. The discharge does not cause or contribute to a violation of any water quality standard;

2. The discharge does not violate any other provision of this General Permit;

3. The discharge is not prohibited by the applicable Basin Plan;

4. The discharger has included and implemented specific BMPs required by this General Permit to prevent or reduce the contact of the non-storm water discharge with construction materials or equipment.

5. The discharge does not contain toxic constituents in toxic amounts or (other) significant quantities of pollutants;

6. The discharge is monitored and meets the applicable NALs; and

7. The discharger reports the sampling information in the Annual Report.

If any of the above conditions are not satisfied, the discharge is not authorized by this General Permit. The discharger shall notify the Regional Water Board of any anticipated non-storm water discharges not already authorized by this General Permit or another NPDES permit, to determine whether a separate NPDES permit is necessary.

D. Debris resulting from construction activities are prohibited from being discharged from construction sites.

E. When soil contamination is found or suspected and a responsible party is not identified, or the responsible party fails to promptly take the appropriate action, the discharger shall have those soils sampled and tested to ensure proper handling and public safety measures are implemented. The discharger shall notify the appropriate local, State, and federal agency(ies) when contaminated soil is found at a construction site, and will notify the appropriate Regional Water Board.

IV. SPECIAL PROVISIONS

A. Duty to Comply

1. The discharger shall comply with all of the conditions of this General Permit. Any permit noncompliance constitutes a violation of the Clean Water Act (CWA) and the Porter-Cologne Water Quality Control Act and is grounds for enforcement action and/or removal from General Permit coverage.

2. The discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this General Permit has not yet been modified to incorporate the requirement.

B. General Permit Actions

1. This General Permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the discharger for a General Permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not annul any General Permit condition.

2. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the CWA for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this General Permit, this General Permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition and the dischargers so notified.

C. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this General Permit.

D. Duty to Mitigate

The discharger shall take all responsible steps to minimize or prevent any discharge in violation of this General Permit, which has a reasonable likelihood of adversely affecting human health or the environment.

E. Proper Operation and Maintenance

The discharger shall at all times properly operate and maintain any facilities and systems of treatment and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with the conditions of this General Permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance may require the operation of backup or auxiliary facilities or similar systems installed by a discharger when necessary to achieve compliance with the conditions of this General Permit.

F. Property Rights

This General Permit does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor does it authorize any infringement of Federal, State, or local laws or regulations.

G. Duty to Maintain Records and Provide Information

1. The discharger shall maintain a paper or electronic copy of all required records, including a copy of this General Permit, for three years from the date generated or date submitted, whichever is last. These records shall be available at the construction site until construction is completed.

2. The discharger shall furnish the Regional Water Board, State Water Board, or U.S. EPA, within a reasonable time, any requested information to determine compliance with this General Permit. The discharger shall also furnish, upon request, copies of records that are required to be kept by this General Permit.

H. Inspection and Entry

The discharger shall allow the Regional Water Board, State Water Board, U.S. EPA, and/or, in the case of construction sites which discharge through a municipal separate storm sewer, an authorized representative of the municipal operator of the separate storm sewer system receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the discharger's premises at reasonable times where a regulated construction activity is being conducted or where records must be kept under the conditions of this General Permit;

2. Access and copy at reasonable times any records that must be kept under the conditions of this General Permit;

3. Inspect at reasonable times the complete construction site, including any off-site staging areas or material storage areas, and the erosion/sediment controls; and

4. Sample or monitor at reasonable times for the purpose of ensuring General Permit compliance.

I. Electronic Signature and Certification Requirements

1. All Permit Registration Documents (PRDs) and Notices of Termination (NOTs) shall be electronically signed, certified, and submitted via SMARTS to the State Water Board. Either the Legally Responsible Person (LRP), as defined in Appendix 5 – Glossary, or a person legally authorized to sign and certify PRDs and NOTs on behalf of the LRP (the LRP's Approved Signatory, as defined in Appendix 5 - Glossary) must submit all information electronically via SMARTS.

2. Changes to Authorization. If an Approved Signatory's authorization is no longer accurate, a new authorization satisfying the requirements of paragraph (a) of this section must be submitted via SMARTS prior to or together with any reports, information or applications to be signed by an Approved Signatory.

3. All Annual Reports, or other information required by the General Permit (other than PRDs and NOTs) or requested by the Regional Water Board, State Water Board, U.S. EPA, or local storm water management agency shall be certified and submitted by the LRP or the LRP's Approved Signatory.

J. Certification

Any person signing documents under Section IV.I above, shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

K. Anticipated Noncompliance

The discharger shall give advance notice to the Regional Water Board and local storm water management agency of any planned changes in the construction activity, which may result in noncompliance with General Permit requirements.

L. Bypass

Bypass[8] is prohibited. The Regional Water Board may take enforcement action against the discharger for bypass unless:

1. Bypass was unavoidable to prevent loss of life, personal injury or severe property damage;[9]

2. There were no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated waste, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that could occur during normal periods of equipment downtime or preventative maintenance;

3. The discharger submitted a notice at least ten days in advance of the need for a bypass to the Regional Water Board; or

4. The discharger may allow a bypass to occur that does not cause effluent limitations to be exceeded, but only if it is for essential maintenance to assure efficient operation. In such a case, the above bypass conditions are not applicable. The discharger shall submit notice of an unanticipated bypass as required.

M. Upset

1. A discharger that wishes to establish the affirmative defense of an upset[10] in an action brought for noncompliance shall demonstrate,

[8] The intentional diversion of waste streams from any portion of a treatment facility

[9] Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

[10] An exceptional incident in which there is unintentional and temporary noncompliance the technology based numeric effluent limitations because of factors beyond the reasonable control of the discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. An upset occurred and that the discharger can identify the cause(s) of the upset

b. The treatment facility was being properly operated by the time of the upset

c. The discharger submitted notice of the upset as required; and

d. The discharger complied with any remedial measures required

2. No determination made before an action of noncompliance occurs, such as during administrative review of claims that noncompliance was caused by an upset, is final administrative action subject to judicial review.

3. In any enforcement proceeding, the discharger seeking to establish the occurrence of an upset has the burden of proof

N. Penalties for Falsification of Reports

Section 309(c)(4) of the CWA provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this General Permit, including reports of compliance or noncompliance shall upon conviction, be punished by a fine of not more than $10,000 or by imprisonment for not more than two years or by both.

O. Oil and Hazardous Substance Liability

Nothing in this General Permit shall be construed to preclude the institution of any legal action or relieve the discharger from any responsibilities, liabilities, or penalties to which the discharger is or may be subject to under Section 311 of the CWA.

P. Severability

The provisions of this General Permit are severable; and, if any provision of this General Permit or the application of any provision of this General Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this General Permit shall not be affected thereby.

Q. Reopener Clause

This General Permit may be modified, revoked and reissued, or terminated for cause due to promulgation of amended regulations, receipt of U.S. EPA guidance concerning regulated activities, judicial decision, or in accordance with 40 Code of Federal Regulations (CFR) 122.62, 122.63, 122.64, and 124.5.

R. Penalties for Violations of Permit Conditions

1. Section 309 of the CWA provides significant penalties for any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the CWA or any permit condition or limitation implementing any such section in a permit issued under Section 402. Any person who violates any permit condition of this General Permit is subject to a civil penalty not to exceed $37,500[11] per calendar day of such violation, as well as any other appropriate sanction provided by Section 309 of the CWA.

2. The Porter-Cologne Water Quality Control Act also provides for civil and criminal penalties, which in some cases are greater than those under the CWA.

S. Transfers

This General Permit is not transferable.

T. Continuation of Expired Permit

This General Permit continues in force and effect until a new General Permit is issued or the SWRCB rescinds this General Permit. Only those dischargers authorized to discharge under the expiring General Permit are covered by the continued General Permit.

[11] May be further adjusted in accordance with the Federal Civil Penalties Inflation Adjustment Act.

V. EFFLUENT STANDARDS & RECEIVING WATER MONITORING

A. Narrative Effluent Limitations

1. Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.

2. Dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.

Table 1- Numeric Action Levels, Test Methods, Detection Limits, and Reporting Units

Parameter	Test Method	Discharge Type	Min. Detection Limit	Units	Numeric Action Level
pH	Field test with calibrated portable instrument	Risk Level 2	0.2	pH units	lower NAL = 6.5 upper NAL = 8.5
		Risk Level 3			lower NAL = 6.5 upper NAL = 8.5
Turbidity	EPA 0180.1 and/or field test with calibrated portable instrument	Risk Level 2	1	NTU	250 NTU
		Risk Level 3			250 NTU

B. Numeric Action Levels (NALs)

1. For Risk Level 2 and 3 dischargers, the lower storm event average NAL for pH is 6.5 pH units and the upper storm event average NAL for

pH is 8.5 pH units. The discharger shall take actions as described below if the discharge is outside of this range of pH values.

2. For Risk Level 2 and 3 dischargers, the NAL storm event daily average for turbidity is 250 NTU. The discharger shall take actions as described below if the discharge is outside of this range of turbidity values.

3. Whenever the results from a storm event daily average indicate that the discharge is below the lower NAL for pH, exceeds the upper NAL for pH, or exceeds the turbidity NAL (as listed in Table 1), the discharger shall conduct a construction site and run-on evaluation to determine whether pollutant source(s) associated with the site's construction activity may have caused or contributed to the NAL exceedance and shall immediately implement corrective actions if they are needed.

4. The site evaluation shall be documented in the SWPPP and specifically address whether the source(s) of the pollutants causing the exceedance of the NAL:

   a. Are related to the construction activities and whether additional BMPs are required to (1) meet BAT/BCT requirements; (2) reduce or prevent pollutants in storm water discharges from causing exceedances of receiving water objectives; and (3) determine what corrective action(s) were taken or will be taken and with a description of the schedule for completion.

      AND/OR:

   b. Are related to the run-on associated with the construction site location and whether additional BMPs measures are required to (1) meet BAT/BCT requirements; (2) reduce or prevent pollutants in storm water discharges from causing exceedances of receiving water objectives; and (3) what corrective action(s) were taken or will be taken with a description of the schedule for completion.

C. Receiving Water Monitoring Triggers

1. The receiving water monitoring triggers for Risk Level 3 dischargers with direct discharges to surface waters are triggered when the daily average effluent pH values during any site phase when there is a high risk of pH discharge[12] fall outside of the range of 6.0 and 9.0 pH units, or when the daily average effluent turbidity exceeds 500 NTU.

2. Risk Level 3 dischargers with with direct discharges to surface waters shall conduct receiving water monitoring whenever their effluent monitoring results exceed the receiving water monitoring triggers. If the pH trigger is exceeded, the receiving water shall be monitored for pH for the duration of coverage under this General Permit. If the turbidity trigger is exceeded, the receiving water shall be monitored for turbidity and SSC for the duration of coverage under this general permit.

3. Risk Level 3 dischargers with direct discharges to surfaces waters shall initiate receiving water monitoring when the triggers are exceeded unless the storm event causing the exceedance is determined after the fact to equal to or greater than the 5-year 24-hour storm (expressed in inches of rainfall) as determined by using these maps:

   http://www.wrcc.dri.edu/pcpnfreq/nca5y24.gif
   http://www.wrcc.dri.edu/pcpnfreq/sca5y24.gif

   Verification of the 5-year 24-hour storm event shall be done by reporting on-site rain gauge readings as well as nearby governmental rain gauge readings.

4. If run-on is caused by a forest fire or any other natural disaster, then receiving water monitoring triggers do not apply.

[12] A period of high risk of pH discharge is defined as a project's complete utilities phase, complete vertical build phase, and any portion of any phase where significant amounts of materials are placed directly on the land at the site in a manner that could result in significant alterations of the background pH of the discharges.

VI. RECEIVING WATER LIMITATIONS

A. The discharger shall ensure that storm water discharges and authorized non-storm water discharges to any surface or ground water will not adversely affect human health or the environment.

B. The discharger shall ensure that storm water discharges and authorized non-storm water discharges will not contain pollutants in quantities that threaten to cause pollution or a public nuisance.

C. The discharger shall ensure that storm water discharges and authorized non-storm water discharges will not contain pollutants that cause or contribute to an exceedance of any applicable water quality objectives or water quality standards (collectively, WQS) contained in a Statewide Water Quality Control Plan, the California Toxics Rule, the National Toxics Rule, or the applicable Regional Water Board's Water Quality Control Plan (Basin Plan).

D. Dischargers located within the watershed of a CWA § 303(d) impaired water body, for which a TMDL has been approved by the U.S. EPA, shall comply with the approved TMDL if it identifies "construction activity" or land disturbance as a source of the pollution.

VII. TRAINING QUALIFICATIONS AND CERTIFICATION REQUIREMENTS

A. General

The discharger shall ensure that all persons responsible for implementing requirements of this General Permit shall be appropriately trained in accordance with this Section. Training should be both formal and informal, occur on an ongoing basis, and should include training offered by recognized governmental agencies or professional organizations. Those responsible for preparing and amending SWPPPs shall comply with the requirements in this Section VII.

The discharger shall provide documentation of all training for persons responsible for implementing the requirements of this General Permit in the Annual Reports.

B. SWPPP Certification Requirements

1. **Qualified SWPPP Developer:** The discharger shall ensure that SWPPPs are written, amended and certified by a Qualified SWPPP Developer (QSD). A QSD shall have one of the following registrations or certifications, and appropriate experience, as required for:

   a. A California registered professional civil engineer;

   b. A California registered professional geologist or engineering geologist;

   c. A California registered landscape architect;

   d. A professional hydrologist registered through the American Institute of Hydrology;

   e. A Certified Professional in Erosion and Sediment Control (CPESC) ™ registered through Enviro Cert International, Inc.;

   f. A Certified Professional in Storm Water Quality (CPSWQ) ™ registered through Enviro Cert International, Inc.; or

   g. A professional in erosion and sediment control registered through the National Institute for Certification in Engineering Technologies (NICET).

Effective two years after the adoption date of this General Permit, a QSD shall have attended a State Water Board-sponsored or approved QSD training course.

2. The discharger shall list the name and telephone number of the currently designated Qualified SWPPP Developer(s) in the SWPPP.

3. **Qualified SWPPP Practitioner:** The discharger shall ensure that all BMPs required by this General Permit are implemented by a Qualified SWPPP Practitioner (QSP). A QSP is a person responsible for non-storm water and storm water visual observations, sampling and analysis. Effective two years from the date of adoption of this General Permit, a QSP shall be either a QSD or have one of the following certifications:

   a. A certified erosion, sediment and storm water inspector registered through Enviro Cert International, Inc.; or

   b. A certified inspector of sediment and erosion control registered through Certified Inspector of Sediment and Erosion Control, Inc.

   Effective two years after the adoption date of this General Permit, a QSP shall have attended a State Water Board-sponsored or approved QSP training course.

4. The LRP shall list in the SWPPP, the name of any Approved Signatory, and provide a copy of the written agreement or other mechanism that provides this authority from the LRP in the SWPPP.

5. The discharger shall include, in the SWPPP, a list of names of all contractors, subcontractors, and individuals who will be directed by the Qualified SWPPP Practitioner. This list shall include telephone numbers and work addresses. Specific areas of responsibility of each subcontractor and emergency contact numbers shall also be included.

6. The discharger shall ensure that the SWPPP and each amendment will be signed by the Qualified SWPPP Developer. The discharger shall include a listing of the date of initial preparation and the date of each amendment in the SWPPP.

VIII. RISK DETERMINATION

The discharger shall calculate the site's sediment risk and receiving water risk during periods of soil exposure (i.e. grading and site stabilization) and use the calculated risks to determine a Risk Level(s) using the methodology in

Appendix 1. For any site that spans two or more planning watersheds,[13] the discharger shall calculate a separate Risk Level for each planning watershed. The discharger shall notify the State Water Board of the site's Risk Level determination(s) and shall include this determination as a part of submitting the PRDs. If a discharger ends up with more than one Risk Level determination, the Regional Water Board may choose to break the project into separate levels of implementation.

IX. RISK LEVEL 1 REQUIREMENTS

Risk Level 1 Dischargers shall comply with the requirements included in Attachment C of this General Permit.

X. RISK LEVEL 2 REQUIREMENTS

Risk Level 2 Dischargers shall comply with the requirements included in Attachment D of this General Permit.

XI. RISK LEVEL 3 REQUIREMENTS

Risk Level 3 Dischargers shall comply with the requirements included in Attachment E of this General Permit.

XII. ACTIVE TREATMENT SYSTEMS (ATS)

Dischargers choosing to implement an ATS on their site shall comply with all of the requirements in Attachment F of this General Permit.

[13] Planning watershed: defined by the Calwater Watershed documents as a watershed that ranges in size from approximately 3,000 to 10,000 acres http://cain.ice.ucdavis.edu/calwater/calwfaq.html, http://gis.ca.gov/catalog/BrowseRecord.epl?id=22175 .

XIII. POST-CONSTRUCTION STANDARDS

A. All dischargers shall comply with the following runoff reduction requirements unless they are located within an area subject to post-construction standards of an active Phase I or II municipal separate storm sewer system (MS4) permit that has an approved Storm Water Management Plan.

1. This provision shall take effect three years from the adoption date of this permit, or later at the discretion of the Executive Officer of the Regional Board.

2. The discharger shall demonstrate compliance with the requirements of this section by submitting with their NOI a map and worksheets in accordance with the instructions in Appendix 2. The discharger shall use non-structural controls unless the discharger demonstrates that non-structural controls are infeasible or that structural controls will produce greater reduction in water quality impacts.

3. The discharger shall, through the use of non-structural and structural measures as described in Appendix 2, replicate the pre-project water balance (for this permit, defined as the volume of rainfall that ends up as runoff) for the smallest storms up to the 85th percentile storm event (or the smallest storm event that generates runoff, whichever is larger). Dischargers shall inform Regional Water Board staff at least 30 days prior to the use of any structural control measure used to comply with this requirement. Volume that cannot be addressed using non-structural practices shall be captured in structural practices and approved by the Regional Water Board. When seeking Regional Board approval for the use of structural practices, dischargers shall document the infeasibility of using non-structural practices on the project site, or document that there will be fewer water quality impacts through the use of structural practices.

4. For sites whose disturbed area exceeds two acres, the discharger shall preserve the pre-construction drainage density (miles of stream length per square mile of drainage area) for all drainage areas within the area serving a first order stream[14] or larger stream and ensure that post-project time of runoff concentration is equal or greater than pre-project time of concentration.

[14] A first order stream is defined as a stream with no tributaries.

B. All dischargers shall implement BMPs to reduce pollutants in storm water discharges that are reasonably foreseeable after all construction phases have been completed at the site (Post-construction BMPs).

XIV. SWPPP REQUIREMENTS

A. The discharger shall ensure that the Storm Water Pollution Prevention Plans (SWPPPs) for all traditional project sites are developed and amended or revised by a QSD. The SWPPP shall be designed to address the following objectives:

1. All pollutants and their sources, including sources of sediment associated with construction, construction site erosion and all other activities associated with construction activity are controlled;

2. Where not otherwise required to be under a Regional Water Board permit, all non-storm water discharges are identified and either eliminated, controlled, or treated;

3. Site BMPs are effective and result in the reduction or elimination of pollutants in storm water discharges and authorized non-storm water discharges from construction activity to the BAT/BCT standard;

4. Calculations and design details as well as BMP controls for site run-on are complete and correct, and

5. Stabilization BMPs installed to reduce or eliminate pollutants after construction are completed.

B. To demonstrate compliance with requirements of this General Permit, the QSD shall include information in the SWPPP that supports the conclusions, selections, use, and maintenance of BMPs.

C. The discharger shall make the SWPPP available at the construction site during working hours while construction is occurring and shall be made available upon request by a State or Municipal inspector. When the original SWPPP is retained by a crewmember in a construction vehicle and is not currently at the construction site, current copies of the BMPs and map/drawing will be left with the field crew and the original SWPPP shall be made available via a request by radio/telephone.

XV. REGIONAL WATER BOARD AUTHORITIES

A. In the case where the Regional Water Board does not agree with the discharger's self-reported risk level (e.g., they determine themselves to be a Level 1 Risk when they are actually a Level 2 Risk site), Regional Water Boards may either direct the discharger to reevaluate the Risk Level(s) for their site or terminate coverage under this General Permit.

B. Regional Water Boards may terminate coverage under this General Permit for dischargers who fail to comply with its requirements or where they determine that an individual NPDES permit is appropriate.

C. Regional Water Boards may require dischargers to submit a Report of Waste Discharge / NPDES permit application for Regional Water Board consideration of individual requirements.

D. Regional Water Boards may require additional Monitoring and Reporting Program Requirements, including sampling and analysis of discharges to sediment-impaired water bodies.

E. Regional Water Boards may require dischargers to retain records for more than the three years required by this General Permit.

XVI. ANNUAL REPORTING REQUIREMENTS

A. All dischargers shall prepare and electronically submit an Annual Report no later than September 1 of each year.

B. The discharger shall certify each Annual Report in accordance with the Special Provisions.

C. The discharger shall retain an electronic or paper copy of each Annual Report for a minimum of three years after the date the annual report is filed.

D. The discharger shall include storm water monitoring information in the Annual Report consisting of:

1. a summary and evaluation of all sampling and analysis results, including copies of laboratory reports;

2. the analytical method(s), method reporting unit(s), and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as "less than the method detection limit");

3. a summary of all corrective actions taken during the compliance year;

4. identification of any compliance activities or corrective actions that were not implemented;

5. a summary of all violations of the General Permit;

6. the names of individual(s) who performed the facility inspections, sampling, visual observation (inspections), and/or measurements;

7. the date, place, time of facility inspections, sampling, visual observation (inspections), and/or measurements, including precipitation (rain gauge); and

8. the visual observation and sample collection exception records and reports specified in Attachments C, D, and E.

E. The discharger shall provide training information in the Annual Report consisting of:

1. documentation of all training for individuals responsible for all activities associated with compliance with this General Permit;

2. documentation of all training for individuals responsible for BMP installation, inspection, maintenance, and repair; and

3. documentation of all training for individuals responsible for overseeing, revising, and amending the SWPPP.

ATTACHMENT A
Linear Underground/ Overhead Requirements

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All Linear Underground/Overhead project dischargers who submit permit registration documents (PRDs) indicating their intention to be regulated under the provisions of this General Permit shall comply with the following:

A. DEFINITION OF LINEAR UNDERGROUND/OVERHEAD PROJECTS

1. Linear Underground/Overhead Projects (LUPs) include, but are not limited to, any conveyance, pipe, or pipeline for the transportation of any gaseous, liquid (including water and wastewater for domestic municipal services), liquiescent, or slurry substance; any cable line or wire for the transmission of electrical energy; any cable line or wire for communications (e.g., telephone, telegraph, radio, or television messages); and associated ancillary facilities. Construction activities associated with LUPs include, but are not limited to, (a) those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment, and associated ancillary facilities); and include, but are not limited to, (b) underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/ or pavement repair or replacement, and stockpile/borrow locations.

2. LUP evaluation shall consist of two tasks:

a. Confirm that the project or project section(s) qualifies as an LUP. The State Water Board website contains a project determination guidance flowchart. http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml

b. Identify which Type(s) (1, 2 or 3 described in Section I below) are applicable to the project or project sections based on project sediment and receiving water risk. (See Attachment A.1)

3. A Legally Responsible Person (LRP) for a Linear Underground/Overhead project is required to obtain CGP coverage under one or more permit registration document (PRD) electronic submittals to the State Water Board's Storm Water Multi-Application and Report Tracking (SMARTs) system. Attachment A.1 contains a flow chart to be used when determining if a linear project qualifies for coverage and to determine LUP Types. Since a LUP may be constructed within both developed and undeveloped locations and portions of LUPs may be constructed by different contractors, LUPs may be broken into logical permit sections. Sections may be determined based on portions of a project conducted by one contractor. Other situations may also occur, such as the time period in which the sections of a project will be constructed (e.g. project phases), for which separate permit coverage is possible. For projects that are broken into separate sections, a description of how each section relates to the overall project and the definition of the boundaries between sections shall be clearly stated.

4. Where construction activities transverse or enter into different Regional Water Board jurisdictions, LRPs shall obtain permit coverage for each Regional Water Board area involved prior to the commencement of construction activities.

5. Small Construction Rainfall Erosivity Waiver

EPA's Small Construction Erosivity Waiver applies to sites between one and five acres demonstrating that there are no adverse water quality impacts.

Dischargers eligible for a Rainfall Erosivity Waiver based on low erosivity potential shall complete the electronic Notice of Intent (NOI) and Sediment Risk form through the State Water Board's SMARTS system, certifying that the construction activity will take place during a period when the value of the rainfall erosivity factor is less than five. Where the LRP changes or another LRP is added during construction, the new LRP must also submit a waiver certification through the SMARTS system.

If a small linear construction site continues beyond the projected completion date given on the waiver certification, the LRP shall recalculate the rainfall erosivity factor for the new project duration and submit this information through the SMARTS system. If the new R factor is below five (5), the discharger shall update through SMARTS all applicable information on the waiver certification and retain a copy of the revised waiver onsite. The LRP shall submit the new waiver certification 30 days prior to the projected completion date listed on the original waiver form to assure exemption from permitting requirements is uninterrupted. If the new R factor is five (5) or above, the LRP shall be required to apply for coverage under this Order.

B. LINEAR PROJECT PERMIT REGISTRATION DOCUMENTS (PRDs)

Any information provided to the Regional Water Board shall comply with the Homeland Security Act and any other federal law that concerns security in the United States; any information that does not comply should not be submitted. PRDs shall consist of the following:

1. Notice of Intent (NOI)

Prior to construction activities, the LRP of a proposed linear underground/overhead project shall utilize the processes and methods provided in Attachment A.2, Permit Registration Documents (PRDs) – General Instructions for Linear Underground/Overhead Projects to comply with the Construction General Permit.

2. Site Maps

LRPs submitting PRDs shall include at least 3 maps. The first map will be a zoomed[1] 1000-1500 ft vicinity map that shows the starting point of the project. The second will be a zoomed map of 1000-1500 ft showing the ending location of the project. The third will be a larger view vicinity map, 1000 ft to 2000 ft, displaying the entire project location depending on the project size, and indicating the LUP type (1, 2 or 3) areas within the total project footprint.

3. Drawings

LRPs submitting PRDs shall include a construction drawing(s) or other appropriate drawing(s) or map(s) that shows the locations of storm drain

[1] An image with a close-up/enhanced detailed view of site features that show minute details such as streets and neighboring structures.
Or: An image with a close-up/enhanced detailed view of the site's surrounding infrastructure.
Or: An image with a close up detailed view of the project and its surroundings.

inlets and waterbodies[2] that may receive discharges from the construction activities and that shows the locations of BMPs to be installed for all those BMPs that can be illustrated on the revisable drawing(s) or map(s). If storm drain inlets, waterbodies, and/or BMPs cannot be adequately shown on the drawing(s) or map(s) they should be described in detail within the SWPPP.

4. Storm Water Pollution Prevention Plan (SWPPP)

LUP dischargers shall comply with the SWPPP Preparation, Implementation, and Oversight requirements in Section K of this Attachment.

5. Contact information

LUP dischargers shall include contact information for all contractors (or subcontractors) responsible for each area of an LUP project. This should include the names, telephone numbers, and addresses of contact personnel. Specific areas of responsibility of each contact, and emergency contact numbers should also be included.

6. In the case of a public emergency that requires immediate construction activities, a discharger shall submit a brief description of the emergency construction activity within five days of the onset of construction, and then shall submit all PRDs within thirty days.

C. LINEAR PROJECT TERMINATION OF COVERAGE REQUIREMENTS

The LRP may terminate coverage of an LUP when construction activities are completed by submitting an electronic notice of termination (NOT) through the State Water Board's SMARTS system. Termination requirements are different depending on the complexity of the LUP. An LUP is considered complete when: (a) there is no potential for construction-related storm water pollution; (b) all elements of the SWPPP have been completed; (c) construction materials and waste have been disposed of properly; (d) the site is in compliance with all local storm water management requirements; and (e) the LRP submits a notice of termination (NOT) and has received approval for termination from the appropriate Regional Water Board office.

1. LUP Stabilization Requirements

The LUP discharger shall ensure that all disturbed areas of the construction site are stabilized prior to termination of coverage under this General Permit. Final stabilization for the purposes of submitting an NOT

[2] Includes basin(s) that the MS4 storm sewer systems may drain to for Hydromodification or Hydrological Conditional of Concerns under the MS4 permits.

is satisfied when all soil disturbing activities are completed and one of the following criteria is met:

a. In disturbed areas that were vegetated prior to construction activities of the LUP, the area disturbed must be re-established to a uniform vegetative cover equivalent to 70 percent coverage of the preconstruction vegetative conditions. Where preconstruction vegetation covers less than 100 percent of the surface, such as in arid areas, the 70 percent coverage criteria is adjusted as follows: if the preconstruction vegetation covers 50 percent of the ground surface, 70 percent of 50 percent (.70 X .50=.35) would require 35 percent total uniform surface coverage; or

b. Where no vegetation is present prior to construction, the site is returned to its original line and grade and/or compacted to achieve stabilization; or

c. Equivalent stabilization measures have been employed. These measures include, but are not limited to, the use of such BMPs as blankets, reinforced channel liners, soil cement, fiber matrices, geotextiles, or other erosion resistant soil coverings or treatments.

2. LUP Termination of Coverage Requirements

The LRP shall file an NOT through the State Water Board's SMARTS system. By submitting an NOT, the LRP is certifying that construction activities for an LUP are complete and that the project is in full compliance with requirements of this General Permit and that it is now compliant with soil stabilization requirements where appropriate. Upon approval by the appropriate Regional Water Board office, permit coverage will be terminated.

3. Revising Coverage for Change of Acreage

When the LRP of a portion of an LUP construction project changes, or when a phase within a multi-phase project is completed, the LRP may reduce the total acreage covered by this General Permit. In reducing the acreage covered by this General Permit, the LRP shall electronically file revisions to the PRDs that include:

a. a revised NOI indicating the new project size;

b. a revised site map showing the acreage of the project completed, acreage currently under construction, acreage sold, transferred or added, and acreage currently stabilized.

c. SWPPP revisions, as appropriate; and

d. certification that any new LRPs have been notified of applicable requirements to obtain General Permit coverage. The certification shall include the name, address, telephone number, and e-mail address (if known) of the new LRP.

If the project acreage has increased, dischargers shall mail payment of revised annual fees within 14 days of receiving the revised annual fee notification.

D. DISCHARGE PROHIBITIONS

1. LUP dischargers shall not violate any discharge prohibitions contained in applicable Basin Plans or statewide water quality control plans. Waste discharges to Areas of Special Biological Significance (ASBS) are prohibited by the California Ocean Plan, unless granted an exception issued by the State Water Board.

2. LUP dischargers are prohibited from discharging non-storm water that is not otherwise authorized by this General Permit. Non-storm water discharges authorized by this General Permit[3] may include, fire hydrant flushing, irrigation of vegetative erosion control measures, pipe flushing and testing, water to control dust, street cleaning, dewatering,[4] uncontaminated groundwater from dewatering, and other discharges not subject to a separate general NPDES permit adopted by a Regional Water Board. Such discharges are allowed by this General Permit provided they are not relied upon to clean up failed or inadequate construction or post-construction BMPs designed to keep materials on site. These authorized non-storm water discharges:

[3] Dischargers must identify all authorized non-storm water discharges in the LUP's SWPPP and identify BMPs that will be implemented to either eliminate or reduce pollutants in non-storm water discharges. Regional Water Boards may direct the discharger to discontinue discharging such non-storm water discharges if determined that such discharges discharge significant pollutants or threaten water quality.
[4] Dewatering activities may be prohibited or need coverage under a separate permit issued by the Regional Water Boards. Dischargers shall check with the appropriate Regional Water Boards for any required permit or basin plan conditions prior to initial dewatering activities to land, storm drains, or waterbodies.

a. Shall not cause or contribute to a violation of any water quality standard;

b. Shall not violate any other provision of this General Permit;

c. Shall not violate any applicable Basin Plan;

d. Shall comply with BMPs as described in the SWPPP;

e. Shall not contain toxic constituents in toxic amounts or (other) significant quantities of pollutants;

f. Shall be monitored and meets the applicable NALs; and

g. Shall be reported by the discharger in the Annual Report.

If any of the above conditions are not satisfied, the discharge is not authorized by this General Permit. The discharger shall notify the Regional Water Board of any anticipated non-storm water discharges not authorized by this General Permit to determine the need for a separate NPDES permit.

Additionally, some LUP dischargers may be required to obtain a separate permit if the applicable Regional Water Board has adopted a General Permit for dewatering discharges. Wherever feasible, alternatives, that do not result in the discharge of non-storm water, shall be implemented in accordance with this Attachment's Section K.2 - SWPPP Implementation Schedule.

3. LUP dischargers shall ensure that trench spoils or any other soils disturbed during construction activities that are contaminated[5] are not discharged with storm water or non-storm water discharges into any storm drain or water body except pursuant to an NPDES permit.

When soil contamination is found or suspected and a responsible party is not identified, or the responsible party fails to promptly take the appropriate action, the LUP discharger shall have those soils sampled and tested to ensure that proper handling and public safety measures are

[5] Contaminated soil contains pollutants in concentrations that exceed the appropriate thresholds that various regulatory agencies set for those substances. Preliminary testing of potentially contaminated soils will be based on odor, soil discoloration, or prior history of the site's chemical use and storage and other similar factors. When soil contamination is found or suspected and a responsible party is not identified, or the responsible party fails to promptly take the appropriate action, the discharger shall have those soils sampled and tested to ensure proper handling and public safety measures are implemented. The legally responsible person will notify the appropriate local, State, or federal agency(ies) when contaminated soil is found at a construction site, and will notify the Regional Water Board by submitting an NOT at the completion of the project.

implemented. The LUP discharger shall notify the appropriate local, State, and federal agency(ies) when contaminated soil is found at a construction site, and will notify the appropriate Regional Water Board.

4. Discharging any pollutant-laden water that will cause or contribute to an exceedance of the applicable Regional Water Board's Basin Plan from a dewatering site or sediment basin into any receiving water or storm drain is prohibited.

5. Debris[6] resulting from construction activities are prohibited from being discharged from construction project sites.

E. SPECIAL PROVISIONS

1. Duty to Comply

a. The LUP discharger must comply with all of the conditions of this General Permit. Any permit noncompliance constitutes a violation of the Clean Water Act (CWA) and the Porter-Cologne Water Quality Control Act and is grounds for enforcement action and/or removal from General Permit coverage.

b. The LUP discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this General Permit has not yet been modified to incorporate the requirement.

2. General Permit Actions

a. This General Permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the discharger for a General Permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not annul any General Permit condition.

[6] Litter, rubble, discarded refuse, and remains of something destroyed.

b. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the CWA for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this General Permit, this General Permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition and the dischargers so notified.

3. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for an LUP discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this General Permit.

4. Duty to Mitigate

The LUP discharger shall take all responsible steps to minimize or prevent any discharge in violation of this General Permit, which has a reasonable likelihood of adversely affecting human health or the environment.

5. Proper Operation and Maintenance

The LUP discharger shall at all times properly operate and maintain any facilities and systems of treatment and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with the conditions of this General Permit and with the requirements of the Storm Water Pollution Prevention Plan (SWPPP). Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance may require the operation of backup or auxiliary facilities or similar systems installed by a discharger when necessary to achieve compliance with the conditions of this General Permit.

6. Property Rights

This General Permit does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor does it authorize any infringement of Federal, State, or local laws or regulations.

7. Duty to Maintain Records and Provide Information

a. The LUP discharger shall maintain a paper or electronic copy of all required records, including a copy of this General Permit, for three years from the date generated or date submitted, whichever is last. These records shall be kept at the construction site or in a crew

member's vehicle until construction is completed, and shall be made available upon request.

b. The LUP discharger shall furnish the Regional Water Board, State Water Board, or USEPA, within a reasonable time, any requested information to determine compliance with this General Permit. The LUP discharger shall also furnish, upon request, copies of records that are required to be kept by this General Permit.

8. Inspection and Entry

The LUP discharger shall allow the Regional Water Board, State Water Board, USEPA, and/or, in the case of construction sites which discharge through a municipal separate storm sewer, an authorized representative of the municipal operator of the separate storm sewer system receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

a. Enter upon the discharger's premises at reasonable times where a regulated construction activity is being conducted or where records must be kept under the conditions of this General Permit;

b. Access and copy at reasonable times any records that must be kept under the conditions of this General Permit;

c. Inspect at reasonable times the complete construction site, including any off-site staging areas or material storage areas, and the erosion/sediment controls; and

d. Sample or monitor at reasonable times for the purpose of ensuring General Permit compliance.

9. Electronic Signature and Certification Requirements

a. All Permit Registration Documents (PRDs) and Notices of Termination (NOTs) shall be electronically signed, certified, and submitted via SMARTS to the State Water Board. Either the Legally Responsible Person (LRP), as defined in Appendix 5 – Glossary, or a person legally authorized to sign and certify PRDs and NOTs on behalf of the LRP (the LRP's Approved Signatory, as defined in Appendix 5 - Glossary) must submit all information electronically via SMARTS.

b. Changes to Authorization. If an Approved Signatory's authorization is no longer accurate, a new authorization satisfying the requirements of paragraph (a) of this section must be submitted via SMARTS prior to or

together with any reports, information or applications to be signed by an Approved Signatory.

c. All SWPPP revisions, annual reports, or other information required by the General Permit (other than PRDs and NOTs) or requested by the Regional Water Board, State Water Board, USEPA, or local storm water management agency shall be certified and submitted by the LRP or the LRP's Approved Signatory.

10. Certification

Any person signing documents under Section E.9 above, shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

11. Anticipated Noncompliance

The LUP discharger shall give advance notice to the Regional Water Board and local storm water management agency of any planned changes in the construction activity, which may result in noncompliance with General Permit requirements.

12. Penalties for Falsification of Reports

Section 309(c)(4) of the CWA provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this General Permit, including reports of compliance or noncompliance shall upon conviction, be punished by a fine of not more than $10,000 or by imprisonment for not more than two years or by both.

13. Oil and Hazardous Substance Liability

Nothing in this General Permit shall be construed to preclude the institution of any legal action or relieve the discharger from any responsibilities, liabilities, or penalties to which the LUP discharger is or may be subject to under Section 311 of the CWA.

14. Severability

The provisions of this General Permit are severable; and, if any provision of this General Permit or the application of any provision of this General Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this General Permit shall not be affected thereby.

15. Reopener Clause

This General Permit may be modified, revoked and reissued, or terminated for cause due to promulgation of amended regulations, receipt of USEPA guidance concerning regulated activities, judicial decision, or in accordance with 40 Code of Federal Regulations (CFR) 122.62, 122.63, 122.64, and 124.5.

16. Penalties for Violations of Permit Conditions

a. Section 309 of the CWA provides significant penalties for any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the CWA or any permit condition or limitation implementing any such section in a permit issued under Section 402. Any person who violates any permit condition of this General Permit is subject to a civil penalty not to exceed $37,500[7] per calendar day of such violation, as well as any other appropriate sanction provided by Section 309 of the CWA.

b. The Porter-Cologne Water Quality Control Act also provides for civil and criminal penalties, which in some cases are greater than those under the CWA.

17. Transfers

This General Permit is not transferable. A new LRP of an ongoing construction activity must submit PRDs in accordance with the requirements of this General Permit to be authorized to discharge under this General Permit. An LRP who is a property owner with active General Permit coverage who sells a fraction or all the land shall inform the new property owner(s) of the requirements of this General Permit.

18. Continuation of Expired Permit

This General Permit continues in force and effect until a new General Permit is issued or the SWRCB rescinds this General Permit. Only those

[7] May be further adjusted in accordance with the Federal Civil Penalties Inflation Adjustment Act

dischargers authorized to discharge under the expiring General Permit are covered by the continued General Permit.

F. EFFLUENT STANDARDS & RECEIVING WATER MONITORING

1. Narrative Effluent Limitations

a. LUP dischargers shall ensure that storm water discharges and authorized non-storm water discharges regulated by this General Permit do not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.

b. LUP dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of structural or non-structural controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.

Table 1. Numeric Action Levels, Test Methods, Detection Limits, and Reporting Units

Parameter	Test Method	Discharge Type	Min. Detection Limit	Units	Numeric Action Level
pH	Field test with calibrated portable instrument	LUP Type 2	0.2	pH units	lower NAL = 6.5 upper NAL = 8.5
		LUP Type 3			lower NAL = 6.5 upper NAL = 8.5
Turbidity	EPA 0180.1 and/or field test with calibrated portable instrument	LUP Type 2	1	NTU	250 NTU
		LUP Type 3			250 NTU

2. Numeric Action Levels (NALs)

a. For LUP Type 2 and 3 dischargers, the lower storm event daily average NAL for pH is 6.5 pH units and the upper storm event daily average NAL for pH is 8.5 pH units. The LUP discharger shall take actions as described below if the storm event daily average discharge is outside of this range of pH values.

b. For LUP Type 2 and 3 dischargers, the storm event daily average NAL for turbidity is 250 NTU. The discharger shall take actions as described below if the storm event daily average discharge is outside of this range of turbidity values.

c. Whenever daily average analytical effluent monitoring results indicate that the discharge is below the lower NAL for pH, exceeds the upper NAL for pH, or exceeds the turbidity NAL (as listed in Table 1), the LUP discharger shall conduct a construction site and run-on evaluation to determine whether pollutant source(s) associated with the site's construction activity may have caused or contributed to the NAL exceedance and shall immediately implement corrective actions if they are needed.

d. The site evaluation will be documented in the SWPPP and specifically address whether the source(s) of the pollutants causing the exceedance of the NAL:

i Are related to the construction activities and whether additional BMPs or SWPPP implementation measures are required to (1) meet BAT/BCT requirements; (2) reduce or prevent pollutants in storm water discharges from causing exceedances of receiving water objectives; and (3) determine what corrective action(s) were taken or will be taken and with a description of the schedule for completion.

AND/OR:

ii Are related to the run-on associated with the construction site location and whether additional BMPs or SWPPP implementation measures are required to (1) meet BAT/BCT requirements; (2) reduce or prevent pollutants in storm water discharges from causing exceedances of receiving water objectives; and (3) decide what corrective action(s) were taken or will be taken, including a description of the schedule for completion.

3. Receiving Water Monitoring Triggers

a. The receiving water monitoring triggers for LUP Type 3 dischargers with direct discharges to surface waters are triggered when the daily average effluent pH values during any site phase when there is a high risk of pH discharge[8] fall outside of the range of 6.0 and 9.0 pH units, or when the daily average effluent turbidity exceeds 500 NTU.

b. LUP Type 3 dischargers with direct discharges to surface waters shall conduct receiving water monitoring whenever their effluent monitoring results exceed the receiving water monitoring triggers. If the pH trigger is exceeded, the receiving water shall be monitored for pH for the duration of coverage under this General Permit. If the turbidity trigger is exceeded, the receiving water shall be monitored for turbidity and SSC for the duration of coverage under this General Permit.

c. LUP Type 3 dischargers with direct discharges to surfaces waters shall initiate receiving water monitoring when the triggers are exceeded unless the storm event causing the exceedance is determined after the fact to equal to or greater than the 5-year 24-hour storm (expressed in inches of rainfall) as determined by using these maps:

   http://www.wrcc.dri.edu/pcpnfreq/nca5y24.gif
   http://www.wrcc.dri.edu/pcpnfreq/sca5y24.gif

   Verification of the 5-year 24-hour storm event shall be done by reporting on-site rain gauge readings as well as nearby governmental rain gauge readings.

d. If run-on is caused by a forest fire or any other natural disaster, then receiving water monitoring triggers do not apply.

G. RECEIVING WATER LIMITATIONS

1. LUP dischargers shall ensure that storm water discharges and authorized non-storm water discharges to any surface or ground water will not adversely affect human health or the environment.

2. LUP dischargers shall ensure that storm water discharges and authorized non-storm water discharges will not contain pollutants in quantities that threaten to cause pollution or a public nuisance.

3. LUP dischargers shall ensure that storm water discharges and authorized non-storm water discharges will not contain pollutants that cause or

[8] A period of high risk of pH discharge is defined as a project's complete utilities phase, complete vertical build phase, and any portion of any phase where significant amounts of materials are placed directly on the land at the site in a manner that could result in significant alterations of the background pH of the discharges.

contribute to an exceedance of any applicable water quality objectives or water quality standards (collectively, WQS) contained in a Statewide Water Quality Control Plan, the California Toxics Rule, the National Toxics Rule, or the applicable Regional Water Board's Water Quality Control Plan (Basin Plan).

H. TRAINING QUALIFICATIONS

1. General

All persons responsible for implementing requirements of this General Permit shall be appropriately trained. Training should be both formal and informal, occur on an ongoing basis, and should include training offered by recognized governmental agencies or professional organizations. Persons responsible for preparing, amending and certifying SWPPPs shall comply with the requirements in this Section H.

2. SWPPP Certification Requirements

a. **Qualified SWPPP Developer:** The LUP discharger shall ensure that all SWPPPs be written, amended and certified by a Qualified SWPPP Developer (QSD). A QSD shall have one of the following registrations or certifications, and appropriate experience, as required for:

i A California registered professional civil engineer;

ii A California registered professional geologist or engineering geologist;

iii A California registered landscape architect;

iv A professional hydrologist registered through the American Institute of Hydrology;

v A certified professional in erosion and sediment control (CPESC) ™ registered through Enviro Cert International, Inc;

vi A certified professional in storm water quality (CPSWQ)™ registered through Enviro Cert International, Inc.; or

vii A certified professional in erosion and sediment control registered through the National Institute for Certification in Engineering Technologies (NICET).

Effective two years after the adoption date of this General Permit, a QSD shall have attended a State Water Board-sponsored or approved QSD training course.

b. The LUP discharger shall ensure that the SWPPP is written and amended, as needed, to address the specific circumstances for each construction site covered by this General Permit prior to commencement of construction activity for any stage.

c. The LUP discharger shall list the name and telephone number of the currently designated Qualified SWPPP Developer(s) in the SWPPP.

d. **Qualified SWPPP Practitioner:** The LUP discharger shall ensure that all elements of any SWPPP for each project will be implemented by a Qualified SWPPP Practitioner (QSP). A QSP is a person responsible for non-storm water and storm water visual observations, sampling and analysis, and for ensuring full compliance with the permit and implementation of all elements of the SWPPP. Effective two years from the date of adoption of this General Permit, a QSP shall be either a QSD or have one of the following certifications:

   i A certified erosion, sediment and storm water inspector registered through Certified Professional in Erosion and Sediment Control, Inc.; or

   ii A certified inspector of sediment and erosion control registered through Certified Inspector of Sediment and Erosion Control, Inc.

   Effective two years after the adoption date of this General Permit, a QSP shall have attended a State Water Board-sponsored or approved QSP training course.

e. The LUP discharger shall ensure that the SWPPP include a list of names of all contractors, subcontractors, and individuals who will be directed by the Qualified SWPPP Practitioner, and who is ultimately responsible for implementation of the SWPPP. This list shall include telephone numbers and work addresses. Specific areas of responsibility of each subcontractor and emergency contact numbers shall also be included.

f. The LUP discharger shall ensure that the SWPPP and each amendment be signed by the Qualified SWPPP Developer. The LUP discharger shall include a listing of the date of initial preparation and the dates of each amendment in the SWPPP.

I. TYPES OF LINEAR PROJECTS

This attachment establishes three types (Type 1, 2 & 3) of complexity for areas within an LUP or project section based on threat to water quality. Project area Types are determined through Attachment A.1.

The Type 1 requirements below establish the baseline requirements for all LUPs subject to this General Permit. Additional requirements for Type 2 and Type 3 LUPs are labeled.

1. Type 1 LUPs*:*

LUP dischargers with areas of a LUP designated as Type 1 shall comply with the requirements in this Attachment. Type 1 LUPs are:

a. Those construction areas where 70 percent or more of the construction activity occurs on a paved surface and where areas disturbed during construction will be returned to preconstruction conditions or equivalent protection established at the end of the construction activities for the day; or

b. Where greater than 30 percent of construction activities occur within the non-paved shoulders or land immediately adjacent to paved surfaces, or where construction occurs on unpaved improved roads, including their shoulders or land immediately adjacent to them where:

   i Areas disturbed during construction will be returned to preconstruction conditions or equivalent protection is established at the end of the construction activities for the day to minimize the potential for erosion and sediment deposition, and

   ii Areas where established vegetation was disturbed during construction will be stabilized and re-vegetated by the end of project. When required, adequate temporary stabilization BMPs will be installed and maintained until vegetation is established to meet minimum cover requirements established in this General Permit for final stabilization.

c. Where the risk determination is as follows:

   i Low sediment risk, low receiving water risk, or

   ii Low sediment risk, medium receiving water risk, or

   iii Medium sediment risk, low receiving water risk

2. Type 2 LUPs:

Type 2 LUPs are determined by the Combined Risk Matrix in Attachment A.1. Type 2 LUPs have the specified combination of risk:

d. High sediment risk, low receiving water risk, or

e. Medium sediment risk, medium receiving water risk, or

f. Low sediment risk, high receiving water risk

Receiving water risk is either considered "Low" for those areas of the project that are not in close proximity to a sensitive receiving watershed, "Medium" for those areas of the project within a sensitive receiving watershed yet outside of the flood plain of a sensitive receiving water body, and "High" where the soil disturbance is within close proximity to a sensitive receiving water body. Project sediment risk is calculated based on the Risk Factor Worksheet in Attachment C of this General Permit.

3. Type 3 LUPs:

Type 3 LUPs are determined by the Combined Risk Matrix in Attachment A.1. Type 3 LUPs have the specified combination of risk:

a. High sediment risk, high receiving water risk, or

b. High sediment risk, medium receiving water risk, or

c. Medium sediment risk, high receiving water risk

Receiving water risk is either considered "Medium" for those areas of the project within a sensitive receiving watershed yet outside of the flood plain of a sensitive receiving water body, or "High" where the soil disturbance is within close proximity to a sensitive receiving water body. Project sediment risk is calculated based on the Risk Factor Worksheet in Attachment C.

J. LUP TYPE-SPECIFIC REQUIREMENTS

1. Effluent Standards

a. Narrative – LUP dischargers shall comply with the narrative effluent standards below.

i Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.

ii LUP dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.

b. Numeric – LUP Type 1 dischargers are not subject to a numeric effluent standard

c. Numeric –LUP Type 2 dischargers are subject to a pH NAL of 6.5-8.5, and a turbidity NAL of 250 NTU.

d. Numeric – LUP Type 3 dischargers are subject to a pH NAL of 6.5-8.5, and a turbidity NAL of 250 NTU.

2. Good Site Management "Housekeeping"

a. LUP dischargers shall implement good site management (i.e., "housekeeping") measures for construction materials that could potentially be a threat to water quality if discharged. At a minimum, the good housekeeping measures shall consist of the following:

i Identify the products used and/or expected to be used and the end products that are produced and/or expected to be produced. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).

ii Cover and berm loose stockpiled construction materials that are not actively being used (i.e. soil, spoils, aggregate, fly-ash, stucco, hydrated lime, etc.).

iii Store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed).

iv Minimize exposure of construction materials to precipitation (not applicable to materials designed to be outdoors and exposed to the environment).

v Implement BMPs to control the off-site tracking of loose construction and landscape materials.

b. LUP dischargers shall implement good housekeeping measures for waste management, which, at a minimum, shall consist of the following:

i Prevent disposal of any rinse or wash waters or materials on impervious or pervious site surfaces or into the storm drain system.

ii Ensure the containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the storm water drainage system or receiving water.

iii Clean or replace sanitation facilities and inspecting them regularly for leaks and spills.

iv Cover waste disposal containers at the end of every business day and during a rain event.

v Prevent discharges from waste disposal containers to the storm water drainage system or receiving water.

vi Contain and securely protect stockpiled waste material from wind and rain at all times unless actively being used.

vii Implement procedures that effectively address hazardous and non-hazardous spills.

viii Develop a spill response and implementation element of the SWPPP prior to commencement of construction activities. The SWPPP shall require that:

(1) Equipment and materials for cleanup of spills shall be available on site and that spills and leaks shall be cleaned up immediately and disposed of properly; and

(2) Appropriate spill response personnel are assigned and trained.

ix Ensure the containment of concrete washout areas and other washout areas that may contain additional pollutants so there is no discharge into the underlying soil and onto the surrounding areas.

c. LUP dischargers shall implement good housekeeping for vehicle storage and maintenance, which, at a minimum, shall consist of the following:

   i Prevent oil, grease, or fuel from leaking into the ground, storm drains or surface waters.

   ii Implement appropriate BMPs whenever equipment or vehicles are fueled, maintained or stored.

   iii Clean leaks immediately and disposing of leaked materials properly.

d. LUP dischargers shall implement good housekeeping for landscape materials, which, at a minimum, shall consist of the following:

   i Contain stockpiled materials such as mulches and topsoil when they are not actively being used.

   ii Contain fertilizers and other landscape materials when they are not actively being used.

   iii Discontinue the application of any erodible landscape material at least 2 days before a forecasted rain event[9] or during periods of precipitation.

   iv Applying erodible landscape material at quantities and application rates according to manufacture recommendations or based on written specifications by knowledgeable and experienced field personnel.

   v Stacking erodible landscape material on pallets and covering or storing such materials when not being used or applied.

e. LUP dischargers shall conduct an assessment and create a list of potential pollutant sources and identify any areas of the site where additional BMPs are necessary to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. This potential pollutant list shall be kept with the SWPPP and shall identify all non-visible pollutants which are known, or should be known, to occur on the construction site. At a minimum, when developing BMPs, LUP dischargers shall do the following:

[9] 50% or greater chance of producing precipitation.

i Consider the quantity, physical characteristics (e.g., liquid, powder, solid), and locations of each potential pollutant source handled, produced, stored, recycled, or disposed of at the site.

ii Consider the degree to which pollutants associated with those materials may be exposed to and mobilized by contact with storm water.

iii Consider the direct and indirect pathways that pollutants may be exposed to storm water or authorized non-storm water discharges. This shall include an assessment of past spills or leaks, non-storm water discharges, and discharges from adjoining areas.

iv Ensure retention of sampling, visual observation, and inspection records.

v Ensure effectiveness of existing BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.

f. LUP dischargers shall implement good housekeeping measures on the construction site to control the air deposition of site materials and from site operations.

3. Non-Storm Water Management

a. LUP dischargers shall implement measures to control all non-storm water discharges during construction.

b. LUP dischargers shall wash vehicles in such a manner as to prevent non-storm water discharges to surface waters or MS4 drainage systems.

c. LUP dischargers shall clean streets in such a manner as to prevent unauthorized non-storm water discharges from reaching surface water or MS4 drainage systems.

4. Erosion Control

a. LUP dischargers shall implement effective wind erosion control.

b. LUP dischargers shall provide effective soil cover for inactive[10] areas and all finished slopes, and utility backfill.

[10] Areas of construction activity that have been disturbed and are not scheduled to be re-disturbed for at least 14 days

c. LUP dischargers shall limit the use of plastic materials when more sustainable, environmentally friendly alternatives exist. Where plastic materials are deemed necessary, the discharger shall consider the use of plastic materials resistant to solar degradation.

5. Sediment Controls

a. LUP dischargers shall establish and maintain effective perimeter controls as needed, and implement effective BMPs for all construction entrances and exits to sufficiently control erosion and sediment discharges from the site.

b. On sites where sediment basins are to be used, LUP dischargers shall, at minimum, design sediment basins according to the guidance provided in CASQA's Construction BMP Handbook.

c. **Additional LUP Type 2 & 3 Requirement:** LUP Type 2 & 3 dischargers shall apply linear sediment controls along the toe of the slope, face of the slope, and at the grade breaks of exposed slopes to comply with sheet flow lengths[11] in accordance with Table 2 below.

Table 2 – Critical Slope/Sheet Flow Length Combinations

Slope Percentage	Sheet flow length not to exceed
0-25%	20 feet
25-50%	15 feet
Over 50%	10 feet

d. **Additional LUP Type 2 & 3 Requirement:** LUP Type 2 & 3 dischargers shall ensure that construction activity traffic to and from the project is limited to entrances and exits that employ effective controls to prevent off-site tracking of sediment.

e. **Additional LUP Type 2 & 3 Requirement:** LUP Type 2 & 3 dischargers shall ensure that all storm drain inlets and perimeter controls, runoff control BMPs, and pollutant controls at entrances and exits (e.g. tire washoff locations) are maintained and protected from activities that reduce their effectiveness.

f. **Additional LUP Type 2 & 3 Requirement:** LUP Type 2 & 3 dischargers shall inspect all immediate access roads. At a minimum daily and prior to any rain event, the discharger shall remove any

[11] Sheet flow length is the length that shallow, low velocity flow travels across a site.

sediment or other construction activity-related materials that are deposited on the roads (by vacuuming or sweeping).

g. **Additional LUP Type 3 Requirement:** The Regional Water Board may require LUP Type 3 dischargers to implement additional site-specific sediment control requirements if the implementation of the other requirements in this section are not adequately protecting the receiving waters.

6. Run-on and Run-off Controls

a. LUP dischargers shall effectively manage all run-on, all runoff within the site and all runoff that discharges off the site. Run-on from off site-shall be directed away from all disturbed areas or shall collectively be in compliance with the effluent limitations in this Attachment.

b. Run-on and runoff controls are not required for Type 1 LUPs unless the evaluation of quantity and quality of run-on and runoff deems them necessary or visual inspections show that the site requires such controls.

7. Inspection, Maintenance and Repair

a. All inspection, maintenance repair and sampling activities at the discharger's LUP location shall be performed or supervised by a QSP representing the discharger. The QSP may delegate any or all of these activities to an employee trained to do the task(s) appropriately, but shall ensure adequate deployment.

b. LUP dischargers shall conduct visual inspections and observations daily during working hours (not recorded). At least once each 24-hour period during extended storm events, **LUP Type 2 & 3 dischargers** shall conduct visual inspections to identify and record BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. Inspectors shall be the QSP or be trained by the QSP.

c. Upon identifying failures or other shortcomings, as directed by the QSP, LUP dischargers shall begin implementing repairs or design changes to BMPs within 72 hours of identification and complete the changes as soon as possible.

d. For each pre- and post-rain event inspection required, LUP dischargers shall complete an inspection checklist, using a form provided by the State Water Board or Regional Water Board or in an alternative format that includes the information described below.

e. The LUP discharger shall ensure that the checklist remains on-site or with the SWPPP. At a minimum, an inspection checklist should include:

i Inspection date and date the inspection report was written.

ii Weather information, including presence or absence of precipitation, estimate of beginning of qualifying storm event, duration of event, time elapsed since last storm, and approximate amount of rainfall in inches.

iii Site information, including stage of construction, activities completed, and approximate area of the site exposed.

iv A description of any BMPs evaluated and any deficiencies noted.

v If the construction site is safely accessible during inclement weather, list the observations of all BMPs: erosion controls, sediment controls, chemical and waste controls, and non-storm water controls. Otherwise, list the results of visual inspections at all relevant outfalls, discharge points, downstream locations and any projected maintenance activities.

vi Report the presence of noticeable odors or of any visible sheen on the surface of any discharges.

vii Any corrective actions required, including any necessary changes to the SWPPP and the associated implementation dates.

viii Photographs taken during the inspection, if any.

ix Inspector’s name, title, and signature.

K. STORM WATER POLLUTION PREVENTION PLAN (SWPPP) REQUIREMENTS

1. Objectives

SWPPPs for all LUPs shall be developed and amended or revised by a QSD. The SWPPP shall be designed to address the following objectives:

a. All pollutants and their sources, including sources of sediment, associated with construction activities associated with LUP activity are controlled;

b. All non-storm water discharges are identified and either eliminated, controlled, or treated;

c. BMPs are effective and result in the reduction or elimination of pollutants in storm water discharges and authorized non-storm water discharges from LUPs during construction; and

d. Stabilization BMPs installed to reduce or eliminate pollutants after construction is completed are effective and maintained.

2. SWPPP Implementation Schedule

a. LUPs for which PRDs have been submitted to the State Water Board shall develop a site/project location SWPPP prior to the start of land-disturbing activity in accordance with this Section and shall implement the SWPPP concurrently with commencement of soil-disturbing activities.

b. For an ongoing LUP involving a change in the LRP, the new LRP shall review the existing SWPPP and amend it, if necessary, or develop a new SWPPP within 15 calendar days to conform to the requirements set forth in this General Permit.

3. Availability

The SWPPP shall be available at the construction site during working hours while construction is occurring and shall be made available upon request by a State or Municipal inspector. When the original SWPPP is retained by a crewmember in a construction vehicle and is not currently at the construction site, copies of the BMPs and map/drawing will be left with the field crew and the original SWPPP shall be made available via a request by radio/telephone.

L. REGIONAL WATER BOARD AUTHORITIES

1. Regional Water Boards shall administer the provisions of this General Permit. Administration of this General Permit may include, but is not limited to, requesting the submittal of SWPPPs, reviewing SWPPPs, reviewing monitoring and sampling and analysis reports, conducting compliance inspections, gathering site information by any medium including sampling, photo and video documentation, and taking enforcement actions.

2. Regional Water Boards may terminate coverage under this General Permit for dischargers who fail to comply with its requirements or where they determine that an individual NPDES permit is appropriate.

3. Regional Water Boards may issue separate permits for discharges of storm water associated with construction activity to individual dischargers, categories of dischargers, or dischargers in a geographic area. Upon issuance of such permits by a Regional Water Board, dischargers subject to those permits shall no longer be regulated by this General Permit.

4. Regional Water Boards may direct the discharger to reevaluate the LUP Type(s) for the project (or elements/areas of the project) and impose the appropriate level of requirements.

5. Regional Water Boards may terminate coverage under this General Permit for dischargers who negligently or with willful intent incorrectly determine or report their LUP Type (e.g., they determine themselves to be a LUP Type 1 when they are actually a Type 2).

6. Regional Water Boards may review PRDs and reject or accept applications for permit coverage or may require dischargers to submit a Report of Waste Discharge / NPDES permit application for Regional Water Board consideration of individual requirements.

7. Regional Water Boards may impose additional requirements on dischargers to satisfy TMDL implementation requirements or to satisfy provisions in their Basin Plans.

8. Regional Water Boards may require additional Monitoring and Reporting Program Requirements, including sampling and analysis of discharges to sediment-impaired water bodies.

9. Regional Water Boards may require dischargers to retain records for more than the three years required by this General Permit.

10. Based on an LUP's threat to water quality and complexity, the Regional Water Board may determine on a case-by-case basis that an LUP, or a portion of an LUP, is not eligible for the linear project requirements contained in this Attachment, and require that the discharger comply with all standard requirements in this General Permit.

11. The Regional Water Board may require additional monitoring and reporting program requirements including sampling and analysis of discharges to CWA § 303(d)-listed water bodies. Additional requirements imposed by the Regional Water Board shall be consistent with the overall monitoring effort in the receiving waters.

M. MONITORING AND REPORTING REQUIREMENTS

Table 3. LUP Summary of Monitoring Requirements

LUP Type	Visual Inspections				Sample Collection		
	Daily Site BMP	Pre-storm Event / Baseline	Daily Storm BMP	Post Storm	Storm Water Discharge	Receiving Water	Non-Visible (when applicable)
1	X						X
2	X	X	X	X	X		X
3	X	X	X	X	X	X	X

1. Objectives

LUP dischargers shall prepare a monitoring and reporting program (M&RP) prior to the start of construction and immediately implement the program at the start of construction for LUPs. The monitoring program must be implemented at the appropriate level to protect water quality at all times throughout the life of the project. The M&RP must be a part of the SWPPP, included as an appendix or separate SWPPP chapter.

2. M&RP Implementation Schedule

a. LUP dischargers shall implement the requirements of this Section at the time of commencement of construction activity. LUP dischargers are responsible for implementing these requirements until construction activity is complete and the site is stabilized.

b. LUP dischargers shall revise the M&RP when:

i Site conditions or construction activities change such that a change in monitoring is required to comply with the requirements and intent of this General Permit.

ii The Regional Water Board requires the discharger to revise its M&RP based on its review of the document. Revisions may include, but not be limited to, conducting additional site inspections, submitting reports, and certifications. Revisions shall be submitted via postal mail or electronic e-mail.

iii The Regional Water Board may require additional monitoring and reporting program requirements including sampling and analysis of discharges to CWA § 303(d)-listed water bodies. Additional requirements imposed by the Regional Water Board shall be consistent with the overall monitoring effort in the receiving waters.

3. LUP Type 1 Monitoring and Reporting Requirements

a. LUP Type 1 Inspection Requirements

i LUP Type 1 dischargers shall ensure that all inspections are conducted by trained personnel. The name(s) and contact number(s) of the assigned inspection personnel should be listed in the SWPPP.

ii LUP Type 1 dischargers shall ensure that all visual inspections are conducted daily during working hours and in conjunction with other daily activities in areas where active construction is occurring.

iii LUP Type 1 dischargers shall ensure that photographs of the site taken before, during, and after storm events are taken during inspections, and submitted through the State Water Board's SMARTS website once every three rain events.

iv LUP Type 1 dischargers shall conduct daily visual inspections to verify that:

(1) Appropriate BMPs for storm water and non-storm water are being implemented in areas where active construction is occurring (including staging areas);

(2) Project excavations are closed, with properly protected spoils, and that road surfaces are cleaned of excavated material and construction materials such as chemicals by either removing or storing the material in protective storage containers at the end of every construction day;

(3) Land areas disturbed during construction are returned to pre-construction conditions or an equivalent protection is used at the end of each workday to eliminate or minimize erosion and the possible discharge of sediment or other pollutants during a rain event.

v Inspections may be discontinued in non-active construction areas where soil-disturbing activities are completed and final soil stabilization is achieved (e.g., paving is completed, substructures

are installed, vegetation meets minimum cover requirements for final stabilization, or other stabilization requirements are met).

vi Inspection programs are required for LUP Type 1 projects where temporary and permanent stabilization BMPs are installed and are to be monitored after active construction is completed. Inspection activities shall continue until adequate permanent stabilization is established and, in areas where re-vegetation is chosen, until minimum vegetative coverage is established in accordance with Section C.1 of this Attachment.

b. LUP Type 1 Monitoring Requirements for Non-Visible Pollutants

LUP Type 1 dischargers shall implement sampling and analysis requirements to monitor non-visible pollutants associated with (1) construction sites; (2) activities producing pollutants that are not visually detectable in storm water discharges; and (3) activities which could cause or contribute to an exceedance of water quality objectives in the receiving waters.

i Sampling and analysis for non-visible pollutants is only required where the LUP Type 1 discharger believes pollutants associated with construction activities have the potential to be discharged with storm water runoff due to a spill or in the event there was a breach, malfunction, failure and/or leak of any BMP. Also, failure to implement BMPs may require sample collection.

(1) Visual observations made during the monitoring program described above will help the LUP Type 1 discharger determine when to collect samples.

(2) The LUP Type 1 discharger is not required to sample if one of the conditions described above (e.g., breach or spill) occurs and the site is cleaned of material and pollutants and/or BMPs are implemented prior to the next storm event.

ii LUP Type 1 dischargers shall collect samples down-gradient from all discharge locations where the visual observations were made triggering the monitoring, and which can be safely accessed. For sites where sampling and analysis is required, personnel trained in water quality sampling procedures shall collect storm water samples.

iii If sampling for non-visible pollutant parameters is required, LUP Type 1 dischargers shall ensure that samples be analyzed for parameters indicating the presence of pollutants identified in the pollutant source assessment required in Section J.2.a.i.

iv LUP Type 1 dischargers shall collect samples during the first two hours of discharge from rain events that occur during business hours and which generate runoff.

v LUP Type 1 dischargers shall ensure that a sufficiently large sample of storm water that has not come into contact with the disturbed soil or the materials stored or used on-site (uncontaminated sample[12]) will be collected for comparison with the discharge sample. Samples shall be collected during the first two hours of discharge from rain events that occur during daylight hours and which generate runoff.

vi LUP Type 1 dischargers shall compare the uncontaminated sample to the samples of discharge using field analysis or through laboratory analysis. Analyses may include, but are not limited to, indicator parameters such as: pH, specific conductance, dissolved oxygen, conductivity, salinity, and Total Dissolved Solids (TDS).

vii For laboratory analyses, all sampling, sample preservation, and other analyses must be conducted according to test procedures pursuant to 40 C.F.R. Part 136. LUP Type 1 dischargers shall ensure that field samples are collected and analyzed according to manufacturer specifications of the sampling devices employed. Portable meters shall be calibrated according to manufacturer's specification.

viii LUP Type 1 dischargers shall ensure that all field and/or analytical data are kept in the SWPPP document.

c. LUP Type 1 Visual Observation Exceptions

i LUP Type 1 dischargers shall be prepared to collect samples and conduct visual observation (inspections) to meet the minimum visual observation requirements of this Attachment. The Type 1 LUP discharger is not required to physically collect samples or conduct visual observation (inspections) under the following conditions:

(1) During dangerous weather conditions such as flooding and electrical storms;

(2) Outside of scheduled site business hours.

(3) When access to the site is unsafe due to storm events.

[12] Sample collected at a location unaffected by contruction activities.

ii If the LUP Type 1 discharger does not collect the required samples or visual observation (inspections) due to these exceptions, an explanation why the sampling or visual observation (inspections) were not conducted shall be included in both the SWPPP and the Annual Report.

d. Particle Size Analysis for Risk Justification

LUP Type 1 dischargers utilizing justifying an alternative project risk shall report a soil particle size analysis used to determine the RUSLE K-Factor. ASTM D-422 (Standard Test Method for Particle-Size Analysis of Soils), as revised, shall be used to determine the percentages of sand, very fine sand, silt, and clay on the site.

4. LUP Type 2 & 3 Monitoring and Reporting Requirements

a. LUP Type 2 & 3 Inspection Requirements

i LUP Type 2 & 3 dischargers shall ensure that all inspections are conducted by trained personnel. The name(s) and contact number(s) of the assigned inspection personnel should be listed in the SWPPP.

ii LUP Type 2 & 3 dischargers shall ensure that all visual inspections are conducted daily during working hours and in conjunction with other daily activities in areas where active construction is occurring.

iii LUP Type 2 & 3 dischargers shall ensure that photographs of the site taken before, during, and after storm events are taken during inspections, and submitted through the State Water Board's SMARTS website once every three rain events.

iv LUP Type 2 & 3 dischargers shall conduct daily visual inspections to verify that appropriate BMPs for storm water and non-storm water are being implemented and in place in areas where active construction is occurring (including staging areas).

v LUP Type 2 & 3 dischargers shall conduct inspections of the construction site prior to anticipated storm events, during extended storm events, and after actual storm events to identify areas contributing to a discharge of storm water associated with construction activity. Pre-storm inspections are to ensure that BMPs are properly installed and maintained; post-storm inspections are to assure that BMPs have functioned adequately. During

extended storm events, inspections shall be required during normal working hours for each 24-hour period.

vi Inspections may be discontinued in non-active construction areas where soil-disturbing activities are completed and final soil stabilization is achieved (e.g., paving is completed, substructures are installed, vegetation meets minimum cover requirements for final stabilization, or other stabilization requirements are met).

vii LUP Type 2 & 3 dischargers shall implement a monitoring program for inspecting projects that require temporary and permanent stabilization BMPs after active construction is complete. Inspections shall ensure that the BMPs are adequate and maintained. Inspection activities shall continue until adequate permanent stabilization is established and, in vegetated areas, until minimum vegetative coverage is established in accordance with Section C.1 of this Attachment.

viii If possible, LUP Type 2 & 3 dischargers shall install a rain gauge on-site at an accessible and secure location with readings made during all storm event inspections. When readings are unavailable, data from the closest rain gauge with publically available data may be used.

ix LUP Type 2 & 3 dischargers shall Include and maintain a log of the inspections conducted in the SWPPP. The log will provide the date and time of the inspection and who conducted the inspection.

b. LUP Type 2 & 3 Storm Water Effluent Monitoring Requirements

Table 4. LUP Type 2 & 3 Effluent Monitoring Requirements

LUP Type	Frequency	Effluent Monitoring
2	Minimum of 3 samples per day characterizing discharges associated with construction activity from the project active areas of construction.	Turbidity, pH, and non-visible pollutant parameters (if applicable)
3	Minimum of 3 samples per day characterizing discharges associated with construction activity from the project active areas of construction.	turbidity, pH, and non-visible pollutant parameters (if applicable)

i LUP Type 2 & 3 dischargers shall collect storm water grab samples from sampling locations characterizing discharges associated with activity from the LUP active areas of construction. At a minimum, 3 samples shall be collected per day of discharge.

ii LUP Type 2 & 3 dischargers shall collect samples of stored or contained storm water that is discharged subsequent to a storm event producing precipitation of ½ inch or more at the time of discharge.

iii LUP Type 2 & 3 dischargers shall ensure that storm water grab sample(s) obtained be representative of the flow and characteristics of the discharge.

iv LUP Type 2 & 3 dischargers shall analyze their effluent samples for:

(1) pH and turbidity
(2) Any additional parameter for which monitoring is required by the Regional Water Board.

c. LUP Type 2 & 3 Storm Water Effluent Sampling Locations

i LUP Type 2 & 3 dischargers shall perform sampling and analysis of storm water discharges to characterize discharges associated with construction activity from the entire disturbed project or area.

ii LUP Type 2 & 3 dischargers may monitor and report run-on from surrounding areas if there is reason to believe run-on may contribute to exceedance of NALs.

iii LUP Type 2 & 3 dischargers shall select analytical test methods from the list provided in Table 5 below.

iv LUP Type 2 & 3 dischargers shall ensure that all storm water sample collection preservation and handling shall be conducted in accordance with the “Storm Water Sample Collection and Handling Instructions” below.

d. LUP Type 3 Receiving Water Monitoring Requirements

i In the event that an LUP Type 3 discharger’s effluent exceeds the receiving water monitoring triggers of 500 NTU turbidity or pH range of 6.0-9.0, contained in this General Permit and has a direct discharge to receiving waters, the LUP discharger shall subsequently sample Receiving Waters (RWs) for turbidity, pH (if applicable) and SSC for the duration of coverage under this General Permit. In the event that an LUP Tupe 3 discharger utilizing ATS with direct discharges into receiving waters discharges effluent that exceeds the NELs in this permit, the discharger shall

subsequently sample RWs for turbidity, pH (if applicable), and SSC for the duration of coverage under this General Permit.

ii LUP Type 3 dischargers that meet the project criteria in Appendix 3 of this General Permit and have more than 30 acres of soil disturbance in the project area or project section area designated as Type 3, shall comply with the Bioassessment requirements prior to commencement of construction activity.

iii LUP Type 3 dischargers shall obtain RW samples in accordance with the requirements of the Receiving Water Sampling Locations section (Section M.4.c. of this Attachment).

e. LUP Type 3 Receiving Water Sampling Locations

i **Upstream/up-gradient RW samples**: LUP Type 3 dischargers shall obtain any required upstream/up-gradient receiving water samples from a representative and accessible location as close as possible to and upstream from the effluent discharge point.

ii **Downstream/down-gradient RW samples**: LUP Type 3 dischargers shall obtain any required downstream/down-gradient receiving water samples from a representative and accessible location as close as possible to and downstream from the effluent discharge point.

iii If two or more discharge locations discharge to the same receiving water, LUP Type 3 dischargers may sample the receiving water at a single upstream and downstream location.

f. LUP Type 2 & 3 Monitoring Requirements for Non-Visible Pollutants

LUP Type 2 & 3 dischargers shall implement sampling and analysis requirements to monitor non-visible pollutants associated with (1) construction sites; (2) activities producing pollutants that are not visually detectable in storm water discharges; and (3) activities which could cause or contribute to an exceedance of water quality objectives in the receiving waters.

i Sampling and analysis for non-visible pollutants is only required where LUP Type 2 & 3 dischargers believe pollutants associated with construction activities have the potential to be discharged with storm water runoff due to a spill or in the event there was a breach, malfunction, failure and/or leak of any BMP. Also, failure to implement BMPs may require sample collection.

(1) Visual observations made during the monitoring program described above will help LUP Type 2 & 3 dischargers determine when to collect samples.

(2) LUP Type 2 & 3 dischargers are not required to sample if one of the conditions described above (e.g., breach or spill) occurs and the site is cleaned of material and pollutants and/or BMPs are implemented prior to the next storm event.

ii LUP Type 2 & 3 dischargers shall collect samples down-gradient from the discharge locations where the visual observations were made triggering the monitoring and which can be safely accessed. For sites where sampling and analysis is required, personnel trained in water quality sampling procedures shall collect storm water samples.

iii If sampling for non-visible pollutant parameters is required, LUP Type 2 & 3 dischargers shall ensure that samples be analyzed for parameters indicating the presence of pollutants identified in the pollutant source assessment required in Section J.2.a.i.

iv LUP Type 2 & 3 dischargers shall collect samples during the first two hours of discharge from rain events that occur during business hours and which generate runoff.

v LUP Type 2 & 3 dischargers shall ensure that a sufficiently large sample of storm water that has not come into contact with the disturbed soil or the materials stored or used on-site (uncontaminated sample[13]) will be collected for comparison with the discharge sample. Samples shall be collected during the first two hours of discharge from rain events that occur during daylight hours and which generate runoff.

vi LUP Type 2 & 3 dischargers shall compare the uncontaminated sample to the samples of discharge using field analysis or through laboratory analysis. Analyses may include, but are not limited to, indicator parameters such as: pH, specific conductance, dissolved oxygen, conductivity, salinity, and Total Dissolved Solids (TDS).

vii For laboratory analyses, all sampling, sample preservation, and other analyses must be conducted according to test procedures pursuant to 40 C.F.R. Part 136. LUP Type 2 & 3 dischargers shall ensure that field samples are collected and analyzed according to manufacturer specifications of the sampling devices employed.

[13] Sample collected at a location unaffected by construction activities

Portable meters shall be calibrated according to manufacturer's specification.

viii LUP Type 2 & 3 dischargers shall ensure that all field and/or analytical data are kept in the SWPPP document.

g. LUP Type 2 & 3 Visual Observation and Sample Collection Exceptions

i LUP Type 2 & 3 dischargers shall be prepared to collect samples and conduct visual observation (inspections) to meet the minimum visual observation requirements of this Attachment. Type 2 & 3 LUP dischargers are not required to physically collect samples or conduct visual observation (inspections) under the following conditions:

(1) During dangerous weather conditions such as flooding and electrical storms;

(2) Outside of scheduled site business hours.

(3) When access to the site is unsafe due to storm events.

ii If the LUP Type 2 or 3 discharger does not collect the required samples or visual observation (inspections) due to these exceptions, an explanation why the sampling or visual observation (inspections) were not conducted shall be included in both the SWPPP and the Annual Report.

h. LUP Type 2 & 3 Storm Water Sample Collection and Handling Instructions

LUP Type 2 & 3 dischargers shall refer to Table 5 below for test Methods, detection Limits, and reporting Units. During storm water sample collection and handling, the LUP Type 2 & 3 discharger shall:

i Identify the parameters required for testing and the number of storm water discharge points that will be sampled. Request the laboratory to provide the appropriate number of sample containers, types of containers, sample container labels, blank chain of custody forms, and sample preservation instructions.

ii Determine how to ship the samples to the laboratory. The testing laboratory should receive samples within 48 hours of the physical sampling (unless otherwise required by the laboratory). The options are to either deliver the samples to the laboratory, arrange to have the laboratory pick them up, or ship them overnight to the laboratory.

iii Use only the sample containers provided by the laboratory to collect and store samples. Use of any other type of containers could contaminate your samples.

iv Prevent sample contamination, by not touching, or putting anything into the sample containers before collecting storm water samples.

v Not overfilling sample containers. Overfilling can change the analytical results.

vi Tightly screw the cap of each sample container without stripping the threads of the cap.

vii Complete and attach a label to each sample container. The label shall identify the date and time of sample collection, the person taking the sample, and the sample collection location or discharge point. The label should also identify any sample containers that have been preserved.

viii Carefully pack sample containers into an ice chest or refrigerator to prevent breakage and maintain temperature during shipment. Remember to place frozen ice packs into the shipping container. Samples should be kept as close to 4° C (39° F) as possible until arriving at the laboratory. Do not freeze samples.

ix Complete a Chain of Custody form for each set of samples. The Chain of Custody form shall include the discharger's name, address, and phone number, identification of each sample container and sample collection point, person collecting the samples, the date and time each sample container was filled, and the analysis that is required for each sample container.

x Upon shipping/delivering the sample containers, obtain both the signatures of the persons relinquishing and receiving the sample containers.

xi Designate and train personnel to collect, maintain, and ship samples in accordance with the above sample protocols and good laboratory practices.

xii Refer to the Surface Water Ambient Monitoring Program's (SWAMP) 2008 Quality Assurance Program Plan (QAPrP) for more

information on sampling collection and analysis. See http://www.waterboards.ca.gov/water_issues/programs/swamp/[14]

Table 5. Test Methods, Detection Limits, Reporting Units and Applicable NALs

Parameter	Test Method	Discharge Type	Min. Detection Limit	Reporting Units	Numeric Action Levels	(LUP Type 3) Receiving Water Monitoring Trigger
pH	Field test with calibrated portable instrument	Type 2 & 3	0.2	pH units	Lower = 6.5 upper = 8.5	Lower = 6.0 upper = 9.0
Turbidity	EPA 0180.1 and/or field test with calibrated portable instrument	Type 2 & 3	1	NTU	250 NTU	500 NTU
SSC	ASTM Method D 3977-97[15]	Type 3 if Receiving Water Monitoring Trigger is exceeded	5	Mg/L	N/A	N/A
Bioassessment	(STE) Level I of (SAFIT),[16] fixed-count of 600 org/sample	Type 3 LUPs > 30 acres	N/A	N/A	N/A	N/A

i. LUP Type 2 & 3 Monitoring Methods

i The LUP Type 2 or 3 discharger's project M&RP shall include a description of the following items:

(1) Visual observation locations, visual observation procedures, and visual observation follow-up and tracking procedures.

[14] Additional information regarding SWAMP's QAPrP can be found at: http://www.waterboards.ca.gov/water_issues/programs/swamp/.

[15] ASTM, 1999, Standard Test Method for Determining Sediment Concentration in Water Samples: American Society of Testing and Materials, D 3977-97, Vol. 11.02, pp. 389-394

[16] The current SAFIT STEs (28 November 2006) list requirements for both the Level I and Level II taxonomic effort, and are located at: http://www.swrcb.ca.gov/swamp/docs/safit/ste_list.pdf. When new editions are published by SAFIT, they will supersede all previous editions. All editions will be posted at the State Water Board's SWAMP website.

(2) Sampling locations, and sample collection and handling procedures. This shall include detailed procedures for sample collection, storage, preservation, and shipping to the testing lab to assure that consistent quality control and quality assurance is maintained. Dischargers shall attach to the monitoring program a copy of the Chain of Custody form used when handling and shipping samples.

(3) Identification of the analytical methods and related method detection limits (if applicable) for each parameter required in Section M.4.f above.

ii LUP Type 2 & 3 dischargers shall ensure that all sampling and sample preservation be in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association). All monitoring instruments and equipment (including a discharger's own field instruments for measuring pH and turbidity) shall be calibrated and maintained in accordance with manufacturers' specifications to ensure accurate measurements. All laboratory analyses shall be conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in this General Permit or by the Regional Water Board. With the exception of field analysis conducted by the discharger for turbidity and pH, all analyses shall be sent to and conducted at a laboratory certified for such analyses by the State Department of Health Services (SSC exception). The LUP discharger shall conduct its own field analysis of pH and may conduct its own field analysis of turbidity if the discharger has sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to adequately perform the field analysis.

j. LUP Type 2 & 3 Analytical Methods

LUP Type 2 & 3 dischargers shall refer to Table 5 above for test Methods, detection Limits, and reporting Units.

i **pH**: LUP Type 2 & 3 dischargers shall perform pH analysis on-site with a calibrated pH meter or pH test kit. The LUP discharger shall record pH monitoring results on paper and retain these records in accordance with Section M.4.o, below.

ii **Turbidity**: LUP Type 2 & 3 dischargers shall perform turbidity analysis using a calibrated turbidity meter (turbidimeter), either on-site or at an accredited lab. Acceptable test methods include Standard Method 2130 or USEPA Method 180.1. The results shall

be recorded in the site log book in Nephelometric Turbidity Units (NTU).

iii **Suspended sediment concentration (SSC)**: LUP Type 3 dischargers exceeding the turbidity Receiving Water Monitoring Trigger, shall perform SSC analysis using ASTM Method D3977-97.

iv **Bioassessment**: LUP Type 3 dischargers shall perform bioassessment sampling and analysis according to Appendix 3 of this General Permit.

k. Watershed Monitoring Option

If an LUP Type 2 or 3 discharger is part of a qualified regional watershed-based monitoring program the LUP Type 2 or 3 discharger may be eligible for relief from the monitoring requirements in this Attachment. The Regional Water Board may approve proposals to substitute an acceptable watershed-based monitoring program if it determines that the watershed-based monitoring program will provide information to determine each discharger's compliance with the requirements of this General Permit.

l. Particle Size Analysis for Risk Justification

LUP Type 2 & 3 dischargers justifying an alternative project risk shall report a soil particle size analysis used to determine the RUSLE K-Factor. ASTM D-422 (Standard Test Method for Particle-Size Analysis of Soils), as revised, shall be used to determine the percentages of sand, very fine sand, silt, and clay on the site.

m. NAL Exceedance Report

i In the event that any effluent sample exceeds an applicable NAL, the Regional Water Boards may require LUP Type 2 & 3 dischargers to submit NAL Exceedance Reports.

ii LUP Type 2 & 3 dischargers shall certify each NAL Exceedance Report in accordance with the Special Provisions for Construction Activity.

iii LUP Type 2 & 3 dischargers shall retain an electronic or paper copy of each NAL Exceedance Report for a minimum of three years after the date the exceedance report is filed.

iv LUP Type 2 & 3 dischargers shall include in the NAL Exceedance Report:

(1) the analytical method(s), method reporting unit(s), and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as "less than the method detection limit"); and
(2) the date, place, time of sampling, visual observation (inspections), and/or measurements, including precipitation.
(3) Description of the current BMPs associated with the effluent sample that exceeded the NAL and the proposed corrective actions taken.

n. Monitoring Records

LUP Type 2 & 3 dischargers shall ensure that records of all storm water monitoring information and copies of all reports (including Annual Reports) required by this General Permit be retained for a period of at least three years. LUP Type 2 & 3 dischargers may retain records off-site and make them available upon request. These records shall include:

i The date, place, time of facility inspections, sampling, visual observation (inspections), and/or measurements, including precipitation (rain gauge);

ii The individual(s) who performed the facility inspections, sampling, visual observation (inspections), and or measurements;

iii The date and approximate time of analyses;

iv The individual(s) who performed the analyses;

v A summary of all analytical results from the last three years, the method detection limits and reporting units, the analytical techniques or methods used, and all chain of custody forms;

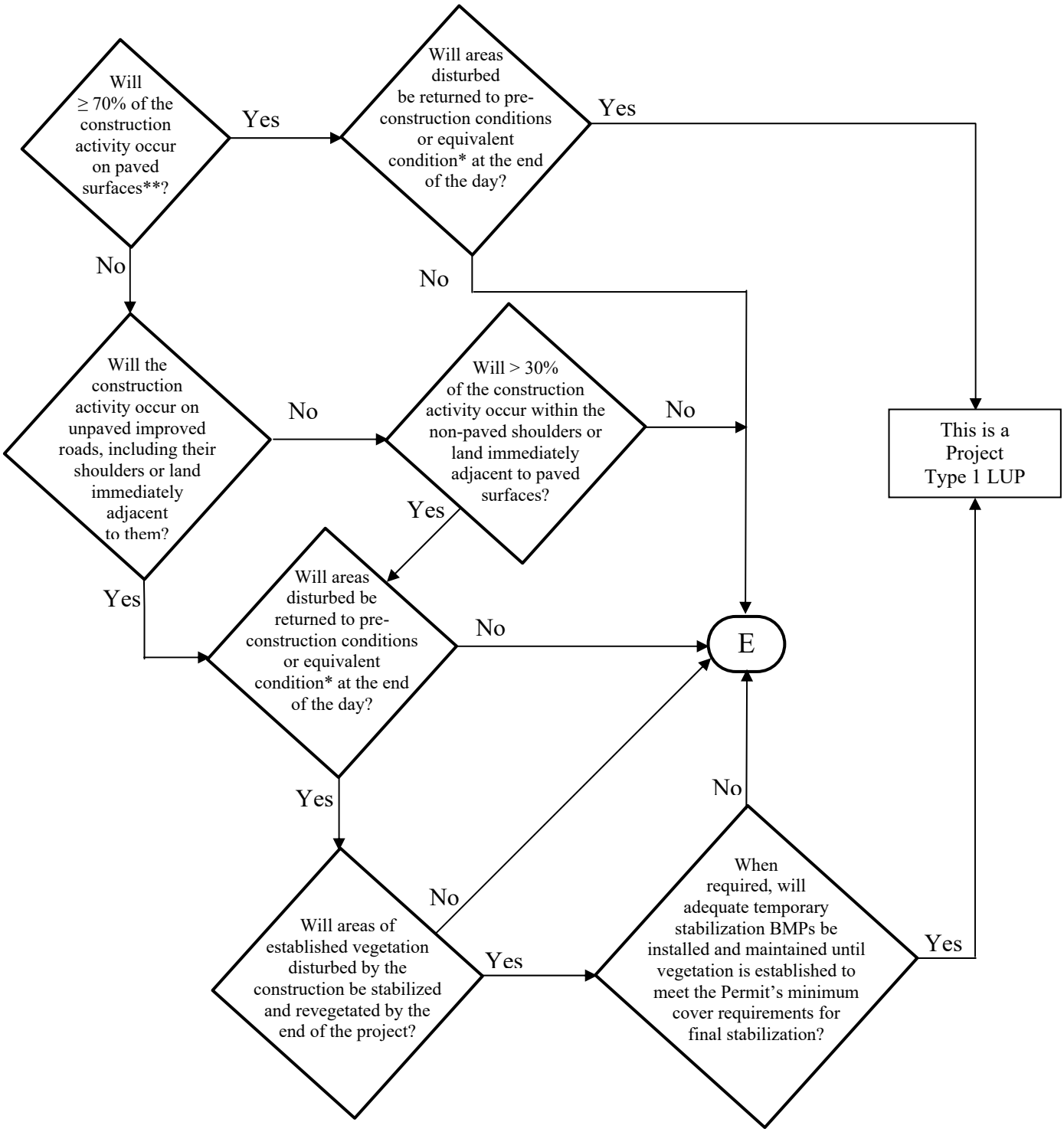
vi Quality assurance/quality control records and results;

vii Non-storm water discharge inspections and visual observation (inspections) and storm water discharge visual observation records (see Section M.4.a above);

viii Visual observation and sample collection exception records (see Section M.4.g above); and

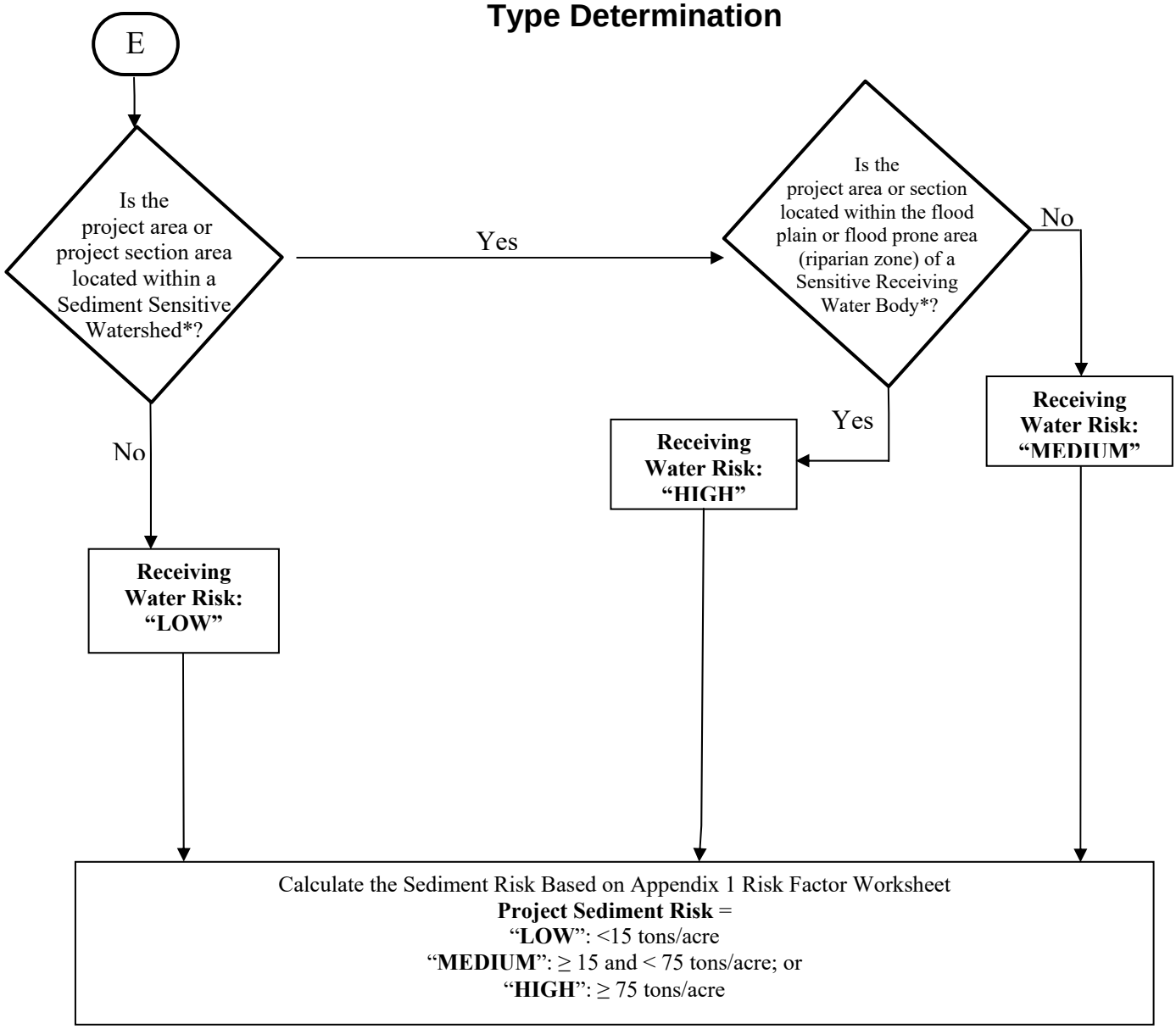
ix The records of any corrective actions and follow-up activities that resulted from analytical results, visual observation (inspections), or inspections.

ATTACHMENT A.1
LUP Project Area or Project Section Area Type Determination



*See Definition of Terms
** Or: "Will < 30% of the soil disturbance occur on unpaved surfaces?

ATTACHMENT A.1
LUP Project Area or Project Section Area Type Determination



* See Definition of Terms

PROJECT SEDIMENT RISK

RECEIVING WATER RISK	LOW	MEDIUM	HIGH
LOW	Type 1	Type 1	Type 2
MEDIUM	Type 1	Type 2	Type 3
HIGH	Type 2	Type 3	Type 3

ATTACHMENT A.1
Definition of Terms

1. **Equivalent Condition** – Means disturbed soils such as those from trench excavation are required to be hauled away, backfilled into the trench, and/or covered (e.g., metal plates, pavement, plastic covers over spoil piles) at the end of the construction day.
2. **Linear Construction Activity** – Linear construction activity consists of underground/ overhead facilities that typically include, but are not limited to, any conveyance, pipe or pipeline for the transportation of any gaseous, liquid (including water, wastewater for domestic municipal services), liquescent, or slurry substance; any cable line or wire for the transmission of electrical energy; any cable line or wire for communications (e.g., telephone, telegraph, radio or television messages); and associated ancillary facilities. Construction activities associated with LUPs include, but are not limited to those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities) and include, but are not limited to, underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/ tower pad and cable/ wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/or pavement repair or replacement, and stockpile/ borrow locations.
3. **Sediment Sensitive Receiving Water Body –** Defined as a water body segment that is listed on EPA's approved CWA 303(d) list for sedimentation/siltation, turbidity, or is designated with beneficial uses of SPAWN, MIGRATORY, and COLD.
4. **Sediment Sensitive Watershed –** Defined as a watershed draining into a receiving water body listed on EPA's approved CWA 303(d) list for sedimentation/siltation, turbidity, or a water body designated with beneficial uses of SPAWN, MIGRATORY, and COLD.

ATTACHMENT A.2
PERMIT REGISTRATION DOCUMENTS (PRDs)
GENERAL INSTRUCTIONS FOR LINEAR UNDERGROUND/OVERHEAD PROJECTS TO COMPLY WITH THE CONSTRUCTION GENERAL PERMIT

GENERAL INSTRUCTIONS

Who Must Submit

This permit is effective on July 1, 2010.

The Legally Responsible Person (LRP) for construction activities associated with linear underground/overhead project (LUP) must electronically apply for coverage under this General Permit on or after July 1, 2010. If it is determined that the LUP construction activities require an NPDES permit, the Legally Responsible Person[1] (LRP) shall submit PRDs for this General Permit in accordance with the following:

LUPs associated with Private or Municipal Development Projects

1. For LUPs associated with pre-development and pre-redevelopment construction activities:

   The LRP must obtain coverage[2] under this General Permit for its pre-development and pre-redevelopment construction activities where the total disturbed land area of these construction activities is greater than 1 acre.

2. For LUPs associated with new development and redevelopment construction projects:

   The LRP must obtain coverage under this General Permit for LUP construction activities associated with new development and redevelopment projects where the total disturbed land area of the LUP is greater than 1 acre. Coverage under this permit is not required where the same LUP construction activities are covered by another NPDES permit.

LUPs not associated with private or municipal new development or redevelopment projects:

The LRP must obtain coverage under this General Permit on or after July 1, 2010 for its LUP construction activities where the total disturbed land area is greater than 1 acre.

PRD Submittal Requirements

Prior to the start of construction activities a LRP must submit PRDs and fees to the State Water Board for each LUP.

New and Ongoing LUPs

Dischargers of new LUPs that commence construction activities after the adoption date of this General Permit shall file PRDs prior to the commencement of construction and implement the SWPPP upon the start of construction.

[1] person possessing the title of the land on which the construction activities will occur for the regulated site
[2] obtain coverage means filing PRDs for the project.

PERMIT REGISTRATION DOCUMENTS (PRDs)
GENERAL INSTRUCTIONS (CONTINUED)

Dischargers of ongoing LUPs that are currently covered under State Water Board Order No. 2003-0007 (Small LUP General Permit) shall electronically file Permit Registration Documents no later than July 1, 2010. After July 1, 2010, all NOIs subject to State Water Board Order No. 2003-0007-DWQ will be terminated. All existing dischargers shall be exempt from the risk determination requirements in Attachment A. All existing dischargers are therefore subject to LUP Type 1 requirements regardless of their project's sediment and receiving water risks. However, a Regional Board retains the authority to require an existing discharger to comply with the risk determination requirements in Attachment A.

Where to Apply

The Permit Registration Documents (PRDs) can be found at www.waterboards.ca.gov/water_issues/programs/stormwater/

Fees

The annual fee for storm water permits are established through the State of California Code of Regulations.

When Permit Coverage Commences

To obtain coverage under the General Permit, the LRP must include the complete PRDs and the annual fee. All PRDs deemed incomplete will be rejected with an explanation as to what is required to complete submittal. Upon receipt of complete PRDs and associated fee, each discharger will be sent a waste discharger's identification (WDID) number.

Projects and Activities Not Defined As Construction Activity

1. LUP construction activity does not include routine maintenance projects to maintain original line and grade, hydraulic capacity, or original purpose of the facility. Routine maintenance projects are projects associated with operations and maintenance activities that are conducted on existing lines and facilities and within existing right-of-way, easements, franchise agreements or other legally binding agreements of the discharger. Routine maintenance projects include, but are not limited to projects that are conducted to:

    - Maintain the original purpose of the facility, or hydraulic capacity.
    - Update existing lines[3] and facilities to comply with applicable codes, standards and regulations regardless if such projects result in increased capacity.
    - Repairing leaks.

    Routine maintenance does not include construction of new[4] lines or facilities resulting from compliance with applicable codes, standards and regulations.

[3] Update existing lines includes replacing existing lines with new materials or pipes.
[4] New lines are those that are not associated with existing facilities and are not part of a project to update or replace existing lines.

PERMIT REGISTRATION DOCUMENTS (PRDs)
GENERAL INSTRUCTIONS (CONTINUED)

Routine maintenance projects do not include those areas of maintenance projects that are outside of an existing right-of-way, franchise, easements, or agreements. When a project must acquire new areas, those areas may be subject to this General Permit based on the area of disturbed land outside the original right-of-way, easement, or agreement.

2. LUP construction activity does not include field activities associated with the planning and design of a project (e.g., activities associated with route selection).

3. Tie-ins conducted immediately adjacent to "energized" or "pressurized" facilities by the discharger are not considered small construction activities where all other LUP construction activities associated with the tie-in are covered by a NOI and SWPPP of a third party or municipal agency.

Calculating Land Disturbance Areas of LUPs

The total land area disturbed for LUPs is the sum of the:

- Surface areas of trenches, laterals and ancillary facilities, plus
- Area of the base of stockpiles on unpaved surfaces, plus
- Surface area of the borrow area, plus
- Areas of paved surfaces constructed for the project, plus
- Areas of new roads constructed or areas of major reconstruction to existing roads (e.g. improvements to two-track surfaces or road widening) for the sole purpose of accessing construction activities or as part of the final project, plus
- Equipment and material storage, staging, and preparation areas (laydown areas) not on paved surfaces, plus
- Soil areas outside the surface area of trenches, laterals and ancillary facilities that will be graded, and/or disturbed by the use of construction equipment, vehicles and machinery during construction activities.

Stockpiling Areas

Stockpiling areas, borrow areas and the removal of soils from a construction site may or may not be included when calculating the area of disturbed soil for a site depending on the following conditions:

- For stockpiling of soils onsite or immediately adjacent to a LUP site and the stockpile is not on a paved surface, the area of the base of the stockpile is to be included in the disturbed area calculation.

- The surface area of borrow areas that are onsite or immediately adjacent to a project site are to be included in the disturbed area calculation.

- For soil that is hauled offsite to a location owned or operated by the discharger that is not a paved surface, the area of the base of the stockpile is to be included in the disturbed area calculation except when the offsite location is already subject to a separate storm water permit.

PERMIT REGISTRATION DOCUMENTS (PRDs)
GENERAL INSTRUCTIONS (CONTINUED)

- For soil that is brought to the project from an off-site location owned or operated by the discharger the surface area of the borrow pit is to be included in the disturbed area calculation except when the offsite location is already subject to a separate storm water permit.

- Trench spoils on a paved surface that are either returned to the trench or excavation or hauled away from the project daily for disposal or reuse will not be included in the disturbed area calculation.

If you have any questions concerning submittal of PRDs, please call the State Water Board at (866) 563-3107.

ATTACHMENT B
PERMIT REGISTRATION DOCUMENTS (PRDs) TO COMPLY WITH THE TERMS OF THE GENERAL PERMIT TO DISCHARGE STORM WATER ASSOCIATED WITH CONSTRUCTION ACTIVITY

GENERAL INSTRUCTIONS

A. All Linear Construction Projects shall comply with the PRD requirements in Attachment A.2 of this Order.

B. Who Must Submit

Discharges of storm water associated with construction that results in the disturbance of one acre or more of land must apply for coverage under the General Construction Storm Water Permit (General Permit). Any construction activity that is a part of a larger common plan of development or sale must also be permitted, regardless of size. (For example, if 0.5 acre of a 20-acre subdivision is disturbed by the construction activities of discharger A and the remaining 19.5 acres is to be developed by discharger B, discharger A must obtain a General Storm Water Permit for the 0.5 acre project).

Other discharges from construction activities that are covered under this General Permit can be found in the General Permit Section II.B.

It is the LRP's responsibility to obtain coverage under this General Permit by electronically submitting complete PRDs (Permit Registration Documents).

In all cases, the proper procedures for submitting the PRDs must be completed before construction can commence.

C. Construction Activity Not Covered By This General Permit

Discharges from construction that are not covered under this General Permit can be found in the General Permit Sections II.A &B..

D. Annual Fees and Fee Calculation

Annual fees are calculated based upon the total area of land to be disturbed not the total size of the acreage owned. However, the calculation includes all acres to be disturbed during the duration of the project. For example, if 10 acres are scheduled to be disturbed the first year and 10 in each subsequent year for 5 years, the annual fees would be based upon 50 acres of disturbance. The State Water Board will evaluate adding acreage to an existing Permit Waste Discharge Identification (WDID) number on a case-by-case basis. In general, any acreage to be considered must be contiguous to the permitted land area and the existing

SWPPP must be appropriate for the construction activity and topography of the acreage under consideration. As acreage is built out and stabilized or sold, the Change of Information (COI) form enables the applicant to remove those acres from inclusion in the annual fee calculation. Checks should be made payable to: State Water Board.

The Annual fees are established through regulations adopted by the State Water Board. The total annual fee is the current base fee plus applicable surcharges for all construction sites submitting an NOI, based on the total acreage to be disturbed during the life of the project. Annual fees are subject to change by regulation.

Dischargers that apply for and satisfy the Small Construction Erosivity Wavier requirements shall pay a fee of $200.00 plus an applicable surcharge, see the General Permit Section II.B.7.

E. When to Apply

LRP's proposing to conduct construction activities subject to this General Permit must submit their PRDs prior to the commencement of construction activity.

F. Requirements for Completing Permit Registration Documents (PRDs)

All dischargers required to comply with this General Permit shall electronically submit the required PRDs for their type of construction as defined below.

G. Standard PRD Requirements (All Dischargers)

1. Notice of Intent
2. Risk Assessment (Standard or Site-Specific)
3. Site Map
4. SWPPP
5. Annual Fee
6. Certification

H. Additional PRD Requirements Related to Construction Type

1. Discharger in unincorporated areas of the State (not covered under an adopted Phase I or II SUSMP requirements) and that are not a linear project shall also submit a completed:
   a. Post-Construction Water Balance Calculator (Appendix 2).

2. Dischargers who are proposing to implement ATS shall submit:
   a. Complete ATS Plan in accordance with Attachment F at least 14 days prior to the planned operation of the ATS and a paper copy shall be available onsite during ATS operation.

b. Certification proof that design done by a professional in accordance with Attachment F.

3. Dischargers who are proposing an alternate Risk Justification:
   a. Particle Size Analysis.

I. Exceptions to Standard PRD Requirements

Construction sites with an R value less than 5 as determined in the Risk Assessment are not required to submit a SWPPP.

J. Description of PRDs

1. Notice of Intent (NOI)

2. Site Map(s) Includes:
   a. The project's surrounding area (vicinity)
   b. Site layout
   c. Construction site boundaries
   d. Drainage areas
   e. Discharge locations
   f. Sampling locations
   g. Areas of soil disturbance (temporary or permanent)
   h. Active areas of soil disturbance (cut or fill)
   i. Locations of all runoff BMPs
   j. Locations of all erosion control BMPs
   k. Locations of all sediment control BMPs
   l. ATS location (if applicable)
   m. Locations of sensitive habitats, watercourses, or other features which are not to be disturbed
   n. Locations of all post-construction BMPs
   o. Locations of storage areas for waste, vehicles, service, loading/unloading of materials, access (entrance/exits) points to construction site, fueling, and water storage, water transfer for dust control and compaction practices

3. **SWPPPs**
   A site-specific SWPPP shall be developed by each discharger and shall be submitted with the PRDs.

4. **Risk Assessment**
   All dischargers shall use the Risk Assessment procedure as describe in the General Permit Appendix 1.

   a. The Standard Risk Assessment includes utilization of the following:
      i. Receiving water Risk Assessment interactive map

ii. EPA Rainfall Erosivity Factor Calculator Website
iii. Sediment Risk interactive map
iv. Sediment sensitive water bodies list

b. The Site-Specific Risk Assessment includes the completion of the hand calculated R value Risk Calculator

5. **Post-Construction Water Balance Calculator**
All dischargers subject to this requirement shall complete the Water Balance Calculator (in Appendix 2) in accordance with the instructions.

6. **ATS Design Document and Certification**
All dischargers using ATS must submit electronically their system design (as well as any supporting documentation) and proof that the system was designed by a qualified ATS design professional (See Attachment F).

To obtain coverage under the General Permit PRDs must be included and completed. If any of the required items are missing, the PRD submittal is considered incomplete and will be rejected. Upon receipt of a complete PRD submittal, the State Water Board will process the application package in the order received and assign a (WDID) number.

Questions?

If you have any questions on completing the PRDs please email stormwater@waterboards.ca.gov or call (866) 563-3107.

ATTACHMENT C
RISK LEVEL 1 REQUIREMENTS

A. Effluent Standards

[These requirements are the same as those in the General Permit order.]

1. Narrative – Risk Level 1 dischargers shall comply with the narrative effluent standards listed below:

   a. Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.

   b. Dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.

2. Numeric – Risk Level 1 dischargers are not subject to a numeric effluent standard.

B. Good Site Management "Housekeeping"

1. Risk Level 1 dischargers shall implement good site management (i.e., "housekeeping") measures for construction materials that could potentially be a threat to water quality if discharged. At a minimum, Risk Level 1 dischargers shall implement the following good housekeeping measures:

   a. Conduct an inventory of the products used and/or expected to be used and the end products that are produced and/or expected to be produced. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).

   b. Cover and berm loose stockpiled construction materials that are not actively being used (i.e. soil, spoils, aggregate, fly-ash, stucco, hydrated lime, etc.).

c. Store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed).

d. Minimize exposure of construction materials to precipitation. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).

e. Implement BMPs to prevent the off-site tracking of loose construction and landscape materials.

2. Risk Level 1 dischargers shall implement good housekeeping measures for waste management, which, at a minimum, shall consist of the following:

a. Prevent disposal of any rinse or wash waters or materials on impervious or pervious site surfaces or into the storm drain system.

b. Ensure the containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the storm water drainage system or receiving water.

c. Clean or replace sanitation facilities and inspecting them regularly for leaks and spills.

d. Cover waste disposal containers at the end of every business day and during a rain event.

e. Prevent discharges from waste disposal containers to the storm water drainage system or receiving water.

f. Contain and securely protect stockpiled waste material from wind and rain at all times unless actively being used.

g. Implement procedures that effectively address hazardous and non-hazardous spills.

h. Develop a spill response and implementation element of the SWPPP prior to commencement of construction activities. The SWPPP shall require that:

i. Equipment and materials for cleanup of spills shall be available on site and that spills and leaks shall be cleaned up immediately and disposed of properly; and

ii. Appropriate spill response personnel are assigned and trained.

i. Ensure the containment of concrete washout areas and other washout areas that may contain additional pollutants so there is no discharge into the underlying soil and onto the surrounding areas.

3. Risk Level 1 dischargers shall implement good housekeeping for vehicle storage and maintenance, which, at a minimum, shall consist of the following:

   a. Prevent oil, grease, or fuel to leak in to the ground, storm drains or surface waters.

   b. Place all equipment or vehicles, which are to be fueled, maintained and stored in a designated area fitted with appropriate BMPs.

   c. Clean leaks immediately and disposing of leaked materials properly.

4. Risk Level 1 dischargers shall implement good housekeeping for landscape materials, which, at a minimum, shall consist of the following:

   a. Contain stockpiled materials such as mulches and topsoil when they are not actively being used.

   b. Contain fertilizers and other landscape materials when they are not actively being used.

   c. Discontinue the application of any erodible landscape material within 2 days before a forecasted rain event or during periods of precipitation.

   d. Apply erodible landscape material at quantities and application rates according to manufacture recommendations or based on written specifications by knowledgeable and experienced field personnel.

   e. Stack erodible landscape material on pallets and covering or storing such materials when not being used or applied.

5. Risk Level 1 dischargers shall conduct an assessment and create a list of potential pollutant sources and identify any areas of the site where additional BMPs are necessary to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. This potential pollutant list shall be kept with the SWPPP and shall identify

all non-visible pollutants which are known, or should be known, to occur on the construction site. At a minimum, when developing BMPs, Risk Level 1 dischargers shall do the following:

a. Consider the quantity, physical characteristics (e.g., liquid, powder, solid), and locations of each potential pollutant source handled, produced, stored, recycled, or disposed of at the site.

b. Consider the degree to which pollutants associated with those materials may be exposed to and mobilized by contact with storm water.

c. Consider the direct and indirect pathways that pollutants may be exposed to storm water or authorized non-storm water discharges. This shall include an assessment of past spills or leaks, non-storm water discharges, and discharges from adjoining areas.

d. Ensure retention of sampling, visual observation, and inspection records.

e. Ensure effectiveness of existing BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.

6. Risk Level 1 dischargers shall implement good housekeeping measures on the construction site to control the air deposition of site materials and from site operations. Such particulates can include, but are not limited to, sediment, nutrients, trash, metals, bacteria, oil and grease and organics.

C. Non-Storm Water Management

1. Risk Level 1 dischargers shall implement measures to control all non-storm water discharges during construction.

2. Risk Level 1 dischargers shall wash vehicles in such a manner as to prevent non-storm water discharges to surface waters or MS4 drainage systems.

3. Risk Level 1 dischargers shall clean streets in such a manner as to prevent unauthorized non-storm water discharges from reaching surface water or MS4 drainage systems.

D. Erosion Control

1. Risk Level 1 dischargers shall implement effective wind erosion control.

2. Risk Level 1 dischargers shall provide effective soil cover for inactive[1] areas and all finished slopes, open space, utility backfill, and completed lots.

3. Risk Level 1 dischargers shall limit the use of plastic materials when more sustainable, environmentally friendly alternatives exist. Where plastic materials are deemed necessary, the discharger shall consider the use of plastic materials resistant to solar degradation.

E. Sediment Controls

1. Risk Level 1 dischargers shall establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from the site.

2. On sites where sediment basins are to be used, Risk Level 1 dischargers shall, at minimum, design sediment basins according to the method provided in CASQA's Construction BMP Guidance Handbook.

F. Run-on and Runoff Controls

Risk Level 1 dischargers shall effectively manage all run-on, all runoff within the site and all runoff that discharges off the site. Run-on from off site shall be directed away from all disturbed areas or shall collectively be in compliance with the effluent limitations in this General Permit.

G. Inspection, Maintenance and Repair

1. Risk Level 1 dischargers shall ensure that all inspection, maintenance repair and sampling activities at the project location shall be performed or supervised by a Qualified SWPPP Practitioner (QSP) representing the discharger. The QSP may delegate any or all of these activities to an employee trained to do the task(s) appropriately, but shall ensure adequate deployment.

2. Risk Level 1 dischargers shall perform weekly inspections and observations, and at least once each 24-hour period during extended

[1] Inactive areas of construction are areas of construction activity that have been disturbed and are not scheduled to be re-disturbed for at least 14 days.

storm events, to identify and record BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. Inspectors shall be the QSP or be trained by the QSP.

3. Upon identifying failures or other shortcomings, as directed by the QSP, Risk Level 1 dischargers shall begin implementing repairs or design changes to BMPs within 72 hours of identification and complete the changes as soon as possible.

4. For each inspection required, Risk Level 1 dischargers shall complete an inspection checklist, using a form provided by the State Water Board or Regional Water Board or in an alternative format.

5. Risk Level 1 dischargers shall ensure that checklists shall remain onsite with the SWPPP and at a minimum, shall include:

    a. Inspection date and date the inspection report was written.

    b. Weather information, including presence or absence of precipitation, estimate of beginning of qualifying storm event, duration of event, time elapsed since last storm, and approximate amount of rainfall in inches.

    c. Site information, including stage of construction, activities completed, and approximate area of the site exposed.

    d. A description of any BMPs evaluated and any deficiencies noted.

    e. If the construction site is safely accessible during inclement weather, list the observations of all BMPs: erosion controls, sediment controls, chemical and waste controls, and non-storm water controls. Otherwise, list the results of visual inspections at all relevant outfalls, discharge points, downstream locations and any projected maintenance activities.

    f. Report the presence of noticeable odors or of any visible sheen on the surface of any discharges.

    g. Any corrective actions required, including any necessary changes to the SWPPP and the associated implementation dates.

    h. Photographs taken during the inspection, if any.

    i. Inspector’s name, title, and signature.

H. Rain Event Action Plan

Not required for Risk Level 1 dischargers.

I. Risk Level 1 Monitoring and Reporting Requirements

Table 1- Summary of Monitoring Requirements

Risk Level	Visual Inspections					Sample Collection	
	Quarterly Non-storm Water Discharge	Pre-storm Event		Daily Storm BMP	Post Storm	Storm Water Discharge	Receiving Water
		Baseline	REAP				
1	X	X		X	X		

1. **Construction Site Monitoring Program Requirements**

   a. Pursuant to Water Code Sections 13383 and 13267, all dischargers subject to this General Permit shall develop and implement a written site-specific Construction Site Monitoring Program (CSMP) in accordance with the requirements of this Section. The CSMP shall include all monitoring procedures and instructions, location maps, forms, and checklists as required in this section. The CSMP shall be developed prior to the commencement of construction activities, and revised as necessary to reflect project revisions. The CSMP shall be a part of the Storm Water Pollution Prevention Plan (SWPPP), included as an appendix or separate SWPPP chapter.

   b. Existing dischargers registered under the State Water Board Order No. 99-08-DWQ shall make and implement necessary revisions to their Monitoring Programs to reflect the changes in this General Permit in a timely manner, but no later than July 1, 2010. Existing dischargers shall continue to implement their existing Monitoring Programs in compliance with State Water Board Order No. 99-08-DWQ until the necessary revisions are completed according to the schedule above.

   c. When a change of ownership occurs for all or any portion of the construction site prior to completion or final stabilization, the new discharger shall comply with these requirements as of the date the ownership change occurs.

2. **Objectives**

   The CSMP shall be developed and implemented to address the following objectives:

   a. To demonstrate that the site is in compliance with the Discharge Prohibitions;

b. To determine whether non-visible pollutants are present at the construction site and are causing or contributing to exceedances of water quality objectives;

c. To determine whether immediate corrective actions, additional Best Management Practice (BMP) implementation, or SWPPP revisions are necessary to reduce pollutants in storm water discharges and authorized non-storm water discharges; and

d. To determine whether BMPs included in the SWPPP are effective in preventing or reducing pollutants in storm water discharges and authorized non-storm water discharges.

3. **Risk Level 1 - Visual Monitoring (Inspection) Requirements for Qualifying Rain Events**

a. Risk Level 1 dischargers shall visually observe (inspect) storm water discharges at all discharge locations within two business days (48 hours) after each qualifying rain event.

b. Risk Level 1 dischargers shall visually observe (inspect) the discharge of stored or contained storm water that is derived from and discharged subsequent to a qualifying rain event producing precipitation of ½ inch or more at the time of discharge. Stored or contained storm water that will likely discharge after operating hours due to anticipated precipitation shall be observed prior to the discharge during operating hours.

c. Risk Level 1 dischargers shall conduct visual observations (inspections) during business hours only.

d. Risk Level 1 dischargers shall record the time, date and rain gauge reading of all qualifying rain events.

e. Within 2 business days (48 hours) prior to each qualifying rain event, Risk Level 1 dischargers shall visually observe (inspect):

i. All storm water drainage areas to identify any spills, leaks, or uncontrolled pollutant sources. If needed, the discharger shall implement appropriate corrective actions.

ii. All BMPs to identify whether they have been properly implemented in accordance with the SWPPP. If needed, the discharger shall implement appropriate corrective actions.

iii. Any storm water storage and containment areas to detect leaks and ensure maintenance of adequate freeboard.

f. For the visual observations (inspections) described in e.i and e.iii above, Risk Level 1 dischargers shall observe the presence or absence of floating and suspended materials, a sheen on the surface, discolorations, turbidity, odors, and source(s) of any observed pollutants.

g. Within two business days (48 hours) after each qualifying rain event, Risk Level 1 dischargers shall conduct post rain event visual observations (inspections) to (1) identify whether BMPs were adequately designed, implemented, and effective, and (2) identify additional BMPs and revise the SWPPP accordingly.

h. Risk Level 1 dischargers shall maintain on-site records of all visual observations (inspections), personnel performing the observations, observation dates, weather conditions, locations observed, and corrective actions taken in response to the observations.

4. **Risk Level 1 – Visual Observation Exemptions**

a. Risk Level 1 dischargers shall be prepared to conduct visual observation (inspections) until the minimum requirements of Section I.3 above are completed. Risk Level 1 dischargers are not required to conduct visual observation (inspections) under the following conditions:

i. During dangerous weather conditions such as flooding and electrical storms.

ii. Outside of scheduled site business hours.

b. If no required visual observations (inspections) are collected due to these exceptions, Risk Level 1 dischargers shall include an explanation in their SWPPP and in the Annual Report documenting why the visual observations (inspections) were not conducted.

5. **Risk Level 1 – Monitoring Methods**

Risk Level 1 dischargers shall include a description of the visual observation locations, visual observation procedures, and visual observation follow-up and tracking procedures in the CSMP.

6. **Risk Level 1 – Non-Storm Water Discharge Monitoring Requirements**

a. Visual Monitoring Requirements:

   i. Risk Level 1 dischargers shall visually observe (inspect) each drainage area for the presence of (or indications of prior) unauthorized and authorized non-storm water discharges and their sources.

   ii. Risk Level 1 dischargers shall conduct one visual observation (inspection) quarterly in each of the following periods: January-March, April-June, July-September, and October-December. Visual observation (inspections) are only required during daylight hours (sunrise to sunset).

   iii. Risk Level 1 dischargers shall ensure that visual observations (inspections) document the presence or evidence of any non-storm water discharge (authorized or unauthorized), pollutant characteristics (floating and suspended material, sheen, discoloration, turbidity, odor, etc.), and source. Risk Level 1 dischargers shall maintain on-site records indicating the personnel performing the visual observation (inspections), the dates and approximate time each drainage area and non-storm water discharge was observed, and the response taken to eliminate unauthorized non-storm water discharges and to reduce or prevent pollutants from contacting non-storm water discharges.

7. **Risk Level 1 – Non-Visible Pollutant Monitoring Requirements**

   a. Risk Level 1 dischargers shall collect one or more samples during any breach, malfunction, leakage, or spill observed during a visual inspection which could result in the discharge of pollutants to surface waters that would not be visually detectable in storm water.

   b. Risk Level 1 dischargers shall ensure that water samples are large enough to characterize the site conditions.

   c. Risk Level 1 dischargers shall collect samples at all discharge locations that can be safely accessed.

   d. Risk Level 1 dischargers shall collect samples during the first two hours of discharge from rain events that occur during business hours and which generate runoff.

   e. Risk Level 1 dischargers shall analyze samples for all non-visible pollutant parameters (if applicable) - parameters indicating the

presence of pollutants identified in the pollutant source assessment required (Risk Level 1 dischargers shall modify their CSMPs to address these additional parameters in accordance with any updated SWPPP pollutant source assessment).

f. Risk Level 1 dischargers shall collect a sample of storm water that has not come in contact with the disturbed soil or the materials stored or used on-site (uncontaminated sample) for comparison with the discharge sample.

g. Risk Level 1 dischargers shall compare the uncontaminated sample to the samples of discharge using field analysis or through laboratory analysis.[2]

h. Risk Level 1 dischargers shall keep all field /or analytical data in the SWPPP document.

8. **Risk Level 1 – Particle Size Analysis for Project Risk Justification**

Risk Level 1 dischargers justifying an alternative project risk shall report a soil particle size analysis used to determine the RUSLE K-Factor. ASTM D-422 (Standard Test Method for Particle-Size Analysis of Soils), as revised, shall be used to determine the percentages of sand, very fine sand, silt, and clay on the site.

9. **Risk Level 1 – Records**

Risk Level 1 dischargers shall retain records of all storm water monitoring information and copies of all reports (including Annual Reports) for a period of at least three years. Risk Level 1 dischargers shall retain all records on-site while construction is ongoing. These records include:

a. The date, place, time of facility inspections, sampling, visual observation (inspections), and/or measurements, including precipitation.

b. The individual(s) who performed the facility inspections, sampling, visual observation (inspections), and or measurements.

c. The date and approximate time of analyses.

d. The individual(s) who performed the analyses.

[2] For laboratory analysis, all sampling, sample preservation, and analyses must be conducted according to test procedures under 40 CFR Part 136. Field discharge samples shall be collected and analyzed according to the specifications of the manufacturer of the sampling devices employed.

e. A summary of all analytical results from the last three years, the method detection limits and reporting units, and the analytical techniques or methods used.

f. Rain gauge readings from site inspections.

g. Quality assurance/quality control records and results.

h. Non-storm water discharge inspections and visual observation (inspections) and storm water discharge visual observation records (see Sections I.3 and I.6 above).

i. Visual observation and sample collection exception records (see Section I.4 above).

j. The records of any corrective actions and follow-up activities that resulted from analytical results, visual observation (inspections), or inspections.

ATTACHMENT D
RISK LEVEL 2 REQUIREMENTS

A. Effluent Standards

[These requirements are the same as those in the General Permit order.]

1. Narrative – Risk Level 2 dischargers shall comply with the narrative effluent standards listed below:

    a. Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.

    b. Dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.

2. Numeric – Risk level 2 dischargers are subject to a pH NAL of 6.5-8.5, and a turbidity NAL of 250 NTU.

B. Good Site Management "Housekeeping"

1. Risk Level 2 dischargers shall implement good site management (i.e., "housekeeping") measures for construction materials that could potentially be a threat to water quality if discharged. At a minimum, Risk Level 2 dischargers shall implement the following good housekeeping measures:

    a. Conduct an inventory of the products used and/or expected to be used and the end products that are produced and/or expected to be produced. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).

    b. Cover and berm loose stockpiled construction materials that are not actively being used (i.e. soil, spoils, aggregate, fly-ash, stucco, hydrated lime, etc.).

c. Store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed).

d. Minimize exposure of construction materials to precipitation. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).

e. Implement BMPs to prevent the off-site tracking of loose construction and landscape materials.

2. Risk Level 2 dischargers shall implement good housekeeping measures for waste management, which, at a minimum, shall consist of the following:

a. Prevent disposal of any rinse or wash waters or materials on impervious or pervious site surfaces or into the storm drain system.

b. Ensure the containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the storm water drainage system or receiving water.

c. Clean or replace sanitation facilities and inspecting them regularly for leaks and spills.

d. Cover waste disposal containers at the end of every business day and during a rain event.

e. Prevent discharges from waste disposal containers to the storm water drainage system or receiving water.

f. Contain and securely protect stockpiled waste material from wind and rain at all times unless actively being used.

g. Implement procedures that effectively address hazardous and non-hazardous spills.

h. Develop a spill response and implementation element of the SWPPP prior to commencement of construction activities. The SWPPP shall require:

i. Equipment and materials for cleanup of spills shall be available on site and that spills and leaks shall be cleaned up immediately and disposed of properly.

ii. Appropriate spill response personnel are assigned and trained.

i. Ensure the containment of concrete washout areas and other washout areas that may contain additional pollutants so there is no discharge into the underlying soil and onto the surrounding areas.

3. Risk Level 2 dischargers shall implement good housekeeping for vehicle storage and maintenance, which, at a minimum, shall consist of the following:

   a. Prevent oil, grease, or fuel to leak in to the ground, storm drains or surface waters.

   b. Place all equipment or vehicles, which are to be fueled, maintained and stored in a designated area fitted with appropriate BMPs.

   c. Clean leaks immediately and disposing of leaked materials properly.

4. Risk Level 2 dischargers shall implement good housekeeping for landscape materials, which, at a minimum, shall consist of the following:

   a. Contain stockpiled materials such as mulches and topsoil when they are not actively being used.

   b. Contain all fertilizers and other landscape materials when they are not actively being used.

   c. Discontinue the application of any erodible landscape material within 2 days before a forecasted rain event or during periods of precipitation.

   d. Apply erodible landscape material at quantities and application rates according to manufacture recommendations or based on written specifications by knowledgeable and experienced field personnel.

   e. Stack erodible landscape material on pallets and covering or storing such materials when not being used or applied.

5. Risk Level 2 dischargers shall conduct an assessment and create a list of potential pollutant sources and identify any areas of the site where additional BMPs are necessary to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. This potential pollutant list shall be kept with the SWPPP and shall identify

all non-visible pollutants which are known, or should be known, to occur on the construction site. At a minimum, when developing BMPs, Risk Level 2 dischargers shall do the following:

a. Consider the quantity, physical characteristics (e.g., liquid, powder, solid), and locations of each potential pollutant source handled, produced, stored, recycled, or disposed of at the site.

b. Consider the degree to which pollutants associated with those materials may be exposed to and mobilized by contact with storm water.

c. Consider the direct and indirect pathways that pollutants may be exposed to storm water or authorized non-storm water discharges. This shall include an assessment of past spills or leaks, non-storm water discharges, and discharges from adjoining areas.

d. Ensure retention of sampling, visual observation, and inspection records.

e. Ensure effectiveness of existing BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.

6. Risk Level 2 dischargers shall implement good housekeeping measures on the construction site to control the air deposition of site materials and from site operations. Such particulates can include, but are not limited to, sediment, nutrients, trash, metals, bacteria, oil and grease and organics.

7. **Additional Risk Level 2 Requirement:** Risk Level 2 dischargers shall document all housekeeping BMPs in the SWPPP and REAP(s) in accordance with the nature and phase of the construction project. Construction phases at traditional land development projects include Grading and Land Development Phase, Streets and Utilities, or Vertical Construction for traditional land development projects.

C. Non-Storm Water Management

1. Risk Level 2 dischargers shall implement measures to control all non-storm water discharges during construction.

2. Risk Level 2 dischargers shall wash vehicles in such a manner as to prevent non-storm water discharges to surface waters or MS4 drainage systems.

3. Risk Level 2 dischargers shall clean streets in such a manner as to prevent unauthorized non-storm water discharges from reaching surface water or MS4 drainage systems.

D. Erosion Control

1. Risk Level 2 dischargers shall implement effective wind erosion control.

2. Risk Level 2 dischargers shall provide effective soil cover for inactive[1] areas and all finished slopes, open space, utility backfill, and completed lots.

3. Risk Level 2 dischargers shall limit the use of plastic materials when more sustainable, environmentally friendly alternatives exist. Where plastic materials are deemed necessary, the discharger shall consider the use of plastic materials resistant to solar degradation.

E. Sediment Controls

1. Risk Level 2 dischargers shall establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from the site.

2. On sites where sediment basins are to be used, Risk Level 2 dischargers shall, at minimum, design sediment basins according to the method provided in CASQA's Construction BMP Guidance Handbook.

3. **Additional Risk Level 2 Requirement:** Risk Level 2 dischargers shall implement appropriate erosion control BMPs (runoff control and soil stabilization) in conjunction with sediment control BMPs for areas under active[2] construction.

4. **Additional Risk Level 2 Requirement:** Risk Level 2 dischargers shall apply linear sediment controls along the toe of the slope, face of the slope, and at the grade breaks of exposed slopes to comply with sheet flow lengths[3] in accordance with Table 1.

[1] Inactive areas of construction are areas of construction activity that have been disturbed and are not scheduled to be re-disturbed for at least 14 days.
[2] Active areas of construction are areas undergoing land surface disturbance. This includes construction activity during the preliminary stage, mass grading stage, streets and utilities stage and the vertical construction stage.
[3] Sheet flow length is the length that shallow, low velocity flow travels across a site.

Table 1 - Critical Slope/Sheet Flow Length Combinations

Slope Percentage	Sheet flow length not to exceed
0-25%	20 feet
25-50%	15 feet
Over 50%	10 feet

5. **Additional Risk Level 2 Requirement:** Risk Level 2 dischargers shall ensure that construction activity traffic to and from the project is limited to entrances and exits that employ effective controls to prevent offsite tracking of sediment.

6. **Additional Risk Level 2 Requirement:** Risk Level 2 dischargers shall ensure that all storm drain inlets and perimeter controls, runoff control BMPs, and pollutant controls at entrances and exits (e.g. tire washoff locations) are maintained and protected from activities that reduce their effectiveness.

7. **Additional Risk Level 2 Requirement:** Risk Level 2 dischargers shall inspect on a daily basis all immediate access roads daily. At a minimum daily (when necessary) and prior to any rain event, the discharger shall remove any sediment or other construction activity-related materials that are deposited on the roads (by vacuuming or sweeping).

F. Run-on and Run-off Controls

Risk Level 2 dischargers shall effectively manage all run-on, all runoff within the site and all runoff that discharges off the site. Run-on from off site shall be directed away from all disturbed areas or shall collectively be in compliance with the effluent limitations in this General Permit.

G. Inspection, Maintenance and Repair

1. Risk Level 2 dischargers shall ensure that all inspection, maintenance repair and sampling activities at the project location shall be performed or supervised by a Qualified SWPPP Practitioner (QSP) representing the discharger. The QSP may delegate any or all of these activities to an employee appropriately trained to do the task(s).

2. Risk Level 2 dischargers shall perform weekly inspections and observations, and at least once each 24-hour period during extended storm events, to identify and record BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. Inspectors shall be the QSP or be trained by the QSP.

3. Upon identifying failures or other shortcomings, as directed by the QSP, Risk Level 2 dischargers shall begin implementing repairs or design changes to BMPs within 72 hours of identification and complete the changes as soon as possible.

4. For each inspection required, Risk Level 2 dischargers shall complete an inspection checklist, using a form provided by the State Water Board or Regional Water Board or in an alternative format.

5. Risk Level 2 dischargers shall ensure that checklists shall remain onsite with the SWPPP and at a minimum, shall include:

   a. Inspection date and date the inspection report was written.

   b. Weather information, including presence or absence of precipitation, estimate of beginning of qualifying storm event, duration of event, time elapsed since last storm, and approximate amount of rainfall in inches.

   c. Site information, including stage of construction, activities completed, and approximate area of the site exposed.

   d. A description of any BMPs evaluated and any deficiencies noted.

   e. If the construction site is safely accessible during inclement weather, list the observations of all BMPs: erosion controls, sediment controls, chemical and waste controls, and non-storm water controls. Otherwise, list the results of visual inspections at all relevant outfalls, discharge points, downstream locations and any projected maintenance activities.

   f. Report the presence of noticeable odors or of any visible sheen on the surface of any discharges.

   g. Any corrective actions required, including any necessary changes to the SWPPP and the associated implementation dates.

   h. Photographs taken during the inspection, if any.

   i. Inspector's name, title, and signature.

H. Rain Event Action Plan

1. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP develop a Rain Event Action Plan (REAP) 48 hours prior to any

likely precipitation event. A likely precipitation event is any weather pattern that is forecast to have a 50% or greater probability of producing precipitation in the project area. The discharger shall ensure a QSP obtain a printed copy of precipitation forecast information from the National Weather Service Forecast Office (e.g., by entering the zip code of the project's location at http://www.srh.noaa.gov/forecast).

2. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP develop the REAPs for all phases of construction (i.e., Grading and Land Development, Streets and Utilities, Vertical Construction, Final Landscaping and Site Stabilization).

3. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP ensure that the REAP include, at a minimum, the following site information:

   a. Site Address
   b. Calculated Risk Level (2 or 3)
   c. Site Storm Water Manager Information including the name, company, and 24-hour emergency telephone number
   d. Erosion and Sediment Control Provider information including the name, company, and 24-hour emergency telephone number
   e. Storm Water Sampling Agent information including the name, company, and 24-hour emergency telephone number

4. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP include in the REAP, at a minimum, the following project phase information:

   a. Activities associated with each construction phase
   b. Trades active on the construction site during each construction phase
   c. Trade contractor information
   d. Suggested actions for each project phase

5. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP develop additional REAPs for project sites where construction activities are indefinitely halted or postponed (Inactive Construction). At a minimum, Inactive Construction REAPs must include:

   a. Site Address
   b. Calculated Risk Level (2 or 3)
   c. Site Storm Water Manager Information including the name, company, and 24-hour emergency telephone number

d. Erosion and Sediment Control Provider information including the name, company, and 24-hour emergency telephone number
e. Storm Water Sampling Agent information including the name, company, and 24-hour emergency telephone number
f. Trades active on site during Inactive Construction
g. Trade contractor information
h. Suggested actions for inactive construction sites

6. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP begin implementation and make the REAP available onsite no later than 24 hours prior to the likely precipitation event.

7. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP maintain onsite a paper copy of each REAP onsite in compliance with the record retention requirements of the Special Provisions in this General Permit.

I. Risk Level 2 Monitoring and Reporting Requirements

Table 2- Summary of Monitoring Requirements

Risk Level	Visual Inspections					Sample Collection	
	Quarterly Non-storm Water Discharge	Pre-storm Event		Daily Storm BMP	Post Storm	Storm Water Discharge	Receiving Water
		Baseline	REAP				
2	X	X	X	X	X	X	

1. Construction Site Monitoring Program Requirements

   a. Pursuant to Water Code Sections 13383 and 13267, all dischargers subject to this General Permit shall develop and implement a written site-specific Construction Site Monitoring Program (CSMP) in accordance with the requirements of this Section. The CSMP shall include all monitoring procedures and instructions, location maps, forms, and checklists as required in this section. The CSMP shall be developed prior to the commencement of construction activities, and revised as necessary to reflect project revisions. The CSMP shall be a part of the Storm Water Pollution Prevention Plan (SWPPP), included as an appendix or separate SWPPP chapter.

   b. Existing dischargers registered under the State Water Board Order No. 99-08-DWQ shall make and implement necessary revisions to their Monitoring Program to reflect the changes in this General Permit in a timely manner, but no later than July 1, 2010. Existing dischargers shall continue to implement their existing Monitoring Programs in compliance with State Water Board Order No. 99-08-DWQ until the necessary revisions are completed according to the schedule above.

   c. When a change of ownership occurs for all or any portion of the construction site prior to completion or final stabilization, the new discharger shall comply with these requirements as of the date the ownership change occurs.

2. **Objectives**

   The CSMP shall be developed and implemented to address the following objectives:

   a. To demonstrate that the site is in compliance with the Discharge Prohibitions and applicable Numeric Action Levels (NALs).

b. To determine whether non-visible pollutants are present at the construction site and are causing or contributing to exceedances of water quality objectives.

c. To determine whether immediate corrective actions, additional Best Management Practice (BMP) implementation, or SWPPP revisions are necessary to reduce pollutants in storm water discharges and authorized non-storm water discharges.

d. To determine whether BMPs included in the SWPPP/Rain Event Action Plan (REAP) are effective in preventing or reducing pollutants in storm water discharges and authorized non-storm water discharges.

3. **Risk Level 2 – Visual Monitoring (Inspection) Requirements for Qualifying Rain Events**

a. Risk Level 2 dischargers shall visually observe (inspect) storm water discharges at all discharge locations within two business days (48 hours) after each qualifying rain event.

b. Risk Level 2 dischargers shall visually observe (inspect) the discharge of stored or contained storm water that is derived from and discharged subsequent to a qualifying rain event producing precipitation of ½ inch or more at the time of discharge. Stored or contained storm water that will likely discharge after operating hours due to anticipated precipitation shall be observed prior to the discharge during operating hours.

c. Risk Level 2 dischargers shall conduct visual observations (inspections) during business hours only.

d. Risk Level 2 dischargers shall record the time, date and rain gauge reading of all qualifying rain events.

e. Within 2 business days (48 hours) prior to each qualifying rain event, Risk Level 2 dischargers shall visually observe (inspect):

i. all storm water drainage areas to identify any spills, leaks, or uncontrolled pollutant sources. If needed, the discharger shall implement appropriate corrective actions.

ii. all BMPs to identify whether they have been properly implemented in accordance with the SWPPP/REAP. If needed, the discharger shall implement appropriate corrective actions.

iii. any storm water storage and containment areas to detect leaks and ensure maintenance of adequate freeboard.

f. For the visual observations (inspections) described in c.i and c.iii above, Risk Level 2 dischargers shall observe the presence or absence of floating and suspended materials, a sheen on the surface, discolorations, turbidity, odors, and source(s) of any observed pollutants.

g. Within two business days (48 hours) after each qualifying rain event, Risk Level 2 dischargers shall conduct post rain event visual observations (inspections) to (1) identify whether BMPs were adequately designed, implemented, and effective, and (2) identify additional BMPs and revise the SWPPP accordingly.

h. Risk Level 2 dischargers shall maintain on-site records of all visual observations (inspections), personnel performing the observations, observation dates, weather conditions, locations observed, and corrective actions taken in response to the observations.

4. **Risk Level 2 – Water Quality Sampling and Analysis**

a. Risk Level 2 dischargers shall collect storm water grab samples from sampling locations, as defined in Section I.5. The storm water grab sample(s) obtained shall be representative of the flow and characteristics of the discharge.

b. At minimum, Risk Level 2 dischargers shall collect 3 samples per day of the qualifying event.

c. Risk Level 2 dischargers shall ensure that the grab samples collected of stored or contained storm water are from discharges subsequent to a qualifying rain event (producing precipitation of ½ inch or more at the time of discharge).

<u>Storm Water Effluent Monitoring Requirements</u>

d. Risk Level 2 dischargers shall analyze their effluent samples for:

i. pH and turbidity.

ii. Any additional parameters for which monitoring is required by the Regional Water Board.

5. **Risk Level 2 – Storm Water Discharge Water Quality Sampling Locations**

Effluent Sampling Locations

a. Risk Level 2 dischargers shall perform sampling and analysis of storm water discharges to characterize discharges associated with construction activity from the entire project disturbed area.

b. Risk Level 2 dischargers shall collect effluent samples at all discharge points where storm water is discharged off-site.

c. Risk Level 2 dischargers shall ensure that storm water discharge collected and observed represent[4] the effluent in each drainage area based on visual observation of the water and upstream conditions.

d. Risk Level 2 dischargers shall monitor and report site run-on from surrounding areas if there is reason to believe run-on may contribute to an exceedance of NALs.

e. Risk Level 2 dischargers who deploy an ATS on their site, or a portion on their site, shall collect ATS effluent samples and measurements from the discharge pipe or another location representative of the nature of the discharge.

f. Risk Level 2 dischargers shall select analytical test methods from the list provided in Table 3 below.

g. All storm water sample collection preservation and handling shall be conducted in accordance with Section I.7 “Storm Water Sample Collection and Handling Instructions” below.

6. **Risk Level 2 – Visual Observation and Sample Collection Exemptions**

a. Risk Level 2 dischargers shall be prepared to collect samples and conduct visual observation (inspections) until the minimum requirements of Sections I.3 and I.4 above are completed. Risk Level 2 dischargers are not required to physically collect samples or conduct visual observation (inspections) under the following conditions:

[4] For example, if there has been concrete work recently in an area, or drywall scrap is exposed to the rain, a pH sample shall be taken of drainage from the relevant work area. Similarly, if sediment laden water is flowing through some parts of a silt fence, samples shall be taken of the sediment-laden water even if most water flowing through the fence is clear.

i. During dangerous weather conditions such as flooding and electrical storms.

ii. Outside of scheduled site business hours.

b. If no required samples or visual observation (inspections) are collected due to these exceptions, Risk Level 2 dischargers shall include an explanation in their SWPPP and in the Annual Report documenting why the sampling or visual observation (inspections) were not conducted.

7. **Risk Level 2 – Storm Water Sample Collection and Handling Instructions**

a. Risk Level 2 dischargers shall refer to Table 3 below for test methods, detection limits, and reporting units.

b. Risk Level 2 dischargers shall ensure that testing laboratories will receive samples within 48 hours of the physical sampling (unless otherwise required by the laboratory), and shall use only the sample containers provided by the laboratory to collect and store samples.

c. Risk Level 2 dischargers shall designate and train personnel to collect, maintain, and ship samples in accordance with the Surface Water Ambient Monitoring Program's (SWAMP) 2008 Quality Assurance Program Plan (QAPrP).[5]

8. **Risk Level 2 – Monitoring Methods**

a. Risk Level 2 dischargers shall include a description of the following items in the CSMP:

i. Visual observation locations, visual observation procedures, and visual observation follow-up and tracking procedures.

ii. Sampling locations, and sample collection and handling procedures. This shall include detailed procedures for sample collection, storage, preservation, and shipping to the testing lab to assure that consistent quality control and quality assurance is maintained. Dischargers shall attach to the monitoring program

[5] Additional information regarding SWAMP's QAPrP can be found at http://www.waterboards.ca.gov/water_issues/programs/swamp/. QAPrP:http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/qapp/swamp_qapp_master090108a.pdf.

an example Chain of Custody form used when handling and shipping samples.

iii. Identification of the analytical methods and related method detection limits (if applicable) for each parameter required in Section I.4 above.

b. Risk Level 2 dischargers shall ensure that all sampling and sample preservation are in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association). All monitoring instruments and equipment (including a discharger's own field instruments for measuring pH and turbidity) should be calibrated and maintained in accordance with manufacturers' specifications to ensure accurate measurements. Risk Level 2 dischargers shall ensure that all laboratory analyses are conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in this General Permit or by the Regional Water Board. With the exception of field analysis conducted by the discharger for turbidity and pH, all analyses should be sent to and conducted at a laboratory certified for such analyses by the State Department of Health Services. Risk Level 2 dischargers shall conduct their own field analysis of pH and may conduct their own field analysis of turbidity if the discharger has sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to adequately perform the field analysis.

9. **Risk Level 2 – Analytical Methods**

a. Risk Level 2 dischargers shall refer to Table 3 below for test methods, detection limits, and reporting units.

b. **pH**: Risk Level 2 dischargers shall perform pH analysis on-site with a calibrated pH meter or a pH test kit. Risk Level 2 dischargers shall record pH monitoring results on paper and retain these records in accordance with Section I.14, below.

c. **Turbidity**: Risk Level 2 dischargers shall perform turbidity analysis using a calibrated turbidity meter (turbidimeter), either on-site or at an accredited lab. Acceptable test methods include Standard Method 2130 or USEPA Method 180.1. The results will be recorded in the site log book in Nephelometric Turbidity Units (NTU).

10. **Risk Level 2 - Non-Storm Water Discharge Monitoring Requirements**

a. Visual Monitoring Requirements:

i. Risk Level 2 dischargers shall visually observe (inspect) each drainage area for the presence of (or indications of prior) unauthorized and authorized non-storm water discharges and their sources.

ii. Risk Level 2 dischargers shall conduct one visual observation (inspection) quarterly in each of the following periods: January-March, April-June, July-September, and October-December. Visual observation (inspections) are only required during daylight hours (sunrise to sunset).

iii. Risk Level 2 dischargers shall ensure that visual observations (inspections) document the presence or evidence of any non-storm water discharge (authorized or unauthorized), pollutant characteristics (floating and suspended material, sheen, discoloration, turbidity, odor, etc.), and source. Risk Level 2 dischargers shall maintain on-site records indicating the personnel performing the visual observation (inspections), the dates and approximate time each drainage area and non-storm water discharge was observed, and the response taken to eliminate unauthorized non-storm water discharges and to reduce or prevent pollutants from contacting non-storm water discharges.

b. Effluent Sampling Locations:

i. Risk Level 2 dischargers shall sample effluent at all discharge points where non-storm water and/or authorized non-storm water is discharged off-site.

ii. Risk Level 2 dischargers shall send all non-storm water sample analyses to a laboratory certified for such analyses by the State Department of Health Services.

iii. Risk Level 2 dischargers shall monitor and report run-on from surrounding areas if there is reason to believe run-on may contribute to an exceedance of NALs.

11. **Risk Level 2 – Non-Visible Pollutant Monitoring Requirements**

a. Risk Level 2 dischargers shall collect one or more samples during any breach, malfunction, leakage, or spill observed during a visual

inspection which could result in the discharge of pollutants to surface waters that would not be visually detectable in storm water.

b. Risk Level 2 dischargers shall ensure that water samples are large enough to characterize the site conditions.

c. Risk Level 2 dischargers shall collect samples at all discharge locations that can be safely accessed.

d. Risk Level 2 dischargers shall collect samples during the first two hours of discharge from rain events that occur during business hours and which generate runoff.

e. Risk Level 2 dischargers shall analyze samples for all non-visible pollutant parameters (if applicable) - parameters indicating the presence of pollutants identified in the pollutant source assessment required (Risk Level 2 dischargers shall modify their CSMPs to address these additional parameters in accordance with any updated SWPPP pollutant source assessment).

f. Risk Level 2 dischargers shall collect a sample of storm water that has not come in contact with the disturbed soil or the materials stored or used on-site (uncontaminated sample) for comparison with the discharge sample.

g. Risk Level 2 dischargers shall compare the uncontaminated sample to the samples of discharge using field analysis or through laboratory analysis.[6]

h. Risk Level 2 dischargers shall keep all field /or analytical data in the SWPPP document.

12. **Risk Level 2 – Watershed Monitoring Option**

Risk Level 2 dischargers who are part of a qualified regional watershed-based monitoring program may be eligible for relief from the requirements in Sections I.5. The Regional Water Board may approve proposals to substitute an acceptable watershed-based monitoring program by determining if the watershed-based monitoring program will provide substantially similar monitoring information in evaluating discharger compliance with the requirements of this General Permit.

[6] For laboratory analysis, all sampling, sample preservation, and analyses must be conducted according to test procedures under 40 CFR Part 136. Field discharge samples shall be collected and analyzed according to the specifications of the manufacturer of the sampling devices employed.

13. **Risk Level 2 – Particle Size Analysis for Project Risk Justification**

    Risk Level 2 dischargers justifying an alternative project risk shall report a soil particle size analysis used to determine the RUSLE K-Factor. ASTM D-422 (Standard Test Method for Particle-Size Analysis of Soils), as revised, shall be used to determine the percentages of sand, very fine sand, silt, and clay on the site.

14. **Risk Level 2 – Records**

    Risk Level 2 dischargers shall retain records of all storm water monitoring information and copies of all reports (including Annual Reports) for a period of at least three years. Risk Level 2 dischargers shall retain all records on-site while construction is ongoing. These records include:

    a. The date, place, time of facility inspections, sampling, visual observation (inspections), and/or measurements, including precipitation.

    b. The individual(s) who performed the facility inspections, sampling, visual observation (inspections), and or measurements.

    c. The date and approximate time of analyses.

    d. The individual(s) who performed the analyses.

    e. A summary of all analytical results from the last three years, the method detection limits and reporting units, the analytical techniques or methods used, and the chain of custody forms.

    f. Rain gauge readings from site inspections;

    g. Quality assurance/quality control records and results.

    h. Non-storm water discharge inspections and visual observation (inspections) and storm water discharge visual observation records (see Sections I.3 and I.10 above).

    i. Visual observation and sample collection exception records (see Section I.6 above).

    j. The records of any corrective actions and follow-up activities that resulted from analytical results, visual observation (inspections), or inspections.

15. **Risk Level 2 – NAL Exceedance Report**

a. In the event that any effluent sample exceeds an applicable NAL, Risk Level 2 dischargers shall electronically submit all storm event sampling results to the State Water Board no later than 10 days after the conclusion of the storm event. The Regional Boards have the authority to require the submittal of an NAL Exceedance Report.

b. Risk Level 2 dischargers shall certify each NAL Exceedance Report in accordance with the Special Provisions for Construction Activity.

c. Risk Level 2 dischargers shall retain an electronic or paper copy of each NAL Exceedance Report for a minimum of three years after the date the annual report is filed.

d. Risk Level 2 dischargers shall include in the NAL Exceedance Report:

i. The analytical method(s), method reporting unit(s), and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as “less than the method detection limit”).

ii. The date, place, time of sampling, visual observation (inspections), and/or measurements, including precipitation.

iii. A description of the current BMPs associated with the effluent sample that exceeded the NAL and the proposed corrective actions taken.

Table 3 – Risk Level 2 Test Methods, Detection Limits, Reporting Units and Applicable NALs/NELs

Parameter	Test Method / Protocol	Discharge Type	Min. Detection Limit	Reporting Units	Numeric Action Level
pH	Field test with calibrated portable instrument	Risk Level 2 Discharges	0.2	pH units	lower NAL = 6.5 upper NAL = 8.5
Turbidity	EPA 0180.1 and/or field test with calibrated portable instrument	Risk Level 2 Discharges other than ATS	1	NTU	250 NTU
		For ATS discharges	1	NTU	N/A

ATTACHMENT E
RISK LEVEL 3 REQUIREMENTS

A. Effluent Standards

[These requirements are the same as those in the General Permit order.]

1. Narrative – Risk Level 3 dischargers shall comply with the narrative effluent standards listed below:

   a. Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.

   b. Dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.

2. Numeric –Risk Level 3 dischargers are subject to a pH NAL of 6.5-8.5, and a turbidity NAL of 250 NTU.

B. Good Site Management "Housekeeping"

1. Risk Level 3 dischargers shall implement good site management (i.e., "housekeeping") measures for construction materials that could potentially be a threat to water quality if discharged. At a minimum, Risk Level 3 dischargers shall implement the following good housekeeping measures:

   a. Conduct an inventory of the products used and/or expected to be used and the end products that are produced and/or expected to be produced. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).

   b. Cover and berm loose stockpiled construction materials that are not actively being used (i.e. soil, spoils, aggregate, fly-ash, stucco, hydrated lime, etc.).

c. Store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed).

d. Minimize exposure of construction materials to precipitation. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).

e. Implement BMPs to prevent the off-site tracking of loose construction and landscape materials.

2. Risk Level 3 dischargers shall implement good housekeeping measures for waste management, which, at a minimum, shall consist of the following:

a. Prevent disposal of any rinse or wash waters or materials on impervious or pervious site surfaces or into the storm drain system.

b. Ensure the containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the storm water drainage system or receiving water.

c. Clean or replace sanitation facilities and inspecting them regularly for leaks and spills.

d. Cover waste disposal containers at the end of every business day and during a rain event.

e. Prevent discharges from waste disposal containers to the storm water drainage system or receiving water.

f. Contain and securely protecting stockpiled waste material from wind and rain at all times unless actively being used.

g. Implement procedures that effectively address hazardous and non-hazardous spills.

h. Develop a spill response and implementation element of the SWPPP prior to commencement of construction activities. The SWPPP shall require that:

i. Equipment and materials for cleanup of spills shall be available on site and that spills and leaks shall be cleaned up immediately and disposed of properly; and

ii. Appropriate spill response personnel are assigned and trained.

i. Ensure the containment of concrete washout areas and other washout areas that may contain additional pollutants so there is no discharge into the underlying soil and onto the surrounding areas.

3. Risk Level 3 dischargers shall implement good housekeeping for vehicle storage and maintenance, which, at a minimum, shall consist of the following:

   a. Prevent oil, grease, or fuel to leak in to the ground, storm drains or surface waters.

   b. Place all equipment or vehicles, which are to be fueled, maintained and stored in a designated area fitted with appropriate BMPs.

   c. Clean leaks immediately and disposing of leaked materials properly.

4. Risk Level 3 dischargers shall implement good housekeeping for landscape materials, which, at a minimum, shall consist of the following:

   a. Contain stockpiled materials such as mulches and topsoil when they are not actively being used.

   b. Contain fertilizers and other landscape materials when they are not actively being used.

   c. Discontinuing the application of any erodible landscape material within 2 days before a forecasted rain event or during periods of precipitation.

   d. Applying erodible landscape material at quantities and application rates according to manufacture recommendations or based on written specifications by knowledgeable and experienced field personnel.

   e. Stacking erodible landscape material on pallets and covering or storing such materials when not being used or applied.

5. Risk Level 3 dischargers shall conduct an assessment and create a list of potential pollutant sources and identify any areas of the site where additional BMPs are necessary to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. This potential pollutant list shall be kept with the SWPPP and shall identify

all non-visible pollutants which are known, or should be known, to occur on the construction site. At a minimum, when developing BMPs, Risk Level 3 dischargers shall do the following:

a. Consider the quantity, physical characteristics (e.g., liquid, powder, solid), and locations of each potential pollutant source handled, produced, stored, recycled, or disposed of at the site.

b. Consider the degree to which pollutants associated with those materials may be exposed to and mobilized by contact with storm water.

c. Consider the direct and indirect pathways that pollutants may be exposed to storm water or authorized non-storm water discharges. This shall include an assessment of past spills or leaks, non-storm water discharges, and discharges from adjoining areas.

d. Ensure retention of sampling, visual observation, and inspection records.

e. Ensure effectiveness of existing BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.

6. Risk Level 3 dischargers shall implement good housekeeping measures on the construction site to control the air deposition of site materials and from site operations. Such particulates can include, but are not limited to, sediment, nutrients, trash, metals, bacteria, oil and grease and organics.

7. **Additional Risk Level 3 Requirement:** Risk Level 3 dischargers shall document all housekeeping BMPs in the SWPPP and REAP(s) in accordance with the nature and phase of the construction project. Construction phases at traditional land development projects include Grading and Land Development Phase, Streets and Utilities, or Vertical Construction for traditional land development projects.

C. Non-Storm Water Management

1. Risk Level 3 dischargers shall implement measures to control all non-storm water discharges during construction.

2. Risk Level 3 dischargers shall wash vehicles in such a manner as to prevent non-storm water discharges to surface waters or MS4 drainage systems.

3. Risk Level 3 dischargers shall clean streets in such a manner as to prevent unauthorized non-storm water discharges from reaching surface water or MS4 drainage systems.

D. Erosion Control

1. Risk Level 3 dischargers shall implement effective wind erosion control.

2. Risk Level 3 dischargers shall provide effective soil cover for inactive[1] areas and all finished slopes, open space, utility backfill, and completed lots.

3. Dischargers shall limit the use of plastic materials when more sustainable, environmentally friendly alternatives exist. Where plastic materials are deemed necessary, the discharger shall consider the use of plastic materials resistant to solar degradation.

E. Sediment Controls

1. Risk Level 3 dischargers shall establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from the site.

2. On sites where sediment basins are to be used, Risk Level 3 dischargers shall, at minimum, design sediment basins according to the method provided in CASQA's Construction BMP Guidance Handbook.

3. **Additional Risk Level 3 Requirement:** Risk Level 3 dischargers shall implement appropriate erosion control BMPs (runoff control and soil stabilization) in conjunction with sediment control BMPs for areas under active[2] construction.

4. **Additional Risk Level 3 Requirement:** Risk Level 3 dischargers shall apply linear sediment controls along the toe of the slope, face of the slope, and at the grade breaks of exposed slopes to comply with sheet flow lengths[3] in accordance with Table 1.

[1] Inactive areas of construction are areas of construction activity that have been disturbed and are not scheduled to be re-disturbed for at least 14 days.
[2] Active areas of construction are areas undergoing land surface disturbance. This includes construction activity during the preliminary stage, mass grading stage, streets and utilities stage and the vertical construction stage
[3] Sheet flow length is the length that shallow, low velocity flow travels across a site.

Table 1 - Critical Slope/Sheet Flow Length Combinations

Slope Percentage	Sheet flow length not to exceed
0-25%	20 feet
25-50%	15 feet
Over 50%	10 feet

5. **Additional Risk Level 3 Requirement:** Risk Level 3 dischargers shall ensure that construction activity traffic to and from the project is limited to entrances and exits that employ effective controls to prevent offsite tracking of sediment.

6. **Additional Risk Level 3 Requirement:** Risk Level 3 dischargers shall ensure that all storm drain inlets and perimeter controls, runoff control BMPs, and pollutant controls at entrances and exits (e.g. tire washoff locations) are maintained and protected from activities that reduce their effectiveness.

7. **Additional Risk Level 3 Requirement:** Risk Level 3 dischargers shall inspect on a daily basis all immediate access roads daily. At a minimum daily (when necessary) and prior to any rain event, the discharger shall remove any sediment or other construction activity-related materials that are deposited on the roads (by vacuuming or sweeping).

8. **Additional Risk Level 3 Requirement:** The Regional Water Board may require Risk Level 3 dischargers to implement additional site-specific sediment control requirements if the implementation of the other requirements in this section are not adequately protecting the receiving waters.

F. Run-on and Run-off Controls

Risk Level 3 dischargers shall effectively manage all run-on, all runoff within the site and all runoff that discharges off the site. Run-on from off site shall be directed away from all disturbed areas or shall collectively be in compliance with the effluent limitations in this General Permit.

G. Inspection, Maintenance and Repair

1. Risk Level 3 dischargers shall ensure that all inspection, maintenance repair and sampling activities at the project location shall be performed or supervised by a Qualified SWPPP Practitioner (QSP) representing the discharger. The QSP may delegate any or all of these activities to an employee appropriately trained to do the task(s).

2. Risk Level 3 dischargers shall perform weekly inspections and observations, and at least once each 24-hour period during extended storm events, to identify and record BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. Inspectors shall be the QSP or be trained by the QSP.

3. Upon identifying failures or other shortcomings, as directed by the QSP, Risk Level 3 dischargers shall begin implementing repairs or design changes to BMPs within 72 hours of identification and complete the changes as soon as possible.

4. For each inspection required, Risk Level 3 dischargers shall complete an inspection checklist, using a form provided by the State Water Board or Regional Water Board or in an alternative format.

5. Risk Level 3 dischargers shall ensure that checklists shall remain onsite with the SWPPP and at a minimum, shall include:

    a. Inspection date and date the inspection report was written.

    b. Weather information, including presence or absence of precipitation, estimate of beginning of qualifying storm event, duration of event, time elapsed since last storm, and approximate amount of rainfall in inches.

    c. Site information, including stage of construction, activities completed, and approximate area of the site exposed.

    d. A description of any BMPs evaluated and any deficiencies noted.

    e. If the construction site is safely accessible during inclement weather, list the observations of all BMPs: erosion controls, sediment controls, chemical and waste controls, and non-storm water controls. Otherwise, list the results of visual inspections at all relevant outfalls, discharge points, downstream locations and any projected maintenance activities.

    f. Report the presence of noticeable odors or of any visible sheen on the surface of any discharges.

    g. Any corrective actions required, including any necessary changes to the SWPPP and the associated implementation dates.

    h. Photographs taken during the inspection, if any.

i. Inspector's name, title, and signature.

H. Rain Event Action Plan

1. **Additional Risk Level 3 Requirement:** The discharger shall ensure a QSP develop a Rain Event Action Plan (REAP) 48 hours prior to any likely precipitation event. A likely precipitation event is any weather pattern that is forecast to have a 50% or greater probability of producing precipitation in the project area. The QSP shall obtain a printed copy of precipitation forecast information from the National Weather Service Forecast Office (e.g., by entering the zip code of the project's location at http://www.srh.noaa.gov/forecast).

2. **Additional Risk Level 3 Requirement:** The discharger shall ensure a QSP develop the REAPs for all phases of construction (i.e., Grading and Land Development, Streets and Utilities, Vertical Construction, Final Landscaping and Site Stabilization).

3. **Additional Risk Level 3 Requirement:** The discharger shall ensure a QSP ensure that the REAP include, at a minimum, the following site information:

   a. Site Address.
   b. Calculated Risk Level (2 or 3).
   c. Site Storm Water Manager Information including the name, company, and 24-hour emergency telephone number.
   d. Erosion and Sediment Control Provider information including the name, company, and 24-hour emergency telephone number.
   e. Storm Water Sampling Agent information including the name, company, and 24-hour emergency telephone number.

4. **Additional Risk Level 3 Requirement:** The QSP shall include in the REAP, at a minimum, the following project phase information:

   a. Activities associated with each construction phase.
   b. Trades active on the construction site during each construction phase.
   c. Trade contractor information.
   d. Suggested actions for each project phase.

5. **Additional Risk Level 3 Requirement:** The QSP shall develop additional REAPs for project sites where construction activities are indefinitely halted or postponed (Inactive Construction). At a minimum, Inactive Construction REAPs must include:

a. Site Address.
b. Calculated Risk Level (2 or 3).
c. Site Storm Water Manager Information including the name, company, and 24-hour emergency telephone number.
d. Erosion and Sediment Control Provider information including the name, company, and 24-hour emergency telephone number.
e. Storm Water Sampling Agent information including the name, company, and 24-hour emergency telephone number.
f. Trades active on site during Inactive Construction.
g. Trade contractor information.
h. Suggested actions for inactive construction sites.

6. **Additional Risk Level 3 Requirement:** The discharger shall ensure a QSP begin implementation and make the REAP available onsite no later than 24 hours prior to the likely precipitation event.

7. **Additional Risk Level 3 Requirement:** The discharger shall ensure a QSP maintain onsite a paper copy of each REAP onsite in compliance with the record retention requirements of the Special Provisions in this General Permit.

I. Risk Level 3 Monitoring and Reporting Requirements

Table 2- Summary of Monitoring Requirements

Risk Level	Visual Inspections					Sample Collection	
	Quarterly Non-storm Water Discharge	Pre-storm Event		Daily Storm BMP	Post Storm	Storm Water Discharge	Receiving Water
		Baseline	REAP				
3	X	X	X	X	X	X	X[4]

1. Construction Site Monitoring Program Requirements

   a. Pursuant to Water Code Sections 13383 and 13267, all dischargers subject to this General Permit shall develop and implement a written site-specific Construction Site Monitoring Program (CSMP) in accordance with the requirements of this Section. The CSMP shall include all monitoring procedures and instructions, location maps, forms, and checklists as required in this section. The CSMP shall be developed prior to the commencement of construction activities, and revised as necessary to reflect project revisions. The CSMP shall be a part of the Storm Water Pollution Prevention Plan (SWPPP), included as an appendix or separate SWPPP chapter.

   b. Existing dischargers registered under the State Water Board Order No. 99-08-DWQ shall make and implement necessary revisions to their Monitoring Program to reflect the changes in this General Permit in a timely manner, but no later than July 1, 2010. Existing dischargers shall continue to implement their existing Monitoring Program in compliance with State Water Board Order No. 99-08-DWQ until the necessary revisions are completed according to the schedule above.

   c. When a change of ownership occurs for all or any portion of the construction site prior to completion or final stabilization, the new discharger shall comply with these requirements as of the date the ownership change occurs.

2. **Objectives**

   The CSMP shall be developed and implemented to address the following objectives:

[4] When receiving water monitoring trigger is exceeded

a. To demonstrate that the site is in compliance with the Discharge Prohibitions and applicable Numeric Action Levels (NALs) of this General Permit.

b. To determine whether non-visible pollutants are present at the construction site and are causing or contributing to exceedances of water quality objectives.

c. To determine whether immediate corrective actions, additional Best Management Practice (BMP) implementation, or SWPPP revisions are necessary to reduce pollutants in storm water discharges and authorized non-storm water discharges.

d. To determine whether BMPs included in the SWPPP/Rain Event Action Plan (REAP) are effective in preventing or reducing pollutants in storm water discharges and authorized non-storm water discharges.

3. **Risk Level 3 – Visual Monitoring (Inspection) Requirements for Qualifying Rain Events**

a. Risk Level 3 dischargers shall visually observe (inspect) storm water discharges at all discharge locations within two business days (48 hours) after each qualifying rain event.

b. Risk Level 3 dischargers shall visually observe (inspect) the discharge of stored or contained storm water that is derived from and discharged subsequent to a qualifying rain event producing precipitation of ½ inch or more at the time of discharge. Stored or contained storm water that will likely discharge after operating hours due to anticipated precipitation shall be observed prior to the discharge during operating hours.

c. Risk Level 3 dischargers shall conduct visual observations (inspections) during business hours only.

d. Risk Level 3 dischargers shall record the time, date and rain gauge reading of all qualifying rain events.

e. Within 2 business days (48 hours) prior to each qualifying rain event, Risk Level 3 dischargers shall visually observe (inspect):

i. all storm water drainage areas to identify any spills, leaks, or uncontrolled pollutant sources. If needed, the discharger shall implement appropriate corrective actions.

ii. all BMPs to identify whether they have been properly implemented in accordance with the SWPPP/REAP. If needed, the discharger shall implement appropriate corrective actions.

iii. any storm water storage and containment areas to detect leaks and ensure maintenance of adequate freeboard.

f. For the visual observations (inspections) described in c.i. and c.iii above, Risk Level 3 dischargers shall observe the presence or absence of floating and suspended materials, a sheen on the surface, discolorations, turbidity, odors, and source(s) of any observed pollutants.

g. Within two business days (48 hours) after each qualifying rain event, Risk Level 3 dischargers shall conduct post rain event visual observations (inspections) to (1) identify whether BMPs were adequately designed, implemented, and effective, and (2) identify additional BMPs and revise the SWPPP accordingly.

h. Risk Level 3 dischargers shall maintain on-site records of all visual observations (inspections), personnel performing the observations, observation dates, weather conditions, locations observed, and corrective actions taken in response to the observations.

4. **Risk Level 3 – Water Quality Sampling and Analysis**

a. Risk Level 3 dischargers shall collect storm water grab samples from sampling locations, as defined in Section I.5. The storm water grab sample(s) obtained shall be representative of the flow and characteristics of the discharge.

b. At minimum, Risk Level 3 dischargers shall collect 3 samples per day of the qualifying event.

c. Risk Level 3 dischargers shall ensure that the grab samples collected of stored or contained storm water are from discharges subsequent to a qualifying rain event (producing precipitation of ½ inch or more at the time of discharge).

<u>Storm Water Effluent Monitoring Requirements</u>

d. Risk Level 3 dischargers shall analyze their effluent samples for:

i. pH and turbidity.

ii. Any additional parameters for which monitoring is required by the Regional Water Board.

e. Risk 3 dischargers shall electronically submit all storm event sampling results to the State Water Board no later than 10 days after the conclusion of the storm event.

Receiving Water Monitoring Requirements

f. In the event that a Risk Level 3 discharger's effluent exceeds the daily average receiving water monitoring trigger of 500 NTU turbidity or the daily average pH range 6.0-9.0 contained in this General Permit and has a direct discharge into receiving waters, the Risk Level 3 discharger shall subsequently sample receiving waters (RWs) for turbidity, pH (if applicable), and SSC for the duration of coverage under this General Permit. If a Risk Level 3 discharger utilizing ATS with direct discharges into receiving waters discharges effluent that exceeds the NELs in this permit, the discharger shall subsequently sample RWs for turbidity, pH (if applicable), and SSC for the duration of coverage under this General Permit.

g. Risk Level 3 dischargers disturbing 30 acres or more of the landscape and with direct discharges into receiving waters shall conduct or participate in benthic macroinvertebrate bioassessment of RWs prior to commencement of construction activity (See Appendix 3).

h. Risk Level 3 dischargers shall obtain RW samples in accordance with the Receiving Water sampling location section (Section I.5), below.

5. **Risk Level 3 – Storm Water Discharge Water Quality Sampling Locations**

Effluent Sampling Locations

a. Risk Level 3 dischargers shall perform sampling and analysis of storm water discharges to characterize discharges associated with construction activity from the entire project disturbed area.

b. Risk Level 3 dischargers shall collect effluent samples at all discharge points where storm water is discharged off-site.

c. Risk Level 3 dischargers shall ensure that storm water discharge collected and observed represent[5] the effluent in each drainage area based on visual observation of the water and upstream conditions.

d. Risk Level 3 dischargers shall monitor and report site run-on from surrounding areas if there is reason to believe run-on may contribute to an exceedance of NALs.

e. Risk Level 3 dischargers who deploy an ATS on their site, or a portion on their site, shall collect ATS effluent samples and measurements from the discharge pipe or another location representative of the nature of the discharge.

f. Risk Level 3 dischargers shall select analytical test methods from the list provided in Table 3 below.

g. All storm water sample collection preservation and handling shall be conducted in accordance with Section I.7 “Storm Water Sample Collection and Handling Instructions” below.

Receiving Water Sampling Locations

h. **Upstream/up-gradient RW samples**: Risk Level 3 dischargers shall obtain any required upstream/up-gradient receiving water samples from a representative and accessible location as close as possible and upstream from the effluent discharge point.

i. **Downstream/down-gradient RW samples**: Risk Level 3 dischargers shall obtain any required downstream/down-gradient receiving water samples from a representative and accessible location as close as possible and downstream from the effluent discharge point.

j. If two or more discharge locations discharge to the same receiving water, Risk Level 3 dischargers may sample the receiving water at a single upstream and downstream location.

[5] For example, if there has been concrete work recently in an area, or drywall scrap is exposed to the rain, a pH sample shall be taken of drainage from the relevant work area. Similarly, if sediment-laden water is flowing through some parts of a silt fence, samples shall be taken of the sediment laden water even if most water flowing through the fence is clear.

6. **Risk Level 3 – Visual Observation and Sample Collection Exemptions**

   a. Risk Level 3 dischargers shall be prepared to collect samples and conduct visual observation (inspections) until the minimum requirements of Sections I.3 and I.4 above are completed. Risk Level 3 dischargers are not required to physically collect samples or conduct visual observation (inspections) under the following conditions:

      i. During dangerous weather conditions such as flooding and electrical storms.

      ii. Outside of scheduled site business hours.

   b. If no required samples or visual observation (inspections) are collected due to these exceptions, Risk Level 3 dischargers shall include an explanation in their SWPPP and in the Annual Report documenting why the sampling or visual observation (inspections) were not conducted.

7. **Risk Level 3 – Storm Water Sample Collection and Handling Instructions**

   a. Risk Level 3 dischargers shall refer to Table 3 below for test methods, detection limits, and reporting units.

   b. Risk Level 3 dischargers shall ensure that testing laboratories will receive samples within 48 hours of the physical sampling (unless otherwise required by the laboratory), and shall use only the sample containers provided by the laboratory to collect and store samples.

   c. Risk Level 3 dischargers shall designate and train personnel to collect, maintain, and ship samples in accordance with the Surface Water Ambient Monitoring Program's (SWAMP) 2008 Quality Assurance Program Plan (QAPrP).[6]

[6] Additional information regarding SWAMP's QAPrP can be found at http://www.waterboards.ca.gov/water_issues/programs/swamp/.
QAPrP:http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/qapp/swamp_qapp_master090108a.pdf

8. **Risk Level 3 – Monitoring Methods**

   a. Risk Level 3 dischargers shall include a description of the following items in the CSMP:

      i. Visual observation locations, visual observation procedures, and visual observation follow-up and tracking procedures.

      ii. Sampling locations, and sample collection and handling procedures. This shall include detailed procedures for sample collection, storage, preservation, and shipping to the testing lab to assure that consistent quality control and quality assurance is maintained. Dischargers shall attach to the monitoring program an example Chain of Custody form used when handling and shipping samples.

      iii. Identification of the analytical methods and related method detection limits (if applicable) for each parameter required in Section I.4 above.

   b. Risk Level 3 dischargers shall ensure that all sampling and sample preservation are in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association). All monitoring instruments and equipment (including a discharger's own field instruments for measuring pH and turbidity) should be calibrated and maintained in accordance with manufacturers' specifications to ensure accurate measurements. Risk Level 3 dischargers shall ensure that all laboratory analyses are conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in this General Permit or by the Regional Water Board. With the exception of field analysis conducted by the discharger for turbidity and pH, all analyses should be sent to and conducted at a laboratory certified for such analyses by the State Department of Health Services (SSC exception). Risk Level 3 dischargers shall conduct their own field analysis of pH and may conduct their own field analysis of turbidity if the discharger has sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to adequately perform the field analysis.

9. **Risk Level 3 – Analytical Methods**

   a. Risk Level 3 dischargers shall refer to Table 3 below for test methods, detection limits, and reporting units.

b. **pH**: Risk Level 3 dischargers shall perform pH analysis on-site with a calibrated pH meter or a pH test kit. Risk Level 3 dischargers shall record pH monitoring results on paper and retain these records in accordance with Section I.14, below.

c. **Turbidity**: Risk Level 3 dischargers shall perform turbidity analysis using a calibrated turbidity meter (turbidimeter), either on-site or at an accredited lab. Acceptable test methods include Standard Method 2130 or USEPA Method 180.1. The results will be recorded in the site log book in Nephelometric Turbidity Units (NTU).

d. **Suspended sediment concentration (SSC)**: Risk Level 3 dischargers that exceed the turbidity Receiving Water Monitoring Trigger shall perform SSC analysis using ASTM Method D3977-97.

e. **Bioassessment**: Risk Level 3 dischargers shall perform bioassessment sampling and analysis according to Appendix 3 of this General Permit.

10. **Risk Level 3 - Non-Storm Water Discharge Monitoring Requirements**

a. Visual Monitoring Requirements:

i. Risk Level 3 dischargers shall visually observe (inspect) each drainage area for the presence of (or indications of prior) unauthorized and authorized non-storm water discharges and their sources.

ii. Risk Level 3 dischargers shall conduct one visual observation (inspection) quarterly in each of the following periods: January-March, April-June, July-September, and October-December. Visual observation (inspections) are only required during daylight hours (sunrise to sunset).

iii. Risk Level 3 dischargers shall ensure that visual observations (inspections) document the presence or evidence of any non-storm water discharge (authorized or unauthorized), pollutant characteristics (floating and suspended material, sheen, discoloration, turbidity, odor, etc.), and source. Risk Level 3 dischargers shall maintain on-site records indicating the personnel performing the visual observation (inspections), the dates and approximate time each drainage area and non-storm water discharge was observed, and the response taken to eliminate unauthorized non-storm water discharges and to

reduce or prevent pollutants from contacting non-storm water discharges.

b. Effluent Sampling Locations:

i. Risk Level 3 dischargers shall sample effluent at all discharge points where non-storm water and/or authorized non-storm water is discharged off-site.

ii. Risk Level 3 dischargers shall send all non-storm water sample analyses to a laboratory certified for such analyses by the State Department of Health Services.

iii. Risk Level 3 dischargers shall monitor and report run-on from surrounding areas if there is reason to believe run-on may contribute to an exceedance of NALs.

11. **Risk Level 3 – Non-Visible Pollutant Monitoring Requirements**

a. Risk Level 3 dischargers shall collect one or more samples during any breach, malfunction, leakage, or spill observed during a visual inspection which could result in the discharge of pollutants to surface waters that would not be visually detectable in storm water.

b. Risk Level 3 dischargers shall ensure that water samples are large enough to characterize the site conditions.

c. Risk Level 3 dischargers shall collect samples at all discharge locations that can be safely accessed.

d. Risk Level 3 dischargers shall collect samples during the first two hours of discharge from rain events that occur during business hours and which generate runoff.

e. Risk Level 3 dischargers shall analyze samples for all non-visible pollutant parameters (if applicable) - parameters indicating the presence of pollutants identified in the pollutant source assessment required (Risk Level 3 dischargers shall modify their CSMPs to address these additional parameters in accordance with any updated SWPPP pollutant source assessment).

f. Risk Level 3 dischargers shall collect a sample of storm water that has not come in contact with the disturbed soil or the materials stored or used on-site (uncontaminated sample) for comparison with the discharge sample.

g. Risk Level 3 dischargers shall compare the uncontaminated sample to the samples of discharge using field analysis or through laboratory analysis.[7]

h. Risk Level 3 dischargers shall keep all field /or analytical data in the SWPPP document.

12. **Risk Level 3 – Watershed Monitoring Option**

Risk Level 3 dischargers who are part of a qualified regional watershed-based monitoring program may be eligible for relief from the requirements in Sections I.5. The Regional Water Board may approve proposals to substitute an acceptable watershed-based monitoring program by determining if the watershed-based monitoring program will provide substantially similar monitoring information in evaluating discharger compliance with the requirements of this General Permit.

13. **Risk Level 3 – Particle Size Analysis for Project Risk Justification**

Risk Level 3 dischargers justifying an alternative project risk shall report a soil particle size analysis used to determine the RUSLE K-Factor. ASTM D-422 (Standard Test Method for Particle-Size Analysis of Soils), as revised, shall be used to determine the percentages of sand, very fine sand, silt, and clay on the site.

14. **Risk Level 3 – Records**

Risk Level 3 dischargers shall retain records of all storm water monitoring information and copies of all reports (including Annual Reports) for a period of at least three years. Risk Level 3 dischargers shall retain all records on-site while construction is ongoing. These records include:

a. The date, place, time of facility inspections, sampling, visual observation (inspections), and/or measurements, including precipitation.

b. The individual(s) who performed the facility inspections, sampling, visual observation (inspections), and or measurements.

c. The date and approximate time of analyses.

[7] For laboratory analysis, all sampling, sample preservation, and analyses must be conducted according to test procedures under 40 CFR Part 136. Field discharge samples shall be collected and analyzed according to the specifications of the manufacturer of the sampling devices employed.

d. The individual(s) who performed the analyses.

e. A summary of all analytical results from the last three years, the method detection limits and reporting units, the analytical techniques or methods used, and the chain of custody forms.

f. Rain gauge readings from site inspections.

g. Quality assurance/quality control records and results.

h. Non-storm water discharge inspections and visual observation (inspections) and storm water discharge visual observation records (see Sections I.3 and I.10 above).

i. Visual observation and sample collection exception records (see Section I.6 above).

j. The records of any corrective actions and follow-up activities that resulted from analytical results, visual observation (inspections), or inspections.

15. **Risk Level 3 – NAL Exceedance Report**

a. Risk Level 3 dischargers shall electronically submit all storm event sampling results to the State Water Board no later than 10 days after the conclusion of the storm event. The Regional Boards have the authority to require the submittal of an NAL Exceedance Report.

b. Risk Level 3 dischargers shall certify each NAL Exceedance Report in accordance with the Special Provisions for Construction Activity In this General Permit.

c. Risk Level 3 dischargers shall retain an electronic or paper copy of each NAL Exceedance Report for a minimum of three years after the date the annual report is filed.

d. Risk Level 3 dischargers shall include in the NAL Exceedance Report:

i. The analytical method(s), method reporting unit(s), and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as “less than the method detection limit”).

ii. The date, place, time of sampling, visual observation (inspections), and/or measurements, including precipitation.

iii. A description of the current BMPs associated with the effluent sample that exceeded the NAL and the proposed corrective actions taken.

16. **Risk Level 3 – Bioassessment**

a. Risk Level 3 dischargers with a total project-related ground disturbance exceeding 30 acres shall:

i. Conduct bioassessment monitoring, as described in Appendix 3.

ii. Include the collection and reporting of specified in stream biological data and physical habitat.

iii. Use the bioassessment sample collection and Quality Assurance & Quality Control (QA/QC) protocols developed by the State of California's Surface Water Ambient Monitoring Program (SWAMP).[8]

b. Risk Level 3 dischargers qualifying for bioassessment, where construction commences out of an index period for the site location shall:

i. Receive Regional Board approval for the sampling exception.

ii. Conduct bioassessment monitoring, as described in Appendix 3.

iii. Include the collection and reporting of specified instream biological data and physical habitat.

iv. Use the bioassessment sample collection and Quality Assurance & Quality Control (QA/QC) protocols developed by the State of California's Surface Water Ambient Monitoring Program (SWAMP).

OR

v. Make a check payable to: Cal State Chico Foundation (SWAMP Bank Account) or San Jose State Foundation (SWAMP Bank Account) and include the WDID# on the check for the amount calculated for the exempted project.

[8] http://www.waterboards.ca.gov/water_issues/programs/swamp/.

vi. Send a copy of the check to the Regional Water Board office for the site's region.

vii. Invest $**7,500.00 X The number of samples required** into the SWAMP program as compensation (upon regional board approval).

Table 3 – Risk Level 3 Test Methods, Detection Limits, Reporting Units and Applicable NALs

Parameter	Test Method / Protocol	Discharge Type	Min. Detection Limit	Reporting Units	Numeric Action Level	Numeric Effluent Limitation	Receiving Water Monitoring Trigger
pH	Field test with calibrated portable instrument	Risk Level 3 Discharges	0.2	pH units	lower NAL = 6.5 upper NAL = 8.5	N/A	lower limit = 6.0 upper limit = 9.0
Turbidity	EPA 0180.1 and/or field test with calibrated portable instrument	Risk Level 3 Discharges other than ATS	1	NTU	250 NTU	N/A	500 NTU
		For ATS discharges	1	NTU	N/A	10 NTU for Daily Weighted Average & 20 NTU for Any Single Sample	10 NTU for Daily Weighted Average & 20 NTU for Any Single Sample
SSC	ASTM Method D 3977-97[9]	Risk Level 3 (if Receiving Water Monitoring Trigger exceeded)	5	mg/L	N/A	N/A	N/A
Bioassessment	(STE) Level I of (SAFIT),[10] fixed-count of 600 org/sample	Risk Level 3 projects> 30 acres	N/A	N/A	N/A	N/A	N/A

[9] ASTM, 1999, Standard Test Method for Determining Sediment Concentration in Water Samples: American Society of Testing and Materials, D 3977-97, Vol. 11.02, pp. 389-394.

[10] The current SAFIT STEs (28 November 2006) list requirements for both the Level I and Level II taxonomic effort, and are located at: http://www.swrcb.ca.gov/swamp/docs/safit/ste_list.pdf. When new editions are published by SAFIT, they will supersede all previous editions. All editions will be posted at the State Water Board's SWAMP website.

ATTACHMENT F:
Active Treatment System (ATS) Requirements

Table 1 – Numeric Effluent Limitations, Numeric Action Levels, Test Methods, Detection Limits, and Reporting Units

Parameter	Test Method	Discharge Type	Min. Detection Limit	Units	Numeric Action Level	Numeric Effluent Limitation
Turbidity	EPA 0180.1 and/or field test with a calibrated portable instrument	For ATS discharges	1	NTU	N/A	10 NTU for Daily Flow-Weighted Average & 20 NTU for Any Single Sample

A. Dischargers choosing to implement an Active Treatment System (ATS) on their site shall comply with all of the requirements in this Attachment.

B. The discharger shall maintain a paper copy of each ATS specification onsite in compliance with the record retention requirements in the Special Provisions of this General Permit.

C. ATS Design, Operation and Submittals

1. The ATS shall be designed and approved by a Certified Professional in Erosion and Sediment Control (CPESC), a Certified Professional in Storm Water Quality (CPSWQ); a California registered civil engineer; or any other California registered engineer.

2. The discharger shall ensure that the ATS is designed in a manner to preclude the accidental discharge of settled floc[1] during floc pumping or related operations.

3. The discharger shall design outlets to dissipate energy from concentrated flows.

4. The discharger shall install and operate an ATS by assigning a lead person (or project manager) who has either a minimum of five years construction storm

[1] Floc is defined as a clump of solids formed by the chemical action in ATS systems.

water experience or who is a licensed contractors specifically holding a California Class A Contractors license.[2]

5. The discharger shall prepare an ATS Plan that combines the site-specific data and treatment system information required to safely and efficiently operate an ATS. The ATS Plan shall be electronically submitted to the State Water Board at least 14 days prior to the planned operation of the ATS and a paper copy shall be available onsite during ATS operation. At a minimum, the ATS Plan shall include:

   a. ATS Operation and Maintenance Manual for All Equipment.

   b. ATS Monitoring, Sampling & Reporting Plan, including Quality Assurance/Quality Control (QA/QC).

   c. ATS Health and Safety Plan.

   d. ATS Spill Prevention Plan.

6. The ATS shall be designed to capture and treat (within a 72-hour period) a volume equivalent to the runoff from a 10-year, 24-hour storm event using a watershed runoff coefficient of 1.0.

D. Treatment – Chemical Coagulation/Flocculation

1. Jar tests shall be conducted using water samples selected to represent typical site conditions and in accordance with ASTM D2035-08 (2003).

2. The discharger shall conduct, at minimum, six site-specific jar tests (per polymer with one test serving as a control) for each project to determine the proper polymer and dosage levels for their ATS.

3. Single field jar tests may also be conducted during a project if conditions warrant, for example if construction activities disturb changing types of soils, which consequently cause change in storm water and runoff characteristics.

E. Residual Chemical and Toxicity Requirements

1. The discharger shall utilize a residual chemical test method that has a method detection limit (MDL) of 10% or less than the maximum allowable threshold

[2] Business and Professions Code Division 3, Chapter 9, Article 4, Class A Contractor: A general engineering contractor is a contractor whose principal contracting business is in connection with fixed works requiring specialized engineering knowledge and skill. [http://www.cslb.ca.gov/General-Information/library/licensing-classifications.asp].

concentration[3] (MATC) for the specific coagulant in use and for the most sensitive species of the chemical used.

2. The discharger shall utilize a residual chemical test method that produces a result within one hour of sampling.

3. The discharger shall have a California State certified laboratory validate the selected residual chemical test. Specifically the lab will review the test protocol, test parameters, and the detection limit of the coagulant. The discharger shall electronically submit this documentation as part of the ATS Plan.

4. If the discharger cannot utilize a residual chemical test method that meets the requirements above, the discharger shall operate the ATS in Batch Treatment[4] mode.

5. A discharger planning to operate in Batch Treatment mode shall perform toxicity testing in accordance with the following:

   a. The discharger shall initiate acute toxicity testing on effluent samples representing effluent from each batch prior to discharge[5]. All bioassays shall be sent to a laboratory certified by the Department of Health Services (DHS) Environmental Laboratory Accreditation Program (ELAP). The required field of testing number for Whole Effluent Toxicity (WET) testing is E113.[6]

   b. Acute toxicity tests shall be conducted with the following species and protocols. The methods to be used in the acute toxicity testing shall be those outlined for a 96-hour acute test in "Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms, USEPA-841-R-02-012" for Fathead minnow, *Pimephales promelas* (fathead minnow). Acute toxicity for *Oncorhynchus mykiss* (Rainbow Trout) may be used as a substitute for testing fathead minnows.

   c. All toxicity tests shall meet quality assurance criteria and test acceptability criteria in the most recent versions of the EPA test method for WET testing.

   d. The discharger shall electronically report all acute toxicity testing.

[3] The Maximum Allowable Threshold Concentration (MATC) is the allowable concentration of residual, or dissolved, coagulant/flocculant in effluent. The MATC shall be coagulant/flocculant-specific, and based on toxicity testing conducted by an independent, third-party laboratory. A typical MATC would be:
The MATC is equal to the geometric mean of the NOEC (No Observed Effect Concentration) and LOEC (Lowest Observed Effect Concentration) Acute and Chronic toxicity results for most sensitive species determined for the specific coagulant. The most sensitive species test shall be used to determine the MATC.

[4] Batch Treatment mode is defined as holding or recirculating the treated water in a holding basin or tank(s) until treatment is complete or the basin or storage tank(s) is full.

[5] This requirement only requires that the test be initiated prior to discharge.

[6] http://www.dhs.ca.gov/ps/ls/elap/pdf/FOT_Desc.pdf.

F. Filtration

1. The ATS shall include a filtration step between the coagulant treatment train and the effluent discharge. This is commonly provided by sand, bag, or cartridge filters, which are sized to capture suspended material that might pass through the clarifier tanks.

2. Differential pressure measurements shall be taken to monitor filter loading and confirm that the final filter stage is functioning properly.

G. Residuals Management

1. Sediment shall be removed from the storage or treatment cells as necessary to ensure that the cells maintain their required water storage (i.e., volume) capability.

2. Handling and disposal of all solids generated during ATS operations shall be done in accordance with all local, state, and federal laws and regulations.

H. ATS Instrumentation

1. The ATS shall be equipped with instrumentation that automatically measures and records effluent water quality data and flow rate.

2. The minimum data recorded shall be consistent with the Monitoring and Reporting requirements below, and shall include:

   a. Influent Turbidity

   b. Effluent Turbidity

   c. Influent pH

   d. Effluent pH

   e. Residual Chemical

   f. Effluent Flow rate

   g. Effluent Flow volume

3. Systems shall be equipped with a data recording system, such as data loggers or webserver-based systems, which records each measurement on a frequency no longer than once every 15 minutes.

4. Cumulative flow volume shall be recorded daily. The data recording system shall have the capacity to record a minimum of seven days continuous data.

5. Instrumentation systems shall be interfaced with system control to provide auto shutoff or recirculation in the event that effluent measurements exceed turbidity or pH.

6. The system shall also assure that upon system upset, power failure, or other catastrophic event, the ATS will default to a recirculation mode or safe shut down.

7. Instrumentation (flow meters, probes, valves, streaming current detectors, controlling computers, etc.) shall be installed and maintained per manufacturer's recommendations, which shall be included in the QA/QC plan.

8. The QA/QC plan shall also specify calibration procedures and frequencies, instrument method detection limit or sensitivity verification, laboratory duplicate procedures, and other pertinent procedures.

9. The instrumentation system shall include a method for controlling coagulant dose, to prevent potential overdosing. Available technologies include flow/turbidity proportional metering, periodic jar testing and metering pump adjustment, and ionic charge measurement controlling the metering pump.

I. ATS Effluent Discharge

1. ATS effluent shall comply with all provisions and prohibitions in this General Permit, specifically the NELs.

2. NELs for discharges from an ATS:

   a. Turbidity of all ATS discharges shall be less than 10 NTU for daily flow-weighted average of all samples and 20 NTU for any single sample.

   b. Residual Chemical shall be < 10% of MATC[7] for the most sensitive species of the chemical used.

[7] The Maximum Allowable Threshold Concentration (MATC) is the allowable concentration of residual, or dissolved, coagulant/flocculant in effluent. The MATC shall be coagulant/flocculant-specific, and based on toxicity testing conducted by an independent, third-party laboratory. The MATC is equal to the geometric mean of the NOEC (No Observed Effect Concentration) and LOEC (Lowest Observed Effect Concentration) Acute and Chronic toxicity results for most sensitive species determined for the specific coagulant. The most sensitive species test shall be used to determine the MATC.

3. If an analytical effluent sampling result exceeds the turbidity NEL (as listed in Table 1), the discharger is in violation of this General Permit and shall electronically file the results in violation within 24-hours of obtaining the results.

4. If ATS effluent is authorized to discharge into a sanitary sewer system, the discharger shall comply with any pre-treatment requirements applicable for that system. The discharger shall include any specific criteria required by the municipality in the ATS Plan.

5. Compliance Storm Event:

   Discharges of storm water from ATS shall comply with applicable NELs (above) unless the storm event causing the discharges is determined after the fact to be equal to or larger than the Compliance Storm Event (expressed in inches of rainfall). The Compliance Storm Event for ATS discharges is the 10 year, 24 hour storm, as determined using these maps:

   http://www.wrcc.dri.edu/pcpnfreq/nca10y24.gif
   http://www.wrcc.dri.edu/pcpnfreq/sca10y24.gif

   This exemption is dependent on the submission of rain gauge data verifying the storm event is equal to or larger than the Compliance Storm.

J. Operation and Maintenance Plan

1. Each Project shall have a site-specific Operation and Maintenance (O&M) Manual covering the procedures required to install, operate and maintain the ATS.[8]

2. The O&M Manual shall only be used in conjunction with appropriate project-specific design specifications that describe the system configuration and operating parameters.

3. The O&M Manual shall have operating manuals for specific pumps, generators, control systems,and other equipment.

K. Sampling and Reporting Quality Assurance/ Quality Check (QA/QC) Plan

4. A project-specific QA/QC Plan shall be developed for each project. The QA/QC Plan shall include at a minimum:

   a. Calibration – Calibration methods and frequencies for all system and field instruments shall be specified.

[8] The manual is typically in a modular format covering generalized procedures for each component that is utilized in a particular system.

b. Method Detection Limits (MDLs) – The methods for determining MDLs shall be specified for each residual coagulant measurement method. Acceptable minimum MDLs for each method, specific to individual coagulants, shall be specified.

c. Laboratory Duplicates – Requirements for monthly laboratory duplicates for residual coagulant analysis shall be specified.

L. Personnel Training

1. Operators shall have training specific to using an ATS and liquid coagulants for storm water discharges in California.

2. The training shall be in the form of a formal class with a certificate and requirements for testing and certificate renewal.

3. Training shall include a minimum of eight hours classroom and 32 hours field training. The course shall cover the following topics:

   a. Coagulation Basics –Chemistry and physical processes

   b. ATS System Design and Operating Principles

   c. ATS Control Systems

   d. Coagulant Selection – Jar testing, dose determination, etc.

   e. Aquatic Safety/Toxicity of Coagulants, proper handling and safety

   f. Monitoring, Sampling, and Analysis

   g. Reporting and Recordkeeping

   h. Emergency Response

M. Active Treatment System (ATS) Monitoring Requirements

Any discharger who deploys an ATS on their site shall conduct the following:

1. Visual Monitoring

   a. A designated responsible person shall be on site daily at all times during treatment operations.

b. Daily on-site visual monitoring of the system for proper performance shall be conducted and recorded in the project data log.

   i. The log shall include the name and phone number of the person responsible for system operation and monitoring.

   ii. The log shall include documentation of the responsible person's training.

2. Operational and Compliance Monitoring

   a. Flow shall be continuously monitored and recorded at not greater than 15-minute intervals for total volume treated and discharged.

   b. Influent and effluent pH must be continuously monitored and recorded at not greater than 15-minute intervals.

   c. Influent and effluent turbidity (expressed in NTU) must be continuously monitored and recorded at not greater than 15-minute intervals.

   d. The type and amount of chemical used for pH adjustment, if any, shall be monitored and recorded.

   e. Dose rate of chemical used in the ATS system (expressed in mg/L) shall be monitored and reported 15-minutes after startup and every 8 hours of operation.

   f. Laboratory duplicates – monthly laboratory duplicates for residual coagulant analysis must be performed and records shall be maintained onsite.

   g. Effluent shall be monitored and recorded for residual chemical/additive levels.

   h. If a residual chemical/additive test does not exist and the ATS is operating in a batch treatment mode of operation refer to the toxicity monitoring requirements below.

3. Toxicity Monitoring

   A discharger operating in batch treatment mode shall perform toxicity testing in accordance with the following:

   a. The discharger shall initiate acute toxicity testing on effluent samples representing effluent from each batch prior to discharge.[9] All bioassays shall be sent to a laboratory certified by the Department of Health Services (DHS)

[9] This requirement only requires that the test be initiated prior to discharge.

Environmental Laboratory Accreditation Program (ELAP). The required field of testing number for Whole Effluent Toxicity (WET) testing is E113.[10]

b. Acute toxicity tests shall be conducted with the following species and protocols. The methods to be used in the acute toxicity testing shall be those outlined for a 96-hour acute test in "Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms, USEPA-841-R-02-012" for Fathead minnow, *Pimephales promelas or* Rainbow trout *Oncorhynchus mykiss* may be used as a substitute for fathead minnow.

c. All toxicity tests shall meet quality assurance criteria and test acceptability criteria in the most recent versions of the EPA test method for WET testing.[11]

4. Reporting and Recordkeeping

   At a minimum, every 30 days a LRP representing the discharger shall access the State Water Boards Storm Water Mulit-Application and Report Tracking system (SMARTS) and electronically upload field data from the ATS. Records must be kept for three years after the project is completed .

5. Non-compliance Reporting

   a. Any indications of toxicity or other violations of water quality objectives shall be reported to the appropriate regulatory agency as required by this General Permit.

   b. Upon any measurements that exceed water quality standards, the system operator shall immediately notify his supervisor or other responsible parties, who shall notify the Regional Water Board.

   c. If any monitoring data exceeds any applicable NEL in this General Permit, the discharger shall electronically submit a NEL Violation Report to the State Water Board within 24 hours after the NEL exceedance has been identified.

      i. ATS dischargers shall certify each NEL Violation Report in accordance with the Special Provisions for Construction Activity in this General Permit.

      ii. ATS dischargers shall retain an electronic or paper copy of each NEL Violation Report for a minimum of three years after the date the annual report is filed.

      iii. ATS dischargers shall include in the NEL Violation Report:

[10] http://www.dhs.ca.gov/ps/ls/elap/pdf/FOT_Desc.pdf.
[11] http://www.epa.gov/waterscience/methods/wet/.

(1) The analytical method(s), method reporting unit(s), and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as “less than the method detection limit”);

(2) The date, place, time of sampling, visual observation (inspections), and/or measurements, including precipitation; and

(3) A description of the current onsite BMPs, and the proposed corrective actions taken to manage the NEL exceedance.

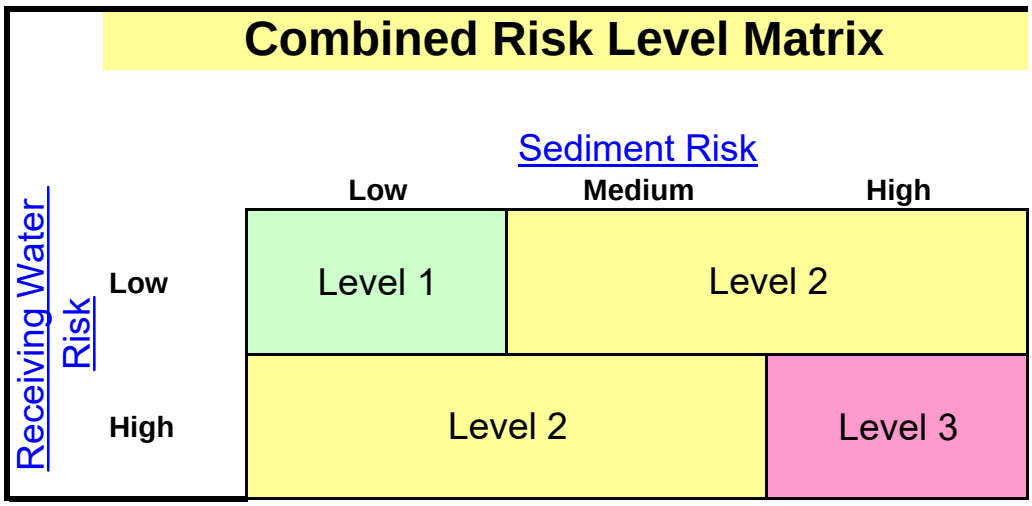
iv. Compliance Storm Exemption - In the event that an applicable NEL has been exceeded during a storm event equal to or larger than the Compliance Storm Event, ATS dischargers shall report the on-site rain gauge reading and nearby governmental rain gauge readings for verification.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Version 8/17/2011												
2		**Risk Determination Worksheet**											
3													
4			**Step 1**	Determine Sediment Risk via one of the options listed:									
5				1. GIS Map Method - EPA Rainfall Erosivity Calculator & GIS map									
6				2. Individual Method - EPA Rainfall Erosivity Calculator & Individual Data									
7			**Step 2**	Determine Receiving Water Risk via one of the options listed:									
8				1. GIS map of Sediment Sensitive Watersheds provided									
9				2. Site Specific Analysis (support documentation required)									
10			**Step 3**	Determine Combined Risk Level									
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													

	A	B	C
1	**Sediment Risk Factor Worksheet**		**Entry**
2	**A) R Factor**		
3	Analyses of data indicated that when factors other than rainfall are held constant, soil loss is directly proportional to a rainfall factor composed of total storm kinetic energy (E) times the maximum 30-min intensity (I30) (Wischmeier and Smith, 1958). The numerical value of R is the average annual sum of EI30 for storm events during a rainfall record of at least 22 years. "Isoerodent" maps were developed based on R values calculated for more than 1000 locations in the Western U.S. Refer to the link below to determine the R factor for the project site.		
4	http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm		
5	**R Factor Value**		0
6	**B) K Factor (weighted average, by area, for all site soils)**		
7	The soil-erodibility factor K represents: (1) susceptibility of soil or surface material to erosion, (2) transportability of the sediment, and (3) the amount and rate of runoff given a particular rainfall input, as measured under a standard condition Fine-textured soils that are high in clay have low K values (about 0.05 to 0.15) because the particles are resistant to detachment. Coarse-textured soils, such as sandy soils, also have low K values (about 0.05 to 0.2) because of high infiltration resulting in low runoff even though these particles are easily detached. Medium-textured soils, such as a silt loam, have moderate K values (about 0.25 to 0.45) because they are moderately susceptible to particle detachment and they produce runoff at moderate rates. Soils having a high silt content are especially susceptible to erosion and have high K values, which can exceed 0.45 and can be as large as 0.65. Silt-size particles are easily detached and tend to crust, producing high rates and large volumes of runoff. Use Site-specific data must be submitted.		
8	Site-specific K factor guidance		
9	**K Factor Value**		0
10	**C) LS Factor (weighted average, by area, for all slopes)**		
11	The effect of topography on erosion is accounted for by the LS factor, which combines the effects of a hillslope-length factor, L, and a hillslope-gradient factor, S. Generally speaking, as hillslope length and/or hillslope gradient increase, soil loss increases. As hillslope length increases, total soil loss and soil loss per unit area increase due to the progressive accumulation of runoff in the downslope direction. As the hillslope gradient increases, the velocity and erosivity of runoff increases. Use the LS table located in separate tab of this spreadsheet to determine LS factors. Estimate the weighted LS for the site prior to construction.		
12	LS Table		
13	**LS Factor Value**		0
14			
15	**Watershed Erosion Estimate (=RxKxLS) in tons/acre**		0
16	**Site Sediment Risk Factor**		**Low**
17	Low Sediment Risk: < 15 tons/acre		
18	Medium Sediment Risk: >=15 and <75 tons/acre		
19	High Sediment Risk: >= 75 tons/acre		
20			
21			
22			
23	**GIS Map Method:**		
24	**1.** The R factor for the project is calculated using the online calculator at:		
25	http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm		
26			
27	**2.** The K and LS factors may be obtained by accessing the GIS maps located on the State Water Board FTP website at:		
28	ftp://swrcb2a.waterboards.ca.gov/pub/swrcb/dwq/cgp/Risk/		
29			

Receiving Water (RW) Risk Factor Worksheet	Entry	Score
A. Watershed Characteristics	**yes/no**	
A.1. Does the disturbed area discharge (either directly or indirectly) to a **303(d)-listed waterbody impaired by sediment** (For help with impaired waterbodies please visit the link below) or has a **USEPA approved TMDL implementation plan for sediment**?:	**no**	**Low**
http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml		
OR		
A.2. Does the disturbed area discharge to a waterbody with designated beneficial uses of SPAWN & COLD & MIGRATORY? (For help please review the appropriate Regional Board Basin Plan)		
http://www.waterboards.ca.gov/waterboards_map.shtml		
Region 1 Basin Plan		
Region 2 Basin Plan		
Region 3 Basin Plan		
Region 4 Basin Plan		
Region 5 Basin Plan		
Region 6 Basin Plan		
Region 7 Basin Plan		
Region 8 Basin Plan		
Region 9 Basin Plan		

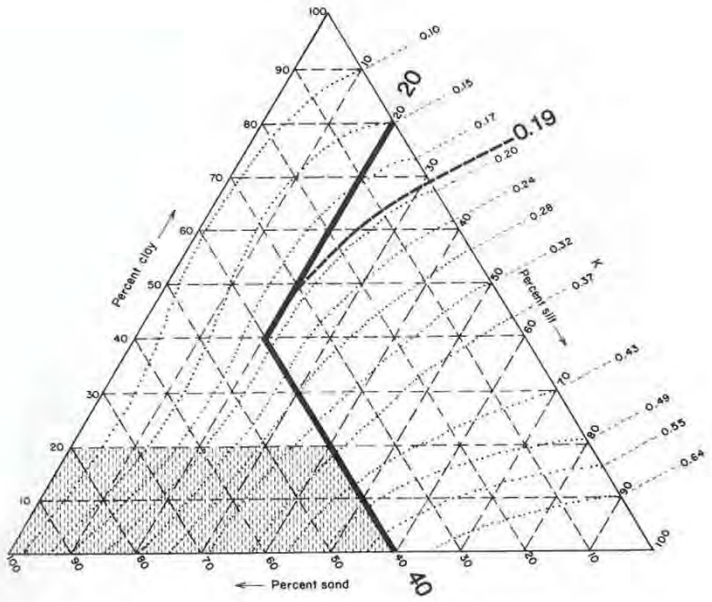
Combined Risk Level Matrix



Project Sediment Risk:	**Low**
Project RW Risk:	**Low**
Project Combined Risk:	**Level 1**

Soil Erodibility Factor (K)

The K factor can be determined by using the nomograph method, which requires that a particle size analysis (ASTM D-422) be done to determine the percentages of sand, very fine sand, silt and clay. Use the figure below to determine appropriate K value.



Erickson triangular nomograph used to estimate soil erodibility (K) factor.
The figure above is the USDA nomograph used to determine the K factor for a soil, based on its texture (% silt plus very fine sand, % sand, % organic matter, soil structure, and permeability). *Nomograph from Erickson 1977 as referenced in Goldman et. al., 1986.*

Sheet Flow Length (ft)	Average Watershed Slope (%)																		
	0.2	**0.5**	**1.0**	**2.0**	**3.0**	**4.0**	**5.0**	**6.0**	**8.0**	**10.0**	**12.0**	**14.0**	**16.0**	**20.0**	**25.0**	**30.0**	**40.0**	**50.0**	**60.0**
<3	0.05	0.07	0.09	0.13	0.17	0.20	0.23	0.26	0.32	0.35	0.36	0.38	0.39	0.41	0.45	0.48	0.53	0.58	0.63
6	0.05	0.07	0.09	0.13	0.17	0.20	0.23	0.26	0.32	0.37	0.41	0.45	0.49	0.56	0.64	0.72	0.85	0.97	1.07
9	0.05	0.07	0.09	0.13	0.17	0.20	0.23	0.26	0.32	0.38	0.45	0.51	0.56	0.67	0.80	0.91	1.13	1.31	1.47
12	0.05	0.07	0.09	0.13	0.17	0.20	0.23	0.26	0.32	0.39	0.47	0.55	0.62	0.76	0.93	1.08	1.37	1.62	1.84
15	0.05	0.07	0.09	0.13	0.17	0.20	0.23	0.26	0.32	0.40	0.49	0.58	0.67	0.84	1.04	1.24	1.59	1.91	2.19
25	0.05	0.07	0.10	0.16	0.21	0.26	0.31	0.36	0.45	0.57	0.71	0.85	0.98	1.24	1.56	1.86	2.41	2.91	3.36
50	0.05	0.08	0.13	0.21	0.30	0.38	0.46	0.54	0.70	0.91	1.15	1.40	1.64	2.10	2.67	3.22	4.24	5.16	5.97
75	0.05	0.08	0.14	0.25	0.36	0.47	0.58	0.69	0.91	1.20	1.54	1.87	2.21	2.86	3.67	4.44	5.89	7.20	8.37
100	0.05	0.09	0.15	0.28	0.41	0.55	0.68	0.82	1.10	1.46	1.88	2.31	2.73	3.57	4.59	5.58	7.44	9.13	10.63
150	0.05	0.09	0.17	0.33	0.50	0.68	0.86	1.05	1.43	1.92	2.51	3.09	3.68	4.85	6.30	7.70	10.35	12.75	14.89
200	0.06	0.10	0.18	0.37	0.57	0.79	1.02	1.25	1.72	2.34	3.07	3.81	4.56	6.04	7.88	9.67	13.07	16.16	18.92
250	0.06	0.10	0.19	0.40	0.64	0.89	1.16	1.43	1.99	2.72	3.60	4.48	5.37	7.16	9.38	11.55	15.67	19.42	22.78
300	0.06	0.10	0.20	0.43	0.69	0.98	1.28	1.60	2.24	3.09	4.09	5.11	6.15	8.23	10.81	13.35	18.17	22.57	26.51
400	0.06	0.11	0.22	0.48	0.80	1.14	1.51	1.90	2.70	3.75	5.01	6.30	7.60	10.24	13.53	16.77	22.95	28.60	33.67
600	0.06	0.12	0.24	0.56	0.96	1.42	1.91	2.43	3.52	4.95	6.67	8.45	10.26	13.94	18.57	23.14	31.89	39.95	47.18
800	0.06	0.12	0.26	0.63	1.10	1.65	2.25	2.89	4.24	6.03	8.17	10.40	12.69	17.35	23.24	29.07	40.29	50.63	59.93
1000	0.06	0.13	0.27	0.69	1.23	1.86	2.55	3.30	4.91	7.02	9.57	12.23	14.96	20.57	27.66	34.71	48.29	60.84	72.15

LS Factors for Construction Sites. *Table from Renard et. al., 1997.*

APPENDIX 2:
Post-Construction Water Balance Performance Standard Spreadsheet

The discharger shall submit with their Notice of Intent (NOI) the following information to demonstrate compliance with the New and Re-Development Water Balance Performance Standard.

Map Instructions

The discharger must submit a small-scale topographic map of the site to show the existing contour elevations, pre- and post-construction drainage divides, and the total length of stream in each watershed area. Recommended scales include 1 in. = 20 ft., 1 in. = 30 ft., 1 in. = 40 ft., or 1 in = 50 ft. The suggested contour interval is usually 1 to 5 feet, depending upon the slope of the terrain. The contour interval may be increased on steep slopes. Other contour intervals and scales may be appropriate given the magnitude of land disturbance.

Spreadsheet Instructions

The intent of the spreadsheet is to help dischargers calculate the project-related increase in runoff volume and select impervious area and runoff reduction credits to reduce the project-related increase in runoff volume to pre-project levels.

The discharger has the option of using the spreadsheet (**Appendix 2.1)** or a more sophisticated, watershed process-based model (e.g. Storm Water Management Model, Hydrological Simulation Program Fortran) to determine the project-related increase in runoff volume.

In* Appendix 4.1**, ***you must complete the worksheet for each land use/soil type combination for each project sub-watershed.

Steps 1 through 9 pertain specifically to the Runoff Volume Calculator:

Step 1: Enter the county where the project is located in cell H3.

Step 2: Enter the soil type in cell H6.

Step 3: Enter the existing pervious (dominant) land use type in cell H7.

Step 4: Enter the proposed pervious (dominant) land use type in cell H8.

Step 5: Enter the total project site area in cell H11 or J11.

Step 6: Enter the sub-watershed area in cell H12 or J12.

Step 7: Enter the existing rooftop area in cell H17 or J17, the existing non-rooftop impervious area in cell H18 or J18, the proposed rooftop area in cell H19 or J19, and the proposed non-rooftop impervious area in cell H20 or J20

Step 8: Work through each of the impervious area reduction credits and claim credits where applicable. Volume that cannot be addressed using non-structural practices must be captured in structural practices and approved by the Regional Water Board.

Step 9: Work through each of the impervious volume reduction credits and claim credits where applicable. Volume that cannot be addressed using non-structural practices must be captured in structural practices and approved by the Regional Water Board.

Non-structural Practices Available for Crediting

- ***Porous Pavement***
- ***Tree Planting***
- ***Downspout Disconnection***
- ***Impervious Area Disconnection***
- ***Green Roof***
- ***Stream Buffer***
- ***Vegetated Swales***
- ***Rain Barrels and Cisterns***
- ***Landscaping Soil Quality***

Post-Construction Water Balance Calculator

3	User may make changes from any cell that is orange or brown in color (similar to the cells to the immediate right). Cells in green are calculated for you.		(Step 1a) If you know the 85th percentile storm event for your location enter it in the box below	(Step 1b) If you can not answer 1a then select the county where the project is located (click on the cell to the right for drop-down): This will determine the average 85th percentile 24 hr. storm event for your site, which will appear under precipitation to left.						SACRAMENTO	
4				(Step 1c) If you would like a more percise value select the location closest to your site. If you do not recgonize any of these locations, leave this drop-down menu at location. The average value for the County will be used.						SACRAMENTO FAA ARPT	
5	**Project Information**			**Runoff Calculations**							
6	***Project Name:***	***Optional***		(Step 2) Indicate the Soil Type (dropdown menu to right):						***Group C Soils***	**Low infiltration. Sandy clay loam. Infiltration rate 0.05 to 0.15 inch/hr when wet.**
7	***Waste Discharge Identification (WDID):***	***Optional***		(Step 3) Indicate the existing **dominant** non-built land Use Type (dropdown menu to right):						***Wood & Grass: <50% ground cover***	
8	***Date:***	***Optional***		(Step 4) Indicate the proposed **dominant** non-built land Use Type (dropdown menu to right):						***Lawn, Grass, or Pasture covering more than 75% of the open space***	
9	***Sub Drainage Area Name (from map):***	***Optional***								**Complete Either**	
10	***Runoff Curve Numbers***									**Sq Ft**	**Acres**	**Acres**
11	**Existing Pervious Runoff Curve Number**		**82**	*(Step 5) Total Project Site Area:*							**5.00**	**5.00**
12	**Proposed Development Pervious Runoff Curve Number**		**74**	*(Step 6) Sub-watershed Area:*							**5.00**	**5.00**
13	***Design Storm***			*Percent of total project :*						**100%**		
14	Based on the County you indicated above, we have included the 85 percentile average 24 hr event - P85 (in)^ for your area.	**0.62**	**in**									
15	The Amount of rainfall needed for runoff to occur (Existing runoff curve number -P from existing RCN (in)^)	**0.44**	**In**	***(Step 7) Sub-watershed Conditions***						**Complete Either**		**Calculated Acres**
16	P used for calculations (in) (the greater of the above two criteria)	**0.62**	**In**	Sub-watershed Area (acres)						**Sq Ft**	**Acres**	**5.00**
17	^Available at www.cabmphandbooks.com			Existing Rooftop Impervious Coverage							**0**	**0.00**
18				Existing Non-Rooftop Impervious Coverage							**0**	**0.00**
19				Proposed Rooftop Impervious Coverage							**0**	**0.00**
20				Proposed Non-Rooftop Impervious Coverage							**0**	**0.00**
21												
22				***Credits***						**Acres**		**Square Feet**
23				Porous Pavement						**0.00**		**0**
24				Tree Planting						**0.00**		**0**
25	**Pre-Project Runoff Volume (cu ft)**	**247**	**Cu.Ft.**	Downspout Disconnection						**0.00**		**0**
26	**Project-Related Runoff Volume Increase w/o credits (cu ft)**	**0**	**Cu.Ft.**	Impervious Area Disconnection						**0.00**		**0**
27				Green Roof						**0.00**		**0**
28				Stream Buffer						**0.00**		**0**
29	**Project-Related Volume Increase with Credits (cu ft)**	**0**	**Cu.Ft.**	Vegetated Swales						**0.00**		**0**
30				**Subtotal**						**0.00**		**0**
31				**Subtotal Runoff Volume Reduction Credit**						**0 Cu. Ft.**		
32	You have achieved your minimum requirements											
33				***(Step 9) Impervious Volume Reduction Credits***						**Volume (cubic feet)**		
34				Rain Barrels/Cisterns						**0 Cu. Ft.**		
35				Soil Quality						**0 Cu. Ft.**		
36				**Subtotal Runoff Volume Reduction**						**0 Cu. Ft.**		
37				**Total Runoff Volume Reduction Credit**						**0 Cu. Ft.**		
38												
39												

Porous Pavement Credit Worksheet

Please fill out a porous pavement credit worksheet for each project sub-watershed.

For the PROPOSED Development:

Proposed Porous Pavement	Runoff Reduction*	Fill in either Acres or SqFt		Equivalent Acres
		In SqFt.	In Acres	
Area of **Brick without Grout** on less than 12 inches of base with at least 20% void space over soil	0.45			0.00
Area of **Brick without Grout** on more than 12 inches of base with at least 20% void space over soil	0.90			0.00
Area of **Cobbles** less than 12 inches deep and over soil	0.30			0.00
Area of **Cobbles** less than 12 inches deep and over soil	0.60			0.00
Area of **Reinforced Grass Pavement** on less than 12 inches of base with at least 20% void space over soil	0.45			0.00
Area of **Reinforced Grass Pavement** on at least 12 inches of base with at least 20% void space over soil	0.90			0.00
Area of **Porous Gravel Pavement** on less than 12 inches of base with at least 20% void space over soil	0.38			0.00
Area of **Porous Gravel Pavement** on at least 12 inches of base with at least 20% void space over soil	0.75			0.00
Area of **Poured Porous Concrete or Asphalt Pavement** with less than 4 inches of gravel base (washed stone)	0.40			0.00
Area of **Poured Porous Concrete or Asphalt Pavement** with 4 to 8 inches of gravel base (washed stone)	0.60			0.00
Area of **Poured Porous Concrete or Asphalt Pavement** with 8 to 12 inches of gravel base (washed stone)	0.80			0.00
Area of **Poured Porous Concrete or Asphalt Pavement** with 12 or more inches of gravel base (washed stone)	1.00			0.00

*=1-Rv**

Return to Calculator

**Using Site Design Techniques to meet Development Standards for Stormwater Quality (BASMAA 2003)

**NCDENR Stormwater BMP Manual (2007)

Tree Planting Credit Worksheet

Please fill out a tree canopy credit worksheet for each project sub-watershed.

Tree Canopy Credit Criteria	Number of Trees Planted	Credit (acres)
Number of proposed evergreen trees to be planted (credit = number of trees x 0.005)*	0	0.00
Number of proposed deciduous trees to be planted (credit = number of trees x 0.0025)*		0.00
	Square feet Under Canopy	
Square feet under an existing tree canopy, that will remain on the property, with an average diameter at 4.5 ft above grade (i.e., diameter at breast height or DBH) is LESS than 12 in diameter.		0.00
Square feet under an existing tree canopy that will remain on the property, with an average diameter at 4.5 ft above grade (i.e., diameter at breast height or DBH) is 12 in diameter or GREATER.		0.00
Please describe below how the project will ensure that these trees will be maintained.		

0

Return to Calculator

* credit amount based on credits from Stormwater Quality Design Manual for the Sacramento and South Placer Regions

Downspout Disconnection Credit Worksheet

Please fill out a downspout disconnection credit worksheet for each project subwatershed. If you answer yes to all questions, all rooftop area draining to each downspout will be subtracted from your proposed rooftop impervious coverage.

Downspout Disconnection Credit Criteria		
Do downspouts and any extensions extend at least six feet from a basement and two feet from a crawl space or concrete slab?	○ Yes	◉ No
Is the area of rooftop connecting to each disconnected downspout 600 square feet or less?	○ Yes	◉ No
Is the roof runoff from the design storm event fully contained in a raised bed or planter box or does it drain as sheet flow to a landscaped area large enough to contain the roof runoff from the design storm event?	○ Yes	◉ No
The Stream Buffer and/or Vegetated Swale credits **will not** be taken in this sub-watershed area?	○ Yes	◉ No

Percentage of existing	0.00	Acres	of rooftop surface has disconnected downspouts	
Percentage of the proposed	0.00	Acres	of rooftop surface has disconnected downspouts	50

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Impervious Area Disconnection Credit Worksheet

Please fill out an impervious area disconnection credit worksheet for each project sub-watershed. If you answer yes to all questions, all non-rooftop impervious surface area will be subtracted from your proposed non-rooftop impervious coverage.

Non-Rooftop Disconnection Credit Criteria	Response
Is the maximum contributing impervious flow path length less than 75 feet or, if equal or greater than 75 feet, is a storage device (e.g. French drain, bioretention area, gravel trench) implemented to achieve the required disconnection length?	◉ Yes ○ No
Is the impervious area to any one discharge location less than 5,000 square feet?	◉ Yes ○ No
The Stream Buffer credit **will not** be taken in this sub-watershed area?	◉ Yes ○ No

Percentage of existing	0.00	Acres non-rooftop surface area disconnected	
Percentage of the proposed	0.00	Acres non-rooftop surface area disconnected	70

Return to Calculator

Green Roof Credit Worksheet

Please fill out a greenroof credit worksheet for each project sub-watershed. If you answer yes to all questions, 70% of the greenroof area will be subtracted from your proposed rooftop impervious coverage.

Green Roof Credit Criteria				Response
Is the roof slope less than 15% or does it have a grid to hold the substrate in place until it forms a thick vegetation mat?				◉ Yes ○ No
Has a professional engineer assessed the necessary load reserves and designed a roof structure to meet state and local codes?				◉ Yes ○ No
Is the irrigation needed for plant establishment and/or to sustain the green roof during extended dry periods, is the source from stored, recycled, reclaimed, or reused water?				◉ Yes ○ No
Percentage of existing	0.00	Acres	rooftop surface area in greenroof	
Percentage of the proposed	0.00	Acres	rooftop surface area in greenroof	

Return to Calculator

Stream Buffer Credit Worksheet

Please fill out a stream buffer credit worksheet for each project sub-watershed. If you answer yes to all questions, you may subtract all impervious surface draining to each stream buffer that has not been addressed using the Downspout and/or Impervious Area Disconnection credits.

Stream Buffer Credit Criteria				Response
Does runoff enter the floodprone width* or within 500 feet (whichever is larger) of a stream channel as sheet flow**?				○ Yes ◉ No
Is the contributing overland slope 5% or less, or if greater than 5%, is a level spreader used?				○ Yes ◉ No
Is the buffer area protected from vehicle or other traffic barriers to reduce compaction?				○ Yes ◉ No
Will the stream buffer be maintained in an ungraded and uncompacted condition and will the vegetation be maintained in a natural condition?				○ Yes ◉ No
Percentage of existing	0.00	Acres	impervious surface area draining into a stream buffer:	
Percentage of the proposed	0.00	Acres	impervious surface area that will drain into a stream buffer:	
Please describe below how the project will ensure that the buffer areas will remain in ungraded and uncompacted condition and that the vegetation will be maintained in a natural condition.				

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* floodprone width is the width at twice the bankfull depth.
** the maximum contributing length shall be 75 feet for impervious area

Vegetated Swale Credit Worksheet

Please fill out a vegetated swale worksheet for each project subwatershed. If you answer yes to all questions, you may subtract all impervious surface draining to each stream buffer that has not been addressed using the Downspout Disconnection credit.

Vegetated Swale Credit Criteria

Have all vegetated swales been designed in accordance with Treatment Control BMP 30 (TC-30 - Vegetated Swale) from the California Stormwater BMP Handbook, New Development and Redevelopment (available at www.cabmphandbooks.com)?	○ Yes ◉ No
Is the maximum flow velocity for runoff from the design storm event less than or equal to 1.0 foot per second?	○ Yes ◉ No

Percentage of existing	0.00	Acres of impervious area draining to a vegetated swale	
Percentage of the proposed	0.00	Acres of impervious area draining to a vegetated swale	

Return to Calculator

Rain Barrel/Cistern Credit Worksheet

Please fill out a rain barrel/cistern worksheet for each project sub-watershed.

Rain Barrel/Cistern Credit Criteria	Response
Total number of rain barrel(s)/cisterns	
Average capacity of rain barrel(s)/cistern(s) (in gallons)	
Total capacity rain barrel(s)/cistern(s) (in cu ft) [1]	0

[1] accounts for 10% loss

Return to Calculator

Please fill out a soil quality worksheet for each project sub-watershed.

	Response
Will the landscaped area be lined with an impervious membrane?	
Will the soils used for landscaping meet the ideal bulk densities listed in Table 1 below? [1]	○ Yes ◉ No
If you answered yes to the question above, and you know the area-weighted bulk density within the top 12 inches for soils used for landscaping (in g/cm^3)* , fill in the cell to the right and skip to cell G11. If not select from the drop-down menu in G10.	1.3
If you answered yes to the question above, but you do not know the exact bulk density, which of the soil types in the drop down menu to the right best describes the top 12 inches for soils used for landscaping (in g/cm^3).	Sandy loams, loams
What is the average depth of your landscaped soil media meeting the above criteria (inches)?	12
What is the total area of the landscaped areas meeting the above criteria (in acres)?	2.97

Return to Calculator

Table 1

Sands, loamy sands	<1.6
Sandy loams, loams	<1.4
Sandy clay loams, loams, clay loams	<1.4
Silts, silt loams	<1.3
Silt loams, silty clay loams	<1.1
Sandy clays, silty clays, some clay loams (35-45% clay)	<1.1
Clays (>45% clay)	<1.1

[1] USDA NRCS. "Soil Quality Urban Technical Note No.2-Urban Soil Compaction". March 2000. http://soils.usda.gov/sqi/management/files/sq_utn_2.pdf

* To determine how to calculate density see: http://www.globe.gov/tctg/bulkden.pdf?sectionID=94

Porosity (%) 50.94%

Mineral grains in many soils are mainly quartz and feldspar, so 2.65 a good average for particle density. To determine percent porosity, use the formula: Porosity (%) = (1-Bulk Density/2.65) X 100

APPENDIX 3
Bioassessment Monitoring Guidelines

Bioassessment monitoring is required for projects that meet all of the following criteria:

1. The project is rated Risk Level 3 or LUP Type 3
2. The project directly discharges runoff to a freshwater wadeable stream (or streams) that is either: (a) listed by the State Water Board or USEPA as impaired due to sediment, and/or (b) tributary to any downstream water body that is listed for sediment; and/or have the beneficial use SPAWN & COLD & MIGRATORY
3. Total project-related ground disturbance exceeds 30 acres.

For all such projects, the discharger shall conduct bioassessment monitoring, as described in this section, to assess the effect of the project on the biological integrity of receiving waters.
Bioassessment shall include:

1. The collection and reporting of specified instream biological data
2. The collection and reporting of specified instream physical habitat data

<u>Bioassessment Exception</u>
If a site qualifies for bioassessment, but construction commences out of an index period for the site location, the discharger shall:

1. Receive Regional Water Board approval for the sampling exception
2. Make a check payable to: Cal State Chico Foundation (SWAMP Bank Account) or San Jose State Foundation (SWAMP Bank Account) and include the WDID# on the check for the amount calculated for the exempted project.
3. Send a copy of the check to the Regional Water Board office for the site's region
4. Invest **7,500.00 X The number of samples required** into the SWAMP program as compensation (upon Regional Water Board approval).
5. Conduct bioassessment monitoring, as described in Appendix 4
6. Include the collection and reporting of specified instream biological data and physical habitat
7. Use the bioassessment sample collection and Quality Assurance & Quality Control (QA/QC) protocols developed by the State of California's Surface Water Ambient Monitoring Program (SWAMP)

<u>Site Locations and Frequency</u>
Macroinvertebrate samples shall be collected both before ground disturbance is initiated and after the project is completed. The "after" sample(s) shall be collected after at least one winter season resulting in surface runoff has transpired after project-related ground disturbance has ceased. "Before" and "after" samples shall be collected both upstream and downstream of the project's

discharge. Upstream samples should be taken immediately before the sites outfall and downstream samples should be taken immediately after the outfall (when safe to collect the samples). Samples should be collected for each freshwater wadeable stream that is listed as impaired due to sediment, or tributary to a water body that is listed for sediment. Habitat assessment data shall be collected concurrently with all required macroinvertebrate samples.

Index Period (Timing of Sample Collection)
Macroinvertebrate sampling shall be conducted during the time of year (i.e., the "index period") most appropriate for bioassessment sampling, depending on ecoregion. This map is posted on the State Water Board's Website: http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml

Field Methods for Macroinvertebrate Collections
In collecting macroinvertebrate samples, the discharger shall use the "Reachwide Benthos (Multi-habitat) Procedure" specified in *Standard Operating Procedures for Collecting Benthic Macroinvertebrate Samples and Associated Physical and Chemical Data for Ambient Bioassessments in California* (Ode 2007).[1]

Physical - Habitat Assessment Methods
The discharger shall conduct, concurrently with all required macroinvertebrate collections, the "Full" suite of physical habitat characterization measurements as specified in *Standard Operating Procedures for Collecting Benthic Macroinvertebrate Samples and Associated Physical and Chemical Data for Ambient Bioassessments in California* (Ode 2007), and as summarized in the Surface Water Ambient Monitoring Program's *Stream Habitat Characterization Form — Full Version*.

Laboratory Methods
Macroinvertebrates shall be identified and classified according to the Standard Taxonomic Effort (STE) Level I of the Southwestern Association of Freshwater Invertebrate Taxonomists (SAFIT),[2] and using a fixed-count of 600 organisms per sample.

Quality Assurance
The discharger or its consultant(s) shall have and follow a quality assurance (QA) plan that covers the required bioassessment monitoring. The QA plan shall include, or be supplemented to include, a specific requirement for external QA checks (i.e., verification of taxonomic identifications and correction of data where

[1] This document is available on the Internet at: ~~http://www.swrcb.ca.gov/swamp/docs/phab_sopr6.pdf~~. http://swamp.mpsl.mlml.calstate.edu/wp-content/uploads/2009/04/swamp_sop_bioassessment_collection_020107.pdf.

[2] The current SAFIT STEs (28 November 2006) list requirements for both the Level I and Level II taxonomic effort, and are located at: ~~http://www.swrcb.ca.gov/swamp/docs/safit/ste_list.pdf~~ http://www.safit.org/Docs/ste_list.pdf. When new editions are published by SAFIT, they will supersede all previous editions. All editions will be posted at the State Water Board's SWAMP website.

errors are identified). External QA checks shall be performed on one of the discharger's macroinvertebrate samples collected per calendar year, or ten percent of the samples per year (whichever is greater). QA samples shall be randomly selected. The external QA checks shall be paid for by the discharger, and performed by the California Department of Fish and Game's Aquatic Bioassessment Laboratory. An alternate laboratory with equivalent or better expertise and performance may be used if approved in writing by State Water Board staff.

Sample Preservation and Archiving

The original sample material shall be stored in 70 percent ethanol and retained by the discharger until: 1) all QA analyses specified herein and in the relevant QA plan are completed; and 2) any data corrections and/or re-analyses recommended by the external QA laboratory have been implemented. The remaining subsampled material shall be stored in 70 percent ethanol and retained until completeness checks have been performed according to the relevant QA plan. The identified organisms shall be stored in 70 percent ethanol, in separate glass vials for each final ID taxon. (For example, a sample with 45 identified taxa would be archived in a minimum of 45 vials, each containing all individuals of the identified taxon.) Each of the vials containing identified organisms shall be labeled with taxonomic information (i.e., taxon name, organism count) and collection information (i.e., site name/site code, waterbody name, date collected, method of collection). The identified organisms shall be archived (i.e., retained) by the discharger for a period of not less than three years from the date that all QA steps are completed, and shall be checked at least once per year and "topped off" with ethanol to prevent desiccation. The identified organisms shall be relinquished to the State Water Board upon request by any State Water Board staff.

Data Submittal

The macroinvertebrate results (i.e., taxonomic identifications consistent with the specified SAFIT STEs, and number of organisms within each taxa) shall be submitted to the State Water Board in electronic format. The State Water Board's Surface Water Ambient Monitoring Program (SWAMP) is currently developing standardized formats for reporting bioassessment data. All bioassessment data collected after those formats become available shall be submitted using the SWAMP formats. Until those formats are available, the biological data shall be submitted in MS-Excel (or equivalent) format.[3]

The physical/habitat data shall be reported using the standard format titled *SWAMP Stream Habitat Characterization Form — Full Version*.[4]

[3] Any version of Excel, 2000 or later, may be used.
[4] Available at: http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/reports/fieldforms_fullversion052908.pdf

Invasive Species Prevention

In conducting the required bioassessment monitoring, the discharger and its consultants shall take precautions to prevent the introduction or spread of aquatic invasive species. At minimum, the discharger and its consultants shall follow the recommendations of the California Department of Fish and Game to minimize the introduction or spread of the New Zealand mudsnail.[5]

[5] Instructions for controlling the spread of NZ mudsnails, including decontamination methods, can be found at: http://www.dfg.ca.gov/invasives/mudsnail/
More information on AIS More information on AIS
http://www.waterboards.ca.gov/water_issues/programs/swamp/ais/

Appendix 4 Non Sediment TMDLs

Region 1 Lost River-DIN and CBOD

Region 1 Source: Cal Trans Construction TMDL Completion Date: 12 30 2008 TMDL Type: River, Lake Watershed Area= 2996 mi^2	**Pollutant Stressors/WLA**	
	Dissolved inorganic nitrogen (DIN) (metric tons/yr)	**Carbonaceous biochemical oxygen demand (CBOD) (metric tons/yr)**
Lost River from the Oregon border to Tule Lake	.1	.2
Tule Lake Refuge	.1	.2
Lower Klamath Refuge	.1	.2

Region 2 San Francisco Bay-Mercury

Region 2 Source:Non-Urban Stormwater Runoff TMDL Type: Bay	**Name**	**Pollutant Stressor/WLA**	**TMDL Completion Date**
	San Francisco Bay	Mercury 25 kg/year	08 09 2006

Region 4 Ballona Creek-Metals and Selenium

Region 4 Source: NPDES General Construction TMDL Completion Date: 12 22 2005 TMDL Type: Creek	**Pollutant Stressors/WLA**							
	Copper (Cu)		**Lead (Pb)**		**Selenium (Se)**		**Zinc (Zn)**	
	g/day	g/day/acre	g/day	g/day/acre	g/day	g/day/acre	g/day	g/day/acre
Ballona Creek	4.94E-07 x Daily storm volume (L)	2.20E-10 x Daily storm volume (L)	1.62E-06 x Daily storm volume (L)	7.20E-10 x Daily storm volume (L)	1.37E-07 x Daily storm volume (L)	6.10E-11 x Daily storm volume (L)	3.27E-06 x Daily storm volume (L)	1.45E-09 x Daily storm volume (L)

General Construction Storm Water Permits:
Waste load allocations will be incorporated into the State Board general permit upon renewal or into a watershed-specific general permit developed by the Regional Board.

- Dry-weather Implementation Non-storm water flows authorized by the General Permit for Storm Water Discharges Associated with Construction Activity (Water Quality Order No. 99-08 DWQ), or any successor order, are exempt from the dry-weather waste load allocation equal to zero as long as they comply with the provisions of sections C.3 and A.9 of the Order No. 99-08 DWQ, which state that these authorized non-storm discharges shall be:
  (1) infeasible to eliminate
  (2) comply with BMPs as described in the Storm Water Pollution Prevention Plan prepared by the permittee, and
  (3) not cause or contribute to a violation of water quality standards, or comparable provisions in any successor order.
  Unauthorized non-storm water flows are already prohibited by Order No. 99-08 DWQ.
- Wet-weather Implementation Within seven years of the effective date of the TMDL, the construction industry will submit the results of BMP effectiveness studies to determine BMPs that will achieve compliance with the final waste load allocations assigned to construction storm water permittees.
- Regional Board staff will bring the recommended BMPs before the Regional Board for consideration within eight years of the effective date of the TMDL.
- General construction storm water permittees will be considered in compliance with final waste load allocations if they implement these Regional Board approved BMPs. All permittees must implement the approved BMPs within nine years of the effective date of the TMDL. If no effectiveness studies are conducted and no BMPs are approved by the Regional Board within eight years of the effective date of the TMDL, each general construction storm water permit holder will be subject to site-specific BMPs and monitoring requirements to demonstrate compliance with final waste load allocations.

Region 4 Calleaguas Creek-OC Pesticides, PCBs, and Siltation

Interim Requirements

Region 4 Calleaguas Creek Source: Minor NPDES point sources/WDRs TMDL Completion Date: 3 14 2006 TMDL Type:Creek	**Pollutant Stressor**	**WLA Daily Max (µg/L)**	**WLA Monthly Ave (µg/L)**
	Chlordane	1.2	0.59
	4,4-DDD	1.7	0.84
	4,4-DDE	1.2	0.59
	4,4-DDT	1.2	0.59
	Dieldrin	0.28	0.14
	PCB's	0.34	0.17
	Toxaphene	0.33	0.16

Final WLA (ng/g)							
Region 4 Calleaguas Creek Source: Stormwater Permittees TMDL Completion Date: 3 14 2006 TMDL Type:Creek	Chlordane	4,4-DDD	4,4-DDE	4,4-DDT	Dieldrin	PCB's	Toxaphene
Mugu Lagoon*	3.3	2.0	2.2	0.3	4.3	180.0	360.0
Callegaus Creek	3.3	2.0	1.4	0.3	0.2	120.0	0.6
Revolon Slough (SW)*	0.9	2.0	1.4	0.3	0.1	130.0	1.0
Arroyo Las posas(SW)*	3.3	2.0	1.4	0.3	0.2	120.0	0.6
Arroyo Simi	3.3	2.0	1.4	0.3	0.2	120.0	0.6
Conejo Creek	3.3	2.0	1.4	0.3	0.2	120.0	0.6
Interim Requirements (ng/g)							
Mugu Lagoon*	25.0	69.0	300.0	39.0	19.0	180.	22900.0
Callegaus Creek	17.0	66.0	470.0	110.0	3.0	3800.0	260.0
Revolon Slough (SW)*	48.0	400.0	1600.0	690.0	5.7	7600.0	790.0
Arroyo Las posas(SW)*	3.3	290.0	950.0	670.0	1.1	25700.0	230.0
Arroyo Simi	3.3	14.0	170.0	25.0	1.1	25700.0	230.0
Conejo Creek	3.4	5.3	20.0	2.0	3.0	3800.0	260.0

*(SW)=Subwatershed

*Mugu Lagoon includes Duck pond/Agricultural Drain/Mugu/Oxnard Drain #2

Compliance with sediment based WLAs is measured as an instream annual average at the base of each subwatershed where the discharges are located.

Region 4 Calleguas Creek-Salts

Final Dry Weather Pollutant WLA (mg/L)					
Region 4 Calleaguas Creek Source Permitted Stormwater Dischargers TMDL Completion Date: 12 2 2008 TMDL Type:Creek	**Critical Condition Flow Rate (mgd)**	**Chloride (lb/day)**	**TDS (lb/day)**	**Sulfate (lb/day)**	**Boron (lb/day)**
Simi	1.39	1738.0	9849.0	2897.0	12.0
Las Posas	0.13	157.0	887.0	261.0	N/A
Conejo	1.26	1576.0	8931.0	2627.0	N/A

Camarillo	0.06	72.0	406.0	119.0	N/A
Pleasant Valley (Calleguas)	0.12	150.0	850.0	250.0	N/A
Pleasant Valley (Revolon)	0.25	314.0	1778.0	523.0	2.0

Dry Weather Interim Pollutant WLA (mg/L)				
	Chloride (mg/L)	**TDS (mg/L)**	**Sulfate (mg/L)**	**Boron (mg/L)**
Simi	230.0	1720.0	1289.0	1.3
Las Posas	230.0	1720.0	1289.0	1.3
Conejo	230.0	1720.0	1289.0	1.3
Camarillo	230.0	1720.0	1289.0	1.3
Pleasant Valley (Calleguas)	230.0	1720.0	1289.0	1.3
Pleasant Valley (Revolon)	230.0	1720.0	1289.0	1.3

- General Construction permittees are assigned a dry weather wasteload allocation equal to the average dry weather critical condition flow rate multiplied by the numeric target for each constituent. Waste load allocations apply in the receiving water at the base of each subwatershed. Dry weather allocations apply when instream flow rates are below the 86th percentile flow and there has been no measurable precipitation in the previous 24 hours.
- Because wet weather flows transport a large mass of salts at low concentrations, these dischargers meet water quality objectives during wet weather.
- Interim limits are assigned for dry weather discharges from areas covered by NPDES stormwater permits to allow time to implement appropriate actions. The interim limits are assigned as concentration based receiving water limits set to the 95th percentile of the discharger data as a monthly average limit except for chloride. The 95th percentile for chloride was 267 mg/L which is higher than the recommended criteria set forth in the Basin Plan for protection of sensitive beneficial uses including aquatic life. Therefore, the interim limit for chloride for Permitted Stormwater Dischargers is set equal to 230 mg/L to ensure protection of sensitive beneficial uses in the Calleguas Creek watershed.

Region 4 San Gabriel River and Tributaries-Metals and Selenium

Region 4 San Gabriel River and Tributaries Source: Construction Stormwater Dischargers TMDL Completion Date: 3 2007 TMDL Type: Creek	**Pollutant Stressor**	**Wet weather Allocations**	**Dry Weather Allocations**	**% of Watershed**

San Gabriel Reach 2	Lead (Pb)	0.7% * 166 µg/l * Daily Storm Vol	N/A	0.7%
San Gabriel Reach 2	Lead (Pb) Mass based	0.8 kg/d	N/A	0.7%
Coyote Creek	Copper (Cu)	0.285 kg/d	0	5.0%
Coyote Creek	Lead (Pb)	1.70 kg/d	N/A	5.0%
Coyote Creek	Zinc (Zn)	2.4 kg/d	N/A	5.0%
San Jose Creek Reach 1 and 2	Selenium	5 µg/L	5 µg/L	5.0%

Wet-weather allocations for lead in San Gabriel River Reach 2. Concentration-based allocations apply to non-stormwater NPDES discharges. Stormwater allocations are expressed as a percent of load duration curve. Mass-based values presented in table are based on a flow of 260 cfs (daily storm volume = 6.4 $x10^{8}$ liters).

There are 1555 acres of water in the entire watershed, 37.4 acres of water in the Reach 1 subwatershed (2.4%), and 269 acres in the Coyote Creek subwatershed (17%).

General Construction Storm Water Permits

Waste load allocations for the general construction storm water permits may be incorporated into the State Board general permit upon renewal or into a watershed-specific general permit developed by the Regional Board. An estimate of direct atmospheric deposition is developed based on the percent area of surface water in the watershed. Approximately 0.4% of the watershed area draining to San Gabriel River Reach 2 is comprised of water and approximately 0.2% of the watershed area draining to Coyote Creek is comprised of water.

Region 4 The Harbor Beaches of Ventura County-Bacteria

The TMDL has a multi-part numeric target based on the bacteriological water quality objectives for marine water to protect the water contact recreation use. These targets are the most appropriate indicators of public health risk in recreational waters. Bacteriological objectives are set forth in Chapter 3 of the Basin Plan. The objectives are based on four bacteria indicators and include both geometric mean limits and single sample limits. The Basin Plan objectives that serve as the numeric targets for this TMDL are:

The General NPDES Construction permit is seen as a minor contributor and is given no allocation

General NPDES permits, individual NPDES permits, the Statewide Industrial Storm Water General Permit, the Statewide Construction Activity Storm Water General Permit, and WDR permittees in the Channel Islands Harbor subwatershed are assigned WLAs of zero (0) days of allowable exceedances for all three time periods and for the single sample limits and the rolling 30-day geometric mean. Any future enrollees under a general NPDES permit, individual NPDES permit, the Statewide Industrial Storm Water General Permit, the Statewide Construction Activity Storm Water General Permit, and WDR will also be subject to a WLA of zero (0) days of allowable exceedances.

Region 4 Resolution No. 03-009 Los Angeles River and Tributaries-Nutrients

Minor Point Sources
Waste loads are allocated to minor point sources enrolled under NPDES or WDR permits including but not limited to Tapia WRP, Whittier Narrows WRP, Los Angeles Zoo WRP, industrial and construction stormwater, and municipal storm water and urban runoff from municipal separate storm sewer systems (MS4s)

Region 4 Minor Point Sources for NPDES/WDR Permits TMDL Completion Date: 7 10 2003 TMDL Type: River	Pollutant Stressor/WLA				
	Total Ammonia (NH_3)		**Nitrate-nitrogen (NO_3-N)**	**Nitrite-nitrogen (NO_2-N)**	**NO_3-N + NO_3-N**
	1 Hr Ave mg/l	30 Day Ave mg/l	30 Day Ave mg/l		30 Day Ave mg/l
LA River Above Los Angeles-Glendale WRP (LAG)	4.7	1.6	8.0	1.0	8.0
LA River Below LAG	8.7	2.4	8.0	1.0	8.0
Los Angeles Tributaries	10.1	2.3	8.0	1.0	8.0

Malibu Creek Attachment A to Resolution No. 2004-019R-Bacteria

12 13 2004 The WLAs for permittees under the NPDES General Stormwater Construction Permit are zero (0) days of allowable exceedances for all three time periods and for the single sample limits and the rolling 30-day geometric mean.

Region 4 Marina del Rey Harbor, Mothers' Beach and Back Basins

Attachment A to Resolution No. 2003-012-Bacteria

8 7 2003 As discussed in “Source Analysis”, discharges from general NPDES permits, general industrial storm water permits and general construction storm water permits are not expected to be a significant source of bacteria. Therefore, the WLAs for these discharges are zero (0) days of allowable exceedances for all three time periods and for the single sample limits and the rolling 30-day geometric mean. Any future enrollees under a general NPDES permit, general industrial storm water permit or general construction storm water permit within the MdR Watershed will also be subject to a WLA of zero days of allowable exceedances.

Region 4 San Gabriel River and Tributaries-Metals and Selenium

Dry Weather Selenium WLA
A zero WLA is assigned to the industrial and construction stormwater permits during dry weather. Non-storm water discharges are already prohibited or restricted by existing general permits.

Region 4 General Construction Permittees TMDL Completion Date: 7 13 2006 TMDL Type: River	**Total Recoverable Metals (kg/day)**		
	Copper (Cu) Kg/day	**Lead (Pb) Kg/day**	**Zinc (Zn) Kg/day**
San Gabriel River Reach 2 and upstream reaches/tributaries	**XXXX**	Daily storm volume x 1.24 µg/L	**XXXX**
Coyote Creek and Tributaries	Daily storm volume x 0.7 µg/L	Daily storm volume x 4.3 µg/L	Daily storm volume x 6.2 µg/L

Each enrollee under the general construction stormwater permit receives a WLA on a per acre basis

Region 4 General Construction Permittees TMDL Completion Date: 7 13 2006 TMDL Type: River	**Total Recoverable Metals (kg/day/acre)**		
	Copper (Cu) Kg/acre/day	**Lead (Pb) Kg/acre/day**	**Zinc (Zn) Kg/acre/day**
San Gabriel River Reach 2 and upstream reaches/tributaries	**XXXX**	Daily storm volume x 0.56 µg/L	**XXXX**

Coyote Creek and Tributaries	Daily storm volume x 0.12 µg/L	Daily storm volume x 0.70 µg/L	Daily storm volume x 1.01 µg/L

For the general industrial and construction storm water permits, the daily storm volume is measured at USGS station 11085000 for discharges to Reach 2 and above and at LACDPW flow gauge station F354-R for discharges to Coyote Creek.

General construction storm water permits
WLAs will be incorporated into the State Board general permit upon renewal or into a watershed-specific general permit developed by the Regional Board.

Dry-weather implementation
Non-storm water flows authorized by the General Permit for Storm Water Discharges Associated with Construction Activity (NPDES Permit No. CAS000002), or any successor permit, are exempt from the dry-weather WLA equal to zero as long as they comply with the provisions of sections C.3.and A.9 of the Order No. 99-08 DWQ, which state that these authorized non-storm discharges shall be (1) infeasible to eliminate (2) comply with BMPs as described in the Storm Water Pollution Prevention Plan prepared by the permittee, and (3) not cause or contribute to a violation of water quality standards, or comparable provisions in any successor order. Unauthorized non-storm water flows are already prohibited by Permit No. CAS000002.

Upon permit issuance, renewal, or re-opener
Non-storm water flows not authorized by Order No. 99-08 DWQ, or any successor order, shall achieve dry-weather WLAs. WLAs shall be expressed as NPDES water quality-based effluent limitations specified in accordance with federal regulations and state policy on water quality control. Effluent limitations may be expressed as permit conditions, such as the installation, maintenance, and monitoring of Regional Board-approved BMPs.

Six years from the effective date of the TMDL
The construction industry will submit the results of wet-weather BMP effectiveness studies to the Los Angeles Regional Board for consideration. In the event that no effectiveness studies are conducted and no BMPs are approved, permittees shall be subject to site-specific BMPs and monitoring to demonstrate BMP effectiveness.

Seven years from the effective date of the TMDL
The Los Angeles Regional Board will consider results of the wet weather BMP effectiveness studies and consider approval of BMPs.

Eight years from the effective date of the TMDL
All general construction storm water permittees shall implement Regional Board-approved BMPs.

Total Maximum Daily Loads (TMDLs) for San Diego Creek,
Upper and Lower Newport Bay, Orange County, California

Region 8 NPDES Construction Permit TMDL Completion Date: 1 24 1995 TMDL Type: River. Cr, Bay	Organochlorine Compounds							
	Total DDT		**Chlordane**		**Total PCBs**		**Toxaphene**	
	g/day	g/yr	g/day	g/yr	g/day	g/yr	g/day	g/yr
San Diego Creek	.27	99.8	**.18***	**64.3***	**.09***	**31.5***	.004	1.5
Upper Newport Bay	.11	40.3	.06	23.4	.06	23.2	**X**	**X**
Lower Newport Bay	.04	14.9	.02	8.6	.17	60.7	**X**	**X**

*Red= Informational WLA only, not for enforcement purposes

Organochlorine Compounds TMDLs Implementation Tasks and Schedule

Regional Board staff shall develop a SWPPP Improvement Program that identifies the Regional Board's expectations with respect to the content of SWPPPs, including documentation regarding the selection and implementation of BMPs, and a sampling and analysis plan. The Improvement Program shall include specific guidance regarding the development and implementation of monitoring plans, including the constituents to be monitored, sampling frequency and analytical protocols. The SWPPP Improvement Program shall be completed by (*the date of OAL approval of this BPA*). ***No later than two months*** from completion of the Improvement Program, Board staff shall assure that the requirements of the Program are communicated to interested parties, including dischargers with existing authorizations under the General Construction Permit. Existing, authorized dischargers shall revise their project SWPPPs as needed to address the Program requirements as soon as possible but ***no later than (three months of completion of the SWPPP Improvement Program)***. Applicable SWPPPs that do not adequately address the Program requirements shall be considered inadequate and enforcement by the Regional Board shall proceed accordingly. The Caltrans and Orange County MS4 permits shall be revised as needed to assure that the permittees communicate the Regional Board's SWPPP expectations, based on the SWPPP Improvement Program, with the Standard Conditions of Approval.

Appendix 4 Sediment TMDLs

Implemented Sediment TMDLs in California. Construction was listed as a source in all fo these TMDLs in relation to road construction. Although construction was mentioned as a source, it was not given a specific allocation amount. The closest allocation amount would be for the road activity management WLA. **Implementation Phase** – Adoption process by the Regional Board, the State Water Resources Control Board, the Office of Administrative Law, and the US Environmental Protection Agency completed and TMDL being implemented.

A. Region	**Type**	**Name**	**Pollutant Stressor**	**Potential Sources**	**TMDL Completion Date**	**Watershed Acres**	**WLA** tons mi^2 yr
1 R1.epa.albionfinaltmdl	R	Albion River	Sedimentation	Road Construction	2001	43 acres	See A (table 6)

B Region	**Type**	**Name**	**Pollutant Stressor**	**Potential Sources**	**TMDL Completion Date**	**Watershed Acres**	**WLA** tons mi^2 yr
1 R1.epa.EelR-middle.mainSed.temp	R	Middle Main Eel River and Tributaries (from Dos Rios to the South Fork)	Sedimentation	Road Construction	2005-2006	521 mi^2	100

C Region	**Type**	**Name**	**Pollutant Stressor**	**Potential Sources**	**TMDL Completion Date**	**Watershed Acres**	**WLA** tons mi^2 yr
1 R1.epa.EelRsouth.sed.temp	R	South Fork Eel River	Sedimentation	Road Construction	12 1999	See chart	473

D Region	**Type**	**Name**	**Pollutant Stressor**	**Potential Sources**	**TMDL Completion Date**	**Watershed Acres**	**WLA** tons mi^2 yr
1 R1.epa.bigfinaltmdl	R	Big River	Sedimentation	Road Construction	12 2001	181 mi^2 watershed drainage	TMDL = loading capacity = nonpoint sources + background =

							393 t mi2 yr

E Region	**Type**	**Name**	**Pollutant Stressor**	**Potential Sources**	**TMDL Completion Date**	**Watershed Acres**	**WLA** tons mi^2 yr
1 R1.epa.EelR-lower.Sed.temp-121807-signed	R	Lower Eel River	Sedimentation	Road Construction	12 2007	300 square-mile watershed	898

F Region	**Type**	**Name**	**Pollutant Stressor**	**Potential Sources**	**TMDL Completion Date**	**Watershed Acres**	**WLA** tons mi^2 yr
1 R1.epa.EelR-middle.Sed.temp-	R	Middle Fork Eel River	Sedimentation	Road Construction	12 2003	753 mi^2 (approx. 482,000 acres)	82

G Region	**Type**	**Name**	**Pollutant Stressor**	**Potential Sources**	**TMDL Completion Date**	**Watershed Acres** Mi^2	**WLA** tons mi^2 yr
1 R1.epa.EelRnorth-Sed.temp.final-121807-signed	R	North Fork Eel River	Sedimentation	Road Construction	12 30 2002	289 (180,020 acres)	20

H Region	**Type**	**Name**	**Pollutant Stressor**	**Potential Sources**	**TMDL Completion Date**	**Watershed Acres** Mi^2	**WLA** tons mi^2 yr
1 R1.epa.EelR-upper.mainSed.temp-	R	Upper Main Eel River and Tributaries (including Tomki Creek, Outlet Creek and Lake Pillsbury)	Sedimentation	Road Construction	12 29 2004	688 (approx. 440,384 acres)	14

I Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres	WLA tons mi^2 yr
1 R1.epa.gualalafinaltmdl	R	Gualala River	Sedimentation	Road Construction	Not sure	300 (191,145 acres)	7

J Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres mi^2	WLA tons mi^2 yr
1 R1.epa.Mad-sed.turbidity	R	Mad River	Sedimentation	Road Construction	12 21 2007	480	174

K Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres mi^2	WLA tons mi^2 yr
1 R1.epa.mattole.sediment	R	Mattole River	Sedimentation	Road Construction	12 30 2003	296	27 or 520+27 = 547

L Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres mi^2	WLA tons mi^2 yr
1 R1.epa.navarro.sed.temp	R	Navarro River	Sedimentation	Road Construction	Not sure	315 (201,600 acres).	50

M Region	Type	Name	Pollutant Stressor	Potential Sources	TMDL Completion Date	Watershed Acres mi^2	WLA tons mi^2 yr
1 R1.epa.noyo.sediment	R	Noyo River	Sedimentation	Road Construction	12 16 1999	113 (72,323 acres)	68 (three areas measured) Table 16 in the TMDL

N Region	**Type**	**Name**	**Pollutant Stressor**	**Potential Sources**	**TMDL Completion Date**	**Watershed Acres** mi^2	**WLA** tons mi^2 yr
1 R1.epa.RedwoodCk.sed	Cr	Redwood Creek	Sedimentation	Road Construction	12 30 1998	278	1900 Total allocation

O Region	**Type**	**Name**	**Pollutant Stressor**	**Potential Sources**	**TMDL Completion Date**	**Watershed Acres** mi^2	**WLA – Roads** tons mi^2 yr
1 R1.epa.tenmile.sed	R	Ten Mile River	Sedimentation	Road Construction	2000	120	9

P Region	**Type**	**Name**	**Pollutant Stressor**	**Potential Sources**	**TMDL Completion Date**	**Watershed Acres** mi^2	**WLA management** tons mi^2 yr
1 R1.epa.trinity.sed	R	Trinity River	Sedimentation	Road Construction	12 20 2001	2000 of 3000 covered in this TMDL	See rows below
1	Cr	Horse Linto Creek	Sedimentation	Road Construction	12 20 2001	64	528
1	Cr	Mill creek and Tish Tang	Sedimentation	Road Construction	12 20 2001	39	210
1	Cr	Willow Creek	Sedimentation	Road Construction	12 20 2001	43	94
1	Cr	Campbell Creek and Supply Creek	Sedimentation	Road Construction	12 20 2001	11	1961
1	Cr	Lower Mainstem and Coon Creek	Sedimentation	Road Construction	12 20 2001	32	63
1	R	Reference	Sedimentation	Road	12 20 2001	434	24

		Subwatershed [1]		Construction			
1	Cr	Canyon Creek	Sedimentation	Road Construction	12 20 2001	64	326
1	R	Upper Tributaries[2]	Sedimentation	Road Construction	12 20 2001	72	67
1	R	Middle Tributaries[3]	Sedimentation	Road Construction	12 20 2001	54	53
1	R	Lower Tributaries[4]	Sedimentation	Road Construction	12 20 2001	96	55
1	Cr	Weaver and Rush Creeks	Sedimentation	Road Construction	12 20 2001	72	169
1	Cr	Deadwood Creek Hoadley Gulch Poker Bar	Sedimentation	Road Construction	12 20 2001	47	68
1	L	Lewiston Lake	Sedimentation	Road Construction	12 20 2001	25	49
1	Cr	Grassvalley Creek	Sedimentation	Road Construction	12 20 2001	37	44
1	Cr	Indian Creek	Sedimentation	Road Construction	12 20 2001	34	81
1	Cr	Reading and Browns Creek	Sedimentation	Road Construction	12 20 2001	104	66
1	Cr	Reference Subwatersheds[5]	Sedimentation	Road Construction	12 20 2001	235	281
1	L, Cr	Westside tributaries[6]	Sedimentation	Road Construction	12 20 2001	93	105
1	R, Cr, G	Upper trinity[7]	Sedimentation	Road Construction	12 20 2001	161	690
1	R, Cr, G	East Fork Tributaries[8]	Sedimentation	Road Construction	12 20 2001	115	65

1
2
3
4
5
6
7
8

1	R, L	Eastside Tributaries[9]	Sedimentation	Road Construction	12 20 2001	89	60

1 New River, Big French, Manzanita, North Fork, East Fork, North Fork
2 Dutch, Soldier, Oregon gulch, Conner Creek
3 Big Bar, Prairie Creek, Little French Creek
4 Swede, Italian, Canadian, Cedar Flat, Mill, McDonald, Hennessy, Quimby, Hawkins, Sharber
5 Stuarts Fork, Swift Creek, Coffee Creek
6 Stuart Arm, Stoney Creek, Mule Creek, East Fork, Stuart Fork, West Side Trinity Lake, Hatchet Creek, Buckeye Creek,
7 Upper Trinity River, Tangle Blue, Sunflower, Graves, Bear Upper Trinity Mainstream, Ramshorn Creek, Ripple Creek, Minnehaha Creek, Snowslide Gulch, Scorpion Creek
8 East Fork Trinity, Cedar Creek, Squirrel Gulch
9 East Side Tributaries, Trinity Lake

Q Region	**Type**	**Name**	**Pollutant Stressor**	**Potential Sources**	**TMDL Completion Date**	**Watershed Acres** mi^2	**WLA** tons mi^2 yr
1 R1.epa.trinity.so.sed	R, Cr	South Fork Trinity River and Hayfork Creek	Sedimentation	Road Construction	12 1998	Not given, 19 miles long	33 (road total)

R Region	**Type**	**Name**	**Pollutant Stressor**	**Potential Sources**	**TMDL Completion Date**	**Watershed Acres** mi^2	**WLA** tons mi^2 yr
1 R1.epa.vanduzen.sed	R, Cr	Van Duzen River and Yager Creek	Sedimentation	Various	12 16 1999	429	1353 total allocation
1		Upper Basin	Sedimentation	Road Construction			7
1		Middle Basin	Sedimentation	Road Construction			22
1		Lower Basin	Sedimentation	Road Construction			20

S Region	**Type**	**Name**	**Pollutant Stressor**	**Potential**	**TMDL**	**Watershed**	**WLA** tons mi^2

[9] 2009-0009-DWQ as amended by 2010-0014-DWQ & 2012-0006-DWQ

				Sources	**Completion Date**	**Acres** mi^2	yr
6 R6.blackwood.sed	Cr	Blackwood Creek (Placer County)	Bedded Sediment	Various	9 2007	11	17272 total

T Region	**Type**	**Name**	**Pollutant Stressor**	**Potential Sources**	**TMDL Completion Date**	**Watershed Acres** mi^2	**WLA** tons mi^2 yr
6 R6.SquawCk.sed	R	Squaw Creek (Placer County)	Sedimentation /controllable sources	Various – basin plan amendment	4 13 2006	8.2	10,900

Adopted TMDLs for Construction Sediment Sources

Region	Type	Name	Pollutant Stressor	Potential Sources	**TMDL Completion Date**	**Watershed Area** mi^2	Waste load Allocation tons mi^2 yr
8	R	Newport Bay San Diego Creek Watershed	Sedimentation	Construction Land Development	1999	2.24 (1432 acres)	125,000 tons per Year (no more than 13,000 tons per year from construction sites)

APPENDIX 5:
Glossary

Active Areas of Construction
All areas subject to land surface disturbance activities related to the project including, but not limited to, project staging areas, immediate access areas and storage areas. All previously active areas are still considered active areas until final stabilization is complete. [The construction activity Phases used in this General Permit are the Preliminary Phase, Grading and Land Development Phase, Streets and Utilities Phase, and the Vertical Construction Phase.]

Active Treatment System (ATS)
A treatment system that employs chemical coagulation, chemical flocculation, or electrocoagulation to aid in the reduction of turbidity caused by fine suspended sediment.

Acute Toxicity Test
A chemical stimulus severe enough to rapidly induce a negative effect; in aquatic toxicity tests, an effect observed within 96 hours or less is considered acute.

Air Deposition
Airborne particulates from construction activities.

Approved Signatory
A person who has been authorized by the Legally Responsible Person to sign, certify, and electronically submit Permit Registration Documents, Notices of Termination, and any other documents, reports, or information required by the General Permit, the State or Regional Water Board, or U.S. EPA. The Approved Signatory must be one of the following:

1. For a corporation or limited liability company: a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (a) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation or limited liability company; or (b) the manager of the facility if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

2. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;

3. For a municipality, State, Federal, or other public agency: a principal executive officer, ranking elected official, city manager, council president, or any other authorized public employee with managerial responsibility over the

construction or land disturbance project (including, but not limited to, project manager, project superintendent, or resident engineer);

4. For the military: any military officer or Department of Defense civilian, acting in an equivalent capacity to a military officer, who has been designated;

5. For a public university: an authorized university official;

6. For an individual: the individual, because the individual acts as both the Legally Responsible Person and the Approved Signatory; or

7. For any type of entity not listed above (e.g. trusts, estates, receivers): an authorized person with managerial authority over the construction or land disturbance project.

Beneficial Uses
As defined in the California Water Code, beneficial uses of the waters of the state that may be protected against quality degradation include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

Best Available Technology Economically Achievable (BAT)
As defined by USEPA, BAT is a technology-based standard established by the Clean Water Act (CWA) as the most appropriate means available on a national basis for controlling the direct discharge of toxic and nonconventional pollutants to navigable waters. The BAT effluent limitations guidelines, in general, represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

Best Conventional Pollutant Control Technology (BCT)
As defined by USEPA, BCT is a technology-based standard for the discharge from existing industrial point sources of conventional pollutants including biochemical oxygen demand (BOD), total suspended sediment (TSS), fecal coliform, pH, oil and grease.

Best Professional Judgment (BPJ)
The method used by permit writers to develop technology-based NPDES permit conditions on a case-by-case basis using all reasonably available and relevant data.

Best Management Practices (BMPs)
BMPs are scheduling of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants. BMPs also include treatment requirements, operating procedures,

and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Chain of Custody (COC)
Form used to track sample handling as samples progress from sample collection to the analytical laboratory. The COC is then used to track the resulting analytical data from the laboratory to the client. COC forms can be obtained from an analytical laboratory upon request.

Coagulation
The clumping of particles in a discharge to settle out impurities, often induced by chemicals such as lime, alum, and iron salts.

Common Plan of Development
Generally a contiguous area where multiple, distinct construction activities may be taking place at different times under one plan. A plan is generally defined as any piece of documentation or physical demarcation that indicates that construction activities may occur on a common plot. Such documentation could consist of a tract map, parcel map, demolition plans, grading plans or contract documents. Any of these documents could delineate the boundaries of a common plan area. However, broad planning documents, such as land use master plans, conceptual master plans, or broad-based CEQA or NEPA documents that identify potential projects for an agency or facility are not considered common plans of development.

Daily Average Discharge
The discharge of a pollutant measured during any 24-hour period that reasonably represents a calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged during the day. For pollutants with limitations expressed in other units of measurement (e.g., concentration) the daily discharge is calculated as the average measurement of the pollutant throughout the day (40 CFR 122.2). In the case of pH, the pH must first be converted from a log scale.

Debris
Litter, rubble, discarded refuse, and remains of destroyed inorganic anthropogenic waste.

Direct Discharge
A discharge that is routed directly to waters of the United States by means of a pipe, channel, or ditch (including a municipal storm sewer system), or through surface runoff.

Discharger
The Legally Responsible Person (see definition) or entity subject to this General Permit.

Dose Rate (for ATS)
In exposure assessment, dose (e.g. of a chemical) per time unit (e.g. mg/day), sometimes also called dosage.

Drainage Area
The area of land that drains water, sediment, pollutants, and dissolved materials to a common outlet.

Effluent
Any discharge of water by a discharger either to the receiving water or beyond the property boundary controlled by the discharger.

Effluent Limitation
Any numeric or narrative restriction imposed on quantities, discharge rates, and concentrations of pollutants which are discharged from point sources into waters of the United States, the waters of the contiguous zone, or the ocean.

Erosion
The process, by which soil particles are detached and transported by the actions of wind, water, or gravity.

Erosion Control BMPs
Vegetation, such as grasses and wildflowers, and other materials, such as straw, fiber, stabilizing emulsion, protective blankets, etc., placed to stabilize areas of disturbed soils, reduce loss of soil due to the action of water or wind, and prevent water pollution.

Field Measurements
Testing procedures performed in the field with portable field-testing kits or meters.

Final Stabilization
All soil disturbing activities at each individual parcel within the site have been completed in a manner consistent with the requirements in this General Permit.

First Order Stream
Stream with no tributaries.

Flocculants
Substances that interact with suspended particles and bind them together to form flocs.

Good Housekeeping BMPs
BMPs designed to reduce or eliminate the addition of pollutants to construction site runoff through analysis of pollutant sources, implementation of proper handling/disposal practices, employee education, and other actions.

Grading Phase (part of the Grading and Land Development Phase)
Includes reconfiguring the topography and slope including; alluvium removals; canyon cleanouts; rock undercuts; keyway excavations; land form grading; and stockpiling of select material for capping operations.

Hydromodification
Hydromodification is the alteration of the hydrologic characteristics of coastal and non-coastal waters, which in turn could cause degradation of water resources. Hydromodification can cause excessive erosion and/or sedimentation rates, causing excessive turbidity, channel aggradation and/or degradation.

Identified Organisms
Organisms within a sub-sample that is specifically identified and counted.

Inactive Areas of Construction
Areas of construction activity that are not active and those that have been active and are not scheduled to be re-disturbed for at least 14 days.

Index Period
The period of time during which bioassessment samples must be collected to produce results suitable for assessing the biological integrity of streams and rivers. Instream communities naturally vary over the course of a year,and sampling during the index period ensures that samples are collected during a time frame when communities are stable so that year-to-year consistency is obtained. The index period approach provides a cost-effective alternative to year-round sampling. Furthermore, sampling within the appropriate index period will yield results that are comparable to the assessment thresholds or criteria for a given region, which are established for the same index period. Because index periods differ for different parts of the state, it is essential to know the index period for your area.

K Factor
The soil erodibility factor used in the Revised Universal Soil Loss Equation (RUSLE). It represents the combination of detachability of the soil, runoff potential of the soil, and the transportability of the sediment eroded from the soil.

Legally Responsible Person
The Legally Responsible Person (LRP) will typically be the project proponent. The categories of persons or entities that are eligible to serve as the LRP are set forth below. For any construction or land disturbance project where multiple persons or entities are eligible to serve as the LRP, those persons or entities

shall select a single LRP. In exceptional circumstances, a person or entity that qualifies as the LRP may provide written authorization to another person or entity to serve as the LRP. In such a circumstance, the person or entity that provides the authorization retains all responsibility for compliance with the General Permit. Except as provided in category 2(d), a contractor who does not satisfy the requirements of any of the categories below is not qualified to be an LRP.

The following persons or entities may serve as an LRP:

1. A person, company, agency, or other entity that possesses a real property interest (including, but not limited to, fee simple ownership, easement, leasehold, or other rights of way) in the land upon which the construction or land disturbance activities will occur for the regulated site.

2. In addition to the above, the following persons or entities may also serve as an LRP:

    a. For linear underground/overhead projects, the utility company, municipality, or other public or private company or agency that owns or operates the LUP;

    b. For land controlled by an estate or similar entity, the person who has day-to-day control over the land (including, but not limited to, a bankruptcy trustee, receiver, or conservator);

    c. For pollution investigation and remediation projects, any potentially responsible party that has received permission to conduct the project from the holder of a real property interest in the land; or

    d. For U.S. Army Corp of Engineers projects, the U.S. Army Corps of Engineers may provide written authorization to its bonded contractor to serve as the LRP, provided, however, that the U.S. Army Corps of Engineers is also responsible for compliance with the general permit, as authorized by the Clean Water Act or the Federal Facilities Compliance Act.

Likely Precipitation Event
Any weather pattern that is forecasted to have a 50% or greater chance of producing precipitation in the project area. The discharger shall obtain likely precipitation forecast information from the National Weather Service Forecast Office (e.g., by entering the zip code of the project's location at http://www.srh.noaa.gov/forecast).

Maximum Allowable Threshold Concentration (MATC)
The allowable concentration of residual, or dissolved, coagulant/flocculant in effluent. The MATC shall be coagulant/flocculant-specific, and based on toxicity

testing conducted by an independent, third-party laboratory. A typical MATC would be:

The MATC is equal to the geometric mean of the NOEC (No Observed Effect Concentration) and LOEC (Lowest Observed Effect Concentration) Acute and Chronic toxicity results for most sensitive species determined for the specific coagulant. The most sensitive species test shall be used to determine the MATC.

Natural Channel Evolution
The physical trend in channel adjustments following a disturbance that causes the river to have more energy and degrade or aggrade more sediment. Channels have been observed to pass through 5 to 9 evolution types. Once they pass though the suite of evolution stages, they will rest in a new state of equilibrium.

Non-Storm Water Discharges
Discharges are discharges that do not originate from precipitation events. They can include, but are not limited to, discharges of process water, air conditioner condensate, non-contact cooling water, vehicle wash water, sanitary wastes, concrete washout water, paint wash water, irrigation water, or pipe testing water.

Non-Visible Pollutants
Pollutants associated with a specific site or activity that can have a negative impact on water quality, but cannot be seen though observation (ex: chlorine). Such pollutants being discharged are not authorized.

Numeric Action Level (NAL)
Level is used as a warning to evaluate if best management practices are effective and take necessary corrective actions. Not an effluent limit.

Original Sample Material
The material (i.e., macroinvertebrates, organic material, gravel, etc.) remaining after the subsample has been removed for identification.

pH
Unit universally used to express the intensity of the acid or alkaline condition of a water sample. The pH of natural waters tends to range between 6 and 9, with neutral being 7. Extremes of pH can have deleterious effects on aquatic systems.

Post-Construction BMPs
Structural and non-structural controls which detain, retain, or filter the release of pollutants to receiving waters after final stabilization is attained.

Preliminary Phase (Pre-Construction Phase - Part of the Grading and Land Development Phase)
Construction stage including rough grading and/or disking, clearing and grubbing operations, or any soil disturbance prior to mass grading.

Project

Qualified SWPPP Developer
Individual who is authorized to develop and revise SWPPPs.

Qualified SWPPP Practitioner
Individual assigned responsibility for non-storm water and storm water visual observations, sampling and analysis, and responsibility to ensure full compliance with the permit and implementation of all elements of the SWPPP, including the preparation of the annual compliance evaluation and the elimination of all unauthorized discharges.

Qualifying Rain Event
Any event that produces 0.5 inches or more precipitation with a 48 hour or greater period between rain events.

R Factor
Erosivity factor used in the Revised Universal Soil Loss Equation (RUSLE). The R factor represents the erosivity of the climate at a particular location. An average annual value of R is determined from historical weather records using erosivity values determined for individual storms. The erosivity of an individual storm is computed as the product of the storm's total energy, which is closely related to storm amount, and the storm's maximum 30-minute intensity.

Rain Event Action Plan (REAP)
Written document, specific for each rain event, that when implemented is designed to protect all exposed portions of the site within 48 hours of any likely precipitation event.

Remaining Sub sampled Material
The material (e.g., organic material, gravel, etc.) that remains after the organisms to be identified have been removed from the subsample for identification. (Generally, no macroinvertebrates are present in the remaining subsampled material, but the sample needs to be checked and verified using a complete Quality Assurance (QA) plan)

Routine Maintenance
Activities intended to maintain the original line and grade, hydraulic capacity, or original purpose of a facility.

Runoff Control BMPs
Measures used to divert runon from offsite and runoff within the site.

Run-on
Discharges that originate offsite and flow onto the property of a separate project site.

Revised Universal Soil Loss Equation (RUSLE)
Empirical model that calculates average annual soil loss as a function of rainfall and runoff erosivity, soil erodibility, topography, erosion controls, and sediment controls.

Sampling and Analysis Plan
Document that describes how the samples will be collected, under what conditions, where and when the samples will be collected, what the sample will be tested for, what test methods and detection limits will be used, and what methods/procedures will be maintained to ensure the integrity of the sample during collection, storage, shipping and testing (i.e., quality assurance/quality control protocols).

Sediment
Solid particulate matter, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity, or ice and has come to rest on the earth's surface either above or below sea level.

Sedimentation
Process of deposition of suspended matter carried by water, wastewater, or other liquids, by gravity. It is usually accomplished by reducing the velocity of the liquid below the point at which it can transport the suspended material.

Sediment Control BMPs
Practices that trap soil particles after they have been eroded by rain, flowing water, or wind. They include those practices that intercept and slow or detain the flow of storm water to allow sediment to settle and be trapped (e.g., silt fence, sediment basin, fiber rolls, etc.).

Settleable Solids (SS)
Solid material that can be settled within a water column during a specified time frame. It is typically tested by placing a water sample into an Imhoff settling cone and then allowing the solids to settle by gravity for a given length of time. Results are reported either as a volume (mL/L) or a mass (mg/L) concentration.

Sheet Flow
Flow of water that occurs overland in areas where there are no defined channels where the water spreads out over a large area at a uniform depth.

Site

Soil Amendment
Any material that is added to the soil to change its chemical properties, engineering properties, or erosion resistance that could become mobilized by storm water.

Streets and Utilities Phase
Construction stage including excavation and street paving, lot grading, curbs, gutters and sidewalks, public utilities, public water facilities including fire hydrants, public sanitary sewer systems, storm sewer system and/or other drainage improvements.

Structural Controls
Any structural facility designed and constructed to mitigate the adverse impacts of storm water and urban runoff pollution

Suspended Sediment Concentration (SSC)
The measure of the concentration of suspended solid material in a water sample by measuring the dry weight of all of the solid material from a known volume of a collected water sample. Results are reported in mg/L.

Total Suspended Solids (TSS)
The measure of the suspended solids in a water sample includes inorganic substances, such as soil particles and organic substances, such as algae, aquatic plant/animal waste, particles related to industrial/sewage waste, etc. The TSS test measures the concentration of suspended solids in water by measuring the dry weight of a solid material contained in a known volume of a sub-sample of a collected water sample. Results are reported in mg/L.

Toxicity
The adverse response(s) of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies.

Turbidity
The cloudiness of water quantified by the degree to which light traveling through a water column is scattered by the suspended organic and inorganic particles it contains. The turbidity test is reported in Nephelometric Turbidity Units (NTU) or Jackson Turbidity Units (JTU).

Vertical Construction Phase
The Build out of structures from foundations to roofing, including rough landscaping.

Waters of the United States
Generally refers to surface waters, as defined by the federal Environmental Protection Agency in 40 C.F.R. § 122.2.[1]

Water Quality Objectives (WQO)
Water quality objectives are defined in the California Water Code as limits or levels of water quality constituents or characteristics, which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area.

[1] The application of the definition of "waters of the United States" may be difficult to determine; there are currently several judicial decisions that create some confusion. If a landowner is unsure whether the discharge must be covered by this General Permit, the landowner may wish to seek legal advice.

APPENDIX 6:
Acronym List

ASBS	Areas of Special Biological Significance
ASTM	American Society of Testing and Materials; Standard Test Method for Particle-Size Analysis of Soils
ATS	Active Treatment System
BASMAA	Bay Area Storm water Management Agencies Association
BAT	Best Available Technology Economically Achievable
BCT	Best Conventional Pollutant Control Technology
BMP	Best Management Practices
BOD	Biochemical Oxygen Demand
BPJ	Best Professional Judgment
CAFO	Confined Animal Feeding Operation
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGP	NPDES General Permit for Storm Water Discharges Associated with Construction Activities
CIWQS	California Integrated Water Quality System
CKD	Cement Kiln Dust
COC	Chain of Custody
CPESC	Certified Professional in Erosion and Sediment Control
CPSWQ	Certified Professional in Storm Water Quality
CSMP	Construction Site Monitoring Program
CTB	Cement Treated Base
CTR	California Toxics Rule
CWA	Clean Water Act
CWC	California Water Code
CWP	Center for Watershed Protection
DADMAC	Diallyldimethyl-ammonium chloride
DDNR	Delaware Department of Natural Resources
DFG	Department of Fish and Game
DHS	Department of Health Services
DWQ	Division of Water Quality
EC	Electrical Conductivity
ELAP	Environmental Laboratory Accreditation Program
EPA	Environmental Protection Agency
ESA	Environmentally Sensitive Area
ESC	Erosion and Sediment Control
HSPF	Hydrologic Simulation Program Fortran
JTU	Jackson Turbidity Units
LID	Low Impact Development
LOEC	Lowest Observed Effect Concentration
LRP	Legally Responsible Person
LUP	Linear Underground/Overhead Projects

MATC	Maximum Allowable Threshold Concentration
MDL	Method Detection Limits
MRR	Monitoring and Reporting Requirements
MS4	Municipal Separate Storm Sewer System
MUSLE	Modified Universal Soil Loss Equation
NAL	Numeric Action Level
NEL	Numeric Effluent Limitation
NICET	National Institute for Certification in Engineering Technologies
NOAA	National Oceanic and Atmospheric Administration
NOEC	No Observed Effect Concentration
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NTR	National Toxics Rule
NTU	Nephelometric Turbidity Units
O&M	Operation and Maintenance
PAC	Polyaluminum chloride
PAM	Polyacrylamide
PASS	Polyaluminum chloride Silica/sulfate
POC	Pollutants of Concern
PoP	Probability of Precipitation
POTW	Publicly Owned Treatment Works
PRDs	Permit Registration Documents
PWS	Planning Watershed
QAMP	Quality Assurance Management Plan
QA/QC	Quality Assurance/Quality Control
REAP	Rain Event Action Plan
Regional Board	Regional Water Quality Control Board
ROWD	Report of Waste Discharge
RUSLE	Revised Universal Soil Loss Equation
RW	Receiving Water
SMARTS	Storm water Multi Application Reporting and Tracking System
SS	Settleable Solids
SSC	Suspended Sediment Concentration
SUSMP	Standard Urban Storm Water Mitigation Plan
SW	Storm Water
SWARM	Storm Water Annual Report Module
SWAMP	Surface Water Ambient Monitoring Program
SWMM	Storm Water Management Model
SWMP	Storm Water Management Program
SWPPP	Storm Water Pollution Prevention Plan
TC	Treatment Control
TDS	Total Dissolved Solids

TMDL	Total Maximum Daily Load
TSS	Total Suspended Solids
USACOE	U.S. Army Corps of Engineers
USC	United States Code
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
WDID	Waste Discharge Identification Number
WDR	Waste Discharge Requirements
WLA	Waste Load Allocation
WET	Whole Effluent Toxicity
WRCC	Western Regional Climate Center
WQBEL	Water Quality Based Effluent Limitation
WQO	Water Quality Objective
WQS	Water Quality Standard

APPENDIX 7:
State and Regional Water Resources Control Board Contacts

NORTH COAST REGION (1)
5550 Skylane Blvd, Ste. A
Santa Rose, CA 95403
(707) 576-2220 FAX: (707)523-0135

SAN FRANCISCO BAY REGION (2)
1515 Clay Street, Ste. 1400
Oakland, CA 94612
(510) 622-2300 FAX: (510) 622-2640

CENTRAL COAST REGION (3)
895 Aerovista Place, Ste 101
San Luis Obispo, CA 93401
(805) 549-3147 FAX: (805) 543-0397

LOS ANGELES REGION (4)
320 W. 4th Street, Ste. 200
Los Angeles, CA 90013
(213) 576-6600 FAX: (213) 576-6640

CENTRAL VALLEY REGION (5S)
11020 Sun Center Dr., #200
Rancho Cordova, CA 95670-6114
(916) 464-3291 FAX: (916) 464-4645

FRESNO BRANCH OFFICE (5F)
1685 E St.
Fresno, CA 93706
(559) 445-5116 FAX: (559) 445-5910

REDDING BRANCH OFFICE (5R)
364 Knollcrest Drive, Ste. 205
Redding, CA 96002
(530) 224-4845 FAX: (530) 224-4857

LAHONTAN REGION (6 SLT)
2501 Lake Tahoe Blvd.
South Lake Tahoe, CA 96150
(530) 542-5400 FAX: (530) 544-2271

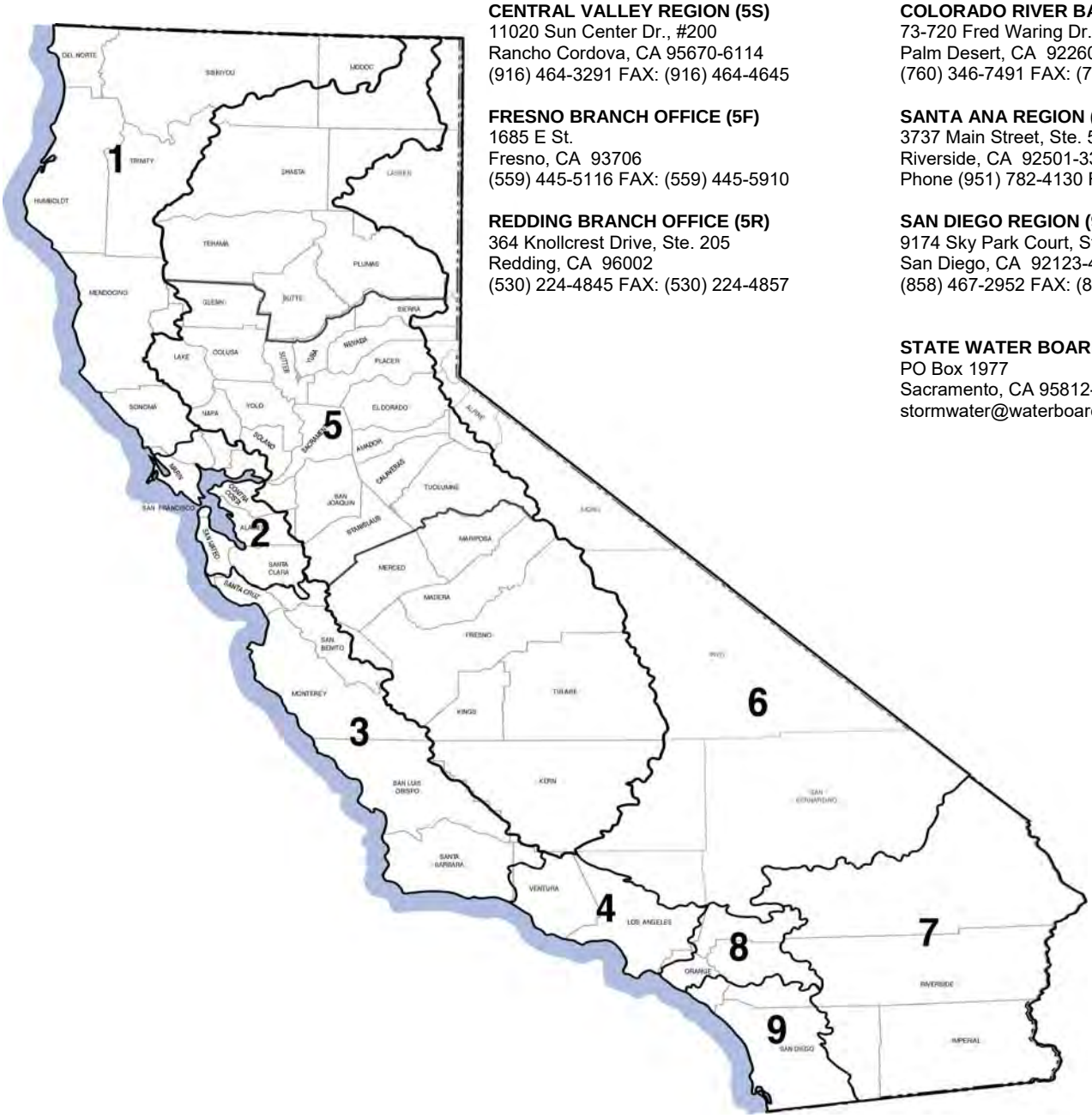
VICTORVILLE OFFICE (6V)
14440 Civic Drive, Ste. 200
Victorville, CA 92392-2383
(760) 241-6583 FAX: (760) 241-7308

COLORADO RIVER BASIN REGION (7)
73-720 Fred Waring Dr., Ste. 100
Palm Desert, CA 92260
(760) 346-7491 FAX: (760) 341-6820

SANTA ANA REGION (8)
3737 Main Street, Ste. 500
Riverside, CA 92501-3339
Phone (951) 782-4130 FAX: (951) 781-6288

SAN DIEGO REGION (9)
9174 Sky Park Court, Ste. 100
San Diego, CA 92123-4340
(858) 467-2952 FAX: (858) 571-6972

STATE WATER BOARD
PO Box 1977
Sacramento, CA 95812-1977
stormwater@waterboards.ca.gov



Shannon Castagno

From: Public Records <PublicRecords@baaqmd.gov>
Sent: Wednesday, March 10, 2021 6:35 PM
To: Shannon Castagno
Subject: Public Record Request No. 2021-02-0211
Attachments: 420 E. 3rd Street, Pittsburg (Closed).pdf

Hello,

Enclosed are the records you requested. If you have any questions or concerns, please call or e-mail me. Thank you.

Sincerely,

Rochele Henderson
Public Records Section
BAAQMD
415-516-1916

Plant Status (Q2)

Facility No.: 16960

Facility Name: ERM West, Inc

Legacy Plant No.:

Legacy Site No.: B6960

Facility Address: 420 E 3rd Street
Pittsburg CA , 94565-4565

Permit Expiration Date:

Facility Status: Demolished 9/30/2005

NAICS: ()

Owning Entity: BF16960
Ownership Start Date:

Current Owner Contact:
,
Email:
Tel:
Alt Tel:
Fax:

Current Operator Contact:
Kevin Mucha
ERM West, Inc
1777 Botelho Dr, Ste 260
Walnut Creek , CA 94596-4596
Email:
Tel: (925) 946-0455
Alt Tel:
Fax:

Current Billing Contact:
Kevin Mucha
ERM West, Inc
1777 Botelho Dr, Ste 260
Walnut Creek , CA 94596-4596
Email:
Tel: (925) 946-0455
Alt Tel:
Fax:

Permit Engineer: Irma Salinas

Inpsector:

Device ID	Device Category	Device Type	Device Sub-Type	Device Status

Historical Facility Information

Facility Status	Status Date

Legacy Facility No.	Facility Name	End Date
16960	ERM West, Inc	9/30/2005

Report Generated 3/10/2021

Show Permit - Applications By Facility

Facility Number: 16960

Legacy Plant/GDF Number:

Legacy Site Number: B6960

Facility Name: ERM West, Inc

Facility Address: 420 E 3rd Street
Pittsburg , 94565-4565

Application No.	Legacy Plant/GDF No.	Application Submission Date	Application Name	Current Status	Current Status Date	Application Engineer
12419	16960	4/6/2005	APP:Vacuum Enhanced Recovery Ststem	Approved	5/11/2005	Irma Salinas

Appendix E
Site Investigation Report

Site Investigation Report

420 E. 3rd Street

Pittsburg, California

Issued: **01 June 2021**

Prepared for: **Integral Communities**
888 San Clemente, Suite 100
Newport Beach, California 92660

GSI ENVIRONMENTAL

GSI Environmental Inc.

155 Grand, Ste 704, Oakland, CA 94612 ■ tel. 510.463.8484

GSI Job No.: 5785

01 June 2021

Mr. Erik Weeks
Integral Communities
888 San Clemente, Suite 100
Newport Beach, CA 92660

RE: Site Investigation Report
420 E. 3rd Street
Pittsburg, California

Dear Mr. Weeks:

GSI Environmental Inc. (GSI) is submitting the enclosed Site Investigation Report to document investigation activities conducted at the property located at 420 E. 3rd Street in Pittsburg, California (the Site). GSI understands that Integral Communities (Integral) is considering purchasing the property for residential development. The objective of the investigation was to assess current subsurface conditions at the Site with respect to future residential redevelopment. The sampling program was designed to provide a general assessment of Site conditions to aid in property transaction decision-making.

Please contact either of the undersigned should you have any questions regarding the enclosed document.

Sincerely,
GSI Environmental Inc.

Jennifer P. Duffield, PE
Senior Associate Engineer

Farid Achour, PhD, PG
Principal Hydrogeologist

Enclosure: Site Investigation Report

cc: Kevin Fryer, Integral Communities
Anna Amarandos, Rutan & Tucker, LLP

SITE INVESTIGATION REPORT
420 E. 3RD STREET
PITTSBURG, CALIFORNIA

Prepared for:

Integral Communities
888 San Clemente, Suite 100
Newport Beach, CA 92660

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GSI Job No. 5785
Issued: 01 June 2021

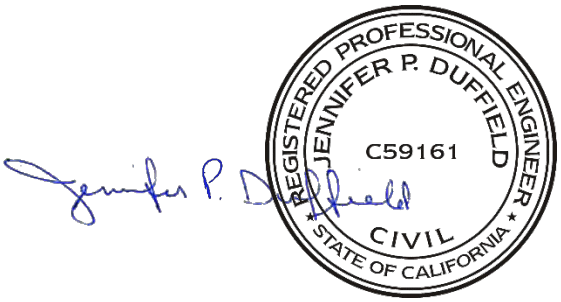
01 June 2021
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This Site Investigation Report was prepared by the staff of GSI Environmental Inc., under the supervision of the Engineer(s)/Geologist(s) whose signature appears hereon.

The findings, recommendations, specifications, or professional opinions were prepared in accordance with generally accepted professional engineering and geologic practice. No warranty is expressed or implied.



Farid Achour, PhD, PG # 9314



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1.0 INTRODUCTION

This report presents the results of soil, groundwater, and soil vapor sampling conducted at the property located at 420 E. 3rd Street in Pittsburg, California (Figures 1 and 2, "the Site"). The work was performed by GSI Environmental Inc. (GSI), on behalf of Integral Communities (Integral), pursuant to the 25 February 2021 Work Plan for Site Investigation prepared by GSI.

The objectives of the sampling were to assess current subsurface conditions at the Site with respect to future residential redevelopment. The sampling program was designed to provide a general assessment of Site conditions to aid in property transaction decision-making.

2.0 SITE SETTING AND BACKGROUND

This section includes a description of the Site, historical site uses, and a summary of previous investigations and remedial actions.

2.1 Site Description

The Site is approximately 20.5 acres and is currently undeveloped. The Site is separated into two sub-areas referred to as the "Bermed Property" and the "Residential Property." The Bermed Property is approximately 3.2 acres along the length of the eastern Site boundary, where asbestos- and petroleum hydrocarbon-impacted soil were stockpiled and covered. The Residential Property is the remainder of the Site which has undergone remediation and has been approved by the California Department of Toxic Substances Control (DTSC) for residential use. Reportedly, depth to groundwater at the Site ranges from approximately 5 to 19 feet below ground surface (bgs) and groundwater likely flows to the north-northeast towards New York Slough (PES, 2017).

2.2 Site History

Historically, the Site was occupied since the mid-1920s by a manufacturing plant that produced products such as asbestos-cement products, asphalt roofing materials, and asbestos-containing pipe covering. Manufacture of asbestos-containing materials (ACM) ceased in 1980 and commercial-grade roofing materials were manufactured at the plant until 2003, when operations terminated.

2.3 Summary of Previous Investigations and Remedial Actions

Site investigation activities have been conducted at the Site since 1986 including the removal of 13 underground storage tanks (USTs) since that time. Results of Site investigations indicated the former evaporation pond and several other on-Site areas contained ACM-and/or petroleum hydrocarbon-impacted soil. Additionally, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and polychlorinated biphenyls (PCBs) were also detected in soil at the Site; however, these constituents were not widespread or considered to be a significant contributor to the risk at the Site.

Remedial activities were conducted at the Site between 2006 and 2008 under DTSC oversight. Petroleum hydrocarbon- and ACM-impacted soil was excavated from the Residential Property. Petroleum hydrocarbon-impacted soil was not excavated below the groundwater table, which was interpreted to be at an elevation of 4 feet NGVD. Some of the excavated soil was disposed of off-

Site, while a portion of it was placed in the Bermed Property. ACM-affected soil was placed in trenches on the Bermed Property that extended to 10 feet bgs. Petroleum hydrocarbon-affected soil was then placed on top of the ACM-affected soil to approximately 8 feet above ground surface. The mounded soil was then covered with a geotextile and 2 feet of imported fill material.

In the vicinity of the former evaporation pond, petroleum hydrocarbon-impacted soil was initially excavated to approximately 22 feet bgs; some of the impacted soil was then placed back in the excavation to a depth of approximately 4 feet above the National Geodetic Vertical Datum (NGVD).[1] This area is referred to as the "Soil Management Area" and is subject to DTSC notification requirements if soil deeper than 4 feet NGVD will be disturbed.

Results of previous groundwater sampling at the Site indicate the presence of total petroleum hydrocarbons (TPH), VOCs (petroleum related and chlorinated), SVOCs, PCBs, metals, and asbestos. The remedial alternative selected for groundwater was natural attenuation with no monitoring. Historical reports indicate that the presence of chlorinated VOCs in the southwest corner of the Site is likely from an off-Site upgradient dry cleaner facility.

GSI performed a Phase I Environmental Site Assessment (GSI, 2021) on behalf of Integral in March 2021. The Phase I ESA identified the following recognized environmental conditions (RECs):

- Two engineered encapsulation berms contain ACM-impacted soil and debris and petroleum hydrocarbon-impacted soil that was excavated during Site remedial actions. The Bermed Property is subject to the Site LUC. This condition is identified as a controlled recognized environmental condition (CREC).
- The Soil Management Area within the Residential Property has underlying soil impacted with VOCs and petroleum hydrocarbons below 4 feet NGVD. The Residential Property is subject to the Site LUC. This condition is identified as a CREC.
- Groundwater and soil vapor beneath the Site is impacted with VOCs and petroleum hydrocarbons. VOCs in groundwater may be originating from an off-site, upgradient source. This condition is identified as a REC.

3.0 SAMPLING PLAN

Based on a review of historical Site documents, GSI developed a sampling plan to assess current subsurface conditions at the Site with respect to future residential redevelopment. The scope of the investigation included:

- Soil vapor sampling at approximately 5 feet bgs in an approximate grid pattern across the Site, with additional samples placed along the perimeter of the Soil Management Area
- Shallower vapor sampling (between 3 and 3.5 feet bgs) within the Soil Management Area
- Grab groundwater sampling at the southwest boundary to assess impacts from the upgradient dry cleaner property
- Grab groundwater sampling around the perimeter of the Soil Management Area and at the downgradient property boundary to assess potential groundwater impacts resulting from previous Site operations

[1] Site documents reference the National Geodetic Vertical Datum of 1929 (known as the Sea Level Datum prior to 1973). The current vertical datum used for the United States is the North American Vertical Datum of 1988 (NAVD88).

- Soil samples to assess the quality of fill soil placed in the excavated areas and address areas where adequate sampling may not have been previously conducted

Soil boring and sampling locations are shown on Figure 2. No samples were collected within the Bermed Area to avoid disturbing the soil cover and geotextile, or from depths greater than 5 feet bgs within the Soil Management Area. Instead, soil vapor samples were collected at 3 and 3.5 feet bgs within the Soil Management Area as well as adjacent to the Bermed Area and the Soil Management Area to assess potential soil vapor impacts.

3.1 Deviations from the Work Plan

The initial Investigation Work Plan proposed collecting soil vapor samples at 3.5, 5 and 15 feet bgs. However, groundwater was encountered in each of the deeper boreholes at depths as shallow as 8 feet bgs; therefore, soil vapor probes were only installed and sampled at the shallower 3.5 and 5 feet bgs intervals.

4.0 FIELD AND ANALYTICAL METHODS

This section summarizes the methodology used to collect soil, groundwater, and soil vapor samples at the Site during the March 2021 investigation.

4.1 Field Preparation Activities

Prior to conducting field work, GSI prepared a site-specific health and safety plan and obtained a drilling permit from Contra Costa County Environmental Health (Appendix A). In addition, GSI marked boring locations and submitted an Underground Service Alert (USA) ticket more than 2 days before advancing borings, as required by law. GSI also subcontracted with Subtronic Corporation of Martinez, California, to conduct a geophysical survey and clear each boring location for potential underground utilities.

4.2 Drilling Methods

GSI subcontracted with PeneCore Drilling, Inc. (PeneCore), of Woodland, California, a California-licensed driller, to advance 21 borings, identified as SB-01 through SB-21, for the collection of soil and grab groundwater samples, and the installation of temporary soil vapor probes. The installation of the borings, soil and groundwater sampling, and installation of the soil vapor probes occurred on 17, 19, and 22 March 2021. Boreholes were advanced using a combination of hand auger and dual-tube direct-push drilling methods to depths ranging from 3.5 to 22 feet bgs. Boring locations are shown on Figure 2.

The upper 3.5 to 5.5 feet of each boring was advanced using a hand auger to clear for potential underground utilities. The deeper borings were then drilled and continuously cored using a Geoprobe dual-tube direct push drill rig. Borings SB-01, SB-04, SB-05, SB-08, SB-17, and SB-18 were drilled to depths ranging between 15 and 22 feet bgs using the combination of hand auger and direct push drill rig.

Boring lithology was logged by a GSI field geologist in general accordance with the visual-manual procedures of American Society for Testing and Materials (ASTM) Standard D2488-09a for guidance, which is based on the Unified Soil Classification System (ASTM Standard D2487).

Samples of the soil were screened for organic vapors using a handheld photoionization detector (PID). Boring logs prepared in the field are included in Appendix B.

The hand auger was decontaminated between use at each boring and immediately before collecting soil samples for laboratory analysis using an Alconox-water solution. Drill casings were previously cleaned by PeneCore prior to use each day and were not re-used between borings. Soil cuttings, purged groundwater, and decontamination water were placed in labeled 55-gallon drums and stored on Site pending off-Site disposal.

4.3 Soil Sample Collection and Analysis

GSI collected one to two soil samples from soil borings SB-01, SB-03 through SB-14, SB-16, and SB-18 through SB-21 at sample depths ranging between approximately 3.0 and 9.0 feet bgs. The soil sample depth intervals are included in Tables 1 through 3 and the sample locations are shown on Figure 2. Soil samples were either collected directly from the decontaminated hand-auger bucket or from new, clean acetate soil sleeves (used in the dual-tube sampling system) and placed directly into laboratory-supplied sample jars. Soil samples were labeled and stored in an ice-chilled cooler until transfer to the analytical laboratory following standard chain-of-custody procedures.

Soil samples were submitted for chemical analytical testing to Eurofins Test America, Inc., of Sacramento, California (Eurofins Test America), a California Environmental Laboratory Accreditation Program (CELAP)-certified analytical laboratory. Soil samples were analyzed for the following:

- TPH in the diesel and motor oil ranges (TPHd and TPHmo, respectively) by United States Environmental Protection Agency (USEPA) Method 8015
- Polycyclic aromatic hydrocarbons (PAHs) by USEPA Method 8270 with selective ion monitoring (SIM)
- Title 22 metals by USEPA Methods 6010/7470
- PCBs by USEPA Method 8082
- Asbestos by California Air Resources Board (CARB) Method 435

4.4 Grab Groundwater Sample Collection and Analysis

GSI collected grab samples of first-encountered groundwater from borings SB-01, SB-04, SB-05, SB-08, SB-17 and SB-18 (Figure 2). During drilling, saturated soils were encountered between approximately 8.0 and 14.0 feet bgs. Upon reaching the target boring depth, a temporary well was constructed by lowering a nominal 0.75-inch diameter polyvinyl chloride (PVC) casing and 5 feet of 0.010-inch slot well screen inside the drill casing. At borings SB-04, SB-05, SB-08, SB-17 and SB-18, the drill casings were retracted 5 to 8 feet to expose the temporary well screen to the saturated soil intervals. At SB-01, the drill casing was only retracted 2 feet due to heaving sands. The approximate sample interval of each groundwater sample is included in Table 4.

Prior to sampling, a water level meter was used to measure the approximate depth to groundwater in each of the borings. Groundwater was then purged from the temporary wells using a peristaltic pump and disposable high-density polyethylene (HDPE) tubing. Purging continued until groundwater was relatively clear and free of significant sediment. Approximately 4 liters of groundwater were purged from each temporary well. Groundwater samples analyzed for non-volatile constituents were collected directly from the HDPE tubing into laboratory-supplied 1-liter, unpreserved, glass bottles. Groundwater samples analyzed for VOCs were collected using

a stainless-steel bailer and poured directly into 40 milliliter (mL) volatile organic analysis (VOA) vials preserved with hydrochloric acid. Groundwater samples were labeled and stored in an ice-chilled cooler before transfer to the analytical laboratory following standard chain-of-custody procedures.

Groundwater samples were submitted for chemical analytical testing to Eurofins Test America. All samples were analyzed for:

- TPH quantified as gasoline (TPHg) by USEPA Method 8260/8015
- TPHd and TPHmo by USEPA Method 8015 with silica gel preparation procedure
- VOCs by USEPA Method 8260

4.5 Soil Vapor Probe Installation and Sampling Methods

This section summarizes the installation and sampling of temporary soil vapor probes at the Site. Soil vapor probes were installed and sampled in general accordance with the California Environmental Protection Agency (Cal-EPA) *Advisory – Active Soil Gas Investigations* (Soil Gas Advisory; DTSC et al. 2015).

4.5.1 Soil Vapor Probe Installation

Soil vapor probes were installed in each of the soil borings at depths ranging between 3 and 5 feet bgs (SB-01 through SB-21; Figure 2). All soil vapor probes were installed by PeneCore under the direction of a GSI field geologist. The vapor probe inlet depths were adjusted slightly in the field to target more permeable coarser-grained soils, if observed. The depth of each soil vapor probe is included in Table 5.

The soil probes were constructed with 1-inch, stainless steel soil vapor probe tips emplaced at the target depth in each borehole between two, 6-inch (or greater) lifts of #3 filter pack sand. New, disposable 0.25-inch-outer-diameter polytetrafluoroethylene (Teflon) tubing was used to connect the probe tip to the surface. Each layer of sand was covered with a 1-foot-thick layer of dry granular bentonite. Hydrated granular bentonite was emplaced above each layer of dry bentonite to the ground surface. Above-ground tubing was sealed with a vinyl cap and placed inside a zip-closure plastic bag and secured with a zip-tie. All soil vapor probes were allowed to equilibrate for at least 48 hours prior to sample collection.

4.5.2 Soil Vapor Sample Collection

GSI collected samples from the soil vapor probes from 22 to 24 March 2021. The sampling trains and helium shrouds were provided by Eurofins Air Toxics, Ltd., of Folsom, California (Eurofins Air Toxics). Each soil vapor sample was collected using a dedicated, pre-cleaned and certified sampling train that included a 1.4-liter (L) Summa canister, flow controller, and helium shroud for leak detection. During purging and sampling, the entire sampling train and purge line were enveloped in an atmosphere containing between approximately 20 percent (%) and 38% helium to provide real-time, quantitative leak detection.

Soil vapor sampling was performed at least 48 hours after vapor probe installation and greater than 5 days after the most recent significant rainfall event, in accordance with the Soil Gas Advisory (DTSC et al., 2015). All probes were free of standing or ponded water at the time of sampling.

Prior to sampling, each soil vapor probe was purged with a 60-mL syringe to remove stagnant air from the sample tubing and the sand pack surrounding the probe. Per the guidelines outlined in the

Soil Gas Advisory (DTSC et al., 2015), the target purge volume for each soil vapor probe was three well volumes. One well volume is calculated as the void space in the well tubing and sand pack and dry bentonite layer, assuming a porosity of 40% for the sand and the dry bentonite. All probes were purged at a rate of approximately 150 mL per minute. A helium detector in the purge line was used to provide real-time leak detection. No helium was observed during purging of any of the probes.

Low-flow conditions were assessed during the purging and sampling process. The Soil Gas Advisory (DTSC et al., 2015) recommends that the downhole vacuum on the probe be maintained below 100-inches of water (approximately 7-inches mercury [Hg]) during purging and sampling to minimize stripping of VOCs from pore water. The Eurofins Air Toxics sample trains are equipped with downhole pressure gauges which were monitored during purging and sampling to ensure downhole pressures were maintained below 7-inches Hg.

After purging the soil vapor probe, a soil vapor sample was collected into a pre-cleaned, certified 1.4-L stainless steel Summa canister. Each sampling train was equipped with a flow restrictor that limited the sampling rate to a maximum of 150 mL per minute. Sampling was stopped when the pressure gauge for the sampling canister indicated a vacuum between 5 and 10 inches of water.

One replicate soil vapor sample was collected from SVP-17 into a separate Summa canister after the primary sample had been collected (sample I.D. REP-210322). The same shroud and sampling train setup was used for both the primary and replicate sample and the sampling train was exposed to a helium-rich atmosphere during the collection of both samples.

One equipment blank sample was collected from an unused soil vapor probe tip with tubing that was placed inside a food-grade resealable plastic bag by connecting a clean, unused sampling train to the end of the blank tubing and drawing ambient air through the vapor probe and into the Summa sample canister (sample I.D. EQB-20210324).

All samples were submitted to Eurofins Air Toxics, a CELAP-certified analytical laboratory, under standard chain-of-custody procedures for analysis of VOCs using USEPA Method TO-15. Additionally, one sample collected per day was analyzed for helium using ASTM Standard D1946-90 (samples SB-01, SB-04, and SB-09).

5.0 INVESTIGATION RESULTS

5.1 Site Lithology and Occurrence of Groundwater

Soil lithology encountered during drilling is shown in the field boring logs included in Appendix B. Soil lithology varied significantly across the Site due to several previously excavated and backfilled remediation areas and general grading of the Site. Fill soils, containing varying amounts of sand, clay, and fragments of brick and concrete, were noted within the upper 1.5 to 5 feet at borings SB-03, SB-05, SB-06, SB-08 through SB-10, SB-13 through SB-15, and SB-17 to SB-20. At boring SB-05, fill soil was observed to extend to a depth of approximately 13 feet bgs. Soil beneath the fill layers consisted of varying thicknesses of poorly graded sands and lean clays.

Saturated soil was encountered during drilling of each of the deeper soil borings (SB-01, SB-04, SB-05, SB-08, SB-17 and SB-18) at depths ranging between 8.0 and 14 feet bgs and groundwater was measured in the boreholes at depths ranging between 7.8 and 15.1 feet bgs. As noted in Section 4.4, heaving sands were encountered at boring SB-01 within a poorly graded sand unit at depths between approximately 14 and 20 feet bgs.

5.2 Analytical Results

Analytical results for soil, groundwater, and soil vapor samples collected during the current sampling program are presented in Tables 1 through 5 and discussed below. Analytical laboratory data reports are included in Appendix C.

5.2.1 Screening Criteria

To provide context to the analytical results, the soil, groundwater, and soil vapor data is evaluated by comparison to screening criteria recommended by DTSC or San Francisco Regional Water Quality Control Board (Water Board). Specifically, GSI compared analytical results to the following screening levels:

- Soil data were compared to risk-based screening levels for residential use published by USEPA (2020), as endorsed or modified by DTSC in HHRA Note 3 (2020). These screening levels are referred to as "DTSC-SLs" herein. DTSC-SLs are not published for TPHd or TPHmo. As such, analytical results for TPHd, and TPHmo were evaluated by comparison to residential Environmental Screening Levels (ESLs) published by the Water Board (2019). The DTSC-SLs and ESLs are generic screening levels, derived using standard default exposure assumptions that represent reasonable maximum exposure (RME) conditions and USEPA or DTSC recommended toxicity values. These screening levels correspond to concentrations in soil that are not expected to pose a significant human health risk. In general, generic screening levels are more stringent (i.e., more likely to significantly overstate actual risks) than Site-specific screening levels due to the conservative nature of the assumptions used. Thus, when contaminant concentrations are below generic screening levels, no further action or study is typically warranted.

- Groundwater data were compared to ESLs published by the Water Board (2019). Groundwater data was not compared to drinking water maximum contaminant levels (MCLs) because the site is subject to a land use covenant that restricts the use of groundwater for drinking water, irrigation, or any other purpose other than monitoring, treatment, or construction dewatering. Specifically, groundwater data were compared to:
    - Vapor intrusion ESLs for residential and commercial/industrial use – these ESLs are developed by applying the default attenuation factor (AF) of 0.001 to the residential and commercial/industrial indoor air ESLs, respectively, and the chemical-specific, unitless Henry's Law Constant.
    - Fresh water aquatic habitat ESLs – these ESLs consider potential adverse effects to aquatic receptors as well as human health, based on promulgated bioaccumulation criteria. Fresh water aquatic habitat ESLs were considered due to the Site's proximity to New York Slough (approximately 700 feet to the north).
    - Gross Contamination Levels – these levels are intended to assist with the identification of non-aqueous phase liquid (NAPL).
- Soil vapor data were compared to soil vapor screening levels for residential use developed using the AF of 0.001 recommended by DTSC (2011) for future residential buildings (referred to herein as DTSC-AF SLs). In addition, soil vapor data were compared to soil vapor screening levels developed using the USEPA-AF 0.03 (referred to herein as USEPA-AF SLs). The USEPA AF SLs typically are applied by DTSC for the initial screening

of soil vapor data collected near existing residential buildings. Both the DTSC-AF SLs and USEPA-AF SLs incorporate the DTSC-SLs for residential indoor air as target indoor air concentrations.

Concentrations of constituents below their respective DTSC-SLs or ESLs are considered to pose no significant risk. Concentrations of constituents above their respective DTSC-SLs or ESLs do not necessarily indicate a risk is present, but rather suggest that additional evaluation is warranted.

5.2.2 Data Validation

Analytical results for the project samples were assessed in accordance with the following federal and state agency guidance:

- DTSC, Los Angeles Regional Water Quality Control Board, and San Francisco Regional Water Quality Control Board, 2015. Advisory—Active Soil Gas Investigations, July.
- USEPA, 2014, Analysis of Volatile Organic Compounds in Air Contained in Canisters by Method TO-15, Hazardous Waste Support Section, SOP NO. HW-31, Revision 6, June.
- USEPA, 2017, National Functional Guidelines for Inorganic Superfund Methods Data Review (EPA-540-R-2017-001), January.
- USEPA, 2017, National Functional Guidelines for Organic Data Review (EPA 540-R-014-002).

The field and laboratory quality assurance/quality control (QA/QC) results indicate that the sampling and analyses performed in generating the analytical data were consistent with the analytical methods and provided data suitable for project objectives. The data validation included a review of method blank results and recoveries for sample surrogate spikes, matrix spikes (MS) and matrix spike duplicates (MSD), and laboratory control samples (LCS) and laboratory control sample duplicates (LCSD). In addition, field quality control data generated from the analysis of equipment blank, trip blank, and field duplicate and replicate samples also were reviewed for data usability.

As described below, the following data qualifiers were applied to the analytical results (Tables 1 through 4) based on this data review:

Qualifier	Definition
J	The result is an estimated concentration. The associated numerical value is the approximate concentration of the analyte in the sample.
UJ	The analyte was analyzed for, but not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

Specifically, data qualifiers applied to the following analytical results:

- PAH surrogate recoveries were low for soil samples SB-03-3.0, SB-05-8.0, and SB-07-3.0. Therefore, non-detect results were flagged with a UJ for select analytes (on the basis of analyte-surrogate association) for these samples, indicating that the reported quantitation limits are approximate.
- PCB surrogate recoveries were low for soil samples SB-05-3.0, SB-05-8.0, SB-08-3.0, SB-08-8.0, SB-18-3.0, and SB-18-9.0. Therefore, the non-detect results were flagged with a UJ across all analytes for these samples, indicating that the reported quantitation limits

are approximate. Detect results were qualified with a J, indicating that the reported concentrations are estimates and approximate.

- TPHd and TPHmo surrogate recoveries were low for groundwater samples SB-05-GW, DUP-01, and SB-18-GW. Therefore, the non-detect results for TPHd and TPHmo were flagged with a UJ for these samples, indicating that the reported quantitation limits are approximate. Detect results were qualified with a J, indicating that the reported concentrations are estimates and approximate.

Analytical variability due to soil matrix effects were not considered as part of this data validation review. As such, no data qualifiers were applied based on the results of the MS/MSD analyses.

Finally, three soil vapor samples were analyzed for helium to assess the integrity of the sampling equipment seals and sampling procedures. One soil sample was analyzed for helium for each day of sampling (three days total). No helium was detected in the three soil vapor samples, which confirms a leak-proof sampling procedure for all soil vapor sample.

Overall, the data generated during the sampling are suitable for use in assessing soil, groundwater, and soil vapor conditions at the Site, and can be used for the intended decision-making purposes for future Site development.

5.2.3 Soil Analytical Results

Soil samples were analyzed for metals, PCBs, TPH, asbestos and PAHs. Soil sample analytical results are presented in Tables 1 through 3. The soil sample analytical results indicated the following:

- Metals were either not detected or were detected at concentrations below DTSC-SLs, with the exception of arsenic. Arsenic was detected at concentrations exceeding the DTSC-SL, but consistent with the estimated regional background concentration (Table 1; Duvergé, 2011).
- PCBs were only detected in one sample (SB-05-8.0); the detected concentration was below the DTSC-SL.
- TPH were not detected at concentrations exceeding the DTSC-SL (Table 2), with the exception of one sample; TPHd was detected in sample SB-10-3.0 at a concentration of 830 milligrams per kilogram (mg/kg), which exceeds the DTSC-SL of 260 mg/kg.
- Asbestos was not detected in any of the soil samples (Table 2).
- PAHs were either not detected or were detected at concentrations below DTSC-SLs (Table 3). In addition, carcinogenic benzo(a)pyrene-like PAHs were evaluated by calculating the benzo(a)pyrene equivalency (BaPe) using equivalency factors recommended by DTSC (2015), with non-detect values represented as the detection limit. The estimated BaPe's for each soil sample were below the estimated regional background concentrations (DTSC, 2009).

5.2.4 Groundwater Analytical Results

Six groundwater samples were collected and analyzed for VOCs and TPH (Table 4). VOCs were only detected in SB-18 (downgradient northern property boundary), SB-01 (upgradient southern property boundary), and SB-05 (adjacent to the Soil Management Area). VOCs detected in one or more of these samples included benzene, 1,1-dichloroethane, 1,1-dichloroethene, cis-1,2-

dichloroethene, tetrachloroethene (PCE), trichloroethene (TCE) and vinyl chloride. No other VOCs were detected in the groundwater samples. TPHg and TPHd were detected in only one groundwater sample and TPHmo was not detected in any of the groundwater samples.

The detected concentrations of VOCs and TPH in groundwater samples are shown on Figure 3 and discussed further below.

Comparison to Vapor Intrusion ESLs

Benzene, PCE, TCE and vinyl chloride were the only VOCs detected at concentrations exceeding the vapor intrusion ESLs:

- Benzene was detected in one groundwater sample (SB-05 located adjacent to the south of the Soil Management Area) at a concentration of 1.4 micrograms per liter (µg/L) which exceeds the residential vapor intrusion ESL (0.42 µg/L). The detected concentration was below the commercial/industrial vapor intrusion ESL.
- PCE was detected in two groundwater samples (SB-01 [upgradient property boundary] and SB-18 [downgradient property boundary]) at concentrations of 1.5 and 2.0 µg/L, respectively, which exceed the residential vapor intrusion ESL (0.64 µg/L). The detected concentrations were below the commercial/industrial vapor intrusion ESL.
- TCE was detected in two groundwater samples (SB-01 [upgradient property boundary] and SB-18 [downgradient property boundary]) at concentrations of 0.66 and 7.6 µg/L, respectively. The TCE concentration at the SB-01 (upgradient boundary) is below the residential and commercial/industrial vapor intrusion ESLs. The TCE concentration at SB-18 exceeds the residential vapor intrusion ESL (1.2 µg/L) and commercial/industrial vapor intrusion ESL (7.5 µg/L).
- Vinyl chloride was detected in one groundwater sample (SB-18 [downgradient property boundary]) at a concentration of 0.55 µg/L which exceeds the residential vapor intrusion ESL (0.0086 µg/L) and commercial/industrial vapor intrusion ESL (0.14 µg/L).

The analytical results for benzene, PCE, TCE, and vinyl chloride in groundwater samples at concentrations exceeding vapor intrusion ESLs indicate additional evaluation is warranted to assess potential vapor intrusion concerns at sample locations SB-01, SB-05, and SB-18. As part of this sampling program, soil vapor samples were collected at 5 feet bgs at these locations to further evaluate the vapor intrusion exposure pathway (see Section 5.2.5).

Comparison to Fresh Water Aquatic Habitat Screening Levels

VOCs and TPH were not detected in any groundwater samples at concentrations exceeding the freshwater aquatic habit screening levels.

Comparison to Gross Contamination Levels

VOCs and TPH were not detected in any groundwater samples at concentrations exceeding the gross contamination levels.

5.2.5 Soil Vapor Analytical Results

Soil vapor samples were collected at 21 locations and analyzed for VOCs at an off-Site laboratory using USEPA Method TO-15 (Table 5). No VOCs were detected in any soil vapor samples at concentrations exceeding the DTSC-AF SLs, which are typically applied by DTSC to evaluate future residential buildings. Benzene, bromodichloromethane, 1,3-butadiene, chloroform, PCE, TCE, and

vinyl chloride were detected in at least one sample at concentrations exceeding the USEPA-AF SLs, which are typically applied by DTSC to provide initial screening near existing residential buildings.

It should be noted that several of these VOCs are commonly detected in urban environments. Benzene and 1,3-butadiene are petroleum-related hydrocarbons associated with combustion engines and commonly detected in outdoor ambient air. Bromodichloromethane and chloroform are disinfection byproducts associated with municipal water supply. The detections and magnitude of concentrations of these compounds in soil vapor samples do not indicate an on-Site source and may be attributed to background ambient air conditions and potential irrigation water used for O&M of the Bermed Property and/or the use of municipal water to hydrate the bentonite when constructing the soil vapor probes.

The detected VOC concentrations exceeding USEPA-AF SLs in soil vapor samples are shown on Figure 4 and a further discussion of VOCs detected in soil vapor and groundwater is provided in Section 6.0 below.

6.0 DISCUSSION OF VOCS IN SOIL VAPOR AND GROUNDWATER SAMPLES

In general, VOCs were detected only at low concentrations and with an inconsistent spatial distribution. The magnitude and distribution of VOC concentrations is not indicative of soil vapor conditions that warrant remediation or mitigation.

The VOC data in four areas of the Site (upgradient southern boundary, downgradient northern boundary, and adjacent to the south of the Soil Management Area) are discussed below:

Upgradient Southern Boundary: SB-01

VOCs were detected in groundwater and soil vapor samples at SB-01 located at the southern boundary of the Site. Since groundwater flows from the south to the north at the Site, VOCs detected in groundwater and soil vapor at this location may be related to an upgradient, off-Site source.

PCE and TCE were detected in groundwater at low concentrations (1.5 and 0.66 µg/L, respectively) at SB-01. The groundwater sample result for PCE (but not TCE) exceeds the residential vapor intrusion ESL. PCE and TCE also were detected at low concentrations (2.8 and 13 µg/m^3, respectively) in the soil vapor sample collected at this location. The soil vapor results for PCE and TCE are below the DTSC-AF SLs and USEPA-AF SLs.

The PCE and TCE concentrations in soil vapor samples at this location do not represent a long-term source to groundwater or a vapor intrusion concern for future Site redevelopment. Given that this location is at the upgradient portion of the Site, it is likely that the PCE and TCE are associated with an off-Site source. Additional sampling may be warranted to evaluate if there is a decreasing or increasing trend of PCE and TCE in groundwater, and that PCE and TCE in soil vapor are consistently below DTSC-AF SLs.

Adjacent to the South of the Soil Management Area: SB-05

Groundwater and soil vapor samples were collected south of the Former Evaporation Pond and Soil Management Area at SB-05. Benzene was detected in the groundwater sample at a low concentration (1.4 µg/L), which exceeds the residential vapor intrusion ESL (0.42 µg/L). Benzene also was detected at a low concentration (6.5 µg/m^3) in the soil vapor sample collected at this location; the soil vapor result is below the DTSC-AF SL, but exceeds the USEPA-AF SL. Thus,

based on a comparison with DTSC-AF SLs, the soil vapor data is not indicative of the need of vapor intrusion mitigation at future residential buildings.

Downgradient Northern Boundary: SB-18

Groundwater and soil vapor samples were collected at the downgradient northern boundary of the Site at SB-18.

- In the groundwater sample collected at SB-18, PCE, TCE and vinyl chloride were detected at low concentrations (2.0, 7.6 and 0.55 µg/L, respectively) that exceed the residential vapor intrusion ESLs (0.64, 1.2, and 0.0086 µg/L). Thus, the groundwater data indicates additional evaluation of potential vapor intrusion concerns may be warranted at this location.
- In the soil vapor sample collected at SB-18, PCE, TCE, and vinyl chloride were not detected, and the detection limits were below the DTSC-AF SLs. The detection limits for PCE and TCE also were below the USEPA-AF SLs. Thus, the data do not indicate the presence of PCE, TCE, or vinyl chloride in soil vapor, despite the detection of these compounds in underlying groundwater.

The soil vapor and groundwater data collected at this location indicate the presence of low concentrations of PCE, TCE, and vinyl chloride in groundwater. These VOCs were not detected in soil vapor, which indicate that PCE, TCE, and vinyl chloride in groundwater is limited in extent.

7.0 SUMMARY AND CONCLUSIONS

Soil, groundwater, and soil vapor sampling was completed to assess current subsurface conditions at the Site with respect to future residential redevelopment. The conclusions of the sampling program are:

- No significant soil impacts were identified.
- Low concentrations of VOCs were detected in groundwater samples at three of the six sample locations. Results may be indicative of a potential off-Site and hydraulically upgradient source of PCE in groundwater and a limited on-Site source of PCE, TCE, and vinyl chloride in groundwater at the downgradient boundary of the Site.
- VOCs were detected in both groundwater and soil vapor at low concentrations and with an inconsistent spatial distribution. The magnitude and distribution of the VOC concentrations is not indicative of soil vapor conditions that warrant remediation or mitigation.
- VOC and TPH concentrations detected in groundwater samples are below the screening levels that are protective of existing downgradient off-site receptors (i.e., aquatic receptors and commercial/industrial uses).

8.0 REFERENCES

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Duvergé, D.J., 2011. Establishing Background Arsenic in Soil of the Urbanized San Francisco Bay Region. Master's thesis, San Francisco State University.

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Tables

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS - Metals
Integral Communities, Pittsburg
420 East 3rd Street, Pittsburg, CA

Boring	Sample I.D.	Date Collected	Sample Depth Interval	Title 22 Metals[1]															
				Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
			feet bgs	mg/kg																
SB-01	SB-01-3.0	3/19/2021	2.5 - 3.0	<1.9	**5.6**	**290**	**0.53**	**0.19**	**33**	**9.5**	**23**	**6.8**	<0.038	<1.9	**32**	<1.9	<0.49	<1.9	**56**	**54**
	SB-01-8.0	3/19/2021	6.5 - 8.0	<2.0	**6.9**	**290**	**0.65**	<2.0	**28**	**10**	**27**	**9.4**	<0.044	<2.0	**30**	<2.0	<0.50	<2.0	**49**	**65**
SB-03	SB-03-3.0	3/19/2021	2.5 - 3.0	<2.0	**4.5**	**110**	**0.38**	<2.0	**21**	**7.6**	**16**	**5.9**	**0.044**	<2.0	**21**	<2.0	<0.50	<2.0	**37**	**45**
SB-04	SB-04-3.0	3/17/2021	2.5 - 3.0	<2.0	**2.5**	**92**	**0.22**	<2.0	**42**	**12**	**21**	**5.2**	<0.037	<2.0	**66**	<2.0	<0.50	<2.0	**47**	**44**
	SB-04-8.0	3/17/2021	6.5 - 8.0	<1.9	<1.9	**54**	<0.19	<0.19	**40**	**11**	**13**	**3.6**	<0.040	<1.9	**61**	<1.9	<0.49	<1.9	**40**	**33**
SB-05	SB-05-3.0	3/19/2021	2.5 - 3.0	<2.0	**4.6**	**110**	**0.42**	<2.0	**26**	**8.5**	**19**	**9.5**	<0.038	<2.0	**28**	<2.0	<0.50	<2.0	**41**	**48**
	SB-05-8.0	3/19/2021	6.5 - 8.0	<2.0	**4.1**	**140**	**0.42**	<2.0	**25**	**9.0**	**17**	**7.8**	<0.037	<2.0	**27**	<2.0	<0.50	<2.0	**39**	**42**
SB-06	SB-06-3.0	3/19/2021	2.5 - 3.0	<1.9	**4.3**	**55**	<0.19	<0.19	**36**	**9.7**	**10**	**3.1**	<0.037	<1.9	**55**	<1.9	<0.49	<1.9	**39**	**27**
SB-07	SB-07-3.0	3/17/2021	2.5 - 3.0	<1.3	**3.4**	**86**	**0.26**	<0.13	**34**	**14**	**21**	**7.7**	**0.044**	<1.3	**46**	<1.3	<0.33	<1.3	**35**	**46**
SB-08	SB-08-3.0	3/17/2021	2.5 - 3.0	<1.9	**3.5**	**110**	**0.41**	<0.19	**30**	**11**	**19**	**7.1**	<0.040	<1.9	**31**	<1.9	<0.49	<1.9	**44**	**43**
	SB-08-8.0	3/17/2021	7.0 - 8.5	<1.9	**4.4**	**120**	**0.38**	<0.19	**20**	**7.2**	**19**	**5.5**	<0.042	<1.9	**20**	<1.9	<0.48	<1.9	**35**	**48**
SB-09	SB-09-3.0	3/22/2021	2.5 - 3.0	<2.0	**4.3**	**130**	**0.41**	<2.0	**26**	**8.7**	**23**	**24**	**0.043**	<2.0	**29**	<2.0	<0.49	<2.0	**41**	**68**
SB-10	SB-10-3.0	3/22/2021	2.5 - 3.0	<2.0	**6.2**	**160**	**0.48**	<2.0	**28**	**9.1**	**31**	**21**	**1.0**	<2.0	**37**	<2.0	<0.49	<2.0	**50**	**70**
SB-11	SB-11-3.0	3/19/2021	2.5 - 3.0	<2.0	**3.7**	**120**	**0.31**	<2.0	**23**	**8.6**	**17**	**8.2**	<0.041	<2.0	**24**	<2.0	<0.50	<2.0	**39**	**43**
SB-12	SB-12-3.0	3/22/2021	2.5 - 3.0	<1.9	**4.2**	**130**	**0.37**	<0.19	**29**	**9.4**	**20**	**5.8**	<0.039	<1.9	**33**	<1.9	<0.48	<1.9	**42**	**47**
SB-13	SB-13-3.0	3/22/2021	2.5 - 3.0	<2.0	**4.9**	**150**	**0.40**	<2.0	**27**	**8.5**	**22**	**9.9**	<0.041	<2.0	**30**	<2.0	<0.50	<2.0	**40**	**60**
SB-14	SB-14-3.0	3/22/2021	2.5 - 3.0	<2.0	**4.6**	**70**	**0.48**	<2.0	**31**	**8.7**	**17**	**5.8**	<0.039	<2.0	**35**	<2.0	<0.50	<2.0	**45**	**41**
SB-16	SB-16-3.0	3/22/2021	2.5 - 3.0	<1.9	**4.1**	**150**	**0.44**	<0.19	**28**	**9.0**	**19**	**8.2**	<0.041	<1.9	**32**	<1.9	<0.48	<1.9	**43**	**47**
SB-18	SB-18-3.0	3/17/2021	2.5 - 3.0	<1.9	**4.3**	**120**	**0.38**	<0.19	**27**	**8.6**	**24**	**20**	**0.049**	<1.9	**31**	<1.9	<0.49	<1.9	**41**	**61**
	SB-18-9.0	3/17/2021	8.0 - 9.0	<2.0	**5.0**	**120**	**0.49**	<0.20	**20**	**8.6**	**21**	**7.4**	<0.038	<2.0	**23**	<2.0	<0.50	<2.0	**35**	**49**
SB-19	SB-19-3.0	3/19/2021	2.5 - 3.0	<1.9	**4.3**	**110**	**0.41**	<0.19	**24**	**9.0**	**18**	**10**	<0.037	<1.9	**28**	<1.9	<0.48	<1.9	**39**	**43**
SB-20	SB-20-3.0	3/19/2021	2.5 - 3.0	<2.0	**7.6**	**66**	<0.20	<2.0	**39**	**8.9**	**12**	**4.3**	**0.040**	<2.0	**49**	<2.0	<0.50	<2.0	**32**	**28**
SB-21	SB-21-3.0	3/19/2021	2.5 - 3.0	<1.9	**3.5**	**92**	**0.37**	<0.19	**25**	**8.3**	**15**	**5.7**	<0.044	<1.9	**29**	<1.9	<0.49	<1.9	**38**	**38**
Maximum Detected Concentration				ND	**7.6**	**290**	**0.65**	**0.19**	**42**	**14**	**31**	**24**	**1.0**	ND	**66**	ND	ND	ND	**56**	**70**
Screening Criteria																				
Residential DTSC-SLs[2]				31	11 [3]	15,000	16	71	120,000 [4]	23	3,100	80	1.0	390	820	390	390	0.78	390	23,000

Notes:

1. Soil samples analyzed by Eurofins TestAmerica for metals using United States Environmental Protection Agency (USEPA) Method 6010B/7471A.
2. DTSC-SLs are Regional Screening Levels (RSL) for residential soil published by the USEPA (2020), as endorsed or modified by the California Department of Toxic Substances Control (2020).
3. Analytical results for arsenic in soil are compared to the 99th percentile of background arsenic concentrations as presented by Duvergé (2011).
4. Total chromium RSLs are not available; therefore, screening levels for chromium(III) are used.

Abbreviations:

bgs = below ground surface
bold = analyte detected at a concentration greater than the reporting/detection limit
mg/kg = milligrams per kilogram
NA = not applicable
ND = not detected
"<" = analyte not detected above the laboratory reporting or detection limit shown

References:

California Department of Toxic Substances Control, 2020, Human and Ecological Risk (HERO), HHRA Note Number 3, June.
Duvergé, Dylan Jacques, 2011, Establishing Background Arsenic in Soil of the Urbanized San Francisco Bay Region, December.
United States Environmental Protection Agency, 2020, Regional Screening Levels, November.

TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS - PCBs, TPH, and Asbestos
Integral Communities, Pittsburg
420 East 3rd Street, Pittsburg, CA

Boring/Cell	Sample I.D.	Date Collected	Sample Depth Interval	Polychlorinated Biphenyls (PCBs)[1]							Total Petroleum Hydrocarbons (TPH)[1]		Asbestos[2]
				Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	TPHd	TPHmo	
			feet bgs	*mg/kg*							*mg/kg*		*%*
SB-01	SB-01-3.0	3/19/2021	2.5 - 3.0	<0.031	<0.031	<0.031	<0.031	<0.031	<0.031	<0.031	<0.97	<4.9	<0.25
	SB-01-8.0	3/19/2021	6.5 - 8.0	<0.032	<0.032	<0.032	<0.032	<0.032	<0.032	<0.032	<0.98	<4.9	<0.25
SB-03	SB-03-3.0	3/19/2021	2.5 - 3.0	<0.031	<0.031	<0.031	<0.031	<0.031	<0.031	<0.031	**11**	**43**	<0.25
SB-04	SB-04-3.0	3/17/2021	2.5 - 3.0	<0.031	<0.031	<0.031	<0.031	<0.031	<0.031	<0.031	<0.97	<4.9	<0.25
	SB-04-8.0	3/17/2021	6.5 - 8.0	<0.033	<0.033	<0.033	<0.033	<0.033	<0.033	<0.033	<0.99	<4.9	<0.25
SB-05	SB-05-3.0	3/19/2021	2.5 - 3.0	<0.032 UJ	<0.032 UJ	<0.032 UJ	<0.032 UJ	<0.032 UJ	<0.032 UJ	<0.032 UJ	**25**	**68**	<0.25
	SB-05-8.0	3/19/2021	6.5 - 8.0	<0.031 UJ	<0.031 UJ	<0.031 UJ	<0.031 UJ	<0.031 UJ	**0.079 J**	<0.031 UJ	**4.6**	**9.9**	<0.25
SB-06	SB-06-3.0	3/19/2021	2.5 - 3.0	<0.032	<0.032	<0.032	<0.032	<0.032	<0.032	<0.032	<0.97	<4.8	<0.25
SB-07	SB-07-3.0	3/17/2021	2.5 - 3.0	<0.032	<0.032	<0.032	<0.032	<0.032	<0.032	<0.032	**10**	**27**	<0.25
SB-08	SB-08-3.0	3/17/2021	2.5 - 3.0	<0.032 UJ	<0.032 UJ	<0.032 UJ	<0.032 UJ	<0.032 UJ	<0.032 UJ	<0.032 UJ	**9.1**	**24**	<0.25
	SB-08-8.0	3/17/2021	7.0 - 8.5	<0.031 UJ	<0.031 UJ	<0.031 UJ	<0.031 UJ	<0.031 UJ	<0.031 UJ	<0.031 UJ	**8.5**	**6.0**	<0.25
SB-09	SB-09-3.0	3/22/2021	2.5 - 3.0	<0.032	<0.032	<0.032	<0.032	<0.032	<0.032	<0.032	**91**	**410**	<0.25
SB-10	SB-10-3.0	3/22/2021	2.5 - 3.0	<0.031	<0.031	<0.031	<0.031	<0.031	<0.031	<0.031	**830**	**3,800**	<0.25
SB-11	SB-11-3.0	3/19/2021	2.5 - 3.0	<0.032	<0.032	<0.032	<0.032	<0.032	<0.032	<0.032	**16**	**34**	<0.25
SB-12	SB-12-3.0	3/22/2021	2.5 - 3.0	<0.032	<0.032	<0.032	<0.032	<0.032	<0.032	<0.032	**1.3**	**5.7**	<0.25
SB-13	SB-13-3.0	3/22/2021	2.5 - 3.0	<0.032	<0.032	<0.032	<0.032	<0.032	<0.032	<0.032	**15**	**49**	<0.25
SB-14	SB-14-3.0	3/22/2021	2.5 - 3.0	<0.032	<0.032	<0.032	<0.032	<0.032	<0.032	<0.032	**1.8**	**6.5**	<0.25
SB-16	SB-16-3.0	3/22/2021	2.5 - 3.0	<0.031	<0.031	<0.031	<0.031	<0.031	<0.031	<0.031	**9.0**	**46**	<0.25
SB-18	SB-18-3.0	3/17/2021	2.5 - 3.0	<0.033 UJ	<0.033 UJ	<0.033 UJ	<0.033 UJ	<0.033 UJ	<0.033 UJ	<0.033 UJ	**32**	**190**	<0.25
	SB-18-9.0	3/17/2021	8.0 - 9.0	<0.032 UJ	<0.032 UJ	<0.032 UJ	<0.032 UJ	<0.032 UJ	<0.032 UJ	<0.032 UJ	**43**	<4.9	--
SB-19	SB-19-3.0	3/19/2021	2.5 - 3.0	<0.033	<0.033	<0.033	<0.033	<0.033	<0.033	<0.033	**13**	**34**	<0.25
SB-20	SB-20-3.0	3/19/2021	2.5 - 3.0	<0.033	<0.033	<0.033	<0.033	<0.033	<0.033	<0.033	**30**	**64**	<0.25
SB-21	SB-21-3.0	3/19/2021	2.5 - 3.0	<0.031	<0.031	<0.031	<0.031	<0.031	<0.031	<0.031	<0.99	<5.0	<0.25
Maximum Detected Concentration				ND	ND	ND	ND	ND	**0.079**	ND	**830**	**3,800**	ND
Screening Criteria													
Residential DTSC-SLs[3]				4.0	0.20	0.17	0.23	0.23	0.24	0.24	260 [4]	12,000 [4]	None

Notes:
1. Soil samples analyzed by Eurofins TestAmerica for PCBs using United States Environmental Protection Agency (USEPA) Method 8082 and TPH (diesel and motor oil) using USEPA Method 8015B.
2. Soil samples analyzed by Eurofins EMLab P&K for asbestos using California Air Resources Board Method 435 (CARB 435).
3. DTSC-SLs are Regional Screening Levels for residential soil published by the USEPA (2020), and endorsed or modified by the California Department of Toxic Substances Control (DTSC, 2020).
4. Analytical results for TPH are compared to direct exposure Environmental Screening Levels under residential land use published by the San Francisco Bay Regional Water Quality Control Board (2019).

Abbreviations:
bgs = below ground surface
bold = analyte detected at a concentration greater than the laboratory reporting/detection limit
mg/kg = milligrams per kilogram
ND = nondetect
J = estimate concentration
UJ = The reported quantitation limit is approximate and may be inaccurate or imprecise.
TPHd = total petroleum hydrocarbons quantified as diesel
TPHmo = total petroleum hydrocarbons quantified as motor oil
% = percent
-- = not analyzed
"<" = analyte not detected above the laboratory reporting limit shown

References:
California Department of Toxic Substances Control, 2020, Human and Ecological Risk (HERO), HHRA Note Number 3, June.
San Francisco Bay Regional Water Quality Control Board, 2019, Environmental Screening Levels, January (Rev. 2).
United States Environmental Protection Agency, 2020, Regional Screening Levels, November.

TABLE 3
SOIL SAMPLE ANALYTICAL RESULTS - PAHs[1]
Integral Communities, Pittsburg
420 East 3rd Street, Pittsburg, CA

Boring	Sample I.D.	Date Collected	Sample Depth Interval feet bgs	Polycyclic Aromatic Hydrocarbons (PAHs)															
				Acenaphthene	Acenaph-thylene	Anthracene	Benz(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(g,h,i) perylene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene	BaPe [2]
				mg/kg																
SB-01	SB-01-3.0	3/19/2021	2.5 - 3.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	**0.012**
	SB-01-8.0	3/19/2021	6.5 - 8.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	**0.012**
SB-03	SB-03-3.0	3/19/2021	2.5 - 3.0	<0.025 UJ	<0.025 UJ	<0.025	<0.025	<0.025 UJ	<0.025 UJ	<0.025 UJ	<0.025 UJ	<0.025	<0.025 UJ	<0.025	<0.025	<0.025 UJ	<0.025 UJ	<0.025	<0.025	**0.058**
SB-04	SB-04-3.0	3/17/2021	2.5 - 3.0	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	**0.011**
	SB-04-8.0	3/17/2021	6.5 - 8.0	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	**0.011**
SB-05	SB-05-3.0	3/19/2021	2.5 - 3.0	<0.005	**0.019**	**0.021**	**0.061**	**0.057**	**0.056**	**0.029**	**0.021**	**0.070**	**0.0091**	**0.096**	**0.0095**	**0.033**	**0.0098**	**0.097**	**0.14**	**0.081**
	SB-05-8.0	3/19/2021	6.5 - 8.0	<0.025 UJ	<0.025 UJ	<0.025	<0.025	<0.025 UJ	<0.025 UJ	<0.025 UJ	<0.025 UJ	<0.025	<0.025 UJ	**0.032**	<0.025	<0.025 UJ	<0.025 UJ	<0.025	**0.034**	**0.58**
SB-06	SB-06-3.0	3/19/2021	2.5 - 3.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	**0.012**
SB-07	SB-07-3.0	3/17/2021	2.5 - 3.0	<0.025	<0.025	<0.025	<0.025	<0.025 UJ	<0.025 UJ	<0.025 UJ	<0.025 UJ	**0.027**	<0.025 UJ	**0.030**	<0.025	<0.025 UJ	**0.081**	<0.025	**0.040**	**0.058**
SB-08	SB-08-3.0	3/17/2021	2.5 - 3.0	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	**0.11**
	SB-08-8.0	3/17/2021	7.0 - 8.5	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	**0.0046**	**0.011**
SB-09	SB-09-3.0	3/22/2021	2.5 - 3.0	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	**0.106**
SB-10	SB-10-3.0	3/22/2021	2.5 - 3.0	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	**0.11**	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	**0.22**
SB-11	SB-11-3.0	3/19/2021	2.5 - 3.0	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	**0.011**
SB-12	SB-12-3.0	3/22/2021	2.5 - 3.0	<0.0047	<0.0047	**0.022**	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	**0.023**	**0.0080**	<0.0047	**0.011**
SB-13	SB-13-3.0	3/22/2021	2.5 - 3.0	<0.0050	<0.0050	<0.0050	**0.013**	**0.010**	**0.012**	**0.0069**	<0.0050	**0.015**	<0.0050	**0.016**	<0.0050	**0.0066**	<0.0050	**0.0084**	**0.023**	**0.018**
SB-14	SB-14-3.0	3/22/2021	2.5 - 3.0	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	**0.011**
SB-16	SB-16-3.0	3/22/2021	2.5 - 3.0	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	**0.011**
SB-18	SB-18-3.0	3/17/2021	2.5 - 3.0	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	**0.15**	<0.046	<0.046	**0.11**
	SB-18-9.0	3/17/2021	8.0 - 9.0	**0.0062**	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	**0.0067**	<0.0046	**0.15**	**0.0070**	<0.0046	**0.011**
SB-19	SB-19-3.0	3/19/2021	2.5 - 3.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	**0.012**
SB-20	SB-20-3.0	3/19/2021	2.5 - 3.0	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	**0.031**	<0.025	<0.025	<0.025	<0.025	**0.044**	**0.058**
SB-21	SB-21-3.0	3/19/2021	2.5 - 3.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	**0.012**
Maximum Detected Concentration				**0.0062**	**0.019**	**0.022**	**0.061**	**0.057**	**0.056**	**0.29**	**0.021**	**0.11**	**0.0091**	**0.096**	**0.0095**	**0.033**	**0.15**	**0.097**	**0.14**	**0.58**
Screening Criteria																				
Residential DTSC-SLs[3]				3,300	None	17,000	1.1	0.11	1.1	None	11	110	0.028	2,400	2,300	1.1	2	None	1,800	0.9 [4]

Notes:
1. Soil samples analyzed by Eurofins TestAmerica for PAHs using United States Environmental Protection Agency (USEPA) Method 8270C-SIM.
2. Benzo(a)pyrene equivalents (BaPe) are calculated using benzo(a)pyrene equivalency factors (California Department of Toxic Substances Control [DTSC], 2015), with non-detect values represented with the detection limit.
3. DTSC-SLs are Regional Screening Levels for residential soil published by the USEPA (2020), modified by the DTSC (2020).
4. BaPe are compared to the regional ambient level of 0.9 mg/kg established by DTSC (2009).

Abbreviations:
bgs = below ground surface
bold = analyte detected at a concentration greater than the laboratory reporting/detection limit
BaPe = benzo(a)pyrene equivalents
mg/kg = milligrams per kilogram
"<" = analyte not detected above the laboratory reporting limit shown

References:
California Department of Toxic Substances Control (DTSC), 2009, Use of the Northern and Southern California Polynuclear Aromatic Hydrocarbon (PAH) Studies in the Manufactured Gas Plant Site Cleanup Process, July 1.
DTSC, 2015, Preliminary Endangerment Assessment Guidance Manual, October.
DTSC, 2020, Human and Ecological Risk (HERO), HHRA Note Number 3, June.
United States Environmental Protection Agency, 2020, Regional Screening Levels, November.

TABLE 4
GROUNDWATER SAMPLE ANALYTICAL RESULTS - VOCs and TPH[1]
Integral Communities, Pittsburg
420 East 3rd Street, Pittsburg, CA

Boring	Sample I.D.	Date Collected	Sample Depth Interval feet bgs	Volatile Organic Compounds (VOCs)								Total Petroleum Hydrocarbons (TPH)		
				Benzene	1,1-Dichloro-ethane	1,1-Dichloro-ethene	cis-1,2-Dichloro-ethene	Tetrachloro-ethene	Trichloro-ethene	Vinyl Chloride	Other VOCs[1]	TPHg	TPHd	TPHmo
				µg/L								*µg/L*		
SB-01	SB-01-GW	3/19/2021	18.0 - 20.0	<0.50	<0.50	<0.50	<0.50	**1.5**	**0.66**	<0.50	ND	<50	<48	<480
SB-04	SB-04-GW	3/17/2021	10.0 - 15.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	ND	<50	<48	<480
SB-05	SB-05-GW	3/19/2021	12.0 - 20.0	**1.3 (1.4)**	<0.50 (<0.50)	<0.50 (<0.50)	<0.50 (<0.50)	<0.50 (<0.50)	<0.50 (<0.50)	<0.50 (<0.50)	ND	**53** (<50)	**61 J** (<48 UJ)	<560 UJ (<480 UJ)
SB-08	SB-08-GW	3/17/2021	10.0 - 15.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	ND	<50	<50	<500
SB-17	SB-17-GW	3/17/2021	10.0 - 15.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	ND	<50	<48	<480
SB-18	SB-18-GW	3/17/2021	14.0 - 22.0	<0.50	**1.4**	**1.6**	**10**	**2.0**	**7.6**	**0.55**	ND	<50	<48 UJ	<480 UJ
Maximum Detected Concentration				**1.4**	**1.4**	**1.6**	**10**	**2.0**	**7.6**	**0.55**	ND	**53**	**61**	ND
Screening Criteria														
Residential Groundwater Vapor Intrusion ESLs[3]				0.42	7.6	66	49	0.64	1.2	0.0086	Various	--	--	--
Commercial/Industrial Groundwater Vapor Intrusion ESLs[3]				1.8	33	280	210	2.8	7.5	0.14	Various	--	--	--
Fresh Water Aquatic Habitat Screening Levels[4]				46	47	25	590	120	360	782	Various	440	640	--
Gross Contaminant Levels[5]				50,000	50,000	50,000	50,000	50,000	50,000	50,000	Various	50,000	2,500	--

Notes:
1. Groundwater samples analyzed by Eurofins TestAmerica for VOCs and TPHg using United States Environmental Protection Agency (USEPA) Method 8260B and TPHd and TPHmo using USEPA Method 8015B with silica gel cleanup.
2. Duplicate sample results are shown in parentheses. Only detected VOCs are shown; see the laboratory report for a full list of analytes.
3. Environmental Screening Levels for groundwater published by the San Francisco Bay Regional Water Quality Control Board (Water Board, 2019), and developed by applying the default source attenuation factor (0.001) to the residential and commercial/industrial indoor air Environmental Screening Levels and the chemical-specific, unitless Henry's Law Constant.
4. Sample results compared to fresh water aquatic habitat screening levels published by the Water Board (2019).
5. Sample results compared to gross contaminant level screening levels published by the Water Board (2019).

Abbreviations:
bgs = below ground surface
bold = analyte detected at a concentration greater than the reporting/detection limit
µg/L = micrograms per liter
ND = not detected
J = estimate concentration
UJ = The reported quantitation limit is approximate and may be inaccurate or imprecise.
TPHd = total petroleum hydrocarbons quantified as diesel
TPHg = total petroleum hydrocarbons quantified as gasoline
TPHmo = total petroleum hydrocarbons quantified as motor oil
(##) = duplicate sample result
"--" = no screening level listed
"<" = analyte not detected above the laboratory reporting or detection limit shown

References:
San Francisco Bay Regional Water Quality Control Board (Water Board), 2019, Environmental Screening Levels, Environmental Screening Level Workbook, January (Rev. 2).

TABLE 5
SOIL VAPOR SAMPLE ANALYTICAL RESULTS - VOCs
Integral Communities, Pittsburg
420 East 3rd Street, Pittsburg, CA

Boring	Sample I.D.	Date Collected	Probe Depth	Volatile Organic Compounds (VOCs)[1]														
				Acetone	Benzene	Bromo-dichloro-methane	Bromoform	1,3-Butadiene	2-Butanone	Carbon Disulfide	Carbon Tetrachloride	Chloroform	Chloro-methane	Cumene	Cyclohexane	Dibromo-chloro-methane	1,1-Dichloro-ethane
			feet bgs	$\mu g/m^3$													
SB-01	SB-01-05.0-SV	03/22/2021	5.0	**11**	**6.6**	**11**	<2.1	**1.9**	<3.0	<3.2	<1.3	**32**	<2.1	<1.0	**40**	**3.5**	<0.83
SB-02	SB-02-05.0-SV	03/22/2021	5.0	**9.8**	<0.64	<1.3	<2.0	<0.44	<2.9	<3.1	<1.2	**2.8**	<2.0	<0.98	<3.4	<1.7	<0.80
SB-03	SB-03-05.0-SV	03/22/2021	5.0	**32**	<0.67	<1.4	<2.2	<0.47	<3.1	<3.3	<1.3	**3.2**	<2.2	<1.0	<3.6	<1.8	<0.85
SB-04	SB-04-05.0-SV	03/23/2021	5.0	**6**	<0.64	<1.3	<2.1	<0.44	<2.9	<3.1	<1.2	<0.98	<2.1	<0.98	<3.4	<1.7	<0.81
SB-05	SB-05-05.0-SV	03/22/2021	5.0	**22**	**6.5**	**1.9**	<2.2	**0.88**	**16**	**20**	<1.4	**5.3**	<2.2	<1.1	<3.7	<1.8	**4.0**
SB-06	SB-06-05.0-SV	03/23/2021	5.0	**11**	<0.67	<1.4	<2.2	<0.46	<3.1	<3.2	<1.3	**1.4**	<2.2	<1.0	<3.6	<1.8	<0.85
SB-07	SB-07-05.0-SV	03/23/2021	5.0	**62**	**1.8**	**2.7**	**8.0**	<0.47	**11**	<3.3	**1.5**	**7.5**	**13**	**1.5**	<3.7	**3.0**	<0.86
SB-08	SB-08-05.0-SV	03/23/2021	5.0	**18**	**1.1**	<1.4	<2.1	<0.45	<3.0	<3.2	<1.3	**2.8**	<2.1	<1.0	<3.5	<1.7	<0.82
SB-09	SB-09-04.0-SV	03/24/2021	4.0	**12**	<0.68	**2**	<2.2	<0.47	<3.2	<3.3	<1.3	**6.0**	<2.2	<1.0	<3.7	<1.8	<0.87
SB-10	SB-10-05.0-SV	03/24/2021	5.0	**17**	<0.63	<1.3	<2.0	<0.44	<2.9	<3.1	<1.2	**2.0**	<2.0	<0.97	<3.4	<1.7	<0.80
SB-11	SB-11-05.0-SV	03/24/2021	5.0	**15**	<0.66	<1.4	<2.1	<0.46	<3.0	<3.2	<1.3	**1.6**	<2.1	<1.0	<3.6	<1.8	<0.84
SB-12	SB-12-05.0-SV	03/24/2021	5.0	**18**	<0.67	**2.1**	<2.2	<0.46	<3.1	<3.2	<1.3	**3.8**	<2.2	<1.0	<3.6	<1.8	<0.85
SB-13	SB-13-05.0-SV	03/24/2021	5.0	**14**	<0.70	**8.6**	<2.3	<0.48	<3.2	<3.4	<1.4	**35**	<2.3	<1.1	<3.8	**2.1**	<0.89
SB-14	SB-14-05.0-SV	03/24/2021	5.0	**6.7**	<0.67	<1.4	<2.2	<0.46	<3.1	<3.2	<1.3	**11**	<2.2	<1.0	<3.6	<1.8	<0.85
SB-15	SB-15-05.0-SV	03/24/2021	5.0	**13**	<0.68	**1.6**	<2.2	<0.47	<3.1	<3.3	<1.3	**4.2**	<2.2	<1.0	<3.6	<1.8	<0.86
SB-16	SB-16-05.0-SV	03/24/2021	5.0	**13**	<0.68	<1.4	<2.2	<0.47	<3.1	<3.3	<1.3	**3.1**	<2.2	<1.0	<3.7	<1.8	<0.86
SB-17	SB-17-05.0-SV	03/22/2021	5.0	**13** (<4.8)	<0.66 (<0.65)	<1.4 (<1.4)	<2.2 (<2.1)	<0.46 (<0.45)	<3.1 (<3.0)	<3.2 (<3.2)	<1.3 (<1.3)	**3.8 (4.2)**	<2.1 (<2.1)	<1.0 (<1.0)	<3.6 (<3.5)	<1.8 (<1.7)	<0.84 (<0.82)
SB-18	SB-18-05.0-SV	03/22/2021	5.0	<51	<6.9	<14	<22	<4.8	<32	<34	<14	<10	<22	<11	**1,100**	<18	<8.7
SB-19	SB-19-03.0-SV	03/22/2021	3.0	**31**	<0.66	**2.9**	<2.1	<0.46	<3.0	<3.2	<1.3	**12**	<2.1	<1.0	<3.5	<1.8	<0.83
SB-20	SB-20-03.5-SV	03/23/2021	3.5	**14**	<0.70	<1.5	<2.3	<0.48	<3.2	<3.4	<1.4	<1.1	<2.3	<1.1	<3.8	<1.9	<0.89
SB-21	SB-21-3.25-SV	03/23/2021	3.25	**26**	**1.2**	**2.8**	<2.2	<0.48	<3.2	**75**	<1.4	**5.9**	<2.2	<1.0	<3.7	**2.2**	<0.87
Equipment Blank	EQB-20210324	03/23/2021	NA	**24**	<0.63	<1.3	<2.0	<0.44	<2.9	<3.1	<1.2	<0.97	<2.0	<0.97	<3.4	<1.7	<0.80
Maximum Detected Concentration				**62**	**6.6**	**11**	**8.0**	**1.9**	**16**	**75**	**1.5**	**35**	**13**	**1.5**	**1,100**	**3.5**	**4.0**
Screening Criteria																	
DTSC-AF SL (AF = 0.001)[2]				32,000,000	97	76	2600	17	5,200,000	730,000	470	120	94,000	420,000	6,300,000	130	1,800
USEPA-AF SL (AF = 0.03)[2]				1,100,000	3.2	2.5	87	0.57	170,000	24,000	16	4.0	3,100	14,000	210,000	4.3	60

TABLE 5
SOIL VAPOR SAMPLE ANALYTICAL RESULTS - VOCs
Integral Communities, Pittsburg
420 East 3rd Street, Pittsburg, CA

Boring	Sample I.D.	Date Collected	Probe Depth	Volatile Organic Compounds (VOCs)[1]														
				1,1-Dichloro-ethene	Ethanol	Ethylbenzene	4-Ethyltoluene	Freon 11	n-Hexane	Isopropanol	4-Methyl-2-Pentanone	Methylene Chloride	n-Propyl-benzene	Tetrachloro-ethene	Toluene	1,1,1-Trichloro-ethane	Trichloro-ethene
			feet bgs	$\mu g/m^3$													
SB-01	SB-01-05.0-SV	03/22/2021	5.0	**32**	**6.6**	**9.7**	**11**	**1.5**	<3.6	**4.3**	**0.97**	<1.4	**2.3**	**2.8**	**27**	<1.1	**13**
SB-02	SB-02-05.0-SV	03/22/2021	5.0	<0.79	**2.9**	<0.86	**1.6**	**1.4**	<3.5	<2.4	**1.1**	<1.4	<0.98	**2.6**	<0.75	<1.1	<1.1
SB-03	SB-03-05.0-SV	03/22/2021	5.0	<0.84	**9.6**	<0.92	**1.7**	**1.3**	<3.7	**8.4**	**0.92**	<1.5	<1.0	<1.4	<0.80	<1.2	<1.1
SB-04	SB-04-05.0-SV	03/23/2021	5.0	<0.79	<1.9	<0.87	<0.98	**1.6**	<3.5	**2.8**	<0.82	<1.4	<0.98	<1.4	<0.75	<1.1	<1.1
SB-05	SB-05-05.0-SV	03/22/2021	5.0	<0.86	**29**	**2.2**	**1.5**	**1.4**	<3.8	**19**	**2.2**	<1.5	<1.1	**26**	**3.4**	**2.7**	**3.9**
SB-06	SB-06-05.0-SV	03/23/2021	5.0	<0.83	**6.0**	<0.91	<1.0	**1.3**	<3.7	**8.4**	<0.86	<1.4	<1.0	<1.4	<0.79	<1.1	<1.1
SB-07	SB-07-05.0-SV	03/23/2021	5.0	<0.84	**11**	**2.2**	**7.2**	**1.7**	<3.8	**11**	**1.2**	<1.5	**2.3**	**160**	**3.5**	**1.3**	**40**
SB-08	SB-08-05.0-SV	03/23/2021	5.0	<0.81	**5.2**	**2.2**	**12**	**1.3**	<3.6	**5.3**	<0.84	<1.4	**2.8**	<1.4	**1.2**	<1.1	**2.3**
SB-09	SB-09-04.0-SV	03/24/2021	4.0	<0.85	<2.0	<0.93	<1.0	**1.2**	<3.8	**10**	<0.88	<1.5	<1.0	**1.4**	<0.81	<1.2	<1.2
SB-10	SB-10-05.0-SV	03/24/2021	5.0	<0.78	**5.7**	<0.86	<0.97	**2.7**	<3.5	**4.7**	<0.81	<1.4	<0.97	**4.4**	<0.75	**3.3**	<1.1
SB-11	SB-11-05.0-SV	03/24/2021	5.0	<0.82	<2.0	<0.90	<1.0	**1.5**	<3.6	**3.7**	<0.85	<1.4	<1.0	<1.4	<0.78	<1.1	<1.1
SB-12	SB-12-05.0-SV	03/24/2021	5.0	<0.83	**5.1**	**1.2**	**5.9**	**1.3**	<3.7	**8.8**	<0.86	<1.4	**1.2**	**1.5**	**1.0**	<1.1	<1.1
SB-13	SB-13-05.0-SV	03/24/2021	5.0	<0.87	<2.1	<0.95	**1.2**	**1.4**	<3.8	**6.0**	<0.90	<1.5	<1.1	**2.6**	**0.86**	<1.2	<1.2
SB-14	SB-14-05.0-SV	03/24/2021	5.0	<0.83	<2.0	<0.91	**1.7**	<1.2	<3.7	**6.8**	<0.86	<1.4	<1.0	<1.4	<0.79	**1.2**	<1.1
SB-15	SB-15-05.0-SV	03/24/2021	5.0	<0.84	**5.3**	**2.3**	**7.6**	**1.3**	<3.7	**5.4**	<0.87	<1.5	**2**	<1.4	**1.8**	<1.2	<1.1
SB-16	SB-16-05.0-SV	03/24/2021	5.0	<0.84	<2.0	<0.92	**2.8**	**2.3**	<3.8	**6.9**	**1.3**	<1.5	<1.0	<1.4	<0.80	<1.2	<1.1
SB-17	SB-17-05.0-SV	03/22/2021	5.0	<0.82 (<0.81)	**5.2** (<1.9)	<0.90 (<0.88)	<1.0 (<1.0)	**1.3 (1.2)**	<3.7 (<3.6)	**8.4** (<2.5)	<0.85 (<0.84)	<1.4 (<1.4)	<1.0 (<1.0)	**2.4 (2.3)**	<0.78 (<0.77)	<1.1 (<1.1)	**1.7 (1.7)**
SB-18	SB-18-05.0-SV	03/22/2021	5.0	<8.6	<20	<9.4	<11	<12	**1,500**	<26	<8.8	<15	<11	<15	<8.1	<12	<12
SB-19	SB-19-03.0-SV	03/22/2021	3.0	<0.82	**7.1**	<0.89	<1.0	**1.2**	<3.6	**9.9**	**1.5**	<1.4	<1.0	**2.8**	<0.78	**1.4**	<1.1
SB-20	SB-20-03.5-SV	03/23/2021	3.5	<0.87	**7.7**	<0.95	<1.1	**1.3**	<3.8	**28**	<0.90	<1.5	<1.1	<1.5	<0.82	<1.2	<1.2
SB-21	SB-21-3.25-SV	03/23/2021	3.25	<0.85	**5.3**	<0.93	<1.0	<1.2	<3.8	**7.2**	**3.7**	**2.4**	<1.0	**1.6**	<0.81	<1.2	<1.2
Equipment Blank	EQB-20210324	03/23/2021	NA	<0.78	**5.0**	<0.86	<0.97	**1.3**	<3.5	**11**	<0.81	<1.4	<0.97	<1.3	<0.75	<1.1	<1.1
Maximum Detected Concentration				**32**	**29**	**9.7**	**12**	**2.7**	**1,500**	**28**	**3.7**	**2.4**	**2.8**	**160**	**27**	**3.3**	**40**
Screening Criteria																		
DTSC-AF SL (AF = 0.001)[2]				73,000	None	1,100	None	1,300,000	730,000	210,000	3,100,000	1,000	1,000,000	460	310,000	1,000,000	480
USEPA-AF SL (AF = 0.03)[2]				2,400	None	37	None	43,000	24,000	7,000	100,000	33	33,000	15	10,000	33,000	16

TABLE 5
SOIL VAPOR SAMPLE ANALYTICAL RESULTS - VOCs
Integral Communities, Pittsburg
420 East 3rd Street, Pittsburg, CA

Boring	Sample I.D.	Date Collected	Probe Depth	Volatile Organic Compounds (VOCs)[1]						LCC
				1,2,4-Trimethyl-benzene	1,3,5-Trimethyl-benzene	Vinyl Chloride	m,p-Xylene	o-Xylene	Other VOCs	Helium
			feet bgs	$\mu g/m^3$						%
SB-01	SB-01-05.0-SV	03/22/2021	5.0	**8.2**	**2.7**	<0.53	**27**	**11**	ND	<0.10
SB-02	SB-02-05.0-SV	03/22/2021	5.0	**1.8**	<0.98	<0.51	**2.1**	**1.5**	ND	--
SB-03	SB-03-05.0-SV	03/22/2021	5.0	**1.7**	<1.0	<0.54	**3**	**1.6**	ND	--
SB-04	SB-04-05.0-SV	03/23/2021	5.0	<0.98	<0.98	<0.51	<0.87	<0.87	ND	<0.10
SB-05	SB-05-05.0-SV	03/22/2021	5.0	**1.1**	<1.1	<0.55	**4.4**	**2.7**	ND	--
SB-06	SB-06-05.0-SV	03/23/2021	5.0	<1.0	<1.0	<0.53	<0.91	<0.91	ND	--
SB-07	SB-07-05.0-SV	03/23/2021	5.0	**14**	**5.7**	**0.62**	**18**	**6.9**	ND	--
SB-08	SB-08-05.0-SV	03/23/2021	5.0	**1.8**	**3.4**	<0.52	**2.5**	**3.2**	ND	--
SB-09	SB-09-04.0-SV	03/24/2021	4.0	<1.0	<1.0	<0.55	<0.93	<0.93	ND	<0.10
SB-10	SB-10-05.0-SV	03/24/2021	5.0	<0.97	<0.97	<0.51	<0.86	<0.86	ND	--
SB-11	SB-11-05.0-SV	03/24/2021	5.0	<1.0	<1.0	<0.53	<0.90	<0.90	ND	--
SB-12	SB-12-05.0-SV	03/24/2021	5.0	**6.8**	**2.4**	<0.53	**5.5**	**2.6**	ND	--
SB-13	SB-13-05.0-SV	03/24/2021	5.0	<1.1	<1.1	<0.56	**1.6**	**1.1**	ND	--
SB-14	SB-14-05.0-SV	03/24/2021	5.0	**1.8**	<1.0	<0.53	**2.3**	**1.1**	ND	--
SB-15	SB-15-05.0-SV	03/24/2021	5.0	**4.4**	**1.6**	<0.54	**8**	**3.2**	ND	--
SB-16	SB-16-05.0-SV	03/24/2021	5.0	**3.1**	<1.0	<0.54	**2.2**	**1.0**	ND	--
SB-17	SB-17-05.0-SV	03/22/2021	5.0	<1.0 (<1.0)	<1.0 (<1.0)	<0.53 (<0.52)	<0.90 (<0.88)	<0.90 (<0.88)	ND (ND)	--
SB-18	SB-18-05.0-SV	03/22/2021	5.0	<11	<11	<5.5	<9.4	<9.4	ND	--
SB-19	SB-19-03.0-SV	03/22/2021	3.0	<1.0	<1.0	<0.53	<0.89	<0.89	ND	--
SB-20	SB-20-03.5-SV	03/23/2021	3.5	<1.1	<1.1	<0.56	<0.95	<0.95	ND	--
SB-21	SB-21-3.25-SV	03/23/2021	3.25	<1.0	<1.0	<0.55	**1.4**	<0.93	ND	--
Equipment Blank	EQB-20210324	03/23/2021	NA	<0.97	<0.97	<0.51	<0.86	<0.86	ND	--
Maximum Detected Concentration				**14**	**5.7**	**0.62**	**27**	**11**	ND	ND
Screening Criteria										
DTSC-AF SL (AF = 0.001)[2]				63,000	63,000	9.5	100,000	100,000	Various	NA
USEPA-AF SL (AF = 0.03)[2]				2,100	2,100	0.32	3,300	3,300	Various	NA

Notes:

1. Soil vapor samples collected into passivated canisters by GSI Environmental, Inc.and analyzed by Eurofins Air Toxics for VOCs using United States Environmental Protection Agency (USEPA) Method TO-15 and helium using Modified ASTM Method D-1946.
2. Residential soil vapor screening levels calculated by applying default attenuation factors for future residential buildings (0.001) published by DTSC (2011) and for all buildings (0.03) published by USEPA (2015) to DTSC-SLs for residential air (DTSC, 2020; USEPA, 2020).
3. A replicate sample was collected from SB-17 immediately following the primary sample. Replicate sample results are shown in parentheses.

Abbreviations:

bgs = below ground surface
bold = analyte detected at a concentration greater than the laboratory reporting limit.
NA = not applicable
ND = not detected above the reporting limit
(##) = replicate sample result
$\mu g/m^3$ = micrograms per cubic meter
< = analyte not detected above the reporting limit shown
% = percent
-- = not analyzed
LCC = Leak Check Compound
DTSC = Department of Toxic Substances Control
SL = screening level
AF = attenuation factor

References:

California Environmental Protection Agency, Department of Toxic Substances Control (DTSC). 2011. Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance). DTSC. October.

DTSC. 2020. Department of Toxic Substances Control (DTSC). Human Health Risk Assessment (HHRA) Note, HERO HHRA Note 3, DTSC-modified Screening Levels (DTSC-SLs). June.

United States Environmental Protection Agency (USEPA). 2015. OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air. June.

USEPA. 2020. Regional Screening Levels (RSLs). November.

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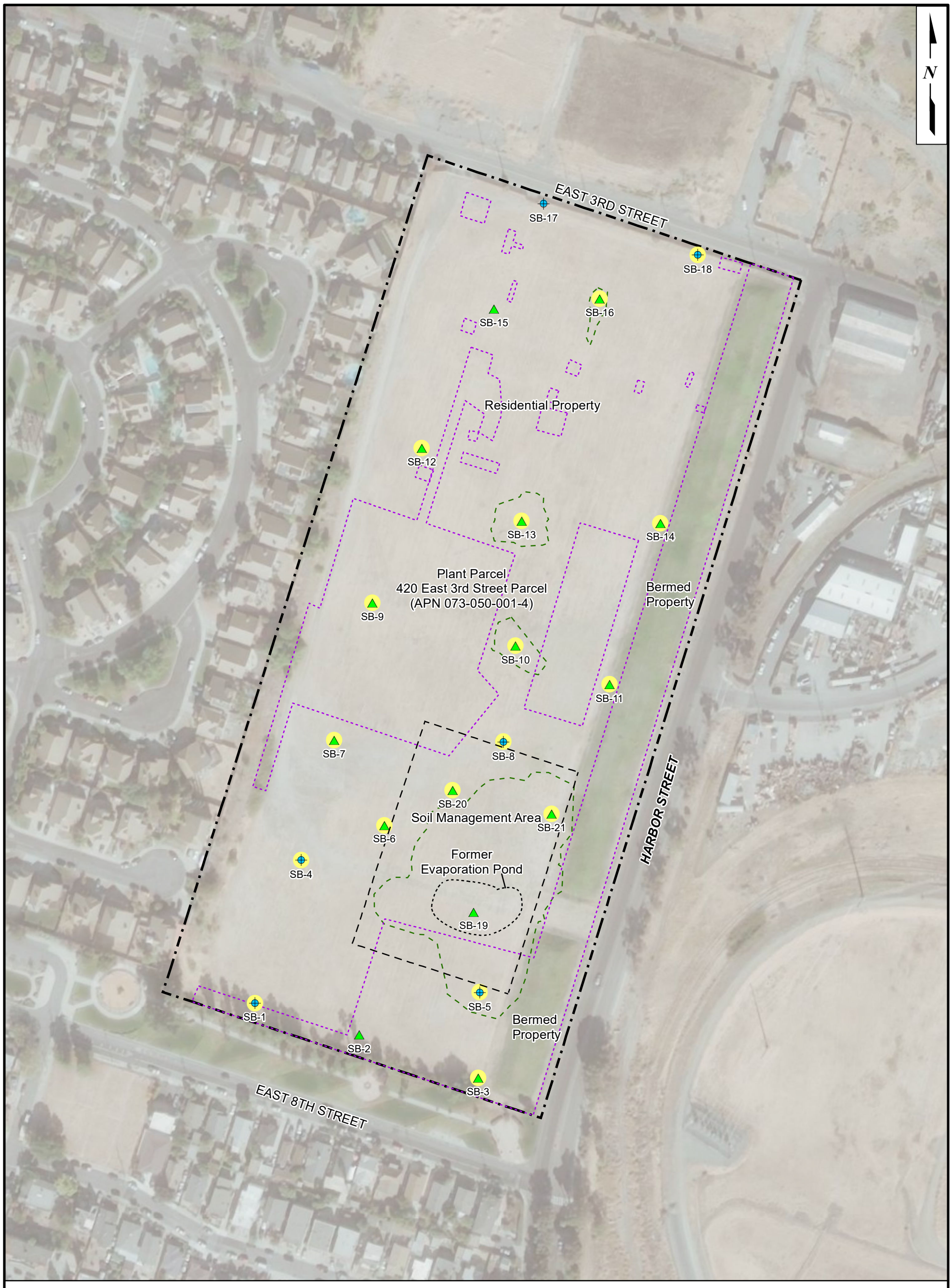
Integral Communities

Figures

Figure 1	Site Location Map
Figure 2	Site Plan and Locations of Soil, Groundwater, and Soil Vapor Samples
Figure 3	VOCs and TPH Detected in Groundwater Samples
Figure 4	VOCs Detected in Soil Vapor Samples at Concentrations Exceeding USEPA-AP Residential SLs



GSI ENVIRONMENTAL	GSI Job No. 5785	Drawn by: XO	**SITE LOCATION MAP**
	Issued: 23-Mar-2021	Chk'd by: MPG	
	Revised:	Aprv'd by: JPD	
	Map ID: Pittsburg_SiteLocMap	**FIGURE 1**	420 East 3rd Street, Pittsburg, California



Notes:

Imagery downloaded from Google Earth Pro, August 2017.

LEGEND

- Soil Vapor and Grab Groundwater Sample Location
- Soil Vapor Sample Location
- Soil Sample Location
- Approximate Extent of Excavation for Asbestos
- Approximate Extent of Excavation for Petroleum Hydrocarbons
- Approximate Property Boundary

Feet
0 75 150

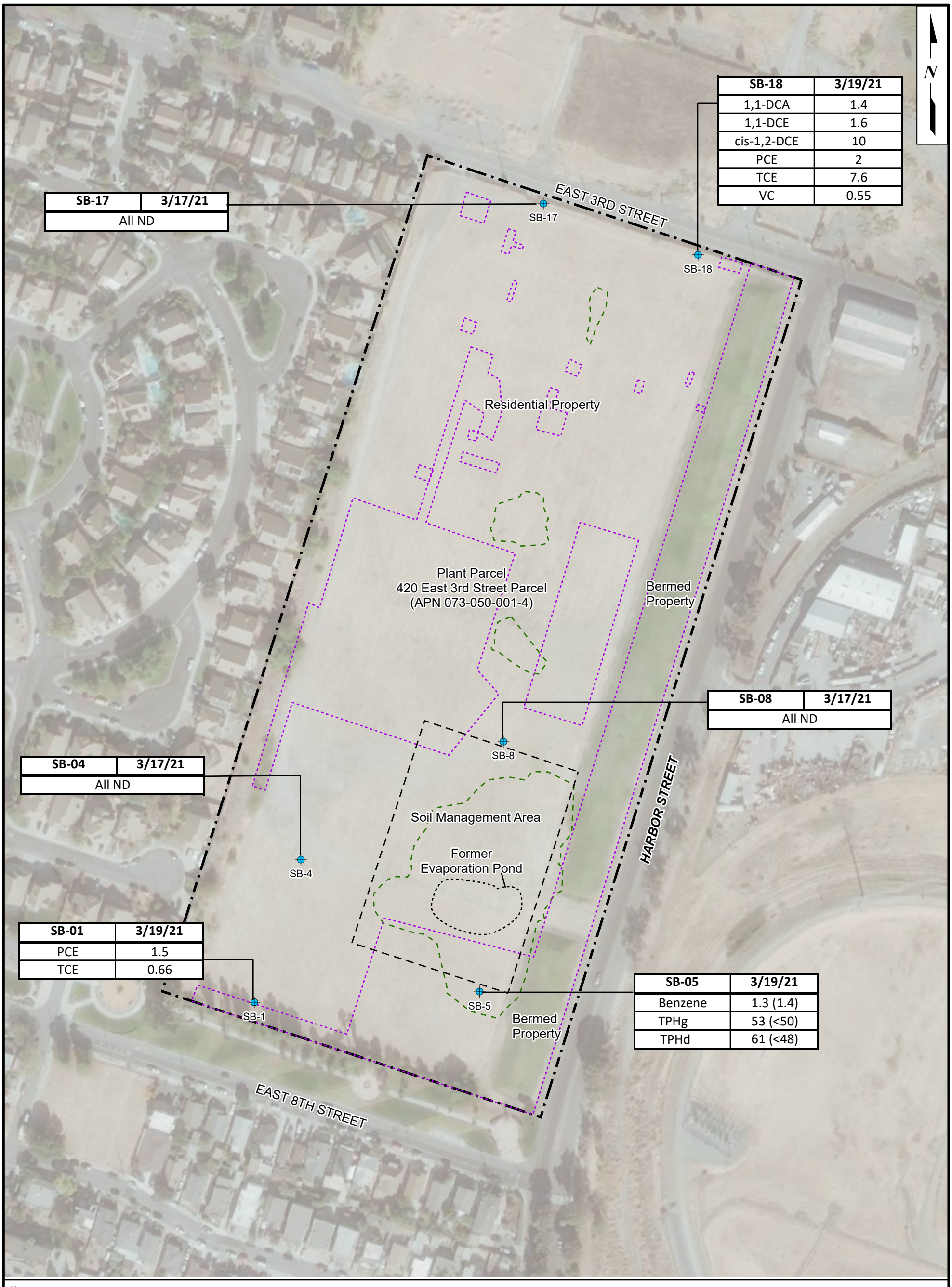
GSI ENVIRONMENTAL

GSI Job No. 5785		Map ID: Pittsburg_AllLocs	
Issued: 15-Apr-2021		Drawn By: XO	
		Chk'd By: MPG	Aprv'd By: JPD

LOCATIONS OF SOIL, GROUNDWATER, AND SOIL VAPOR SAMPLES

420 East 3rd Street, Pittsburg, California

FIGURE 2



SB-17	3/17/21
All ND	

SB-18	3/19/21
1,1-DCA	1.4
1,1-DCE	1.6
cis-1,2-DCE	10
PCE	2
TCE	7.6
VC	0.55

SB-08	3/17/21
All ND	

SB-04	3/17/21
All ND	

SB-01	3/19/21
PCE	1.5
TCE	0.66

SB-05	3/19/21
Benzene	1.3 (1.4)
TPHg	53 (<50)
TPHd	61 (<48)

Notes:

1) Imagery downloaded from Google Earth Pro, August 2017.
2) Data boxes show analytical results for volatile organic compounds (VOCs) detected in groundwater samples.
3) All concentrations are shown in units of micrograms per liter.
4) PCE = tetrachloroethene; TCE = trichloroethene
5) TPHd = total petroleum hydrocarbons (TPH) quantified as diesel; TPHg = TPH quantified as gasoline
6) ND = not detected
7) < = not detected above the laboratory reporting limit shown
8) Duplicate sample results presented in parentheses.

LEGEND

- Soil Vapor and Grab Groundwater Sample Location
- Approximate Extent of Excavation for Asbestos
- Approximate Extent of Excavation for Petroleum Hydrocarbons
- Approximate Property Boundary

Feet
0 75 150

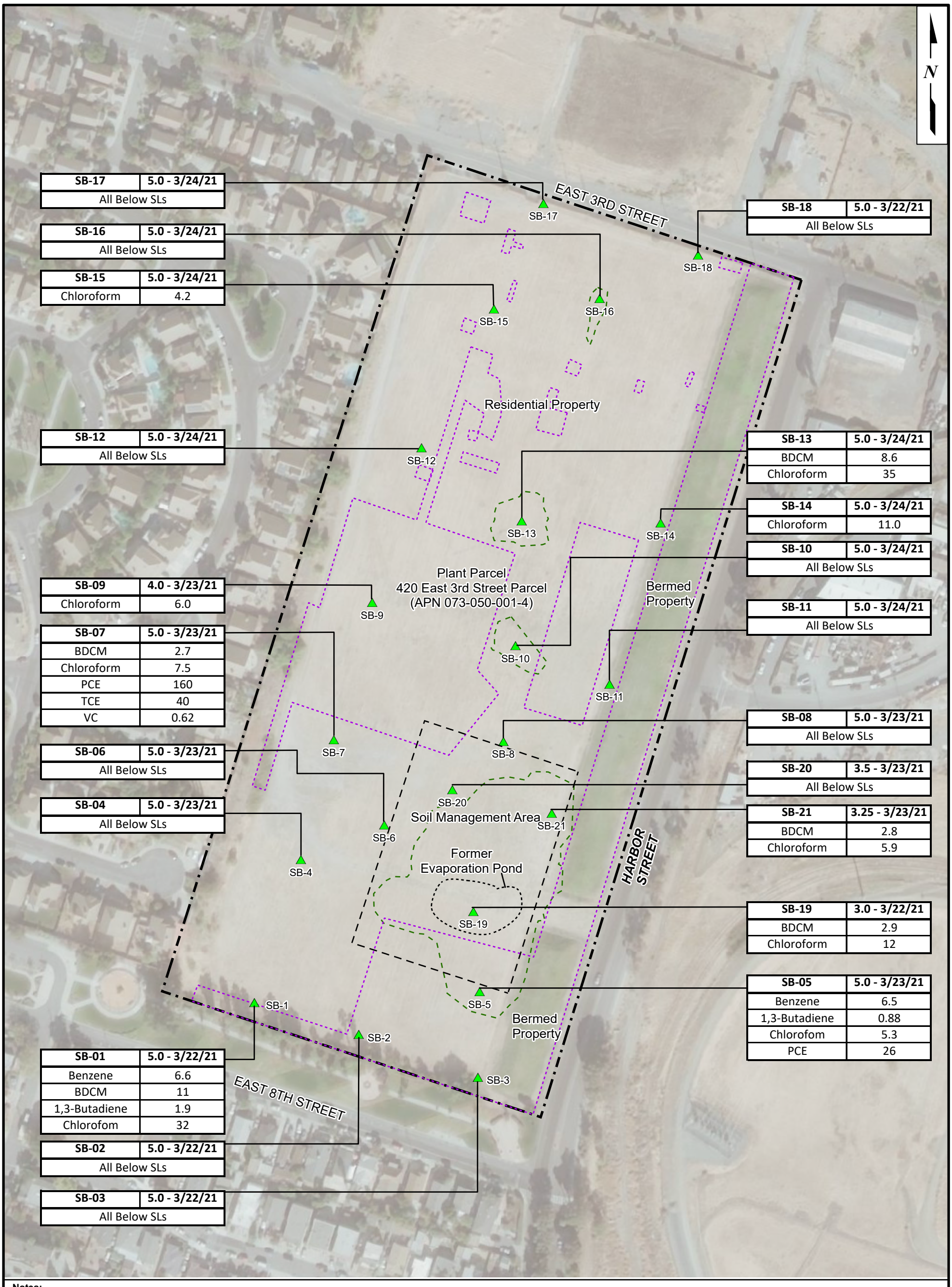
GSI ENVIRONMENTAL

GSI Job No.	Map ID:	
5785	Pittsburg_GW	
Issued: 16-Apr-2021	Drawn By: XO	
	Chk'd By: MPG	Aprv'd By: JPD

VOCS AND TPH DETECTED IN GROUNDWATER SAMPLES

420 East 3rd Street, Pittsburg, California

FIGURE 3



Notes:

1) Imagery downloaded from Google Earth Pro, August 2017.
2) Data boxes show analytical results for volatile organic compounds (VOCs) detected in soil vapor samples at concentrations exceeding the USEPA attenuation factor (0.03) residential screening levels (SLs).
3) The sample depth is presented (prior to the sample date) in feet below ground surface.
4) All concentrations are shown in units of micrograms per cubic meter.
5) BDCM =bromodichloromethane
6) PCE = tetrachloroethene
7) TCE = trichloroethene
8) VC = vinyl chloride

LEGEND

- Soil Vapor Sample Location
- Approximate Extent of Excavation for Asbestos
- Approximate Extent of Excavation for Petroleum Hydrocarbons
- Approximate Property Boundary

Feet
0 75 150

GSI ENVIRONMENTAL

GSI Job No.	Map ID:	
5785	Pittsburg_SV	
Issued: 16-Apr-2021	Drawn By: XO	
	Chk'd By: MPG	Aprv'd By: JPD

VOCS DETECTED IN SOIL VAPOR SAMPLES AT CONCENTRATIONS EXCEEDING USEPA-AF RESIDENTIAL SLS

420 East 3rd Street, Pittsburg, California

FIGURE 4

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Site Investigation Report
420 E. 3rd Street
Pittsburg, California

Integral Communities

Appendices

Appendix A. Drilling Permits

Appendix B. Boring Logs

Appendix C. Analytical Laboratory Reports

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Site Investigation Report
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Pittsburg, California

Integral Communities

Appendix A

Drilling Permits

CONTRA COSTA
ENVIRONMENTAL HEALTH DIVISION

2120 DIAMOND BLVD. SUITE 100. CONCORD. CA 94520-5704
(925) 608-5500 FAX (925) 608-5502 www.cchealth.org/eh/

Soil Boring Permit

Permit Number: 0028237 PE Number: 4302

Date Received: March 02, 2021 WP Number: WP0028237

Issued By: JOHN WIGGINS Date Issued: 15-Mar-2021 Date Expires: 15-Sep-2021

Intended Use: SOIL VAPOR PROBE # of Borings or Well ID: 5

The issuance of this permit by Contra Costa County Environmental Health Division does not guarantee a satisfactory and an indefinite operation of any well. Permit expires in 180 calendar days from date of approval. Permits are non-transferable, and can be suspended or revoked. If more time is required for the project, a time extension may be granted if reasons warrant it in writing.

Project Site Information

Site Address: 420 EAST 3RD ST
APN: 073 050 001 Lot/Parcel #:
Subdivisioin #: Minor Subdivision #:

Driller/Consultant Information

Driller: PENECORE DRILLING Contact Person: TUAN NGUYEN
Phone #: 530-661-3600 E-Mail or Fax#: tuan@penecore.com
Consultant: GSI ENVIRONMENTAL INC Contact Person: KALIN HOWELL
Phone #: 815-735-0110 E-Mail or Fax#: KJHOWELL@GSI-NET.COM

Legal Owner Information

Property Owner: THIRD STREET PITTSBURG CAMPUS, LLC Responsible Party: INTEGRAL COMMUNITIES
Owner Address: 3220 STE BLUME DR Address: 888 SAN CLEMENTE STE 100
City/State/Zip: SAN PABLO, CA 94806-5741 City/State/Zip: NEWPORT BEACH CA 92660
Phone #: 402-660-9767 Phone #: 925-362-3749

Prior to any drilling construction or destruction of a well, requests for inspection appointment must be received 48 hours in advance (excluding weekends, holidays, and Mandatory County Furlough Days) by faxing your written request to (925) 608-5502 or e-mail to ehlu@.cchealth.org. Voice mail messages are not acceptable.

Well drillers must possess a valid C-57 license and must have on file a performance bond of $5,000.00 with Contra Costa County before commencing with any well construction, destruction or repairs.

Soil Boring Permit Conditions:

1. Soil Boring shall be destroyed pursuant to County regulations within 30 days of completing monitoring activities.
2. _____
3. _____

Final Approval by:_____ Date: _____

GSI ENVIRONMENTAL

Site Investigation Report
420 E. 3rd Street
Pittsburg, California

Integral Communities

Appendix B

Boring Logs

PROJECT NUMBER: 5785	LOG OF BORING NO. SB-01		
PROJECT NAME: Intergral Pittsburg	DATE STARTED: 3/19/21	DATE FINISHED: 3/19/21	
PROJECT LOCATION: 420 E. 3rd St., Pittsburg, CA	ELEVATION: Not Surveyed	MEASURING POINT: Ground Surface	
DRILLING CONTRACTOR: Penecore	SURVEY DATUM: Not Surveyed		
DRILLING METHOD: Hand Auger and Direct-Push	TOTAL DEPTH OF BORING: 20.0 FT	DEPTH TO SATURATED SOIL: 14.0 FT	
DRILLING EQUIPMENT: Geoprobe 6712DT ← 3.25" OD	MEASURED DEPTH TO GROUNDWATER: 12.1 FT		
SAMPLING METHOD: Hand Auger ~~[2" OD]~~ to 5 feet; Dual Tube [5' x 1.25" ID]	LOGGED BY: M. GOERZ	BOREHOLE DIAMETER: 3.25" TO 5 FT; 2.25" 5-20 FT	
HAMMER WEIGHT/TYPE: NA	DROP: NA	RESPONSIBLE PROFESSIONAL:	REG. NO.

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample Run	SAMPLES: Blows / 6 in.	OVM (ppm)	FIELD-ESTIMATED % FINES	SAND: Fine	SAND: Medium	SAND: Coarse	GRAVEL: Fine	GRAVEL: Coarse	MOISTURE	PLASTICITY	CONSISTENCY	DESCRIPTION (NAME (USCS Symbol): color, other descriptors: dilatancy, toughness, dry strength, structure, cementation, reaction with HCl, geologic interpretation.)	USCS Symbo	REMARKS AND / OR TEST RESULTS
0					60	40					M	L		SANDY LEAN (CL) LIGHT OLIVE BROWN (2.5Y 5/3)		HAND AUGER TO 5 FT
1																
2	SB-01-3.0			0.0	40	60					M	L		CLAYEY SAND (SC) LIGHT OLIVE BROWN [2.5Y 5/3]		
3					70	30					M	M		LEAN CLAY W/ SAND (CL) LIGHT OLIVE BROWN [2.5Y 5/3]		
4																
5				0.0												INSTALL SOIL VAPOR PROBE AT 5 FT.
6				0.0	90	10					M	H	F	LEAN CLAY (CL) LIGHT OLIVE BROWN [2.5Y 5/3]		
7	SB-01-8.0															
8				0.0												
9																
10				0.0												09:00 MEASURE WL AT 12.1 FT
11																BORING AT 20 FT
12																DRILL CASING AT 18 FT.
13																
14				0.0	10	90→					W	L		POORLY GRADED SAND WITH SILT (SP-SM) [BROWN 7.5YR 4/4]		
15																

MOISTURE: D = DRY, M = MOIST, W = WET
PLASTICITY OF FINES: L = LOW, M = MEDIUM, H = HIGH
CONSISTENCY (FINE GRAINED SEDIMENTS ONLY): VS = VERY SOFT, S = SOFT, F = FIRM, H = HARD, VH = VERY HARD
FIELD-ESTIMATED %: T = TRACE

PROJECT NUMBER: 5785

LOG OF BORING NO. SB-01

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample Run Blows / 6 in.	OVM (ppm)	FIELD-ESTIMATED %: FINES	SAND: Fine	SAND: Medium	SAND: Coarse	GRAVEL: Fine	GRAVEL: Coarse	MOISTURE	PLASTICITY	CONSISTENCY	DESCRIPTION (NAME (USCS Symbol): color, other descriptors such as dilatancy, toughness, dry strength, structure, cementation, reaction with HCl, geologic interpretation.)	USCS Symbol	REMARKS AND / OR TEST RESULTS
16			0.0										POORLY GRADED SAND W/ CLAY (SP-SC) CONT'D.		
				5	90 →					W	L		POORLY GRADED SAND (SP) [BROWN 7.5 YR 4/4]		
17															
18													CLAYEY SAND (SC)		
19			0.0										CLAYEY SAND (SC)		
20													BOTTOM OF BORING AT 20 FT		
21															
22															
23															
24															
25															
26															
27															
28															
29															
30															
31															
32															
33															
34															
35															

MOISTURE: D = DRY, M = MOIST, W = WET
PLASTICITY OF FINES: L = LOW, M = MEDIUM, H = HIGH
CONSISTENCY (FINE GRAINED SEDIMENTS ONLY): VS = VERY SOFT, S = SOFT, F = FIRM, H = HARD, VH = VERY HARD
FIELD-ESTIMATED %: T = TRACE

PROJECT NUMBER: 5785

LOG OF BORING NO. SB-02

PROJECT NAME: Intergral Pittsburg

DATE STARTED: 3/19/21

DATE FINISHED: 3/19/21

PROJECT LOCATION: 420 E. 3rd St., Pittsburg, CA

ELEVATION: Not Surveyed

MEASURING POINT: Ground Surface

DRILLING CONTRACTOR: Penecore

SURVEY DATUM: Not Surveyed

DRILLING METHOD: Hand Auger ~~and Direct Push~~ MPG

TOTAL DEPTH OF BORING: 5.5 FT

DEPTH TO SATURATED SOIL: NA

DRILLING EQUIPMENT: HAND AUGER ~~Geoprobe 6712DT~~ MPG

MEASURED DEPTH TO GROUNDWATER: NA

SAMPLING METHOD: Hand Auger ~~(2" OD)~~ 3.25" OD to 5.5 FT

LOGGED BY: M. GOERZ

BOREHOLE DIAMETER: 3.25-inch

HAMMER WEIGHT/TYPE: NA

DROP: NA

RESPONSIBLE PROFESSIONAL:

REG. NO.

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample Run	SAMPLES: Blows / 6 in.	OVM (ppm)	FIELD-ESTIMATED %: FINES	SAND: Fine	SAND: Medium	SAND: Coarse	GRAVEL: Fine	GRAVEL: Coarse	MOISTURE	PLASTICITY	CONSISTENCY	DESCRIPTION (NAME (USCS Symbol): color, other descriptors: dilatancy, toughness, dry strength, structure, cementation, reaction with HCl, geologic interpretation)	USCS Symbol	REMARKS AND / OR TEST RESULTS
0					60	40					M	M		SANDY LEAN CLAY (CL) GRAYISH BROWN (2.5Y 5/2)		HAND AUGER TO 5.5 FT
1																
2				0.0	70	30					M	M		↓ LIGHT YELLOWISH BROWN (2.5Y 6/3)		INSTALL SOIL VAPOR PROBE AT 5.0 FT
3																
4				0.0												
5																
6														BOTTOM OF BORING AT 5.5 FT		
7																
8																
9																
10																
11																
12																
13																
14																
15																

MOISTURE: D = DRY, M = MOIST, W = WET
PLASTICITY OF FINES: L = LOW, M = MEDIUM, H = HIGH
CONSISTENCY (FINE GRAINED SEDIMENTS ONLY): VS = VERY SOFT, S = SOFT, F = FIRM, H = HARD, VH = VERY HARD
FIELD-ESTIMATED %: T = TRACE

PROJECT NUMBER: 5785	LOG OF BORING NO. SB-03		
PROJECT NAME: Intergral Pittsburg	DATE STARTED: 3 / 19 / 21	DATE FINISHED: 3 / 19 / 21	
PROJECT LOCATION: 420 E. 3rd St., Pittsburg, CA	ELEVATION: Not Surveyed	MEASURING POINT: Ground Surface	
DRILLING CONTRACTOR: Penecore	SURVEY DATUM: Not Surveyed		
DRILLING METHOD: Hand Auger ~~and Direct Push~~ HDG	TOTAL DEPTH OF BORING: 5.5 FT	DEPTH TO SATURATED SOIL: NA	
DRILLING EQUIPMENT: HAND AUGER HDG ~~Geoprobe 6712DT~~	MEASURED DEPTH TO GROUNDWATER: NA		
SAMPLING METHOD: Hand Auger ~~[3" OD]~~ 3.25" OD to 5.5 FT	LOGGED BY: M. GOERZ	BOREHOLE DIAMETER: 3.25-INCH	
HAMMER WEIGHT/TYPE: NA	DROP: NA	RESPONSIBLE PROFESSIONAL:	REG. NO.

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample Run	SAMPLES: Blows / 6 in.	OVM (ppm)	FIELD-ESTIMATED %: FINES	SAND: Fine	SAND: Medium	SAND: Coarse	GRAVEL: Fine	GRAVEL: Coarse	MOISTURE	PLASTICITY	CONSISTENCY	DESCRIPTION (NAME (USCS Symbol): color, other descriptors: dilatancy, toughness, dry strength, structure, cementation, reaction with HCl, geologic interpretation.)	USCS Symbol	REMARKS AND / OR TEST RESULTS
0					60	40					M	M		SANDY LEAN CLAY (CL) YELLOWISH BROWN [10YR 5/4] CONTAINS BRICK FRAGMENTS [FILL]		HAND AUGER TO 5.5 FT
1	SB-03-3.0															
2				0.0												INSTALL SOIL VAPOR PROBE AT 5.0 FT
3					40	30								↓		
4																
5				0.0												
6														BOTTOM OF BORING AT 5.5 FT		
7																
8																
9																
10																
11																
12																
13																
14																
15																

MOISTURE: D = DRY, M = MOIST, W = WET
PLASTICITY OF FINES: L = LOW, M = MEDIUM, H = HIGH
CONSISTENCY (FINE GRAINED SEDIMENTS ONLY): VS = VERY SOFT, S = SOFT, F = FIRM, H = HARD, VH = VERY HARD
FIELD-ESTIMATED %: T = TRACE

PROJECT NUMBER: 5785	**LOG OF BORING NO. SB-04**
PROJECT NAME: INTEGRAL PITTSBURG	BORING LOCATION: SW AREA OF SITE
PROJECT LOCATION: 420 E. 3RD ST, PITTSBURG	ELEVATION: NOT SURVEYED / MEASURING POINT: GROUND SURFACE
DRILLING CONTRACTOR: PENECORE	SURVEY DATUM: NOT SURVEYED
DRILLING METHOD: DIRECT PUSH	DATE STARTED: 3/17/21 / DATE FINISHED: 3/17/21
DRILLING EQUIPMENT: GEOPROBE 6712 DT	TOTAL DEPTH: 15 FT / DEPTH TO SATURATED SOIL: 10 FT
SAMPLING METHOD: HAND AUGER [8.25" OD.] DUAL TUBE [5.0' x 1.25" ID]	LOGGED BY: M. GOERZ / BOREHOLE DIAMETER: 3.25-INCH TO 5 FT, 2.25-INCH TO 15 FT
HAMMER WEIGHT/TYPE: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: / REG. NO.

DEPTH (feet)	SAMPLES: Sample No.	Sample Run	Blows / 6 in.	OVM (ppm)	FIELD-ESTIMATED % FINES	SAND: Fine	SAND: Medium	SAND: Coarse	GRAVEL: Fine	GRAVEL: Coarse	MOISTURE	PLASTICITY	CONSISTENCY	DESCRIPTION: NAME (USCS Symbol): color, other descriptors: dilatancy, toughness, dry strength, structure, cementation, reaction with HCl, geologic interpretation.	USCS Symbol	REMARKS AND / OR TEST RESULTS
0					10	75	→	→	15	→	D	N		POORLY GRADED SAND W/ SILT AND GRAVEL (SP-SM). GRAY [5Y 6/1]		HAND AUGER TO 5 FT.
1	SB-04-3.0				5	95	→				M	N		POORLY GRADED SAND (SP) GRAYISH BROWN [10YR 5/2]		
2				0.0												INSTALL SOIL VAPOR PROBE AT 5.0 FT
3																
4				0.0												
5																
6				0.0												
7	SB-04-8.0													↓ DARK YELLOWISH BROWN [10YR 4/4]		
8																16:20 MEASURE WATER LEVEL AT 9.2 FT WITH TOTAL DEPTH OF BOREHOLE AT 15 FT AND DRILL CASING AT 10 FT BGS.
9																
10				0.0	5	95	→							↓ WET		
11														↓ BROWN [7.5YR 4/4]		
12																
13				0.0												
14																
15														BOTTOM OF BORING AT 15 FT		

MOISTURE: D = DRY, M = MOIST, W = WET
PLASTICITY OF FINES: L = LOW, M = MEDIUM, H = HIGH
CONSISTENCY (FINE GRAINED SEDIMENTS ONLY): VS = VERY SOFT, S = SOFT, F = FIRM, H = HARD, VH = VERY HARD
FIELD-ESTIMATED %: T = TRACE

PROJECT NUMBER: 5785	LOG OF BORING NO. SB-05		
PROJECT NAME: Intergral Pittsburg	DATE STARTED: 3/19/21	DATE FINISHED: 3/19/21	
PROJECT LOCATION: 420 E. 3rd St., Pittsburg, CA	ELEVATION: Not Surveyed	MEASURING POINT: Ground Surface	
DRILLING CONTRACTOR: Penecore	SURVEY DATUM: Not Surveyed		
DRILLING METHOD: Hand Auger and Direct-Push	TOTAL DEPTH OF BORING: 20.0 FT	DEPTH TO SATURATED SOIL: 12 FT	
DRILLING EQUIPMENT: Geoprobe 6712DT ~~3" OD~~ 3.25" OD	MEASURED DEPTH TO GROUNDWATER: 15.1 FT		
SAMPLING METHOD: Hand Auger ~~[3" OD]~~ to 5 feet; Dual Tube [5' x 1.25" ID]	LOGGED BY: M. GOERZ	BOREHOLE DIAMETER: 3.25-INCH TO 5 FT; 2.25-INCH TO 20 FT	
HAMMER WEIGHT/TYPE: NA	DROP: NA	RESPONSIBLE PROFESSIONAL:	REG. NO.

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample Run	SAMPLES: Blows / 6 in.	OVM (ppm)	FIELD-ESTIMATED % FINES	SAND: Fine	SAND: Medium	SAND: Coarse	GRAVEL: Fine	GRAVEL: Coarse	MOISTURE	PLASTICITY	CONSISTENCY	DESCRIPTION: NAME (USCS Symbol): color, other descriptors: dilatancy, toughness, dry strength, structure, cementation, reaction with HCl, geologic interpretation.	USCS Symbol	REMARKS AND / OR TEST RESULTS
0					80	20					M	M	F	LEAN CLAY W/ SAND (CL) DARK GRAYISH BROWN [10YR 4/2] CONTAINS BRICK FRAGMENTS [FILL]		HAND AUGER TO 5 FT.
1																
2	SB-05-3.0			0.0												
3					70	30					M	M	F	SANDY LEAN CLAY (CL) OLIVE BROWN [2.5Y 4/4] CONTAINS BRICK FRAGMENTS [FILL]		INSTALL SOIL VAPOR PROBE AT 5.0 FT
4																
5				0.0										↓ TRACE COARSE GRAVEL		
6					75	25										
7	SB-05-8.0			9.1										↓ OLIVE BROWN [2.5Y 4/4] MOTTLED WITH DARK [GRAY 5Y 4/1]		
8					90	10					M	H	F	LEAN CLAY (CL): OLIVE GRAY [5Y 4/2] CONTAINS BRICK FRAGMENTS		
9				8.8												11:15 MEASURE WL AT 15.1 FT
10																BOREHOLE AT 20 FT
11				1.1												DRILL CASING AT 12 FT.
12				:	15	60 →			25 →		W	L		CLAYEY SAND WITH GRAVEL (SC) OLIVE [5Y 5/3] CONTAINS BRICK FRAGMENTS		
13				0.0	90	10					M	H	F	LEAN CLAY (CL) DARK GREENISH GRAY [GLEY 1 4/1]		
14																
15																

MOISTURE: D = DRY, M = MOIST, W = WET
PLASTICITY OF FINES: L = LOW, M = MEDIUM, H = HIGH
CONSISTENCY (FINE GRAINED SEDIMENTS ONLY): VS = VERY SOFT, S = SOFT, F = FIRM, H = HARD, VH = VERY HARD
FIELD-ESTIMATED %: T = TRACE

PROJECT NUMBER:

LOG OF BORING NO. SB-05

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample Run	SAMPLES: Blows / 6 in.	OVM (ppm)	FIELD-ESTIMATED %: FINES	SAND: Fine	SAND: Medium	SAND: Coarse	GRAVEL: Fine	GRAVEL: Coarse	MOISTURE	PLASTICITY	CONSISTENCY	DESCRIPTION	USCS Symbol	REMARKS AND / OR TEST RESULTS
16	SB-05-17 HOLD			0.0	85	15					M	N	S	LEAN CLAY (CL) : CONT'D		
17				31.1										SILT WITH SAND (ML) BLACK [5YR 2.5/1] STRONG ORGANIC ODOR.		
18																
19																
20														BOTTOM OF BORING AT 20 FT		
21																
22																
23																
24																
25																
26																
27																
28																
29																
30																
31																
32																
33																
34																
35																

MOISTURE: D = DRY, M = MOIST, W = WET
PLASTICITY OF FINES: L = LOW, M = MEDIUM, H = HIGH
CONSISTENCY (FINE GRAINED SEDIMENTS ONLY): VS = VERY SOFT, S = SOFT, F = FIRM, H = HARD, VH = VERY HARD
FIELD-ESTIMATED %: T = TRACE

PROJECT NUMBER: 5785	LOG OF BORING NO. SB-06
PROJECT NAME: Intergral Pittsburg	DATE STARTED: 3/19/21 — DATE FINISHED: 3/19/21
PROJECT LOCATION: 420 E. 3rd St., Pittsburg, CA	ELEVATION: Not Surveyed — MEASURING POINT: Ground Surface
DRILLING CONTRACTOR: Penecore	SURVEY DATUM: Not Surveyed
DRILLING METHOD: Hand Auger and ~~Direct Push~~ MPG	TOTAL DEPTH OF BORING: 5.5 FT — DEPTH TO SATURATED SOIL: NA
DRILLING EQUIPMENT: HAND AUGER MPG ~~Geoprobe 6712DT~~	MEASURED DEPTH TO GROUNDWATER: NA
SAMPLING METHOD: Hand Auger 3.25" OD ~~[3" OD]~~ to 5.5 FT	LOGGED BY: M. GOERZ — BOREHOLE DIAMETER: 3.25-INCH
HAMMER WEIGHT/TYPE: NA — DROP: NA	RESPONSIBLE PROFESSIONAL: — REG. NO.

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample Run	SAMPLES: Blows / 6 in.	OVM (ppm)	FIELD-ESTIMATED %: FINES	SAND: Fine	SAND: Medium	SAND: Coarse	GRAVEL: Fine	GRAVEL: Coarse	MOISTURE	PLASTICITY	CONSISTENCY	DESCRIPTION (NAME (USCS Symbol): color, other descriptors: dilatancy, toughness, dry strength, structure, cementation, reaction with HCl, geologic interpretation.)	USCS Symbol	REMARKS AND / OR TEST RESULTS
0	SB-06-3.0				20	50 →		→	30 →		M	N		SILTY SAND W/ GRAVEL (SM) GRAYISH BROWN [2.5Y 5/2] [FILL]		HAND AUGER TO 5.5 FT
1					5	95 →					M			POORLY GRADED SAND (SP) [FILL] GRAY [2.5Y 5/1]		
2				0.0												INSTALL SOIL VAPOR PROBE AT 5.0 FT
3																
4				0.0												
5														BOTTOM OF BORING AT 5.5 FT		
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

MOISTURE: D = DRY, M = MOIST, W = WET
PLASTICITY OF FINES: L = LOW, M = MEDIUM, H = HIGH
CONSISTENCY (FINE GRAINED SEDIMENTS ONLY): VS = VERY SOFT, S = SOFT, F = FIRM, H = HARD, VH = VERY HARD
FIELD-ESTIMATED %: T = TRACE

PROJECT NUMBER: 5785	LOG OF BORING NO. SB-07
PROJECT NAME: INTEGRAL PITTSBURG	BORING LOCATION: SEE SITE MAP
PROJECT LOCATION: 420 E. 3RD ST, PITTSBURG, CA	ELEVATION: NA / MEASURING POINT: GROUND SURFACE
DRILLING CONTRACTOR: PENECORE	SURVEY DATUM: NA
DRILLING METHOD: DIRECT PUSH	DATE STARTED: 3/17/21 / DATE FINISHED: 3/17/21
DRILLING EQUIPMENT: GEOPROBE 6712 DT	TOTAL DEPTH: 5 FT / DEPTH TO SATURATED SOIL: NA
SAMPLING METHOD: HAND AUGER [3.25" OD]	LOGGED BY: M. GOFERZ / BOREHOLE DIAMETER: 3.25-INCH
HAMMER WEIGHT/TYPE: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: / REG. NO.

DEPTH (feet)	SAMPLES: Sample No.	Sample Run	Blows / 6 In.	OVM (ppm)	FIELD-ESTIMATED %: FINES	SAND: Fine	SAND: Medium	SAND: Coarse	GRAVEL: Fine	GRAVEL: Coarse	MOISTURE	PLASTICITY	CONSISTENCY	DESCRIPTION: NAME (USCS Symbol): color, other descriptors: dilatancy, toughness, dry strength, structure, cementation, reaction with HCl, geologic interpretation.	USCS Symbol	REMARKS AND / OR TEST RESULTS
0	SB-07-3.0			0.0	5	35	→	→	60	→	M			POORLY GRADED GRAVEL WITH SAND (GP) GRAY [10YR 6/1]		VERY HARD POSSIBLY CONCRETE 0.5' TO 1.5'
2				0.0	5	95	→				M			POORLY GRADED SAND (SP) STRONG BROWN [7.5YR 4/6]		HAND AUGER TO 5.5 FT
3																INSTALL SVP AT 5.0 FT
4																
5				0.0												USE DRILL RIG TO BREAK THRU HARD MATERIAL
6														BOTTOM OF BORING AT 5.5 FT		
7																
8																
9																
10																
11																
12																
13																
14																
15																

MOISTURE: D = DRY, M = MOIST, W = WET
PLASTICITY OF FINES: L = LOW, M = MEDIUM, H = HIGH
CONSISTENCY (FINE GRAINED SEDIMENTS ONLY): VS = VERY SOFT, S = SOFT, F = FIRM, H = HARD, VH = VERY HARD
FIELD-ESTIMATED %: T = TRACE

PROJECT NUMBER: 5785	LOG OF BORING NO. SB-08
PROJECT NAME: INTEGRAL PITTSBURG	BORING LOCATION: NORTH EDGE OF SOIL MGMT AREA
PROJECT LOCATION: 420 E. 3RD ST, PITTSBURG, CA	ELEVATION: NA / MEASURING POINT: GROUND SURFACE
DRILLING CONTRACTOR: PENECORE	SURVEY DATUM: NA
DRILLING METHOD: DIRECT PUSH	DATE STARTED: 3/17/21 / DATE FINISHED: 3/17/21
DRILLING EQUIPMENT: GEOPROBE 6712 DT	TOTAL DEPTH: 15 FT / DEPTH TO SATURATED SOIL: 8 FT
SAMPLING METHOD: HAND AUGER [3.25"OD] DUAL TUBE [5.0'x1.25"ID]	LOGGED BY: M. GOERZ / BOREHOLE DIAMETER: 3.25-INCH TO 5 FT 15 FT; 2.25-INCH TO
HAMMER WEIGHT/TYPE: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: / REG. NO.

DEPTH (feet)	SAMPLES: Sample No.	Sample Run	Blows / 6 in.	OVM (ppm)	FIELD-ESTIMATED % FINES	SAND: Fine	SAND: Medium	SAND: Coarse	GRAVEL: Fine	GRAVEL: Coarse	MOISTURE	PLASTICITY	CONSISTENCY	DESCRIPTION: NAME (USCS Symbol): color, other descriptors: dilatancy, toughness, dry strength, structure, cementation, reaction with HCl, geologic interpretation.	USCS Symbol	REMARKS AND / OR TEST RESULTS
0					15	75 →			10 →		M	N		SILTY SAND W/ GRAVEL (SM) DARK GRAYISH BROWN [10YR 4/2]. CONTAINS WHITE MEDIUM COURSE SAND		HAND AUGER TO 5 FT
1																
2	SB-08-3.0			0.0												
3														↓ DARK YELLOWISH BROWN [10YR 4/4]		INSTALL SVP AT 5.0 FT
4				0.0	80	20					M	M	F	LEAN CLAY W/ SAND (CL) YELLOWISH BROWN [10YR 5/4]		
5					90	10					M	M	H	LEAN CLAY (CL): YELLOWISH BROWN [10YR 5/4]		
6																
7	SB-08-8.0			0.0												14:30 MEASURED WL AT 9.0 FT WITH TOTAL DEPTH OF BOREHOLE AT 15 FT AND DRILL CASING AT 7.5 FT BGS
8					40	60					W	M		CLAYEY SAND (SC), WET		
9				0.0												
10					40	60					W	M		CLAYEY SAND (SC), WET		
11				0.0												COLLECT GRAB GW SAMPLE SB-08-GW
12					40	60					W	M		CLAYEY SAND (SC) LIGHT YELLOWISH BROWN [2.5Y 6/4]		THRU 5 FT PVC SCREEN PLACED IN BORING FROM 10-15 FT. DRILL CASING RETRACTED TO 7.5 FT BGS.
13				0.0												
14																
15														BOTTOM OF BORING AT 15 FT		

MOISTURE: D = DRY, M = MOIST, W = WET
PLASTICITY OF FINES: L = LOW, M = MEDIUM, H = HIGH
CONSISTENCY (FINE GRAINED SEDIMENTS ONLY): VS = VERY SOFT, S = SOFT, F = FIRM, H = HARD, VH = VERY HARD
FIELD-ESTIMATED %: T = TRACE

PROJECT NUMBER: 5785	LOG OF BORING NO. SB-09
PROJECT NAME: Intergral Pittsburg	DATE STARTED: 3/22/21 — DATE FINISHED: 3/22/21
PROJECT LOCATION: 420 E. 3rd St., Pittsburg, CA	ELEVATION: Not Surveyed — MEASURING POINT: Ground Surface
DRILLING CONTRACTOR: Penecore	SURVEY DATUM: Not Surveyed
DRILLING METHOD: Hand Auger ~~and Direct Push~~ MPG	TOTAL DEPTH OF BORING: 5.5 — DEPTH TO SATURATED SOIL: NA
DRILLING EQUIPMENT: HAND AUGER ~~Geoprobe 6712DT~~ MPG	MEASURED DEPTH TO GROUNDWATER: NA
SAMPLING METHOD: Hand Auger ~~(2" OD)~~ 3.25" OD to 5.5'	LOGGED BY: M. GOERZ — BOREHOLE DIAMETER: 3.25-INCH
HAMMER WEIGHT/TYPE: NA — DROP: NA	RESPONSIBLE PROFESSIONAL: — REG. NO.

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample Run	SAMPLES: Blows / 6 in.	OVM (ppm)	FIELD-ESTIMATED %: FINES	SAND: Fine	SAND: Medium	SAND: Coarse	GRAVEL: Fine	GRAVEL: Coarse	MOISTURE	PLASTICITY	CONSISTENCY	DESCRIPTION	USCS Symbol	REMARKS AND / OR TEST RESULTS
0	SB-09-3.0				20	60	→	→	20	→	M	N		SILTY SAND WITH GRAVEL (SM) BROWN [10YR5/3]		
2				0.0	60	40	→				M	L		CLAYEY SAND (SC) DARK YELLOWISH BROWN [10YR4/4] CONTAINS BRICK FRAGMENTS [FILL]		INSTALL SOIL VAPOR PROBE AT 4.0 FT.
4				0.0	80	20					M	M		LEAN CLAY WITH SAND (CL)		
5.5														BOTTOM OF BORING AT 5.5 FT		

MOISTURE: D = DRY, M = MOIST, W = WET
PLASTICITY OF FINES: L = LOW, M = MEDIUM, H = HIGH
CONSISTENCY (FINE GRAINED SEDIMENTS ONLY): VS = VERY SOFT, S = SOFT, F = FIRM, H = HARD, VH = VERY HARD
FIELD-ESTIMATED %: T = TRACE

LOG OF BORING NO. SB-10

PROJECT NUMBER: 5785	
PROJECT NAME: Intergral Pittsburg	DATE STARTED: 3/22/21 — DATE FINISHED: 3/22/21
PROJECT LOCATION: 420 E. 3rd St., Pittsburg, CA	ELEVATION: Not Surveyed — MEASURING POINT: Ground Surface
DRILLING CONTRACTOR: Penecore	SURVEY DATUM: Not Surveyed
DRILLING METHOD: Hand Auger ~~and Direct Push~~ MPL	TOTAL DEPTH OF BORING: 5.5 FT — DEPTH TO SATURATED SOIL: NA
DRILLING EQUIPMENT: ~~Geoprobe 6712DT~~ HAND AUGER MPL	MEASURED DEPTH TO GROUNDWATER: NA
SAMPLING METHOD: Hand Auger ~~(3" OD) to~~ 3.25" OD AND 2.25" OD	LOGGED BY: M. GOERZ — BOREHOLE DIAMETER: 3.25-INCH TO 4.5 FT, 2.25-INCH TO 5.5 FT
HAMMER WEIGHT/TYPE: NA — DROP: NA	RESPONSIBLE PROFESSIONAL: — REG. NO.

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample Run	SAMPLES: Blows / 6 in.	OVM (ppm)	FIELD-ESTIMATED % FINES	SAND: Fine	SAND: Medium	SAND: Coarse	GRAVEL: Fine	GRAVEL: Coarse	MOISTURE	PLASTICITY	CONSISTENCY	DESCRIPTION (NAME (USCS Symbol): color, other descriptors: dilatancy, toughness, dry strength, structure, cementation, reaction with HCl, geologic interpretation.)	USCS Symbol	REMARKS AND / OR TEST RESULTS
0	SB-10-3.0				30	65 →			5 →		M	N		SILTY SAND (SM): GRAYISH BROWN [10YR 5/2]		
1					30	55 →			15					↓ CONTAINS BRICK FRAGMENTS [FILL]		
2				0.0												INSTALL SOIL VAPOR PROBE AT 5.0 FT
3					35	55 →			10		M	L		CLAYEY SAND (SC): DARK GRAYISH BROWN [10YR 4/2] CONTAINS BRICK FRAGMENTS [FILL]		
4					40	60 →					M	L		↓		
5				0.0												USE 3.25" HAND AUGER TO 4.5 FT USE 2.25" HAND AUGER 4.5 TO 5.5 FT
6														BOTTOM OF BORING AT 5.5 FT		
7																
8																
9																
10																
11																
12																
13																
14																
15																

MOISTURE: D = DRY, M = MOIST, W = WET
PLASTICITY OF FINES: L = LOW, M = MEDIUM, H = HIGH
CONSISTENCY (FINE GRAINED SEDIMENTS ONLY): VS = VERY SOFT, S = SOFT, F = FIRM, H = HARD, VH = VERY HARD
FIELD-ESTIMATED %: T = TRACE

PROJECT NUMBER: 5785	LOG OF BORING NO. SB-11
PROJECT NAME: Intergral Pittsburg	DATE STARTED: 3/19/21 — DATE FINISHED: 3/19/21
PROJECT LOCATION: 420 E. 3rd St., Pittsburg, CA	ELEVATION: Not Surveyed — MEASURING POINT: Ground Surface
DRILLING CONTRACTOR: Penecore	SURVEY DATUM: Not Surveyed
DRILLING METHOD: Hand Auger ~~and Direct Push~~ MPG	TOTAL DEPTH OF BORING: 5.7 — DEPTH TO SATURATED SOIL: NA
DRILLING EQUIPMENT: HAND AUGER ~~Geoprobe 6712DT~~ MPG	MEASURED DEPTH TO GROUNDWATER: NA
SAMPLING METHOD: Hand Auger ~~[3" OD]~~ to 5 feet 3.25" OD ~~Dual Tube [5' x 1.25" ID]~~ MPG	LOGGED BY: M. GOERZ — BOREHOLE DIAMETER: 3.25-INCH
HAMMER WEIGHT/TYPE: NA — DROP: NA	RESPONSIBLE PROFESSIONAL: — REG. NO.

DEPTH (feet)	SAMPLES: Sample No.	Sample Run	Blows / 6 In.	OVM (ppm)	FIELD-ESTIMATED %: FINES	SAND: Fine	SAND: Medium	SAND: Coarse	GRAVEL: Fine	GRAVEL: Coarse	MOISTURE	PLASTICITY	CONSISTENCY	DESCRIPTION: NAME (USCS Symbol): color, other descriptors: dilatancy, toughness, dry strength, structure, cementation, reaction with HCl, geologic interpretation.	USCS Symbo	REMARKS AND / OR TEST RESULTS
0	SB-11-3.0				40	60	→				M	L		CLAYEY SAND (SC) GRAYISH BROWN [2.5Y 5/2]		HAND AUGER TO 5.7 FT
1																
2				0.0	60	40					M	M		SANDY LEAN CLAY (CL) DARK GRAYISH BROWN [2.5Y 4/2]		
3					70	30								↓		INSTALL VAPOR PROBE AT 5.0 FT
4				0.0												
5					60	40								↓		
6														BOTTOM OF BORING AT 5.7 FT		
7																
8																
9																
10																
11																
12																
13																
14																
15																

MOISTURE: D = DRY, M = MOIST, W = WET
PLASTICITY OF FINES: L = LOW, M = MEDIUM, H = HIGH
CONSISTENCY (FINE GRAINED SEDIMENTS ONLY): VS = VERY SOFT, S = SOFT, F = FIRM, H = HARD, VH = VERY HARD
FIELD-ESTIMATED %: T = TRACE

PROJECT NUMBER: 5785	LOG OF BORING NO. SB-12
PROJECT NAME: Intergral Pittsburg	DATE STARTED: 3/22/21 — DATE FINISHED: 3/22/21
PROJECT LOCATION: 420 E. 3rd St., Pittsburg, CA	ELEVATION: Not Surveyed — MEASURING POINT: Ground Surface
DRILLING CONTRACTOR: Penecore	SURVEY DATUM: Not Surveyed
DRILLING METHOD: Hand Auger ~~and Direct Push~~ MDG	TOTAL DEPTH OF BORING: 5.5 FT — DEPTH TO SATURATED SOIL: NA
DRILLING EQUIPMENT: ~~Geoprobe 6712DT~~ MDG HAND AVGER	MEASURED DEPTH TO GROUNDWATER: NA
SAMPLING METHOD: Hand Auger [~~3" OD~~] 3.25"OD to 5.5 FT	LOGGED BY: M. GOERZ — BOREHOLE DIAMETER: 3.25-INCH TO 4.5 FT, 2.25-INCH TO 5.5 FT
HAMMER WEIGHT/TYPE: NA — DROP: NA	RESPONSIBLE PROFESSIONAL: — REG. NO.

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample Run	SAMPLES: Blows / 6 in.	OVM (ppm)	FIELD-ESTIMATED %: FINES	SAND: Fine	SAND: Medium	SAND: Coarse	GRAVEL: Fine	GRAVEL: Coarse	MOISTURE	PLASTICITY	CONSISTENCY	DESCRIPTION (NAME (USCS Symbol): color, other descriptors: dilatancy, toughness, dry strength, structure, cementation, reaction with HCl, geologic interpretation.)	USCS Symbol	REMARKS AND / OR TEST RESULTS
0					40	60					M	L		CLAYEY SAND (SC) DARK YELLOWISH BROWN [10YR 4/6]		
1																INSTALL SOIL VAPOR PROBE AT 5.0 FT
2	SB-12-3.0			0.0												
3																USE 3.25" HAND AUGER TO 4.5 FT.
4																
5				0.0	30	70					M	L		↓		USE 2.25" HAND AUGER 4.5 TO 5.5 FT
6														BOTTOM OF BORING AT 5.5 FT		
7																
8																
9																
10																
11																
12																
13																
14																
15																

MOISTURE: D = DRY, M = MOIST, W = WET
PLASTICITY OF FINES: L = LOW, M = MEDIUM, H = HIGH
CONSISTENCY (FINE GRAINED SEDIMENTS ONLY): VS = VERY SOFT, S = SOFT, F = FIRM, H = HARD, VH = VERY HARD
FIELD-ESTIMATED %: T = TRACE

PROJECT NUMBER: 5785	LOG OF BORING NO. SB-13
PROJECT NAME: Intergral Pittsburg	DATE STARTED: 3/22/21 — DATE FINISHED: 3/22/21
PROJECT LOCATION: 420 E. 3rd St., Pittsburg, CA	ELEVATION: Not Surveyed — MEASURING POINT: Ground Surface
DRILLING CONTRACTOR: Penecore	SURVEY DATUM: Not Surveyed
DRILLING METHOD: Hand Auger ~~and Direct Push~~ MPG	TOTAL DEPTH OF BORING: 5.5 FT — DEPTH TO SATURATED SOIL: NA
DRILLING EQUIPMENT: HAND AUGER MPG ~~Geoprobe 6712DT~~	MEASURED DEPTH TO GROUNDWATER: NA
SAMPLING METHOD: Hand Auger [3" OD] ~~to~~ 3.25" OD AND 2.25" OD	LOGGED BY: M. GOERZ — BOREHOLE DIAMETER: 3.25-INCH TO 4.5 FT, 2.25-INCH TO 5.5 FT
HAMMER WEIGHT/TYPE: NA — DROP: NA	RESPONSIBLE PROFESSIONAL: — REG. NO.

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample Run	SAMPLES: Blows / 6 in.	OVM (ppm)	FIELD-ESTIMATED %: FINES	SAND: Fine	SAND: Medium	SAND: Coarse	GRAVEL: Fine	GRAVEL: Coarse	MOISTURE	PLASTICITY	CONSISTENCY	DESCRIPTION: NAME (USCS Symbol): color, other descriptors: dilatancy, toughness, dry strength, structure, cementation, reaction with HCl, geologic interpretation.	USCS Symbol	REMARKS AND / OR TEST RESULTS
0					40	55 →			5 →		M	L		CLAYEY SAND (CL) BROWN [10YR 4/3]		
1	SB-13-3.0															INSTALL SOIL VAPOR PROBE AT 5.0 FT
2				0.0										CONTAINS BRICK FRAGMENTS		
3																
4					CO	40			T		M	M		SANDY LEAN CLAY (CL) BROWN [10YR 4/3], CONTAINS BRICK FRAGMENTS		USE 3.25" HAND AUGER TO 4.5 FT
5				0.0												USE 2.25" HAND AUGER 4.5 TO 5.5 FT
6														BOTTOM OF BORING AT 5.5 FT		
7																
8																
9																
10																
11																
12																
13																
14																
15																

MOISTURE: D = DRY, M = MOIST, W = WET
PLASTICITY OF FINES: L = LOW, M = MEDIUM, H = HIGH
CONSISTENCY (FINE GRAINED SEDIMENTS ONLY): VS = VERY SOFT, S = SOFT, F = FIRM, H = HARD, VH = VERY HARD
FIELD-ESTIMATED %: T = TRACE

PROJECT NUMBER: 5785	LOG OF BORING NO. SB-14
PROJECT NAME: Intergral Pittsburg	DATE STARTED: 3/22/21 — DATE FINISHED: 3/22/21
PROJECT LOCATION: 420 E. 3rd St., Pittsburg, CA	ELEVATION: Not Surveyed — MEASURING POINT: Ground Surface
DRILLING CONTRACTOR: Penecore	SURVEY DATUM: Not Surveyed
DRILLING METHOD: Hand Auger ~~and Direct Push~~ MDG	TOTAL DEPTH OF BORING: 5.5 FT — DEPTH TO SATURATED SOIL: NA
DRILLING EQUIPMENT: HAND AUGER MDG ~~Geoprobe 6712DT~~	MEASURED DEPTH TO GROUNDWATER: NA
SAMPLING METHOD: Hand Auger ~~3" OD to~~ 3.25" OD AND 2.25" OD	LOGGED BY: M. GOERZ — BOREHOLE DIAMETER: 3.25-INCH TO 4.5 FT, 2.25-INCH TO 5.5 FT
HAMMER WEIGHT/TYPE: NA — DROP: NA	RESPONSIBLE PROFESSIONAL: — REG. NO.

DEPTH (feet)	SAMPLES: Sample No.	Sample Run	Blows / 6 in.	OVM (ppm)	FIELD-ESTIMATED %: FINES	SAND: Fine	SAND: Medium	SAND: Coarse	GRAVEL: Fine	GRAVEL: Coarse	MOISTURE	PLASTICITY	CONSISTENCY	DESCRIPTION (NAME (USCS Symbol): color, other descriptors: dilatancy, toughness, dry strength, structure, cementation, reaction with HCl, geologic interpretation.)	USCS Symbol	REMARKS AND / OR TEST RESULTS
0	SB-14-3.0				25	65 →			10 →		M	L		CLAYEY SAND (SC) DARK GRAYISH BROWN [10YR 4/2] CONTAINS BRICK FRAGMENTS [FILL]		INSTALL SOIL VAPOR PROBE AT 5.0 FT
1																
2				0.0	75	25					M	M		LEAN CLAY WITH SAND (CL) DARK BROWN [10YR 3/3]		
3																
4				0.0	15	85 →					M	L		CLAYEY SAND (SC) YELLOWISH BROWN [10YR 5/6]		USE 3.25" HAND AUGER TO 4.5 FT
5														BOTTOM OF BORING AT 5.5 FT		USE 2.25" HAND AUGER 4.5 TO 5.5 FT
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

MOISTURE: D = DRY, M = MOIST, W = WET
PLASTICITY OF FINES: L = LOW, M = MEDIUM, H = HIGH
CONSISTENCY (FINE GRAINED SEDIMENTS ONLY): VS = VERY SOFT, S = SOFT, F = FIRM, H = HARD, VH = VERY HARD
FIELD-ESTIMATED %: T = TRACE

PROJECT NUMBER: 5785	LOG OF BORING NO. SB-15
PROJECT NAME: Intergral Pittsburg	DATE STARTED: 3/22/21 — DATE FINISHED: 3/22/21
PROJECT LOCATION: 420 E. 3rd St., Pittsburg, CA	ELEVATION: Not Surveyed — MEASURING POINT: Ground Surface
DRILLING CONTRACTOR: Penecore	SURVEY DATUM: Not Surveyed
DRILLING METHOD: Hand Auger and Direct-Push	TOTAL DEPTH OF BORING: 5.5 FT — DEPTH TO SATURATED SOIL: NA
DRILLING EQUIPMENT: Geoprobe 6712DT	MEASURED DEPTH TO GROUNDWATER: NA
SAMPLING METHOD: Hand Auger ~~[illegible] to~~ 3.25"OD AND 2.25"OD	LOGGED BY: M. GOERZ — BOREHOLE DIAMETER: 3.25-INCH TO 4.5 FT, 2.25-INCH TO 5.5 FT
HAMMER WEIGHT/TYPE: NA — DROP: NA	RESPONSIBLE PROFESSIONAL: — REG. NO.

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample Run	SAMPLES: Blows / 6 in.	OVM (ppm)	FIELD-ESTIMATED %: FINES	SAND: Fine	SAND: Medium	SAND: Coarse	GRAVEL: Fine	GRAVEL: Coarse	MOISTURE	PLASTICITY	CONSISTENCY	DESCRIPTION (NAME (USCS Symbol): color, other descriptors: dilatancy, toughness, dry strength, structure, cementation, reaction with HCl, geologic interpretation.)	USCS Symbol	REMARKS AND / OR TEST RESULTS
0					25	70 →			5 →		M	N		SILTY SAND (SM) GRAVISH BROWN [10YR 5/2]		
1														PIECE OF CONCRETE APPROX 6"x3"		
2				0.6	40	60					M	L		CLAYEY SAND (CL): DARK GRAYISH BROWN [10YR 4/2]		INSTALL SOIL VAPOR PROBE AT 5.0 FT
3					30	70								↓ YELLOWISH BROWN [10YR 5/4]		USE 3.25"OD HAND AUGER TO 4.5 FT.
4				0.0												
5					25	75										USE 2.25"OD HAND AUGER 4.5 TO 5.5 FT
6														BOTTOM OF BORING AT 5.5 FT		
7																
8																
9																
10																
11																
12																
13																
14																
15																

MOISTURE: D = DRY, M = MOIST, W = WET
PLASTICITY OF FINES: L = LOW, M = MEDIUM, H = HIGH
CONSISTENCY (FINE GRAINED SEDIMENTS ONLY): VS = VERY SOFT, S = SOFT, F = FIRM, H = HARD, VH = VERY HARD
FIELD-ESTIMATED %: T = TRACE

PROJECT NUMBER: 5785	LOG OF BORING NO. SB-16
PROJECT NAME: Intergral Pittsburg	DATE STARTED: 3/22/21 — DATE FINISHED: 3/22/21
PROJECT LOCATION: 420 E. 3rd St., Pittsburg, CA	ELEVATION: Not Surveyed — MEASURING POINT: Ground Surface
DRILLING CONTRACTOR: Penecore	SURVEY DATUM: Not Surveyed
DRILLING METHOD: Hand Auger ~~and Direct Push~~ MPG	TOTAL DEPTH OF BORING: 5.5 — DEPTH TO SATURATED SOIL: NA
DRILLING EQUIPMENT: HAND AUGER ~~Geoprobe 6712DT~~ MPG	MEASURED DEPTH TO GROUNDWATER: NA
SAMPLING METHOD: Hand Auger [~~3" OD~~] 3.25" OD AND 2.25" OD	LOGGED BY: M. GOERZ — BOREHOLE DIAMETER: 3.25-INCH TO 4.5 FT, 2.25-INCH TO 5.5 FT
HAMMER WEIGHT/TYPE: NA — DROP: NA	RESPONSIBLE PROFESSIONAL: — REG. NO.

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample Run	SAMPLES: Blows / 6 in.	OVM (ppm)	FIELD-ESTIMATED %: FINES	SAND: Fine	SAND: Medium	SAND: Coarse	GRAVEL: Fine	GRAVEL: Coarse	MOISTURE	PLASTICITY	CONSISTENCY	DESCRIPTION (NAME (USCS Symbol): color, other descriptors: dilatancy, toughness, dry strength, structure, cementation, reaction with HCl, geologic interpretation.)	USCS Symbol	REMARKS AND / OR TEST RESULTS
0					20	70 →			10 →		M	N		SILTY SAND (SM) DARK GRAYISH BROWN [10YR4/2]		
1																INSTALL SOIL VAPOR PROBE AT 5.0 FT
2	SB-16-3.0			0.0												
3					15	70 →			15 →					GRAY [10YR 5/1]		USE 3.25" OD HAND AUGER TO 4.5 FT.
4					70	30					M	L		SANDY LEAN CLAY (CL) : DARK GRAYISH BROWN [10YR 4/2]		
5				0.0								M		YELLOWISH BROWN [10YR 5/4]		USE 2.25" HAND AUGER 4.5 TO 5.5 FT
6														BOTTOM OF BORING AT 5.5 FT		
7																
8																
9																
10																
11																
12																
13																
14																
15																

MOISTURE: D = DRY, M = MOIST, W = WET
PLASTICITY OF FINES: L = LOW, M = MEDIUM, H = HIGH
CONSISTENCY (FINE GRAINED SEDIMENTS ONLY): VS = VERY SOFT, S = SOFT, F = FIRM, H = HARD, VH = VERY HARD
FIELD-ESTIMATED %: T = TRACE

PROJECT NUMBER: 5785	LOG OF BORING NO. SB-17
PROJECT NAME: INTEGRAL PITTSBURG	BORING LOCATION: NW PROPERTY LINE
PROJECT LOCATION: 420 E. 3RD ST, PITTSBURG, CA	ELEVATION: NA / MEASURING POINT: GROUND SURFACE
DRILLING CONTRACTOR: PENECORE	SURVEY DATUM: NA
DRILLING METHOD: DIRECT PUSH	DATE STARTED: 3/17/21 / DATE FINISHED: 3/17/21
DRILLING EQUIPMENT: GEOPROBE 6712DT	TOTAL DEPTH: 15 FT / DEPTH TO SATURATED SOIL: 11.0 FT
SAMPLING METHOD: HAND AUGER [3.25" OD] DUAL TUBE [5.0' X 1.25" ID]	LOGGED BY: M. GOERZ / BOREHOLE DIAMETER: 3.25-INCH TO 5 FT, 2.25-INCH TO 15 FT
HAMMER WEIGHT/TYPE: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: / REG. NO.

DEPTH (feet)	Sample No.	Sample Run	Blows / 6 in.	OVM (ppm)	FINES	SAND: Fine	SAND: Medium	SAND: Coarse	GRAVEL: Fine	GRAVEL: Coarse	MOISTURE	PLASTICITY	CONSISTENCY	DESCRIPTION (NAME (USCS Symbol): color, other descriptors: dilatancy, toughness, dry strength, structure, cementation, reaction with HCl, geologic interpretation.)	USCS Symbol	REMARKS AND / OR TEST RESULTS
0					20	65 →			15 →		M	N		SILTY SAND WITH GRAVEL (SM): DARK OLIVE BROWN [2.5Y 3/3] TRACE BRICK FRAGMENTS [FILL]		HAND AUGER TO 5 FT
1				0.0												
2																
3					40	60					M	L		CLAYEY SAND (SC): YELLOWISH BROWN [10YR 5/6]		INSTALL SVP AT 5.0 FT
4				0.0												
5														LEAN CLAY (CL) VERY DARK GRAYISH BROWN [10YR 3/2]		
				0.0										LEAN CLAY WITH SAND (CL)		
6					80	20					M	L		YELLOWISH BROWN [10YR 5/4]		
7																
				0.0												09:10 MEASURED WL AT 8.4 FT WITH TOTAL DEPTH OF BOREHOLE AT 15 FT AND DRILL CASING AT 10 FT BGS.
8																
9																
10														POORLY GRADED SAND W/ CLAY (SP-SC) YELLOWISH BROWN [10YR 5/6]		
				0.0	10	90					M	L		WET		
11											W					
12																COLLECT GRAB GROUNDWATER SAMPLE THROUGH 5 FT OF 3/4" PVC SCREEN PLACED AT BOTTOM OF BORE HOLE, DRILL CASING RETRACTED TO 10 FT BGS
				0.0	5	95					W			POORLY GRADED SAND DARK YELLOWISH BROWN [10YR 4/4]		
13																
14																
15														BOTTOM OF BORING AT 15 FT BGS		

MOISTURE: D = DRY, M = MOIST, W = WET
PLASTICITY OF FINES: L = LOW, M = MEDIUM, H = HIGH
CONSISTENCY (FINE GRAINED SEDIMENTS ONLY): VS = VERY SOFT, S = SOFT, F = FIRM, H = HARD, VH = VERY HARD
FIELD-ESTIMATED %: T = TRACE

PROJECT NUMBER: 5785	LOG OF BORING NO. SB-18
PROJECT NAME: INTEGRAL PITTSBURG	BORING LOCATION: NE PROPERTY LINE
PROJECT LOCATION: 420 E 3RD ST, PITTSBURG	ELEVATION: NA / MEASURING POINT: GROUND SURFACE
DRILLING CONTRACTOR: PENECORE	SURVEY DATUM: NA
DRILLING METHOD: DIRECT PUSH	DATE STARTED: 3/17/21 / DATE FINISHED: 3/19/21
DRILLING EQUIPMENT: GEOPROBE 6712 DT	TOTAL DEPTH: 22 FT / DEPTH TO SATURATED SOIL: 14.0 FT
SAMPLING METHOD: HAND AUGER [3.25" OD] DUAL TUBE [5.0'X 1.25" ID]	LOGGED BY: M. GOERZ / BOREHOLE DIAMETER: 3.25-INCH TO 5 FT, 2.25-INCH TO 22 FT
HAMMER WEIGHT/TYPE: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: / REG. NO.

DEPTH (feet)	SAMPLES: Sample No.	Sample Run	Blows / 6 in.	OVM (ppm)	FIELD-ESTIMATED % FINES	SAND: Fine	SAND: Medium	SAND: Coarse	GRAVEL: Fine	GRAVEL: Coarse	MOISTURE	PLASTICITY	CONSISTENCY	DESCRIPTION (NAME (USCS Symbol): color, other descriptors: dilatancy, toughness, dry strength, structure, cementation, reaction with HCl, geologic interpretation.)	USCS Symbol	REMARKS AND / OR TEST RESULTS
0					20	65	→	→	15	→	M	N		SILTY SAND W/ GRAVEL (SM) DARK OLIVE BROWN [2.5Y 3/3]		HAND AUGER TO 5 FT
1				0.0												
2	SB-18-3.0													BLACK TARY SUBSTANCE BRICK FRAGMENTS		
3				0.0												
4				0.0												
5					90	10					M	M	F	LEAN CLAY (CL). BROWN [10YR 5/3]		
6				5.2												INSTALL SVP AT 5.0 FT
7				5.5										STRONG ODOR, DARK GREENISH GRAY [GLEY 1 4/1]		
8	SB-18-9.0				70	30					M	M	F	SANDY LEAN CLAY (CL) DARK GREENISH GREY [GLEY 1 4/1] STRONG ODOR		12:20 MEASURED WL = 7.9 FT BGS
9				10.5												DRILL CASING AT 14 FT AND BOTTOM OF BORING AT 22 FT
10				25												
11				0.0	80	20					M	M	H	LEAN CLAY W/ SAND (CL) OLIVE GRAY [5Y 5/2]		3 FT RUN
12				0.0										LIGHT YELLOW BROWN [2.5Y 6/4]		
13																2 FT RUN
14				0.0	65	35					W	M		CLAYEY SAND		
15																

MOISTURE: D = DRY, M = MOIST, W = WET
PLASTICITY OF FINES: L = LOW, M = MEDIUM, H = HIGH
CONSISTENCY (FINE GRAINED SEDIMENTS ONLY): VS = VERY SOFT, S = SOFT, F = FIRM, H = HARD, VH = VERY HARD
FIELD-ESTIMATED %: T = TRACE

PROJECT NUMBER: 5785	LOG OF BORING NO. SB-18
PROJECT NAME: SEE PAGE 1	BORING LOCATION:
PROJECT LOCATION:	ELEVATION: / MEASURING POINT:
DRILLING CONTRACTOR:	SURVEY DATUM:
DRILLING METHOD:	DATE STARTED: / DATE FINISHED:
DRILLING EQUIPMENT:	TOTAL DEPTH: / DEPTH TO SATURATED SOIL:
SAMPLING METHOD:	LOGGED BY: / BOREHOLE DIAMETER:
HAMMER WEIGHT/TYPE: / DROP:	RESPONSIBLE PROFESSIONAL: / REG. NO.

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample Run	SAMPLES: Blows / 6 in.	OVM (ppm)	FIELD-ESTIMATED %: FINES	SAND: Fine	SAND: Medium	SAND: Coarse	GRAVEL: Fine	GRAVEL: Coarse	MOISTURE	PLASTICITY	CONSISTENCY	DESCRIPTION (NAME (USCS Symbol): color, other descriptors: dilatancy, toughness, dry strength, structure, cementation, reaction with HCl, geologic interpretation.)	USCS Symbol	REMARKS AND / OR TEST RESULTS
0				0.0										LEAN CLAY W/ SAND (CL) CONT'D		
1	16				60	40								-SANDY LEAN CLAY		2.5 FT RUN
2	17			0.0									S	SOFT		
3	18			0.0									H	HARD		2.5 FT RUN
4	19															COLLECT GRAB GW SAMPLE SB-18-GW THROUGH 5 FT PVC WELL SCREEN FROM 17 TO 22 FT DRILL CASING RETRACTED TO 14 FT.
5	20			0.0												
6	21			0.0									S	SOFT		
7	22													BOTTOM OF BORING AT 22 FT		
8																
9																
10																
11																
12																
13																
14																
15																

MOISTURE: D = DRY, M = MOIST, W = WET
PLASTICITY OF FINES: L = LOW, M = MEDIUM, H = HIGH
CONSISTENCY (FINE GRAINED SEDIMENTS ONLY): VS = VERY SOFT, S = SOFT, F = FIRM, H = HARD, VH = VERY HARD
FIELD-ESTIMATED %: T = TRACE

PROJECT NUMBER: 5785

LOG OF BORING NO. SB-19

PROJECT NAME: Intergral Pittsburg

DATE STARTED: 3/19/21 DATE FINISHED: 3/19/21

PROJECT LOCATION: 420 E. 3rd St., Pittsburg, CA

ELEVATION: Not Surveyed MEASURING POINT: Ground Surface

DRILLING CONTRACTOR: Penecore

SURVEY DATUM: Not Surveyed

DRILLING METHOD: Hand Auger ~~and Direct Push~~ MOG

TOTAL DEPTH OF BORING: 3.5 DEPTH TO SATURATED SOIL: NA

DRILLING EQUIPMENT: HAND AUGER MOG ~~Geoprobe 6712DT~~

MEASURED DEPTH TO GROUNDWATER: NA

SAMPLING METHOD: Hand Auger 3.25" OD ~~[3" OD] to~~

LOGGED BY: M. GOERZ BOREHOLE DIAMETER: 3.25-INCH

HAMMER WEIGHT/TYPE: NA DROP: NA

RESPONSIBLE PROFESSIONAL: REG. NO.

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample Run	SAMPLES: Blows / 6 in.	OVM (ppm)	FIELD-ESTIMATED %: FINES	SAND: Fine	SAND: Medium	SAND: Coarse	GRAVEL: Fine	GRAVEL: Coarse	MOISTURE	PLASTICITY	CONSISTENCY	DESCRIPTION	USCS Symbol	REMARKS AND / OR TEST RESULTS
0					60	40					M	L		SANDY LEAN CLAY (CL) DARK GRAYISH BROWN [2.5Y 4/2] CONTAINS BRICK FRAGMENTS		HAND AUGER TO 3.5 FT
1																
2	SB-19-3.0			0.0												INSTALL SOIL VAPOR PROBE AT 3.0 FT
3																
4														BOTTOM OF BORING AT 3.5 FT		
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

MOISTURE: D = DRY, M = MOIST, W = WET
PLASTICITY OF FINES: L = LOW, M = MEDIUM, H = HIGH
CONSISTENCY (FINE GRAINED SEDIMENTS ONLY): VS = VERY SOFT, S = SOFT, F = FIRM, H = HARD, VH = VERY HARD
FIELD-ESTIMATED %: T = TRACE

PROJECT NUMBER: 5785

LOG OF BORING NO. SB-20

PROJECT NAME: Intergral Pittsburg

DATE STARTED: 3/19/21 DATE FINISHED: 3/19/21

PROJECT LOCATION: 420 E. 3rd St., Pittsburg, CA

ELEVATION: Not Surveyed MEASURING POINT: Ground Surface

DRILLING CONTRACTOR: Penecore

SURVEY DATUM: Not Surveyed

DRILLING METHOD: Hand Auger ~~and Direct Push~~ MDG

TOTAL DEPTH OF BORING: 4.0 FT DEPTH TO SATURATED SOIL: NA

DRILLING EQUIPMENT: HAND AUGER MDG ~~Geoprobe 6712DT~~

MEASURED DEPTH TO GROUNDWATER: NA

SAMPLING METHOD: Hand Auger 2.25" OD ~~[2" OD] to~~

LOGGED BY: M. GOERZ BOREHOLE DIAMETER: 2.25-inch

HAMMER WEIGHT/TYPE: NA DROP: NA

RESPONSIBLE PROFESSIONAL: REG. NO.

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample Run	SAMPLES: Blows / 6 in	OVM (ppm)	FIELD-ESTIMATED %: FINES	SAND: Fine	SAND: Medium	SAND: Coarse	GRAVEL: Fine	GRAVEL: Coarse	MOISTURE	PLASTICITY	CONSISTENCY	DESCRIPTION: NAME (USCS Symbol): color, other descriptors: dilatancy, toughness, dry strength, structure, cementation, reaction with HCl, geologic interpretation.	USCS Symbol	REMARKS AND / OR TEST RESULTS
0					20	50 →			30 →		M	N		SILTY SAND W/ GRAVEL (SM) GRAYISH BROWN [2.5Y 5/2] [FILL]		HAND AUGER TO 4.0 FT
1	SB-20-3.0				5	95 →					M			POORLY GRADED SAND (SP) GRAY [2.5Y 5/1] [FILL]		
2				0.0												INSTALL SOIL VAPOR PROBE AT 3.5 FT
3																
4		1		0.0										BOTTOM OF BORING AT 4.0 FT		* USED 2.25" DIAM AUGER
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

MOISTURE: D = DRY, M = MOIST, W = WET
PLASTICITY OF FINES: L = LOW, M = MEDIUM, H = HIGH
CONSISTENCY (FINE GRAINED SEDIMENTS ONLY): VS = VERY SOFT, S = SOFT, F = FIRM, H = HARD, VH = VERY HARD
FIELD-ESTIMATED %: T = TRACE

PROJECT NUMBER: 5785	LOG OF BORING NO. SB-21
PROJECT NAME: Intergral Pittsburg	DATE STARTED: 3/19/21 — DATE FINISHED: 3/19/21
PROJECT LOCATION: 420 E. 3rd St., Pittsburg, CA	ELEVATION: Not Surveyed — MEASURING POINT: Ground Surface
DRILLING CONTRACTOR: Penecore	SURVEY DATUM: Not Surveyed
DRILLING METHOD: Hand Auger ~~and Direct Push~~ MPG	TOTAL DEPTH OF BORING: 4.0' — DEPTH TO SATURATED SOIL: NA
DRILLING EQUIPMENT: HAND AUGER MPG ~~Geoprobe 6712DT~~	MEASURED DEPTH TO GROUNDWATER: NA
SAMPLING METHOD: Hand Auger 3.25" OD ~~[3" OD]~~	LOGGED BY: M. GOMEZ — BOREHOLE DIAMETER: 3.25-INCH
HAMMER WEIGHT/TYPE: NA — DROP: NA	RESPONSIBLE PROFESSIONAL: — REG. NO.

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample Run	SAMPLES: Blows / 6 in.	OVM (ppm)	FIELD-ESTIMATED %: FINES	SAND: Fine	SAND: Medium	SAND: Coarse	GRAVEL: Fine	GRAVEL: Coarse	MOISTURE	PLASTICITY	CONSISTENCY	DESCRIPTION (NAME (USCS Symbol): color, other descriptors: dilatancy, toughness, dry strength, structure, cementation, reaction with HCl, geologic interpretation.)	USCS Symbol	REMARKS AND / OR TEST RESULTS
0	SB-21-3.0	1		0.0	10	85 →			5		M	N		POORLY GRADED SAND W/ SILT (SP-SM) DARK GRAYISH BROWN [10YR 4/2]		HAND AUGER TO 4 FT
1														↓ GRAY [10YR 6/1]		
2				0.0	80	20					M	M		LEAN CLAY WITH SAND (CL) VERY DARK GRAYISH BROWN [10YR 3/2]		INSTALL SOIL VAPOR PROBE AT 3.25'
3				0.0	20	80					M	L		CLAYEY SAND (SC		SAND UP TO 2.75'
4					75	25					M	M		BOTTOM OF BORING AT 4 FT		
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

MOISTURE: D = DRY, M = MOIST, W = WET
PLASTICITY OF FINES: L = LOW, M = MEDIUM, H = HIGH
CONSISTENCY (FINE GRAINED SEDIMENTS ONLY): VS = VERY SOFT, S = SOFT, F = FIRM, H = HARD, VH = VERY HARD
FIELD-ESTIMATED %: T = TRACE

Site Investigation Report
420 E. 3rd Street
Pittsburg, California

Integral Communities

Appendix C

Analytical Laboratory Reports

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-71386-1
Client Project/Site: Integral Communities Pittsburg Project

For:
GSI Environmental, Inc
155 Grand Avenue
Suite 704
Oakland, California 94612

Attn: Matt Goerz

Authorized for release by:
3/29/2021 9:40:45 AM
Criselda Caparas, Project Manager I
(925)484-1919
Criselda.Caparas@Eurofinset.com

Designee for

Afsaneh Salimpour, Senior Project Manager
(925)484-1919
Afsaneh.Salimpour@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1+	Surrogate recovery exceeds control limits, high biased.

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.

Metals

Qualifier	Qualifier Description
^2	Calibration Blank (ICB and/or CCB) is outside acceptance limits.
F1	MS and/or MSD recovery exceeds control limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 320-71386-1

Laboratory: Eurofins TestAmerica, Sacramento

Narrative

Job Narrative
320-71386-1

Comments
No additional comments.

Receipt
The samples were received on 3/17/2021 5:10 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.8º C.

GC/MS VOA
Method 8260B: Internal standard (ISTD) response for Dioxane-d8 for the following sample was outside acceptance criteria: (CCV 320-472644/5). This ISTD does not correspond to any of the requested target compounds; therefore, the data have been reported.

Method 8260B: Internal standard (ISTD) response for Dioxane-d8 and TBA-d9 for the following samples were outside acceptance criteria: SB-08-GW (320-71386-8), (LCSD 320-472644/32) and (MB 320-472644/11). This ISTD does not correspond to any of the requested target compounds; therefore, the data have been reported.

Method 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 320-472644.

Method 8260B/CA_LUFTMS: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 320-473460.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270C SIM: Surrogate recovery for the following sample was outside control limits: SB-18-9.0 (320-71386-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8270C SIM: The following samples were diluted due to the nature of the sample matrix: SB-18-3.0 (320-71386-1), SB-08-3.0 (320-71386-3), (320-71386-A-3-D MS) and (320-71386-A-3-E MSD). Elevated reporting limits (RLs) are provided.

Method 8270C SIM: The following samples were diluted due to the nature of the sample matrix: (320-71386-A-3-D MS) and (320-71386-A-3-E MSD). Because of this dilution, the surrogate spike and matrix spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method 8270C SIM: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 320-472483 and analytical batch 320-472658 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected.

Method 8270C SIM: The matrix spike (MS) recovery for preparation batch 320-472483 and analytical batch 320-472658 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method 8015B: The following samples were diluted to bring the concentration of target analytes within the calibration range: SB-18-3.0 (320-71386-1), (320-71386-A-1-J MS) and (320-71386-A-1-K MSD). Elevated reporting limits (RLs) are provided.

Method 8015B: The following samples contained a hydrocarbon pattern in the diesel range; however, the elution pattern was earlier than the typical diesel fuel pattern used by the laboratory for quantitative purposes: SB-18-9.0 (320-71386-2).

Method 8015B: The following samples contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: SB-18-3.0 (320-71386-1), SB-08-3.0 (320-71386-3) and

Job ID: 320-71386-1 (Continued)

Laboratory: Eurofins TestAmerica, Sacramento (Continued)

SB-08-8.0 (320-71386-4).

Method 8015B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 320-472780 and analytical batch 320-473161 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8015B: Due to the high concentration of Motor Oil Range Organics [C24-C40] , [C28-C40] and [C24-C36], the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 320-472780 and analytical batch 320-473161 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method 8015B: Surrogate recovery for the following sample was outside control limits: SB-18-GW (320-71386-7). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8082: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 320-472489 and analytical batch 320-473057 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected.

Method 8082: Surrogate recovery for the following samples were outside control limits: SB-18-3.0 (320-71386-1), SB-18-9.0 (320-71386-2), SB-08-3.0 (320-71386-3), SB-08-8.0 (320-71386-4), (320-71386-A-1-G MS) and (320-71386-A-1-H MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

Method 6010B: The instrument blank (CCB) for analytical batch 320-472778 contained Copper (Cu) and Zinc (Zn) greater than the reporting limit (RL), and were not re-analyzed because sample results were 10x greater than the CCB. The data have been qualified and reported.

Method 6010B: The following post digestion spike % recovery associated with batch 320-472778 was outside of the 75-125% control limits: Zinc (64%). The associated sample is: (320-71386-A-1-B PDS)

Method 6010B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 320-472129 and analytical batch 320-472778 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 6010B: The serial dilution performed for the following samples associated with batch 320-472778 was above the control limits of 10% for the following analytes: Zinc (19%). The associated sample is: (320-71386-A-1-B SD ^5)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

Method 3510C SGC: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with method 8015B_DRO aqueous in preparation batch 320-472853.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71386-1

Client Sample ID: SB-18-3.0 — Lab Sample ID: 320-71386-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.15		0.046		mg/Kg	10		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	32	F1	4.9		mg/Kg	5		8015B	Total/NA
Motor Oil Range Organics [C28-C40]	190		25		mg/Kg	5		8015B	Total/NA
Arsenic	4.3		1.9		mg/Kg	1		6010B	Total/NA
Barium	120		0.97		mg/Kg	1		6010B	Total/NA
Beryllium	0.38		0.19		mg/Kg	1		6010B	Total/NA
Chromium	27		0.49		mg/Kg	1		6010B	Total/NA
Cobalt	8.6		0.49		mg/Kg	1		6010B	Total/NA
Copper	24	^2	1.5		mg/Kg	1		6010B	Total/NA
Lead	20		0.97		mg/Kg	1		6010B	Total/NA
Nickel	31		0.97		mg/Kg	1		6010B	Total/NA
Vanadium	41		0.49		mg/Kg	1		6010B	Total/NA
Zinc	61	F1 ^2	1.9		mg/Kg	1		6010B	Total/NA
Mercury	0.049		0.043		mg/Kg	1		7471A	Total/NA

Client Sample ID: SB-18-9.0 — Lab Sample ID: 320-71386-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.0062		0.0046		mg/Kg	1		8270C SIM	Total/NA
Fluorene	0.0067		0.0046		mg/Kg	1		8270C SIM	Total/NA
Naphthalene	0.15		0.0046		mg/Kg	1		8270C SIM	Total/NA
Phenanthrene	0.0070		0.0046		mg/Kg	1		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	43		0.98		mg/Kg	1		8015B	Total/NA
Arsenic	5.0		2.0		mg/Kg	1		6010B	Total/NA
Barium	120		1.0		mg/Kg	1		6010B	Total/NA
Beryllium	0.49		0.20		mg/Kg	1		6010B	Total/NA
Chromium	20		0.50		mg/Kg	1		6010B	Total/NA
Cobalt	8.6		0.50		mg/Kg	1		6010B	Total/NA
Copper	21	^2	1.5		mg/Kg	1		6010B	Total/NA
Lead	7.4		1.0		mg/Kg	1		6010B	Total/NA
Nickel	23		1.0		mg/Kg	1		6010B	Total/NA
Vanadium	35		0.50		mg/Kg	1		6010B	Total/NA
Zinc	49	^2	2.0		mg/Kg	1		6010B	Total/NA

Client Sample ID: SB-08-3.0 — Lab Sample ID: 320-71386-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	9.1		0.98		mg/Kg	1		8015B	Total/NA
Motor Oil Range Organics [C28-C40]	24		4.9		mg/Kg	1		8015B	Total/NA
Arsenic	3.5		1.9		mg/Kg	1		6010B	Total/NA
Barium	110		0.97		mg/Kg	1		6010B	Total/NA
Beryllium	0.41		0.19		mg/Kg	1		6010B	Total/NA
Chromium	30		0.49		mg/Kg	1		6010B	Total/NA
Cobalt	11		0.49		mg/Kg	1		6010B	Total/NA
Copper	19	^2	1.5		mg/Kg	1		6010B	Total/NA
Lead	7.1		0.97		mg/Kg	1		6010B	Total/NA
Nickel	31		0.97		mg/Kg	1		6010B	Total/NA
Vanadium	44		0.49		mg/Kg	1		6010B	Total/NA
Zinc	43	^2	1.9		mg/Kg	1		6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71386-1

Client Sample ID: SB-08-8.0 — Lab Sample ID: 320-71386-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Pyrene	0.0046		0.0046		mg/Kg	1		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	8.5		0.99		mg/Kg	1		8015B	Total/NA
Motor Oil Range Organics [C28-C40]	6.0		5.0		mg/Kg	1		8015B	Total/NA
Arsenic	4.4		1.9		mg/Kg	1		6010B	Total/NA
Barium	120		0.95		mg/Kg	1		6010B	Total/NA
Beryllium	0.38		0.19		mg/Kg	1		6010B	Total/NA
Chromium	20		0.48		mg/Kg	1		6010B	Total/NA
Cobalt	7.2		0.48		mg/Kg	1		6010B	Total/NA
Copper	19	^2	1.4		mg/Kg	1		6010B	Total/NA
Lead	5.5		0.95		mg/Kg	1		6010B	Total/NA
Nickel	20		0.95		mg/Kg	1		6010B	Total/NA
Vanadium	35		0.48		mg/Kg	1		6010B	Total/NA
Zinc	48	^2	1.9		mg/Kg	1		6010B	Total/NA

Client Sample ID: SB-17-GW — Lab Sample ID: 320-71386-5

No Detections.

Client Sample ID: TRIP BLANK — Lab Sample ID: 320-71386-6

No Detections.

Client Sample ID: SB-18-GW — Lab Sample ID: 320-71386-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	10		0.50		ug/L	1		8260B	Total/NA
1,1-Dichloroethane	1.4		0.50		ug/L	1		8260B	Total/NA
1,1-Dichloroethene	1.6		0.50		ug/L	1		8260B	Total/NA
Tetrachloroethene	2.0		0.50		ug/L	1		8260B	Total/NA
Trichloroethene	7.6		0.50		ug/L	1		8260B	Total/NA
Vinyl chloride	0.55		0.50		ug/L	1		8260B	Total/NA

Client Sample ID: SB-08-GW — Lab Sample ID: 320-71386-8

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: SB-18-3.0
Date Collected: 03/17/21 11:00
Date Received: 03/17/21 17:10

Lab Sample ID: 320-71386-1
Matrix: Solid

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.046		mg/Kg		03/21/21 07:42	03/22/21 20:13	10
Acenaphthylene	ND		0.046		mg/Kg		03/21/21 07:42	03/22/21 20:13	10
Anthracene	ND		0.046		mg/Kg		03/21/21 07:42	03/22/21 20:13	10
Benzo[a]anthracene	ND		0.046		mg/Kg		03/21/21 07:42	03/22/21 20:13	10
Benzo[a]pyrene	ND		0.046		mg/Kg		03/21/21 07:42	03/22/21 20:13	10
Benzo[b]fluoranthene	ND		0.046		mg/Kg		03/21/21 07:42	03/22/21 20:13	10
Benzo[g,h,i]perylene	ND		0.046		mg/Kg		03/21/21 07:42	03/22/21 20:13	10
Benzo[k]fluoranthene	ND		0.046		mg/Kg		03/21/21 07:42	03/22/21 20:13	10
Chrysene	ND		0.046		mg/Kg		03/21/21 07:42	03/22/21 20:13	10
Dibenz(a,h)anthracene	ND		0.046		mg/Kg		03/21/21 07:42	03/22/21 20:13	10
Fluoranthene	ND		0.046		mg/Kg		03/21/21 07:42	03/22/21 20:13	10
Fluorene	ND		0.046		mg/Kg		03/21/21 07:42	03/22/21 20:13	10
Indeno[1,2,3-cd]pyrene	ND		0.046		mg/Kg		03/21/21 07:42	03/22/21 20:13	10
Naphthalene	**0.15**		0.046		mg/Kg		03/21/21 07:42	03/22/21 20:13	10
Phenanthrene	ND		0.046		mg/Kg		03/21/21 07:42	03/22/21 20:13	10
Pyrene	ND		0.046		mg/Kg		03/21/21 07:42	03/22/21 20:13	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*71*		*43 - 109*	*03/21/21 07:42*	*03/22/21 20:13*	*10*
2-methylnaphthalene-d10	*79*		*50 - 150*	*03/21/21 07:42*	*03/22/21 20:13*	*10*
Fluoranthene-d10 (Surr)	*100*		*50 - 150*	*03/21/21 07:42*	*03/22/21 20:13*	*10*
Nitrobenzene-d5	*72*		*49 - 114*	*03/21/21 07:42*	*03/22/21 20:13*	*10*
Terphenyl-d14	*88*		*53 - 121*	*03/21/21 07:42*	*03/22/21 20:13*	*10*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**32**	**F1**	4.9		mg/Kg		03/22/21 14:15	03/23/21 19:57	5
Motor Oil Range Organics [C28-C40]	**190**		25		mg/Kg		03/22/21 14:15	03/23/21 19:57	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*75*		*51 - 111*	*03/22/21 14:15*	*03/23/21 19:57*	*5*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	F1 F2	0.033		mg/Kg		03/21/21 09:00	03/23/21 17:09	1
PCB-1221	ND		0.033		mg/Kg		03/21/21 09:00	03/23/21 17:09	1
PCB-1232	ND		0.033		mg/Kg		03/21/21 09:00	03/23/21 17:09	1
PCB-1242	ND		0.033		mg/Kg		03/21/21 09:00	03/23/21 17:09	1
PCB-1248	ND		0.033		mg/Kg		03/21/21 09:00	03/23/21 17:09	1
PCB-1254	ND		0.033		mg/Kg		03/21/21 09:00	03/23/21 17:09	1
PCB-1260	ND	F1	0.033		mg/Kg		03/21/21 09:00	03/23/21 17:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*53*		*52 - 138*	*03/21/21 09:00*	*03/23/21 17:09*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	F1	1.9		mg/Kg		03/19/21 13:15	03/22/21 12:36	1
Arsenic	**4.3**		1.9		mg/Kg		03/19/21 13:15	03/22/21 12:36	1
Barium	**120**		0.97		mg/Kg		03/19/21 13:15	03/22/21 12:36	1

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71386-1

Client Sample ID: SB-18-3.0
Date Collected: 03/17/21 11:00
Date Received: 03/17/21 17:10

Lab Sample ID: 320-71386-1
Matrix: Solid

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	**0.38**		0.19		mg/Kg		03/19/21 13:15	03/22/21 12:36	1
Cadmium	ND		0.19		mg/Kg		03/19/21 13:15	03/22/21 12:36	1
Chromium	**27**		0.49		mg/Kg		03/19/21 13:15	03/22/21 12:36	1
Cobalt	**8.6**		0.49		mg/Kg		03/19/21 13:15	03/22/21 12:36	1
Copper	**24**	**^2**	1.5		mg/Kg		03/19/21 13:15	03/22/21 12:36	1
Lead	**20**		0.97		mg/Kg		03/19/21 13:15	03/22/21 12:36	1
Molybdenum	ND		1.9		mg/Kg		03/19/21 13:15	03/22/21 12:36	1
Nickel	**31**		0.97		mg/Kg		03/19/21 13:15	03/22/21 12:36	1
Selenium	ND		1.9		mg/Kg		03/19/21 13:15	03/22/21 12:36	1
Silver	ND		0.49		mg/Kg		03/19/21 13:15	03/22/21 12:36	1
Thallium	ND		1.9		mg/Kg		03/19/21 13:15	03/22/21 12:36	1
Vanadium	**41**		0.49		mg/Kg		03/19/21 13:15	03/22/21 12:36	1
Zinc	**61**	**F1 ^2**	1.9		mg/Kg		03/19/21 13:15	03/22/21 12:36	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.049**		0.043		mg/Kg		03/19/21 09:00	03/19/21 13:00	1

Client Sample ID: SB-18-9.0
Date Collected: 03/17/21 11:15
Date Received: 03/17/21 17:10

Lab Sample ID: 320-71386-2
Matrix: Solid

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**0.0062**		0.0046		mg/Kg		03/21/21 07:42	03/22/21 20:43	1
Acenaphthylene	ND		0.0046		mg/Kg		03/21/21 07:42	03/22/21 20:43	1
Anthracene	ND		0.0046		mg/Kg		03/21/21 07:42	03/22/21 20:43	1
Benzo[a]anthracene	ND		0.0046		mg/Kg		03/21/21 07:42	03/22/21 20:43	1
Benzo[a]pyrene	ND		0.0046		mg/Kg		03/21/21 07:42	03/22/21 20:43	1
Benzo[b]fluoranthene	ND		0.0046		mg/Kg		03/21/21 07:42	03/22/21 20:43	1
Benzo[g,h,i]perylene	ND		0.0046		mg/Kg		03/21/21 07:42	03/22/21 20:43	1
Benzo[k]fluoranthene	ND		0.0046		mg/Kg		03/21/21 07:42	03/22/21 20:43	1
Chrysene	ND		0.0046		mg/Kg		03/21/21 07:42	03/22/21 20:43	1
Dibenz(a,h)anthracene	ND		0.0046		mg/Kg		03/21/21 07:42	03/22/21 20:43	1
Fluoranthene	ND		0.0046		mg/Kg		03/21/21 07:42	03/22/21 20:43	1
Fluorene	**0.0067**		0.0046		mg/Kg		03/21/21 07:42	03/22/21 20:43	1
Indeno[1,2,3-cd]pyrene	ND		0.0046		mg/Kg		03/21/21 07:42	03/22/21 20:43	1
Naphthalene	**0.15**		0.0046		mg/Kg		03/21/21 07:42	03/22/21 20:43	1
Phenanthrene	**0.0070**		0.0046		mg/Kg		03/21/21 07:42	03/22/21 20:43	1
Pyrene	ND		0.0046		mg/Kg		03/21/21 07:42	03/22/21 20:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*73*		*43 - 109*	*03/21/21 07:42*	*03/22/21 20:43*	*1*
2-methylnaphthalene-d10	*91*		*50 - 150*	*03/21/21 07:42*	*03/22/21 20:43*	*1*
Fluoranthene-d10 (Surr)	*84*		*50 - 150*	*03/21/21 07:42*	*03/22/21 20:43*	*1*
Nitrobenzene-d5	*1179*	*S1+*	*49 - 114*	*03/21/21 07:42*	*03/22/21 20:43*	*1*
Terphenyl-d14	*77*		*53 - 121*	*03/21/21 07:42*	*03/22/21 20:43*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**43**		0.98		mg/Kg		03/22/21 14:15	03/23/21 21:22	1
Motor Oil Range Organics [C28-C40]	ND		4.9		mg/Kg		03/22/21 14:15	03/23/21 21:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*78*		*51 - 111*	*03/22/21 14:15*	*03/23/21 21:22*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.032		mg/Kg		03/21/21 09:00	03/23/21 18:16	1
PCB-1221	ND		0.032		mg/Kg		03/21/21 09:00	03/23/21 18:16	1
PCB-1232	ND		0.032		mg/Kg		03/21/21 09:00	03/23/21 18:16	1
PCB-1242	ND		0.032		mg/Kg		03/21/21 09:00	03/23/21 18:16	1
PCB-1248	ND		0.032		mg/Kg		03/21/21 09:00	03/23/21 18:16	1
PCB-1254	ND		0.032		mg/Kg		03/21/21 09:00	03/23/21 18:16	1
PCB-1260	ND		0.032		mg/Kg		03/21/21 09:00	03/23/21 18:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*35*	*S1-*	*52 - 138*	*03/21/21 09:00*	*03/23/21 18:16*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0		mg/Kg		03/19/21 13:15	03/22/21 12:55	1
Arsenic	**5.0**		2.0		mg/Kg		03/19/21 13:15	03/22/21 12:55	1
Barium	**120**		1.0		mg/Kg		03/19/21 13:15	03/22/21 12:55	1
Beryllium	**0.49**		0.20		mg/Kg		03/19/21 13:15	03/22/21 12:55	1

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71386-1

Client Sample ID: SB-18-9.0
Date Collected: 03/17/21 11:15
Date Received: 03/17/21 17:10

Lab Sample ID: 320-71386-2
Matrix: Solid

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.20		mg/Kg		03/19/21 13:15	03/22/21 12:55	1
Chromium	**20**		0.50		mg/Kg		03/19/21 13:15	03/22/21 12:55	1
Cobalt	**8.6**		0.50		mg/Kg		03/19/21 13:15	03/22/21 12:55	1
Copper	**21**	**^2**	1.5		mg/Kg		03/19/21 13:15	03/22/21 12:55	1
Lead	**7.4**		1.0		mg/Kg		03/19/21 13:15	03/22/21 12:55	1
Molybdenum	ND		2.0		mg/Kg		03/19/21 13:15	03/22/21 12:55	1
Nickel	**23**		1.0		mg/Kg		03/19/21 13:15	03/22/21 12:55	1
Selenium	ND		2.0		mg/Kg		03/19/21 13:15	03/22/21 12:55	1
Silver	ND		0.50		mg/Kg		03/19/21 13:15	03/22/21 12:55	1
Thallium	ND		2.0		mg/Kg		03/19/21 13:15	03/22/21 12:55	1
Vanadium	**35**		0.50		mg/Kg		03/19/21 13:15	03/22/21 12:55	1
Zinc	**49**	**^2**	2.0		mg/Kg		03/19/21 13:15	03/22/21 12:55	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.038		mg/Kg		03/19/21 09:00	03/19/21 13:02	1

Client Sample ID: SB-08-3.0
Date Collected: 03/17/21 14:00
Date Received: 03/17/21 17:10

Lab Sample ID: 320-71386-3
Matrix: Solid

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.048		mg/Kg		03/21/21 07:42	03/22/21 21:12	10
Acenaphthylene	ND		0.048		mg/Kg		03/21/21 07:42	03/22/21 21:12	10
Anthracene	ND		0.048		mg/Kg		03/21/21 07:42	03/22/21 21:12	10
Benzo[a]anthracene	ND		0.048		mg/Kg		03/21/21 07:42	03/22/21 21:12	10
Benzo[a]pyrene	ND		0.048		mg/Kg		03/21/21 07:42	03/22/21 21:12	10
Benzo[b]fluoranthene	ND		0.048		mg/Kg		03/21/21 07:42	03/22/21 21:12	10
Benzo[g,h,i]perylene	ND	F2 F1	0.048		mg/Kg		03/21/21 07:42	03/22/21 21:12	10
Benzo[k]fluoranthene	ND		0.048		mg/Kg		03/21/21 07:42	03/22/21 21:12	10
Chrysene	ND		0.048		mg/Kg		03/21/21 07:42	03/22/21 21:12	10
Dibenz(a,h)anthracene	ND		0.048		mg/Kg		03/21/21 07:42	03/22/21 21:12	10
Fluoranthene	ND		0.048		mg/Kg		03/21/21 07:42	03/22/21 21:12	10
Fluorene	ND		0.048		mg/Kg		03/21/21 07:42	03/22/21 21:12	10
Indeno[1,2,3-cd]pyrene	ND		0.048		mg/Kg		03/21/21 07:42	03/22/21 21:12	10
Naphthalene	ND		0.048		mg/Kg		03/21/21 07:42	03/22/21 21:12	10
Phenanthrene	ND		0.048		mg/Kg		03/21/21 07:42	03/22/21 21:12	10
Pyrene	ND		0.048		mg/Kg		03/21/21 07:42	03/22/21 21:12	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*73*		*43 - 109*	*03/21/21 07:42*	*03/22/21 21:12*	*10*
2-methylnaphthalene-d10	*81*		*50 - 150*	*03/21/21 07:42*	*03/22/21 21:12*	*10*
Fluoranthene-d10 (Surr)	*93*		*50 - 150*	*03/21/21 07:42*	*03/22/21 21:12*	*10*
Nitrobenzene-d5	*75*		*49 - 114*	*03/21/21 07:42*	*03/22/21 21:12*	*10*
Terphenyl-d14	*85*		*53 - 121*	*03/21/21 07:42*	*03/22/21 21:12*	*10*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**9.1**		0.98		mg/Kg		03/22/21 14:15	03/23/21 21:51	1
Motor Oil Range Organics [C28-C40]	**24**		4.9		mg/Kg		03/22/21 14:15	03/23/21 21:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*81*		*51 - 111*	*03/22/21 14:15*	*03/23/21 21:51*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.032		mg/Kg		03/21/21 09:00	03/23/21 18:37	1
PCB-1221	ND		0.032		mg/Kg		03/21/21 09:00	03/23/21 18:37	1
PCB-1232	ND		0.032		mg/Kg		03/21/21 09:00	03/23/21 18:37	1
PCB-1242	ND		0.032		mg/Kg		03/21/21 09:00	03/23/21 18:37	1
PCB-1248	ND		0.032		mg/Kg		03/21/21 09:00	03/23/21 18:37	1
PCB-1254	ND		0.032		mg/Kg		03/21/21 09:00	03/23/21 18:37	1
PCB-1260	ND		0.032		mg/Kg		03/21/21 09:00	03/23/21 18:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*32*	*S1-*	*52 - 138*	*03/21/21 09:00*	*03/23/21 18:37*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.9		mg/Kg		03/19/21 13:15	03/22/21 12:59	1
Arsenic	**3.5**		1.9		mg/Kg		03/19/21 13:15	03/22/21 12:59	1
Barium	**110**		0.97		mg/Kg		03/19/21 13:15	03/22/21 12:59	1

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71386-1

Client Sample ID: SB-08-3.0
Date Collected: 03/17/21 14:00
Date Received: 03/17/21 17:10

Lab Sample ID: 320-71386-3
Matrix: Solid

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	**0.41**		0.19		mg/Kg		03/19/21 13:15	03/22/21 12:59	1
Cadmium	ND		0.19		mg/Kg		03/19/21 13:15	03/22/21 12:59	1
Chromium	**30**		0.49		mg/Kg		03/19/21 13:15	03/22/21 12:59	1
Cobalt	**11**		0.49		mg/Kg		03/19/21 13:15	03/22/21 12:59	1
Copper	**19**	**^2**	1.5		mg/Kg		03/19/21 13:15	03/22/21 12:59	1
Lead	**7.1**		0.97		mg/Kg		03/19/21 13:15	03/22/21 12:59	1
Molybdenum	ND		1.9		mg/Kg		03/19/21 13:15	03/22/21 12:59	1
Nickel	**31**		0.97		mg/Kg		03/19/21 13:15	03/22/21 12:59	1
Selenium	ND		1.9		mg/Kg		03/19/21 13:15	03/22/21 12:59	1
Silver	ND		0.49		mg/Kg		03/19/21 13:15	03/22/21 12:59	1
Thallium	ND		1.9		mg/Kg		03/19/21 13:15	03/22/21 12:59	1
Vanadium	**44**		0.49		mg/Kg		03/19/21 13:15	03/22/21 12:59	1
Zinc	**43**	**^2**	1.9		mg/Kg		03/19/21 13:15	03/22/21 12:59	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.040		mg/Kg		03/19/21 09:00	03/19/21 13:05	1

Client Sample ID: SB-08-8.0
Date Collected: 03/17/21 14:15
Date Received: 03/17/21 17:10

Lab Sample ID: 320-71386-4
Matrix: Solid

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0046		mg/Kg		03/21/21 07:42	03/22/21 22:40	1
Acenaphthylene	ND		0.0046		mg/Kg		03/21/21 07:42	03/22/21 22:40	1
Anthracene	ND		0.0046		mg/Kg		03/21/21 07:42	03/22/21 22:40	1
Benzo[a]anthracene	ND		0.0046		mg/Kg		03/21/21 07:42	03/22/21 22:40	1
Benzo[a]pyrene	ND		0.0046		mg/Kg		03/21/21 07:42	03/22/21 22:40	1
Benzo[b]fluoranthene	ND		0.0046		mg/Kg		03/21/21 07:42	03/22/21 22:40	1
Benzo[g,h,i]perylene	ND		0.0046		mg/Kg		03/21/21 07:42	03/22/21 22:40	1
Benzo[k]fluoranthene	ND		0.0046		mg/Kg		03/21/21 07:42	03/22/21 22:40	1
Chrysene	ND		0.0046		mg/Kg		03/21/21 07:42	03/22/21 22:40	1
Dibenz(a,h)anthracene	ND		0.0046		mg/Kg		03/21/21 07:42	03/22/21 22:40	1
Fluoranthene	ND		0.0046		mg/Kg		03/21/21 07:42	03/22/21 22:40	1
Fluorene	ND		0.0046		mg/Kg		03/21/21 07:42	03/22/21 22:40	1
Indeno[1,2,3-cd]pyrene	ND		0.0046		mg/Kg		03/21/21 07:42	03/22/21 22:40	1
Naphthalene	ND		0.0046		mg/Kg		03/21/21 07:42	03/22/21 22:40	1
Phenanthrene	ND		0.0046		mg/Kg		03/21/21 07:42	03/22/21 22:40	1
Pyrene	**0.0046**		0.0046		mg/Kg		03/21/21 07:42	03/22/21 22:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*77*		*43 - 109*	*03/21/21 07:42*	*03/22/21 22:40*	*1*
2-methylnaphthalene-d10	*88*		*50 - 150*	*03/21/21 07:42*	*03/22/21 22:40*	*1*
Fluoranthene-d10 (Surr)	*102*		*50 - 150*	*03/21/21 07:42*	*03/22/21 22:40*	*1*
Nitrobenzene-d5	*85*		*49 - 114*	*03/21/21 07:42*	*03/22/21 22:40*	*1*
Terphenyl-d14	*93*		*53 - 121*	*03/21/21 07:42*	*03/22/21 22:40*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**8.5**		0.99		mg/Kg		03/22/21 14:15	03/23/21 22:19	1
Motor Oil Range Organics [C28-C40]	**6.0**		5.0		mg/Kg		03/22/21 14:15	03/23/21 22:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*77*		*51 - 111*	*03/22/21 14:15*	*03/23/21 22:19*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.031		mg/Kg		03/21/21 09:00	03/23/21 18:57	1
PCB-1221	ND		0.031		mg/Kg		03/21/21 09:00	03/23/21 18:57	1
PCB-1232	ND		0.031		mg/Kg		03/21/21 09:00	03/23/21 18:57	1
PCB-1242	ND		0.031		mg/Kg		03/21/21 09:00	03/23/21 18:57	1
PCB-1248	ND		0.031		mg/Kg		03/21/21 09:00	03/23/21 18:57	1
PCB-1254	ND		0.031		mg/Kg		03/21/21 09:00	03/23/21 18:57	1
PCB-1260	ND		0.031		mg/Kg		03/21/21 09:00	03/23/21 18:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*29*	*S1-*	*52 - 138*	*03/21/21 09:00*	*03/23/21 18:57*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.9		mg/Kg		03/19/21 13:15	03/22/21 13:03	1
Arsenic	**4.4**		1.9		mg/Kg		03/19/21 13:15	03/22/21 13:03	1
Barium	**120**		0.95		mg/Kg		03/19/21 13:15	03/22/21 13:03	1

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71386-1

Client Sample ID: SB-08-8.0
Date Collected: 03/17/21 14:15
Date Received: 03/17/21 17:10

Lab Sample ID: 320-71386-4
Matrix: Solid

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	**0.38**		0.19		mg/Kg		03/19/21 13:15	03/22/21 13:03	1
Cadmium	ND		0.19		mg/Kg		03/19/21 13:15	03/22/21 13:03	1
Chromium	**20**		0.48		mg/Kg		03/19/21 13:15	03/22/21 13:03	1
Cobalt	**7.2**		0.48		mg/Kg		03/19/21 13:15	03/22/21 13:03	1
Copper	**19**	**^2**	1.4		mg/Kg		03/19/21 13:15	03/22/21 13:03	1
Lead	**5.5**		0.95		mg/Kg		03/19/21 13:15	03/22/21 13:03	1
Molybdenum	ND		1.9		mg/Kg		03/19/21 13:15	03/22/21 13:03	1
Nickel	**20**		0.95		mg/Kg		03/19/21 13:15	03/22/21 13:03	1
Selenium	ND		1.9		mg/Kg		03/19/21 13:15	03/22/21 13:03	1
Silver	ND		0.48		mg/Kg		03/19/21 13:15	03/22/21 13:03	1
Thallium	ND		1.9		mg/Kg		03/19/21 13:15	03/22/21 13:03	1
Vanadium	**35**		0.48		mg/Kg		03/19/21 13:15	03/22/21 13:03	1
Zinc	**48**	**^2**	1.9		mg/Kg		03/19/21 13:15	03/22/21 13:03	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.042		mg/Kg		03/19/21 09:00	03/19/21 13:08	1

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71386-1

Client Sample ID: SB-17-GW

Date Collected: 03/17/21 09:55
Date Received: 03/17/21 17:10

Lab Sample ID: 320-71386-5

Matrix: Water

Method: 8260B/CA_LUFTMS - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C4-C12	ND		50		ug/L			03/24/21 15:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*73 - 115*		*03/24/21 15:19*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			03/22/21 13:38	1
Bromobenzene	ND		1.0		ug/L			03/22/21 13:38	1
Bromochloromethane	ND		1.0		ug/L			03/22/21 13:38	1
Bromodichloromethane	ND		0.50		ug/L			03/22/21 13:38	1
Bromoform	ND		1.0		ug/L			03/22/21 13:38	1
Bromomethane	ND		1.0		ug/L			03/22/21 13:38	1
Carbon tetrachloride	ND		0.50		ug/L			03/22/21 13:38	1
Chlorobenzene	ND		0.50		ug/L			03/22/21 13:38	1
Chloroethane	ND		1.0		ug/L			03/22/21 13:38	1
Chloroform	ND		1.0		ug/L			03/22/21 13:38	1
Chloromethane	ND		1.0		ug/L			03/22/21 13:38	1
2-Chlorotoluene	ND		0.50		ug/L			03/22/21 13:38	1
4-Chlorotoluene	ND		0.50		ug/L			03/22/21 13:38	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			03/22/21 13:38	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			03/22/21 13:38	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			03/22/21 13:38	1
1,2-Dibromoethane (EDB)	ND		0.50		ug/L			03/22/21 13:38	1
Dibromomethane	ND		0.50		ug/L			03/22/21 13:38	1
1,2-Dichlorobenzene	ND		0.50		ug/L			03/22/21 13:38	1
1,3-Dichlorobenzene	ND		0.50		ug/L			03/22/21 13:38	1
1,4-Dichlorobenzene	ND		0.50		ug/L			03/22/21 13:38	1
Dichlorodifluoromethane	ND		1.0		ug/L			03/22/21 13:38	1
1,1-Dichloroethane	ND		0.50		ug/L			03/22/21 13:38	1
1,2-Dichloroethane	ND		0.50		ug/L			03/22/21 13:38	1
1,1-Dichloroethene	ND		0.50		ug/L			03/22/21 13:38	1
1,2-Dichloropropane	ND		0.50		ug/L			03/22/21 13:38	1
1,3-Dichloropropane	ND		1.0		ug/L			03/22/21 13:38	1
2,2-Dichloropropane	ND		1.0		ug/L			03/22/21 13:38	1
1,1-Dichloropropene	ND		0.50		ug/L			03/22/21 13:38	1
Ethylbenzene	ND		0.50		ug/L			03/22/21 13:38	1
Hexachlorobutadiene	ND		1.0		ug/L			03/22/21 13:38	1
Isopropylbenzene	ND		0.50		ug/L			03/22/21 13:38	1
Methylene Chloride	ND		1.0		ug/L			03/22/21 13:38	1
m-Xylene & p-Xylene	ND		0.50		ug/L			03/22/21 13:38	1
Naphthalene	ND		1.0		ug/L			03/22/21 13:38	1
n-Butylbenzene	ND		1.0		ug/L			03/22/21 13:38	1
N-Propylbenzene	ND		1.0		ug/L			03/22/21 13:38	1
o-Xylene	ND		0.50		ug/L			03/22/21 13:38	1
p-Isopropyltoluene	ND		1.0		ug/L			03/22/21 13:38	1
sec-Butylbenzene	ND		1.0		ug/L			03/22/21 13:38	1
Styrene	ND		0.50		ug/L			03/22/21 13:38	1
tert-Butylbenzene	ND		1.0		ug/L			03/22/21 13:38	1

Client Sample ID: SB-17-GW
Lab Sample ID: 320-71386-5
Date Collected: 03/17/21 09:55
Matrix: Water
Date Received: 03/17/21 17:10

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			03/22/21 13:38	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			03/22/21 13:38	1
Tetrachloroethene	ND		0.50		ug/L			03/22/21 13:38	1
Toluene	ND		0.50		ug/L			03/22/21 13:38	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			03/22/21 13:38	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			03/22/21 13:38	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			03/22/21 13:38	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			03/22/21 13:38	1
1,1,1-Trichloroethane	ND		0.50		ug/L			03/22/21 13:38	1
1,1,2-Trichloroethane	ND		0.50		ug/L			03/22/21 13:38	1
Trichloroethene	ND		0.50		ug/L			03/22/21 13:38	1
Trichlorofluoromethane	ND		1.0		ug/L			03/22/21 13:38	1
1,2,3-Trichloropropane	ND		1.0		ug/L			03/22/21 13:38	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			03/22/21 13:38	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			03/22/21 13:38	1
Vinyl chloride	ND		0.50		ug/L			03/22/21 13:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*74 - 120*		*03/22/21 13:38*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 123*		*03/22/21 13:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*110*		*72 - 123*		*03/22/21 13:38*	*1*
Toluene-d8 (Surr)	*109*		*78 - 120*		*03/22/21 13:38*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		48		ug/L		03/22/21 15:16	03/24/21 02:19	1
Motor Oil Range Organics [C28-C40]	ND		480		ug/L		03/22/21 15:16	03/24/21 02:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*67*		*56 - 145*	*03/22/21 15:16*	*03/24/21 02:19*	*1*

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71386-1

Client Sample ID: TRIP BLANK

Date Collected: 03/17/21 10:05
Date Received: 03/17/21 17:10

Lab Sample ID: 320-71386-6

Matrix: Water

Method: 8260B/CA_LUFTMS - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C4-C12	ND		50		ug/L			03/24/21 15:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*73 - 115*		*03/24/21 15:43*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			03/22/21 13:15	1
Bromobenzene	ND		1.0		ug/L			03/22/21 13:15	1
Bromochloromethane	ND		1.0		ug/L			03/22/21 13:15	1
Bromodichloromethane	ND		0.50		ug/L			03/22/21 13:15	1
Bromoform	ND		1.0		ug/L			03/22/21 13:15	1
Bromomethane	ND		1.0		ug/L			03/22/21 13:15	1
Carbon tetrachloride	ND		0.50		ug/L			03/22/21 13:15	1
Chlorobenzene	ND		0.50		ug/L			03/22/21 13:15	1
Chloroethane	ND		1.0		ug/L			03/22/21 13:15	1
Chloroform	ND		1.0		ug/L			03/22/21 13:15	1
Chloromethane	ND		1.0		ug/L			03/22/21 13:15	1
2-Chlorotoluene	ND		0.50		ug/L			03/22/21 13:15	1
4-Chlorotoluene	ND		0.50		ug/L			03/22/21 13:15	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			03/22/21 13:15	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			03/22/21 13:15	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			03/22/21 13:15	1
1,2-Dibromoethane (EDB)	ND		0.50		ug/L			03/22/21 13:15	1
Dibromomethane	ND		0.50		ug/L			03/22/21 13:15	1
1,2-Dichlorobenzene	ND		0.50		ug/L			03/22/21 13:15	1
1,3-Dichlorobenzene	ND		0.50		ug/L			03/22/21 13:15	1
1,4-Dichlorobenzene	ND		0.50		ug/L			03/22/21 13:15	1
Dichlorodifluoromethane	ND		1.0		ug/L			03/22/21 13:15	1
1,1-Dichloroethane	ND		0.50		ug/L			03/22/21 13:15	1
1,2-Dichloroethane	ND		0.50		ug/L			03/22/21 13:15	1
1,1-Dichloroethene	ND		0.50		ug/L			03/22/21 13:15	1
1,2-Dichloropropane	ND		0.50		ug/L			03/22/21 13:15	1
1,3-Dichloropropane	ND		1.0		ug/L			03/22/21 13:15	1
2,2-Dichloropropane	ND		1.0		ug/L			03/22/21 13:15	1
1,1-Dichloropropene	ND		0.50		ug/L			03/22/21 13:15	1
Ethylbenzene	ND		0.50		ug/L			03/22/21 13:15	1
Hexachlorobutadiene	ND		1.0		ug/L			03/22/21 13:15	1
Isopropylbenzene	ND		0.50		ug/L			03/22/21 13:15	1
Methylene Chloride	ND		1.0		ug/L			03/22/21 13:15	1
m-Xylene & p-Xylene	ND		0.50		ug/L			03/22/21 13:15	1
Naphthalene	ND		1.0		ug/L			03/22/21 13:15	1
n-Butylbenzene	ND		1.0		ug/L			03/22/21 13:15	1
N-Propylbenzene	ND		1.0		ug/L			03/22/21 13:15	1
o-Xylene	ND		0.50		ug/L			03/22/21 13:15	1
p-Isopropyltoluene	ND		1.0		ug/L			03/22/21 13:15	1
sec-Butylbenzene	ND		1.0		ug/L			03/22/21 13:15	1
Styrene	ND		0.50		ug/L			03/22/21 13:15	1
tert-Butylbenzene	ND		1.0		ug/L			03/22/21 13:15	1

Client: GSI Environmental, Inc
Job ID: 320-71386-1
Project/Site: Integral Communities Pittsburg Project

Client Sample ID: TRIP BLANK
Lab Sample ID: 320-71386-6
Date Collected: 03/17/21 10:05
Matrix: Water
Date Received: 03/17/21 17:10

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			03/22/21 13:15	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			03/22/21 13:15	1
Tetrachloroethene	ND		0.50		ug/L			03/22/21 13:15	1
Toluene	ND		0.50		ug/L			03/22/21 13:15	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			03/22/21 13:15	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			03/22/21 13:15	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			03/22/21 13:15	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			03/22/21 13:15	1
1,1,1-Trichloroethane	ND		0.50		ug/L			03/22/21 13:15	1
1,1,2-Trichloroethane	ND		0.50		ug/L			03/22/21 13:15	1
Trichloroethene	ND		0.50		ug/L			03/22/21 13:15	1
Trichlorofluoromethane	ND		1.0		ug/L			03/22/21 13:15	1
1,2,3-Trichloropropane	ND		1.0		ug/L			03/22/21 13:15	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			03/22/21 13:15	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			03/22/21 13:15	1
Vinyl chloride	ND		0.50		ug/L			03/22/21 13:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*74 - 120*		*03/22/21 13:15*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 123*		*03/22/21 13:15*	*1*
1,2-Dichloroethane-d4 (Surr)	*109*		*72 - 123*		*03/22/21 13:15*	*1*
Toluene-d8 (Surr)	*109*		*78 - 120*		*03/22/21 13:15*	*1*

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71386-1

Client Sample ID: SB-18-GW

Date Collected: 03/17/21 12:40
Date Received: 03/17/21 17:10

Lab Sample ID: 320-71386-7

Matrix: Water

Method: 8260B/CA_LUFTMS - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C4-C12	ND		50		ug/L			03/24/21 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*73 - 115*		*03/24/21 16:06*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			03/22/21 14:00	1
Bromobenzene	ND		1.0		ug/L			03/22/21 14:00	1
Bromochloromethane	ND		1.0		ug/L			03/22/21 14:00	1
Bromodichloromethane	ND		0.50		ug/L			03/22/21 14:00	1
Bromoform	ND		1.0		ug/L			03/22/21 14:00	1
Bromomethane	ND		1.0		ug/L			03/22/21 14:00	1
Carbon tetrachloride	ND		0.50		ug/L			03/22/21 14:00	1
Chlorobenzene	ND		0.50		ug/L			03/22/21 14:00	1
Chloroethane	ND		1.0		ug/L			03/22/21 14:00	1
Chloroform	ND		1.0		ug/L			03/22/21 14:00	1
Chloromethane	ND		1.0		ug/L			03/22/21 14:00	1
2-Chlorotoluene	ND		0.50		ug/L			03/22/21 14:00	1
4-Chlorotoluene	ND		0.50		ug/L			03/22/21 14:00	1
cis-1,2-Dichloroethene	**10**		0.50		ug/L			03/22/21 14:00	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			03/22/21 14:00	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			03/22/21 14:00	1
1,2-Dibromoethane (EDB)	ND		0.50		ug/L			03/22/21 14:00	1
Dibromomethane	ND		0.50		ug/L			03/22/21 14:00	1
1,2-Dichlorobenzene	ND		0.50		ug/L			03/22/21 14:00	1
1,3-Dichlorobenzene	ND		0.50		ug/L			03/22/21 14:00	1
1,4-Dichlorobenzene	ND		0.50		ug/L			03/22/21 14:00	1
Dichlorodifluoromethane	ND		1.0		ug/L			03/22/21 14:00	1
1,1-Dichloroethane	**1.4**		0.50		ug/L			03/22/21 14:00	1
1,2-Dichloroethane	ND		0.50		ug/L			03/22/21 14:00	1
1,1-Dichloroethene	**1.6**		0.50		ug/L			03/22/21 14:00	1
1,2-Dichloropropane	ND		0.50		ug/L			03/22/21 14:00	1
1,3-Dichloropropane	ND		1.0		ug/L			03/22/21 14:00	1
2,2-Dichloropropane	ND		1.0		ug/L			03/22/21 14:00	1
1,1-Dichloropropene	ND		0.50		ug/L			03/22/21 14:00	1
Ethylbenzene	ND		0.50		ug/L			03/22/21 14:00	1
Hexachlorobutadiene	ND		1.0		ug/L			03/22/21 14:00	1
Isopropylbenzene	ND		0.50		ug/L			03/22/21 14:00	1
Methylene Chloride	ND		1.0		ug/L			03/22/21 14:00	1
m-Xylene & p-Xylene	ND		0.50		ug/L			03/22/21 14:00	1
Naphthalene	ND		1.0		ug/L			03/22/21 14:00	1
n-Butylbenzene	ND		1.0		ug/L			03/22/21 14:00	1
N-Propylbenzene	ND		1.0		ug/L			03/22/21 14:00	1
o-Xylene	ND		0.50		ug/L			03/22/21 14:00	1
p-Isopropyltoluene	ND		1.0		ug/L			03/22/21 14:00	1
sec-Butylbenzene	ND		1.0		ug/L			03/22/21 14:00	1
Styrene	ND		0.50		ug/L			03/22/21 14:00	1
tert-Butylbenzene	ND		1.0		ug/L			03/22/21 14:00	1

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71386-1

Client Sample ID: SB-18-GW
Date Collected: 03/17/21 12:40
Date Received: 03/17/21 17:10

Lab Sample ID: 320-71386-7
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			03/22/21 14:00	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			03/22/21 14:00	1
Tetrachloroethene	**2.0**		0.50		ug/L			03/22/21 14:00	1
Toluene	ND		0.50		ug/L			03/22/21 14:00	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			03/22/21 14:00	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			03/22/21 14:00	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			03/22/21 14:00	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			03/22/21 14:00	1
1,1,1-Trichloroethane	ND		0.50		ug/L			03/22/21 14:00	1
1,1,2-Trichloroethane	ND		0.50		ug/L			03/22/21 14:00	1
Trichloroethene	**7.6**		0.50		ug/L			03/22/21 14:00	1
Trichlorofluoromethane	ND		1.0		ug/L			03/22/21 14:00	1
1,2,3-Trichloropropane	ND		1.0		ug/L			03/22/21 14:00	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			03/22/21 14:00	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			03/22/21 14:00	1
Vinyl chloride	**0.55**		0.50		ug/L			03/22/21 14:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*74 - 120*		*03/22/21 14:00*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 123*		*03/22/21 14:00*	*1*
1,2-Dichloroethane-d4 (Surr)	*111*		*72 - 123*		*03/22/21 14:00*	*1*
Toluene-d8 (Surr)	*114*		*78 - 120*		*03/22/21 14:00*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		48		ug/L		03/22/21 15:16	03/24/21 02:43	1
Motor Oil Range Organics [C28-C40]	ND		480		ug/L		03/22/21 15:16	03/24/21 02:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*47*	*S1-*	*56 - 145*	*03/22/21 15:16*	*03/24/21 02:43*	*1*

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71386-1

Client Sample ID: SB-08-GW

Date Collected: 03/17/21 14:50
Date Received: 03/17/21 17:10

Lab Sample ID: 320-71386-8

Matrix: Water

Method: 8260B/CA_LUFTMS - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C4-C12	ND		50		ug/L			03/24/21 16:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*73 - 115*		*03/24/21 16:29*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			03/22/21 14:24	1
Bromobenzene	ND		1.0		ug/L			03/22/21 14:24	1
Bromochloromethane	ND		1.0		ug/L			03/22/21 14:24	1
Bromodichloromethane	ND		0.50		ug/L			03/22/21 14:24	1
Bromoform	ND		1.0		ug/L			03/22/21 14:24	1
Bromomethane	ND		1.0		ug/L			03/22/21 14:24	1
Carbon tetrachloride	ND		0.50		ug/L			03/22/21 14:24	1
Chlorobenzene	ND		0.50		ug/L			03/22/21 14:24	1
Chloroethane	ND		1.0		ug/L			03/22/21 14:24	1
Chloroform	ND		1.0		ug/L			03/22/21 14:24	1
Chloromethane	ND		1.0		ug/L			03/22/21 14:24	1
2-Chlorotoluene	ND		0.50		ug/L			03/22/21 14:24	1
4-Chlorotoluene	ND		0.50		ug/L			03/22/21 14:24	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			03/22/21 14:24	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			03/22/21 14:24	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			03/22/21 14:24	1
1,2-Dibromoethane (EDB)	ND		0.50		ug/L			03/22/21 14:24	1
Dibromomethane	ND		0.50		ug/L			03/22/21 14:24	1
1,2-Dichlorobenzene	ND		0.50		ug/L			03/22/21 14:24	1
1,3-Dichlorobenzene	ND		0.50		ug/L			03/22/21 14:24	1
1,4-Dichlorobenzene	ND		0.50		ug/L			03/22/21 14:24	1
Dichlorodifluoromethane	ND		1.0		ug/L			03/22/21 14:24	1
1,1-Dichloroethane	ND		0.50		ug/L			03/22/21 14:24	1
1,2-Dichloroethane	ND		0.50		ug/L			03/22/21 14:24	1
1,1-Dichloroethene	ND		0.50		ug/L			03/22/21 14:24	1
1,2-Dichloropropane	ND		0.50		ug/L			03/22/21 14:24	1
1,3-Dichloropropane	ND		1.0		ug/L			03/22/21 14:24	1
2,2-Dichloropropane	ND		1.0		ug/L			03/22/21 14:24	1
1,1-Dichloropropene	ND		0.50		ug/L			03/22/21 14:24	1
Ethylbenzene	ND		0.50		ug/L			03/22/21 14:24	1
Hexachlorobutadiene	ND		1.0		ug/L			03/22/21 14:24	1
Isopropylbenzene	ND		0.50		ug/L			03/22/21 14:24	1
Methylene Chloride	ND		1.0		ug/L			03/22/21 14:24	1
m-Xylene & p-Xylene	ND		0.50		ug/L			03/22/21 14:24	1
Naphthalene	ND		1.0		ug/L			03/22/21 14:24	1
n-Butylbenzene	ND		1.0		ug/L			03/22/21 14:24	1
N-Propylbenzene	ND		1.0		ug/L			03/22/21 14:24	1
o-Xylene	ND		0.50		ug/L			03/22/21 14:24	1
p-Isopropyltoluene	ND		1.0		ug/L			03/22/21 14:24	1
sec-Butylbenzene	ND		1.0		ug/L			03/22/21 14:24	1
Styrene	ND		0.50		ug/L			03/22/21 14:24	1
tert-Butylbenzene	ND		1.0		ug/L			03/22/21 14:24	1

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71386-1

Client Sample ID: SB-08-GW
Date Collected: 03/17/21 14:50
Date Received: 03/17/21 17:10

Lab Sample ID: 320-71386-8
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			03/22/21 14:24	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			03/22/21 14:24	1
Tetrachloroethene	ND		0.50		ug/L			03/22/21 14:24	1
Toluene	ND		0.50		ug/L			03/22/21 14:24	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			03/22/21 14:24	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			03/22/21 14:24	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			03/22/21 14:24	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			03/22/21 14:24	1
1,1,1-Trichloroethane	ND		0.50		ug/L			03/22/21 14:24	1
1,1,2-Trichloroethane	ND		0.50		ug/L			03/22/21 14:24	1
Trichloroethene	ND		0.50		ug/L			03/22/21 14:24	1
Trichlorofluoromethane	ND		1.0		ug/L			03/22/21 14:24	1
1,2,3-Trichloropropane	ND		1.0		ug/L			03/22/21 14:24	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			03/22/21 14:24	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			03/22/21 14:24	1
Vinyl chloride	ND		0.50		ug/L			03/22/21 14:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*74 - 120*		*03/22/21 14:24*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 123*		*03/22/21 14:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*109*		*72 - 123*		*03/22/21 14:24*	*1*
Toluene-d8 (Surr)	*110*		*78 - 120*		*03/22/21 14:24*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		03/22/21 15:16	03/24/21 03:08	1
Motor Oil Range Organics [C28-C40]	ND		500		ug/L		03/22/21 15:16	03/24/21 03:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*67*		*56 - 145*	*03/22/21 15:16*	*03/24/21 03:08*	*1*

Surrogate Summary

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71386-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		BFB	DBFM	DCA	TOL
Lab Sample ID	Client Sample ID	(74-120)	(80-123)	(72-123)	(78-120)
320-71386-5	SB-17-GW	102	107	110	109
320-71386-6	TRIP BLANK	101	107	109	109
320-71386-7	SB-18-GW	102	110	111	114
320-71386-8	SB-08-GW	105	107	109	110
LCS 320-472644/6	Lab Control Sample	108	113	110	115
LCSD 320-472644/32	Lab Control Sample Dup	106	111	110	116
MB 320-472644/11	Method Blank	103	110	111	113

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260B/CA_LUFTMS - Volatile Organic Compounds by GC/MS

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		BFB
Lab Sample ID	Client Sample ID	(73-115)
320-71386-5	SB-17-GW	99
320-71386-6	TRIP BLANK	95
320-71386-7	SB-18-GW	96
320-71386-8	SB-08-GW	93
LCS 320-473460/5	Lab Control Sample	101
LCSD 320-473460/6	Lab Control Sample Dup	99
MB 320-473460/7	Method Blank	98

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)				
		FBP	2MN	FLN10	NBZ	TPHL
Lab Sample ID	Client Sample ID	(43-109)	(50-150)	(50-150)	(49-114)	(53-121)
320-71386-1	SB-18-3.0	71	79	100	72	88
320-71386-2	SB-18-9.0	73	91	84	1179 S1+	77
320-71386-3	SB-08-3.0	73	81	93	75	85
320-71386-3 MS	SB-08-3.0	77	89	96	81	88
320-71386-3 MSD	SB-08-3.0	70	76	87	75	81
320-71386-4	SB-08-8.0	77	88	102	85	93
LCS 320-472483/2-A	Lab Control Sample	81	88	93	86	88
MB 320-472483/1-A	Method Blank	80	90	93	86	89

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2MN = 2-methylnaphthalene-d10
FLN10 = Fluoranthene-d10 (Surr)
NBZ = Nitrobenzene-d5
TPHL = Terphenyl-d14

Surrogate Summary

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71386-1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	OTPH1 (51-111)
320-71386-1	SB-18-3.0	75
320-71386-1 MS	SB-18-3.0	83
320-71386-1 MSD	SB-18-3.0	78
320-71386-2	SB-18-9.0	78
320-71386-3	SB-08-3.0	81
320-71386-4	SB-08-8.0	77
LCS 320-472780/2-A	Lab Control Sample	79
MB 320-472780/1-A	Method Blank	72

Surrogate Legend

OTPH = o-Terphenyl (Surr)

Method: 8015B - Diesel Range Organics (DRO) (GC)

Matrix: Water — **Prep Type: Silica Gel Cleanup**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	OTPH1 (56-145)
320-71386-5	SB-17-GW	67
320-71386-7	SB-18-GW	47 S1-
320-71386-8	SB-08-GW	67
LCS 320-472853/2-A	Lab Control Sample	79
LCSD 320-472853/3-A	Lab Control Sample Dup	79
MB 320-472853/1-A	Method Blank	63

Surrogate Legend

OTPH = o-Terphenyl (Surr)

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	DCBP1 (52-138)
320-71386-1	SB-18-3.0	53
320-71386-1 MS	SB-18-3.0	43 S1-
320-71386-1 MSD	SB-18-3.0	38 S1-
320-71386-2	SB-18-9.0	35 S1-
320-71386-3	SB-08-3.0	32 S1-
320-71386-4	SB-08-8.0	29 S1-
LCS 320-472489/2-A	Lab Control Sample	77
MB 320-472489/1-A	Method Blank	73

Surrogate Legend

DCBP = DCB Decachlorobiphenyl

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 320-472644/11
Matrix: Water
Analysis Batch: 472644

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			03/22/21 12:52	1
Bromobenzene	ND		1.0		ug/L			03/22/21 12:52	1
Bromochloromethane	ND		1.0		ug/L			03/22/21 12:52	1
Bromodichloromethane	ND		0.50		ug/L			03/22/21 12:52	1
Bromoform	ND		1.0		ug/L			03/22/21 12:52	1
Bromomethane	ND		1.0		ug/L			03/22/21 12:52	1
Carbon tetrachloride	ND		0.50		ug/L			03/22/21 12:52	1
Chlorobenzene	ND		0.50		ug/L			03/22/21 12:52	1
Chloroethane	ND		1.0		ug/L			03/22/21 12:52	1
Chloroform	ND		1.0		ug/L			03/22/21 12:52	1
Chloromethane	ND		1.0		ug/L			03/22/21 12:52	1
2-Chlorotoluene	ND		0.50		ug/L			03/22/21 12:52	1
4-Chlorotoluene	ND		0.50		ug/L			03/22/21 12:52	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			03/22/21 12:52	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			03/22/21 12:52	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			03/22/21 12:52	1
1,2-Dibromoethane (EDB)	ND		0.50		ug/L			03/22/21 12:52	1
Dibromomethane	ND		0.50		ug/L			03/22/21 12:52	1
1,2-Dichlorobenzene	ND		0.50		ug/L			03/22/21 12:52	1
1,3-Dichlorobenzene	ND		0.50		ug/L			03/22/21 12:52	1
1,4-Dichlorobenzene	ND		0.50		ug/L			03/22/21 12:52	1
Dichlorodifluoromethane	ND		1.0		ug/L			03/22/21 12:52	1
1,1-Dichloroethane	ND		0.50		ug/L			03/22/21 12:52	1
1,2-Dichloroethane	ND		0.50		ug/L			03/22/21 12:52	1
1,1-Dichloroethene	ND		0.50		ug/L			03/22/21 12:52	1
1,2-Dichloropropane	ND		0.50		ug/L			03/22/21 12:52	1
1,3-Dichloropropane	ND		1.0		ug/L			03/22/21 12:52	1
2,2-Dichloropropane	ND		1.0		ug/L			03/22/21 12:52	1
1,1-Dichloropropene	ND		0.50		ug/L			03/22/21 12:52	1
Ethylbenzene	ND		0.50		ug/L			03/22/21 12:52	1
Hexachlorobutadiene	ND		1.0		ug/L			03/22/21 12:52	1
Isopropylbenzene	ND		0.50		ug/L			03/22/21 12:52	1
Methylene Chloride	ND		1.0		ug/L			03/22/21 12:52	1
m-Xylene & p-Xylene	ND		0.50		ug/L			03/22/21 12:52	1
Naphthalene	ND		1.0		ug/L			03/22/21 12:52	1
n-Butylbenzene	ND		1.0		ug/L			03/22/21 12:52	1
N-Propylbenzene	ND		1.0		ug/L			03/22/21 12:52	1
o-Xylene	ND		0.50		ug/L			03/22/21 12:52	1
p-Isopropyltoluene	ND		1.0		ug/L			03/22/21 12:52	1
sec-Butylbenzene	ND		1.0		ug/L			03/22/21 12:52	1
Styrene	ND		0.50		ug/L			03/22/21 12:52	1
tert-Butylbenzene	ND		1.0		ug/L			03/22/21 12:52	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			03/22/21 12:52	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			03/22/21 12:52	1
Tetrachloroethene	ND		0.50		ug/L			03/22/21 12:52	1
Toluene	ND		0.50		ug/L			03/22/21 12:52	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			03/22/21 12:52	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			03/22/21 12:52	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 320-472644/11
Matrix: Water
Analysis Batch: 472644

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	ND		1.0		ug/L			03/22/21 12:52	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			03/22/21 12:52	1
1,1,1-Trichloroethane	ND		0.50		ug/L			03/22/21 12:52	1
1,1,2-Trichloroethane	ND		0.50		ug/L			03/22/21 12:52	1
Trichloroethene	ND		0.50		ug/L			03/22/21 12:52	1
Trichlorofluoromethane	ND		1.0		ug/L			03/22/21 12:52	1
1,2,3-Trichloropropane	ND		1.0		ug/L			03/22/21 12:52	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			03/22/21 12:52	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			03/22/21 12:52	1
Vinyl chloride	ND		0.50		ug/L			03/22/21 12:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*74 - 120*		*03/22/21 12:52*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 123*		*03/22/21 12:52*	*1*
1,2-Dichloroethane-d4 (Surr)	*111*		*72 - 123*		*03/22/21 12:52*	*1*
Toluene-d8 (Surr)	*113*		*78 - 120*		*03/22/21 12:52*	*1*

Lab Sample ID: LCS 320-472644/6
Matrix: Water
Analysis Batch: 472644

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	20.0	19.9		ug/L		99	79 - 120
Bromobenzene	20.0	20.5		ug/L		102	80 - 120
Bromochloromethane	20.0	20.8		ug/L		104	80 - 120
Bromodichloromethane	20.0	19.9		ug/L		100	80 - 124
Bromoform	20.0	21.3		ug/L		106	80 - 120
Bromomethane	20.0	19.9		ug/L		100	65 - 132
Carbon tetrachloride	20.0	20.8		ug/L		104	78 - 124
Chlorobenzene	20.0	20.0		ug/L		100	78 - 120
Chloroethane	20.0	20.8		ug/L		104	65 - 123
Chloroform	20.0	20.0		ug/L		100	80 - 120
Chloromethane	20.0	18.6		ug/L		93	62 - 129
2-Chlorotoluene	20.0	20.1		ug/L		101	79 - 120
4-Chlorotoluene	20.0	20.4		ug/L		102	80 - 121
cis-1,2-Dichloroethene	20.0	19.4		ug/L		97	78 - 120
cis-1,3-Dichloropropene	20.0	21.1		ug/L		106	80 - 131
1,2-Dibromo-3-Chloropropane	20.0	18.5		ug/L		92	66 - 121
1,2-Dibromoethane (EDB)	20.0	20.8		ug/L		104	78 - 120
Dibromomethane	20.0	21.1		ug/L		106	80 - 121
1,2-Dichlorobenzene	20.0	18.7		ug/L		93	77 - 120
1,3-Dichlorobenzene	20.0	19.4		ug/L		97	78 - 120
1,4-Dichlorobenzene	20.0	19.5		ug/L		97	74 - 120
Dichlorodifluoromethane	20.0	16.7		ug/L		84	39 - 161
1,1-Dichloroethane	20.0	20.0		ug/L		100	79 - 120
1,2-Dichloroethane	20.0	20.7		ug/L		103	77 - 128
1,1-Dichloroethene	20.0	20.0		ug/L		100	74 - 120
1,2-Dichloropropane	20.0	20.3		ug/L		101	75 - 125

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 320-472644/6
Matrix: Water
Analysis Batch: 472644

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichloropropane	20.0	21.3		ug/L		107	79 - 120
2,2-Dichloropropane	20.0	18.3		ug/L		91	75 - 127
1,1-Dichloropropene	20.0	20.1		ug/L		100	77 - 120
Ethylbenzene	20.0	19.9		ug/L		99	80 - 120
Hexachlorobutadiene	20.0	16.6		ug/L		83	69 - 120
Isopropylbenzene	20.0	19.4		ug/L		97	80 - 121
Methylene Chloride	20.0	19.2		ug/L		96	77 - 120
m-Xylene & p-Xylene	20.0	20.0		ug/L		100	80 - 121
Naphthalene	20.0	17.3		ug/L		86	56 - 143
n-Butylbenzene	20.0	18.7		ug/L		94	72 - 120
N-Propylbenzene	20.0	20.4		ug/L		102	76 - 120
o-Xylene	20.0	20.3		ug/L		102	80 - 124
p-Isopropyltoluene	20.0	19.7		ug/L		99	76 - 120
sec-Butylbenzene	20.0	19.8		ug/L		99	77 - 120
Styrene	20.0	20.5		ug/L		103	80 - 120
tert-Butylbenzene	20.0	19.9		ug/L		100	78 - 120
1,1,1,2-Tetrachloroethane	20.0	20.1		ug/L		101	79 - 120
1,1,2,2-Tetrachloroethane	20.0	21.6		ug/L		108	74 - 137
Tetrachloroethene	20.0	19.5		ug/L		98	74 - 120
Toluene	20.0	19.9		ug/L		99	79 - 126
trans-1,2-Dichloroethene	20.0	20.4		ug/L		102	76 - 120
trans-1,3-Dichloropropene	20.0	21.3		ug/L		107	75 - 133
1,2,3-Trichlorobenzene	20.0	15.8		ug/L		79	47 - 162
1,2,4-Trichlorobenzene	20.0	17.1		ug/L		86	61 - 130
1,1,1-Trichloroethane	20.0	20.2		ug/L		101	79 - 121
1,1,2-Trichloroethane	20.0	20.7		ug/L		104	79 - 127
Trichloroethene	20.0	20.0		ug/L		100	74 - 120
Trichlorofluoromethane	20.0	18.4		ug/L		92	60 - 135
1,2,3-Trichloropropane	20.0	20.8		ug/L		104	73 - 120
1,2,4-Trimethylbenzene	20.0	19.9		ug/L		99	76 - 120
1,3,5-Trimethylbenzene	20.0	20.3		ug/L		102	79 - 120
Vinyl chloride	20.0	18.0		ug/L		90	68 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*74 - 120*
Dibromofluoromethane (Surr)	*113*		*80 - 123*
1,2-Dichloroethane-d4 (Surr)	*110*		*72 - 123*
Toluene-d8 (Surr)	*115*		*78 - 120*

Lab Sample ID: LCSD 320-472644/32
Matrix: Water
Analysis Batch: 472644

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	20.0	19.7		ug/L		98	79 - 120	1	21
Bromobenzene	20.0	20.2		ug/L		101	80 - 120	1	17
Bromochloromethane	20.0	20.4		ug/L		102	80 - 120	2	19
Bromodichloromethane	20.0	19.3		ug/L		97	80 - 124	3	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 320-472644/32
Matrix: Water
Analysis Batch: 472644

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromoform	20.0	19.9		ug/L		100	80 - 120	7	16
Bromomethane	20.0	19.5		ug/L		98	65 - 132	2	40
Carbon tetrachloride	20.0	20.4		ug/L		102	78 - 124	2	25
Chlorobenzene	20.0	19.9		ug/L		99	78 - 120	0	15
Chloroethane	20.0	20.3		ug/L		101	65 - 123	3	40
Chloroform	20.0	19.9		ug/L		99	80 - 120	1	22
Chloromethane	20.0	18.8		ug/L		94	62 - 129	1	25
2-Chlorotoluene	20.0	19.8		ug/L		99	79 - 120	2	19
4-Chlorotoluene	20.0	20.2		ug/L		101	80 - 121	1	19
cis-1,2-Dichloroethene	20.0	19.4		ug/L		97	78 - 120	0	18
cis-1,3-Dichloropropene	20.0	20.2		ug/L		101	80 - 131	4	24
1,2-Dibromo-3-Chloropropane	20.0	16.2		ug/L		81	66 - 121	13	33
1,2-Dibromoethane (EDB)	20.0	20.1		ug/L		101	78 - 120	3	15
Dibromomethane	20.0	20.4		ug/L		102	80 - 121	3	17
1,2-Dichlorobenzene	20.0	17.9		ug/L		89	77 - 120	4	19
1,3-Dichlorobenzene	20.0	18.6		ug/L		93	78 - 120	4	17
1,4-Dichlorobenzene	20.0	19.0		ug/L		95	74 - 120	3	15
Dichlorodifluoromethane	20.0	17.8		ug/L		89	39 - 161	6	51
1,1-Dichloroethane	20.0	20.2		ug/L		101	79 - 120	1	21
1,2-Dichloroethane	20.0	20.7		ug/L		104	77 - 128	0	25
1,1-Dichloroethene	20.0	20.3		ug/L		101	74 - 120	1	22
1,2-Dichloropropane	20.0	19.9		ug/L		100	75 - 125	2	27
1,3-Dichloropropane	20.0	21.1		ug/L		105	79 - 120	1	15
2,2-Dichloropropane	20.0	17.2		ug/L		86	75 - 127	6	25
1,1-Dichloropropene	20.0	20.3		ug/L		101	77 - 120	1	20
Ethylbenzene	20.0	20.0		ug/L		100	80 - 120	1	15
Hexachlorobutadiene	20.0	15.1		ug/L		76	69 - 120	9	30
Isopropylbenzene	20.0	19.2		ug/L		96	80 - 121	1	17
Methylene Chloride	20.0	19.1		ug/L		95	77 - 120	1	20
m-Xylene & p-Xylene	20.0	19.5		ug/L		98	80 - 121	2	15
Naphthalene	20.0	16.3		ug/L		81	56 - 143	6	48
n-Butylbenzene	20.0	17.7		ug/L		88	72 - 120	6	25
N-Propylbenzene	20.0	20.2		ug/L		101	76 - 120	1	26
o-Xylene	20.0	19.7		ug/L		99	80 - 124	3	18
p-Isopropyltoluene	20.0	19.1		ug/L		95	76 - 120	3	18
sec-Butylbenzene	20.0	19.3		ug/L		97	77 - 120	2	19
Styrene	20.0	20.3		ug/L		101	80 - 120	1	15
tert-Butylbenzene	20.0	19.5		ug/L		97	78 - 120	2	19
1,1,1,2-Tetrachloroethane	20.0	19.3		ug/L		96	79 - 120	4	23
1,1,2,2-Tetrachloroethane	20.0	20.3		ug/L		102	74 - 137	6	27
Tetrachloroethene	20.0	19.5		ug/L		98	74 - 120	0	18
Toluene	20.0	19.4		ug/L		97	79 - 126	2	20
trans-1,2-Dichloroethene	20.0	20.2		ug/L		101	76 - 120	1	20
trans-1,3-Dichloropropene	20.0	20.5		ug/L		102	75 - 133	4	29
1,2,3-Trichlorobenzene	20.0	15.4		ug/L		77	47 - 162	3	45
1,2,4-Trichlorobenzene	20.0	15.8		ug/L		79	61 - 130	8	40
1,1,1-Trichloroethane	20.0	20.2		ug/L		101	79 - 121	0	25
1,1,2-Trichloroethane	20.0	20.1		ug/L		101	79 - 127	3	30
Trichloroethene	20.0	20.0		ug/L		100	74 - 120	0	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 320-472644/32
Matrix: Water
Analysis Batch: 472644

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichlorofluoromethane			20.0	19.4		ug/L		97	60 - 135	5	41
1,2,3-Trichloropropane			20.0	20.4		ug/L		102	73 - 120	2	22
1,2,4-Trimethylbenzene			20.0	19.2		ug/L		96	76 - 120	3	17
1,3,5-Trimethylbenzene			20.0	19.6		ug/L		98	79 - 120	4	20
Vinyl chloride			20.0	18.3		ug/L		91	68 - 121	2	33

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*74 - 120*
Dibromofluoromethane (Surr)	*111*		*80 - 123*
1,2-Dichloroethane-d4 (Surr)	*110*		*72 - 123*
Toluene-d8 (Surr)	*116*		*78 - 120*

Method: 8260B/CA_LUFTMS - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 320-473460/7
Matrix: Water
Analysis Batch: 473460

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C4-C12	ND		50		ug/L			03/24/21 13:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*73 - 115*		*03/24/21 13:47*	*1*

Lab Sample ID: LCS 320-473460/5
Matrix: Water
Analysis Batch: 473460

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C4-C12			1000	1050		ug/L		105	78 - 118

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*73 - 115*

Lab Sample ID: LCSD 320-473460/6
Matrix: Water
Analysis Batch: 473460

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C4-C12			1000	1060		ug/L		106	78 - 118	1	23

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*73 - 115*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 320-472483/1-A
Matrix: Solid
Analysis Batch: 472658

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 472483

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		03/21/21 07:42	03/22/21 15:19	1
Acenaphthylene	ND		0.0050		mg/Kg		03/21/21 07:42	03/22/21 15:19	1
Anthracene	ND		0.0050		mg/Kg		03/21/21 07:42	03/22/21 15:19	1
Benzo[a]anthracene	ND		0.0050		mg/Kg		03/21/21 07:42	03/22/21 15:19	1
Benzo[a]pyrene	ND		0.0050		mg/Kg		03/21/21 07:42	03/22/21 15:19	1
Benzo[b]fluoranthene	ND		0.0050		mg/Kg		03/21/21 07:42	03/22/21 15:19	1
Benzo[g,h,i]perylene	ND		0.0050		mg/Kg		03/21/21 07:42	03/22/21 15:19	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		03/21/21 07:42	03/22/21 15:19	1
Chrysene	ND		0.0050		mg/Kg		03/21/21 07:42	03/22/21 15:19	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		03/21/21 07:42	03/22/21 15:19	1
Fluoranthene	ND		0.0050		mg/Kg		03/21/21 07:42	03/22/21 15:19	1
Fluorene	ND		0.0050		mg/Kg		03/21/21 07:42	03/22/21 15:19	1
Indeno[1,2,3-cd]pyrene	ND		0.0050		mg/Kg		03/21/21 07:42	03/22/21 15:19	1
Naphthalene	ND		0.0050		mg/Kg		03/21/21 07:42	03/22/21 15:19	1
Phenanthrene	ND		0.0050		mg/Kg		03/21/21 07:42	03/22/21 15:19	1
Pyrene	ND		0.0050		mg/Kg		03/21/21 07:42	03/22/21 15:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*80*		*43 - 109*	*03/21/21 07:42*	*03/22/21 15:19*	*1*
2-methylnaphthalene-d10	*90*		*50 - 150*	*03/21/21 07:42*	*03/22/21 15:19*	*1*
Fluoranthene-d10 (Surr)	*93*		*50 - 150*	*03/21/21 07:42*	*03/22/21 15:19*	*1*
Nitrobenzene-d5	*86*		*49 - 114*	*03/21/21 07:42*	*03/22/21 15:19*	*1*
Terphenyl-d14	*89*		*53 - 121*	*03/21/21 07:42*	*03/22/21 15:19*	*1*

Lab Sample ID: LCS 320-472483/2-A
Matrix: Solid
Analysis Batch: 472658

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 472483

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	0.0250	0.0175		mg/Kg		70	54 - 97
Acenaphthylene	0.0250	0.0178		mg/Kg		71	52 - 99
Anthracene	0.0250	0.0182		mg/Kg		73	52 - 102
Benzo[a]anthracene	0.0250	0.0215		mg/Kg		86	55 - 109
Benzo[a]pyrene	0.0250	0.0188		mg/Kg		75	54 - 110
Benzo[b]fluoranthene	0.0250	0.0193		mg/Kg		77	52 - 112
Benzo[g,h,i]perylene	0.0250	0.0180		mg/Kg		72	51 - 119
Benzo[k]fluoranthene	0.0250	0.0179		mg/Kg		72	56 - 106
Chrysene	0.0250	0.0190		mg/Kg		76	54 - 110
Dibenz(a,h)anthracene	0.0250	0.0188		mg/Kg		75	55 - 119
Fluoranthene	0.0250	0.0197		mg/Kg		79	53 - 110
Fluorene	0.0250	0.0190		mg/Kg		76	53 - 100
Indeno[1,2,3-cd]pyrene	0.0250	0.0192		mg/Kg		77	52 - 120
Naphthalene	0.0250	0.0177		mg/Kg		71	55 - 100
Phenanthrene	0.0250	0.0176		mg/Kg		71	54 - 98
Pyrene	0.0250	0.0199		mg/Kg		80	53 - 108

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*81*		*43 - 109*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCS 320-472483/2-A
Matrix: Solid
Analysis Batch: 472658

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 472483

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-methylnaphthalene-d10	88		50 - 150
Fluoranthene-d10 (Surr)	93		50 - 150
Nitrobenzene-d5	86		49 - 114
Terphenyl-d14	88		53 - 121

Lab Sample ID: 320-71386-3 MS
Matrix: Solid
Analysis Batch: 472658

Client Sample ID: SB-08-3.0
Prep Type: Total/NA
Prep Batch: 472483

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	ND		0.0233	ND		mg/Kg		70	54 - 97
Acenaphthylene	ND		0.0233	ND		mg/Kg		82	52 - 99
Anthracene	ND		0.0233	ND		mg/Kg		66	52 - 102
Benzo[a]anthracene	ND		0.0233	ND		mg/Kg		98	55 - 109
Benzo[a]pyrene	ND		0.0233	ND		mg/Kg		84	54 - 110
Benzo[b]fluoranthene	ND		0.0233	ND		mg/Kg		92	52 - 112
Benzo[g,h,i]perylene	ND	F2 F1	0.0233	ND	F1	mg/Kg		47	51 - 119
Benzo[k]fluoranthene	ND		0.0233	ND		mg/Kg		76	56 - 106
Chrysene	ND		0.0233	ND		mg/Kg		89	54 - 110
Dibenz(a,h)anthracene	ND		0.0233	ND		mg/Kg		67	55 - 119
Fluoranthene	ND		0.0233	ND		mg/Kg		99	53 - 110
Fluorene	ND		0.0233	ND		mg/Kg		80	53 - 100
Indeno[1,2,3-cd]pyrene	ND		0.0233	ND		mg/Kg		91	52 - 120
Naphthalene	ND		0.0233	ND		mg/Kg		82	55 - 100
Phenanthrene	ND		0.0233	ND		mg/Kg		86	54 - 98
Pyrene	ND		0.0233	ND		mg/Kg		60	53 - 108

Surrogate	MS %Recovery	MS Qualifier	Limits
2-Fluorobiphenyl (Surr)	77		43 - 109
2-methylnaphthalene-d10	89		50 - 150
Fluoranthene-d10 (Surr)	96		50 - 150
Nitrobenzene-d5	81		49 - 114
Terphenyl-d14	88		53 - 121

Lab Sample ID: 320-71386-3 MSD
Matrix: Solid
Analysis Batch: 472658

Client Sample ID: SB-08-3.0
Prep Type: Total/NA
Prep Batch: 472483

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	ND		0.0238	ND		mg/Kg		69	54 - 97	1	30
Acenaphthylene	ND		0.0238	ND		mg/Kg		93	52 - 99	15	30
Anthracene	ND		0.0238	ND		mg/Kg		96	52 - 102	25	30
Benzo[a]anthracene	ND		0.0238	ND		mg/Kg		97	55 - 109	1	30
Benzo[a]pyrene	ND		0.0238	ND		mg/Kg		88	54 - 110	8	30
Benzo[b]fluoranthene	ND		0.0238	ND		mg/Kg		95	52 - 112	5	30
Benzo[g,h,i]perylene	ND	F2 F1	0.0238	ND	F2	mg/Kg		93	51 - 119	31	30
Benzo[k]fluoranthene	ND		0.0238	ND		mg/Kg		76	56 - 106	3	30
Chrysene	ND		0.0238	ND		mg/Kg		90	54 - 110	3	30

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: 320-71386-3 MSD
Matrix: Solid
Analysis Batch: 472658

Client Sample ID: SB-08-3.0
Prep Type: Total/NA
Prep Batch: 472483

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dibenz(a,h)anthracene	ND		0.0238	ND		mg/Kg		65	55 - 119	0	30
Fluoranthene	ND		0.0238	ND		mg/Kg		104	53 - 110	7	30
Fluorene	ND		0.0238	ND		mg/Kg		76	53 - 100	3	30
Indeno[1,2,3-cd]pyrene	ND		0.0238	ND		mg/Kg		100	52 - 120	12	30
Naphthalene	ND		0.0238	ND		mg/Kg		77	55 - 100	4	30
Phenanthrene	ND		0.0238	ND		mg/Kg		82	54 - 98	2	30
Pyrene	ND		0.0238	ND		mg/Kg		68	53 - 108	9	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*70*		*43 - 109*
2-methylnaphthalene-d10	*76*		*50 - 150*
Fluoranthene-d10 (Surr)	*87*		*50 - 150*
Nitrobenzene-d5	*75*		*49 - 114*
Terphenyl-d14	*81*		*53 - 121*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 320-472780/1-A
Matrix: Solid
Analysis Batch: 473161

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 472780

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		03/22/21 14:15	03/23/21 18:02	1
Motor Oil Range Organics [C28-C40]	ND		5.0		mg/Kg		03/22/21 14:15	03/23/21 18:02	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*72*		*51 - 111*	*03/22/21 14:15*	*03/23/21 18:02*	*1*

Lab Sample ID: LCS 320-472780/2-A
Matrix: Solid
Analysis Batch: 473161

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 472780

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			10.0	10.5		mg/Kg		105	57 - 132		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl (Surr)	*79*		*51 - 111*

Lab Sample ID: 320-71386-1 MS
Matrix: Solid
Analysis Batch: 473161

Client Sample ID: SB-18-3.0
Prep Type: Total/NA
Prep Batch: 472780

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]	32	F1	10.0	35.7	F1	mg/Kg		40	57 - 132		

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 320-71386-1 MS
Matrix: Solid
Analysis Batch: 473161

Client Sample ID: SB-18-3.0
Prep Type: Total/NA
Prep Batch: 472780

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
o-Terphenyl (Surr)	*83*		*51 - 111*

Lab Sample ID: 320-71386-1 MSD
Matrix: Solid
Analysis Batch: 473161

Client Sample ID: SB-18-3.0
Prep Type: Total/NA
Prep Batch: 472780

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	32	F1	9.68	33.4	F1	mg/Kg		17	57 - 132	7	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
o-Terphenyl (Surr)	*78*		*51 - 111*

Lab Sample ID: MB 320-472853/1-A
Matrix: Water
Analysis Batch: 473165

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 472853

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		03/22/21 15:16	03/24/21 01:05	1
Motor Oil Range Organics [C28-C40]	ND		500		ug/L		03/22/21 15:16	03/24/21 01:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*63*		*56 - 145*	*03/22/21 15:16*	*03/24/21 01:05*	*1*

Lab Sample ID: LCS 320-472853/2-A
Matrix: Water
Analysis Batch: 473165

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 472853

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			300	258		ug/L		86	53 - 123		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl (Surr)	*79*		*56 - 145*

Lab Sample ID: LCSD 320-472853/3-A
Matrix: Water
Analysis Batch: 473165

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 472853

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			300	268		ug/L		89	53 - 123	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl (Surr)	*79*		*56 - 145*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 320-472489/1-A
Matrix: Solid
Analysis Batch: 473057

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 472489

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.033		mg/Kg		03/21/21 09:00	03/23/21 16:28	1
PCB-1221	ND		0.033		mg/Kg		03/21/21 09:00	03/23/21 16:28	1
PCB-1232	ND		0.033		mg/Kg		03/21/21 09:00	03/23/21 16:28	1
PCB-1242	ND		0.033		mg/Kg		03/21/21 09:00	03/23/21 16:28	1
PCB-1248	ND		0.033		mg/Kg		03/21/21 09:00	03/23/21 16:28	1
PCB-1254	ND		0.033		mg/Kg		03/21/21 09:00	03/23/21 16:28	1
PCB-1260	ND		0.033		mg/Kg		03/21/21 09:00	03/23/21 16:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*73*		*52 - 138*	*03/21/21 09:00*	*03/23/21 16:28*	*1*

Lab Sample ID: LCS 320-472489/2-A
Matrix: Solid
Analysis Batch: 473057

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 472489

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			0.0667	0.0624		mg/Kg		94	58 - 124		
PCB-1260			0.0667	0.0502		mg/Kg		75	55 - 138		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*77*		*52 - 138*

Lab Sample ID: 320-71386-1 MS
Matrix: Solid
Analysis Batch: 473057

Client Sample ID: SB-18-3.0
Prep Type: Total/NA
Prep Batch: 472489

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016	ND	F1 F2	0.0664	0.0552		mg/Kg		83	58 - 124		
PCB-1260	ND	F1	0.0664	0.0403	F1	mg/Kg		34	55 - 138		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*43*	*S1-*	*52 - 138*

Lab Sample ID: 320-71386-1 MSD
Matrix: Solid
Analysis Batch: 473057

Client Sample ID: SB-18-3.0
Prep Type: Total/NA
Prep Batch: 472489

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	ND	F1 F2	0.0666	ND	F1 F2	mg/Kg		47	58 - 124	55	20
PCB-1260	ND	F1	0.0666	0.0342	F1	mg/Kg		24	55 - 138	15	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*38*	*S1-*	*52 - 138*

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 320-472129/1-A
Matrix: Solid
Analysis Batch: 472778

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 472129

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0		mg/Kg		03/19/21 13:15	03/22/21 11:35	1
Arsenic	ND		2.0		mg/Kg		03/19/21 13:15	03/22/21 11:35	1
Barium	ND		1.0		mg/Kg		03/19/21 13:15	03/22/21 11:35	1
Beryllium	ND		0.20		mg/Kg		03/19/21 13:15	03/22/21 11:35	1
Cadmium	ND		0.20		mg/Kg		03/19/21 13:15	03/22/21 11:35	1
Chromium	ND		0.50		mg/Kg		03/19/21 13:15	03/22/21 11:35	1
Cobalt	ND		0.50		mg/Kg		03/19/21 13:15	03/22/21 11:35	1
Copper	ND		1.5		mg/Kg		03/19/21 13:15	03/22/21 11:35	1
Lead	ND		1.0		mg/Kg		03/19/21 13:15	03/22/21 11:35	1
Molybdenum	ND		2.0		mg/Kg		03/19/21 13:15	03/22/21 11:35	1
Nickel	ND		1.0		mg/Kg		03/19/21 13:15	03/22/21 11:35	1
Selenium	ND		2.0		mg/Kg		03/19/21 13:15	03/22/21 11:35	1
Silver	ND		0.50		mg/Kg		03/19/21 13:15	03/22/21 11:35	1
Thallium	ND		2.0		mg/Kg		03/19/21 13:15	03/22/21 11:35	1
Vanadium	ND		0.50		mg/Kg		03/19/21 13:15	03/22/21 11:35	1
Zinc	ND		2.0		mg/Kg		03/19/21 13:15	03/22/21 11:35	1

Lab Sample ID: LCS 320-472129/2-A
Matrix: Solid
Analysis Batch: 472778

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 472129

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	49.5	44.4		mg/Kg		90	80 - 120
Arsenic	50.0	45.1		mg/Kg		90	80 - 120
Barium	50.0	45.6		mg/Kg		91	80 - 120
Beryllium	25.0	23.1		mg/Kg		92	80 - 120
Cadmium	25.0	22.7		mg/Kg		91	80 - 120
Chromium	25.0	23.3		mg/Kg		93	80 - 120
Cobalt	25.0	22.8		mg/Kg		91	80 - 120
Lead	25.0	23.1		mg/Kg		92	80 - 120
Molybdenum	25.0	23.2		mg/Kg		93	80 - 120
Nickel	25.0	22.5		mg/Kg		90	80 - 120
Selenium	50.0	42.6		mg/Kg		85	80 - 120
Silver	5.05	4.40		mg/Kg		87	80 - 120
Thallium	50.0	44.2		mg/Kg		88	80 - 120
Vanadium	25.0	22.6		mg/Kg		90	80 - 120

Lab Sample ID: LCS 320-472129/2-A
Matrix: Solid
Analysis Batch: 472951

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 472129

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Copper	25.0	22.8		mg/Kg		91	80 - 120
Zinc	50.0	46.7		mg/Kg		93	80 - 120

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 320-71386-1 MS
Matrix: Solid
Analysis Batch: 472778

Client Sample ID: SB-18-3.0
Prep Type: Total/NA
Prep Batch: 472129

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	ND	F1	49.0	19.5	F1	mg/Kg		40	80 - 120
Arsenic	4.3		49.5	47.5		mg/Kg		87	80 - 120
Barium	120		49.5	161		mg/Kg		89	80 - 120
Beryllium	0.38		24.8	22.5		mg/Kg		89	80 - 120
Cadmium	ND		24.7	21.7		mg/Kg		87	80 - 120
Chromium	27		24.8	53.8		mg/Kg		107	80 - 120
Cobalt	8.6		24.8	30.9		mg/Kg		90	80 - 120
Copper	24	^2	24.7	49.0		mg/Kg		100	80 - 120
Lead	20		24.8	43.2		mg/Kg		93	80 - 120
Molybdenum	ND		24.8	21.2		mg/Kg		86	80 - 120
Nickel	31		24.8	55.0		mg/Kg		96	80 - 120
Selenium	ND		49.5	41.8		mg/Kg		84	80 - 120
Silver	ND		5.00	4.42		mg/Kg		88	80 - 120
Thallium	ND		49.5	41.6		mg/Kg		84	80 - 120
Vanadium	41		24.8	69.5		mg/Kg		113	80 - 120
Zinc	61	F1 ^2	49.5	99.2	F1	mg/Kg		77	80 - 120

Lab Sample ID: 320-71386-1 MSD
Matrix: Solid
Analysis Batch: 472778

Client Sample ID: SB-18-3.0
Prep Type: Total/NA
Prep Batch: 472129

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	ND	F1	47.6	18.3	F1	mg/Kg		38	80 - 120	7	35
Arsenic	4.3		48.1	46.5		mg/Kg		88	80 - 120	2	35
Barium	120		48.1	171		mg/Kg		112	80 - 120	6	35
Beryllium	0.38		24.0	22.0		mg/Kg		90	80 - 120	2	35
Cadmium	ND		24.0	21.2		mg/Kg		88	80 - 120	2	35
Chromium	27		24.0	55.2		mg/Kg		116	80 - 120	2	35
Cobalt	8.6		24.0	29.8		mg/Kg		88	80 - 120	4	35
Copper	24	^2	24.0	47.1		mg/Kg		95	80 - 120	4	35
Lead	20		24.0	40.6		mg/Kg		85	80 - 120	6	35
Molybdenum	ND		24.0	20.5		mg/Kg		85	80 - 120	3	35
Nickel	31		24.0	52.2		mg/Kg		88	80 - 120	5	35
Selenium	ND		48.1	40.5		mg/Kg		84	80 - 120	3	35
Silver	ND		4.86	4.29		mg/Kg		88	80 - 120	3	35
Thallium	ND		48.1	40.8		mg/Kg		85	80 - 120	2	35
Vanadium	41		24.0	68.8		mg/Kg		114	80 - 120	1	35
Zinc	61	F1 ^2	48.1	102		mg/Kg		85	80 - 120	3	35

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 320-471962/11-A
Matrix: Solid
Analysis Batch: 472227

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 471962

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.040		mg/Kg		03/19/21 09:00	03/19/21 11:48	1

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71386-1

Method: 7471A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 320-471962/12-A
Matrix: Solid
Analysis Batch: 472227

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 471962

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			0.167	0.166		mg/Kg		99	86 - 114		

Lab Sample ID: LCSD 320-471962/13-A
Matrix: Solid
Analysis Batch: 472227

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 471962

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury			0.167	0.164		mg/Kg		98	86 - 114	1	17

GC/MS VOA

Analysis Batch: 472644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71386-5	SB-17-GW	Total/NA	Water	8260B	
320-71386-6	TRIP BLANK	Total/NA	Water	8260B	
320-71386-7	SB-18-GW	Total/NA	Water	8260B	
320-71386-8	SB-08-GW	Total/NA	Water	8260B	
MB 320-472644/11	Method Blank	Total/NA	Water	8260B	
LCS 320-472644/6	Lab Control Sample	Total/NA	Water	8260B	
LCSD 320-472644/32	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 473460

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71386-5	SB-17-GW	Total/NA	Water	8260B/CA_LUFT MS	
320-71386-6	TRIP BLANK	Total/NA	Water	8260B/CA_LUFT MS	
320-71386-7	SB-18-GW	Total/NA	Water	8260B/CA_LUFT MS	
320-71386-8	SB-08-GW	Total/NA	Water	8260B/CA_LUFT MS	
MB 320-473460/7	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	
LCS 320-473460/5	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 320-473460/6	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	

GC/MS Semi VOA

Prep Batch: 472483

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71386-1	SB-18-3.0	Total/NA	Solid	3546	
320-71386-2	SB-18-9.0	Total/NA	Solid	3546	
320-71386-3	SB-08-3.0	Total/NA	Solid	3546	
320-71386-4	SB-08-8.0	Total/NA	Solid	3546	
MB 320-472483/1-A	Method Blank	Total/NA	Solid	3546	
LCS 320-472483/2-A	Lab Control Sample	Total/NA	Solid	3546	
320-71386-3 MS	SB-08-3.0	Total/NA	Solid	3546	
320-71386-3 MSD	SB-08-3.0	Total/NA	Solid	3546	

Analysis Batch: 472658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71386-1	SB-18-3.0	Total/NA	Solid	8270C SIM	472483
320-71386-2	SB-18-9.0	Total/NA	Solid	8270C SIM	472483
320-71386-3	SB-08-3.0	Total/NA	Solid	8270C SIM	472483
320-71386-4	SB-08-8.0	Total/NA	Solid	8270C SIM	472483
MB 320-472483/1-A	Method Blank	Total/NA	Solid	8270C SIM	472483
LCS 320-472483/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM	472483
320-71386-3 MS	SB-08-3.0	Total/NA	Solid	8270C SIM	472483
320-71386-3 MSD	SB-08-3.0	Total/NA	Solid	8270C SIM	472483

GC Semi VOA

Prep Batch: 472489

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71386-1	SB-18-3.0	Total/NA	Solid	3546	
320-71386-2	SB-18-9.0	Total/NA	Solid	3546	
320-71386-3	SB-08-3.0	Total/NA	Solid	3546	
320-71386-4	SB-08-8.0	Total/NA	Solid	3546	
MB 320-472489/1-A	Method Blank	Total/NA	Solid	3546	
LCS 320-472489/2-A	Lab Control Sample	Total/NA	Solid	3546	
320-71386-1 MS	SB-18-3.0	Total/NA	Solid	3546	
320-71386-1 MSD	SB-18-3.0	Total/NA	Solid	3546	

Prep Batch: 472780

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71386-1	SB-18-3.0	Total/NA	Solid	3550B	
320-71386-2	SB-18-9.0	Total/NA	Solid	3550B	
320-71386-3	SB-08-3.0	Total/NA	Solid	3550B	
320-71386-4	SB-08-8.0	Total/NA	Solid	3550B	
MB 320-472780/1-A	Method Blank	Total/NA	Solid	3550B	
LCS 320-472780/2-A	Lab Control Sample	Total/NA	Solid	3550B	
320-71386-1 MS	SB-18-3.0	Total/NA	Solid	3550B	
320-71386-1 MSD	SB-18-3.0	Total/NA	Solid	3550B	

Prep Batch: 472853

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71386-5	SB-17-GW	Silica Gel Cleanup	Water	3510C SGC	
320-71386-7	SB-18-GW	Silica Gel Cleanup	Water	3510C SGC	
320-71386-8	SB-08-GW	Silica Gel Cleanup	Water	3510C SGC	
MB 320-472853/1-A	Method Blank	Silica Gel Cleanup	Water	3510C SGC	
LCS 320-472853/2-A	Lab Control Sample	Silica Gel Cleanup	Water	3510C SGC	
LCSD 320-472853/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	3510C SGC	

Analysis Batch: 473057

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71386-1	SB-18-3.0	Total/NA	Solid	8082	472489
320-71386-2	SB-18-9.0	Total/NA	Solid	8082	472489
320-71386-3	SB-08-3.0	Total/NA	Solid	8082	472489
320-71386-4	SB-08-8.0	Total/NA	Solid	8082	472489
MB 320-472489/1-A	Method Blank	Total/NA	Solid	8082	472489
LCS 320-472489/2-A	Lab Control Sample	Total/NA	Solid	8082	472489
320-71386-1 MS	SB-18-3.0	Total/NA	Solid	8082	472489
320-71386-1 MSD	SB-18-3.0	Total/NA	Solid	8082	472489

Analysis Batch: 473161

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71386-1	SB-18-3.0	Total/NA	Solid	8015B	472780
320-71386-2	SB-18-9.0	Total/NA	Solid	8015B	472780
320-71386-3	SB-08-3.0	Total/NA	Solid	8015B	472780
320-71386-4	SB-08-8.0	Total/NA	Solid	8015B	472780
MB 320-472780/1-A	Method Blank	Total/NA	Solid	8015B	472780
LCS 320-472780/2-A	Lab Control Sample	Total/NA	Solid	8015B	472780
320-71386-1 MS	SB-18-3.0	Total/NA	Solid	8015B	472780
320-71386-1 MSD	SB-18-3.0	Total/NA	Solid	8015B	472780

GC Semi VOA

Analysis Batch: 473165

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71386-5	SB-17-GW	Silica Gel Cleanup	Water	8015B	472853
320-71386-7	SB-18-GW	Silica Gel Cleanup	Water	8015B	472853
320-71386-8	SB-08-GW	Silica Gel Cleanup	Water	8015B	472853
MB 320-472853/1-A	Method Blank	Silica Gel Cleanup	Water	8015B	472853
LCS 320-472853/2-A	Lab Control Sample	Silica Gel Cleanup	Water	8015B	472853
LCSD 320-472853/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	8015B	472853

Metals

Prep Batch: 471962

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71386-1	SB-18-3.0	Total/NA	Solid	7471A	
320-71386-2	SB-18-9.0	Total/NA	Solid	7471A	
320-71386-3	SB-08-3.0	Total/NA	Solid	7471A	
320-71386-4	SB-08-8.0	Total/NA	Solid	7471A	
MB 320-471962/11-A	Method Blank	Total/NA	Solid	7471A	
LCS 320-471962/12-A	Lab Control Sample	Total/NA	Solid	7471A	
LCSD 320-471962/13-A	Lab Control Sample Dup	Total/NA	Solid	7471A	

Prep Batch: 472129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71386-1	SB-18-3.0	Total/NA	Solid	3050B	
320-71386-2	SB-18-9.0	Total/NA	Solid	3050B	
320-71386-3	SB-08-3.0	Total/NA	Solid	3050B	
320-71386-4	SB-08-8.0	Total/NA	Solid	3050B	
MB 320-472129/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 320-472129/2-A	Lab Control Sample	Total/NA	Solid	3050B	
320-71386-1 MS	SB-18-3.0	Total/NA	Solid	3050B	
320-71386-1 MSD	SB-18-3.0	Total/NA	Solid	3050B	

Analysis Batch: 472227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71386-1	SB-18-3.0	Total/NA	Solid	7471A	471962
320-71386-2	SB-18-9.0	Total/NA	Solid	7471A	471962
320-71386-3	SB-08-3.0	Total/NA	Solid	7471A	471962
320-71386-4	SB-08-8.0	Total/NA	Solid	7471A	471962
MB 320-471962/11-A	Method Blank	Total/NA	Solid	7471A	471962
LCS 320-471962/12-A	Lab Control Sample	Total/NA	Solid	7471A	471962
LCSD 320-471962/13-A	Lab Control Sample Dup	Total/NA	Solid	7471A	471962

Analysis Batch: 472778

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71386-1	SB-18-3.0	Total/NA	Solid	6010B	472129
320-71386-2	SB-18-9.0	Total/NA	Solid	6010B	472129
320-71386-3	SB-08-3.0	Total/NA	Solid	6010B	472129
320-71386-4	SB-08-8.0	Total/NA	Solid	6010B	472129
MB 320-472129/1-A	Method Blank	Total/NA	Solid	6010B	472129
LCS 320-472129/2-A	Lab Control Sample	Total/NA	Solid	6010B	472129
320-71386-1 MS	SB-18-3.0	Total/NA	Solid	6010B	472129
320-71386-1 MSD	SB-18-3.0	Total/NA	Solid	6010B	472129

Metals

Analysis Batch: 472951

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 320-472129/2-A	Lab Control Sample	Total/NA	Solid	6010B	472129

Lab Chronicle

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71386-1

Client Sample ID: SB-18-3.0

Date Collected: 03/17/21 11:00
Date Received: 03/17/21 17:10

Lab Sample ID: 320-71386-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			10.82 g	1 mL	472483	03/21/21 07:42	TL	TAL SAC
Total/NA	Analysis	8270C SIM		10			472658	03/22/21 20:13	Y1S	TAL SAC
Total/NA	Prep	3550B			30.58 g	3 mL	472780	03/22/21 14:15	NGK	TAL SAC
Total/NA	Analysis	8015B		5			473161	03/23/21 19:57	K1D	TAL SAC
Total/NA	Prep	3546			15.14 g	5 mL	472489	03/21/21 09:00	NGK	TAL SAC
Total/NA	Analysis	8082		1			473057	03/23/21 17:09	K1D	TAL SAC
Total/NA	Prep	3050B			1.03 g	100 mL	472129	03/19/21 13:15	JP	TAL SAC
Total/NA	Analysis	6010B		1			472778	03/22/21 12:36	GSH	TAL SAC
Total/NA	Prep	7471A			0.56 g	50 mL	471962	03/19/21 09:00	IM	TAL SAC
Total/NA	Analysis	7471A		1			472227	03/19/21 13:00	IM	TAL SAC

Client Sample ID: SB-18-9.0

Date Collected: 03/17/21 11:15
Date Received: 03/17/21 17:10

Lab Sample ID: 320-71386-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			10.90 g	1 mL	472483	03/21/21 07:42	TL	TAL SAC
Total/NA	Analysis	8270C SIM		1			472658	03/22/21 20:43	Y1S	TAL SAC
Total/NA	Prep	3550B			30.74 g	3 mL	472780	03/22/21 14:15	NGK	TAL SAC
Total/NA	Analysis	8015B		1			473161	03/23/21 21:22	K1D	TAL SAC
Total/NA	Prep	3546			15.39 g	5 mL	472489	03/21/21 09:00	NGK	TAL SAC
Total/NA	Analysis	8082		1			473057	03/23/21 18:16	K1D	TAL SAC
Total/NA	Prep	3050B			1.00 g	100 mL	472129	03/19/21 13:15	JP	TAL SAC
Total/NA	Analysis	6010B		1			472778	03/22/21 12:55	GSH	TAL SAC
Total/NA	Prep	7471A			0.63 g	50 mL	471962	03/19/21 09:00	IM	TAL SAC
Total/NA	Analysis	7471A		1			472227	03/19/21 13:02	IM	TAL SAC

Client Sample ID: SB-08-3.0

Date Collected: 03/17/21 14:00
Date Received: 03/17/21 17:10

Lab Sample ID: 320-71386-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			10.33 g	1 mL	472483	03/21/21 07:42	TL	TAL SAC
Total/NA	Analysis	8270C SIM		10			472658	03/22/21 21:12	Y1S	TAL SAC
Total/NA	Prep	3550B			30.61 g	3 mL	472780	03/22/21 14:15	NGK	TAL SAC
Total/NA	Analysis	8015B		1			473161	03/23/21 21:51	K1D	TAL SAC
Total/NA	Prep	3546			15.53 g	5 mL	472489	03/21/21 09:00	NGK	TAL SAC
Total/NA	Analysis	8082		1			473057	03/23/21 18:37	K1D	TAL SAC
Total/NA	Prep	3050B			1.03 g	100 mL	472129	03/19/21 13:15	JP	TAL SAC
Total/NA	Analysis	6010B		1			472778	03/22/21 12:59	GSH	TAL SAC
Total/NA	Prep	7471A			0.60 g	50 mL	471962	03/19/21 09:00	IM	TAL SAC
Total/NA	Analysis	7471A		1			472227	03/19/21 13:05	IM	TAL SAC

Client Sample ID: SB-08-8.0
Lab Sample ID: 320-71386-4
Date Collected: 03/17/21 14:15
Matrix: Solid
Date Received: 03/17/21 17:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			10.95 g	1 mL	472483	03/21/21 07:42	TL	TAL SAC
Total/NA	Analysis	8270C SIM		1			472658	03/22/21 22:40	Y1S	TAL SAC
Total/NA	Prep	3550B			30.24 g	3 mL	472780	03/22/21 14:15	NGK	TAL SAC
Total/NA	Analysis	8015B		1			473161	03/23/21 22:19	K1D	TAL SAC
Total/NA	Prep	3546			15.78 g	5 mL	472489	03/21/21 09:00	NGK	TAL SAC
Total/NA	Analysis	8082		1			473057	03/23/21 18:57	K1D	TAL SAC
Total/NA	Prep	3050B			1.05 g	100 mL	472129	03/19/21 13:15	JP	TAL SAC
Total/NA	Analysis	6010B		1			472778	03/22/21 13:03	GSH	TAL SAC
Total/NA	Prep	7471A			0.57 g	50 mL	471962	03/19/21 09:00	IM	TAL SAC
Total/NA	Analysis	7471A		1			472227	03/19/21 13:08	IM	TAL SAC

Client Sample ID: SB-17-GW
Lab Sample ID: 320-71386-5
Date Collected: 03/17/21 09:55
Matrix: Water
Date Received: 03/17/21 17:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	50 mL	50 mL	472644	03/22/21 13:38	SS	TAL SAC
Total/NA	Analysis	8260B/CA_LUFTMS		1	50 mL	50 mL	473460	03/24/21 15:19	SS	TAL SAC
Silica Gel Cleanup	Prep	3510C SGC			1042.8 mL	3 mL	472853	03/22/21 15:16	MAD	TAL SAC
Silica Gel Cleanup	Analysis	8015B		1			473165	03/24/21 02:19	K1D	TAL SAC

Client Sample ID: TRIP BLANK
Lab Sample ID: 320-71386-6
Date Collected: 03/17/21 10:05
Matrix: Water
Date Received: 03/17/21 17:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	50 mL	50 mL	472644	03/22/21 13:15	SS	TAL SAC
Total/NA	Analysis	8260B/CA_LUFTMS		1	50 mL	50 mL	473460	03/24/21 15:43	SS	TAL SAC

Client Sample ID: SB-18-GW
Lab Sample ID: 320-71386-7
Date Collected: 03/17/21 12:40
Matrix: Water
Date Received: 03/17/21 17:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	50 mL	50 mL	472644	03/22/21 14:00	SS	TAL SAC
Total/NA	Analysis	8260B/CA_LUFTMS		1	50 mL	50 mL	473460	03/24/21 16:06	SS	TAL SAC
Silica Gel Cleanup	Prep	3510C SGC			1032.6 mL	3 mL	472853	03/22/21 15:16	MAD	TAL SAC
Silica Gel Cleanup	Analysis	8015B		1			473165	03/24/21 02:43	K1D	TAL SAC

Lab Chronicle

Client: GSI Environmental, Inc
Job ID: 320-71386-1
Project/Site: Integral Communities Pittsburg Project

Client Sample ID: SB-08-GW
Lab Sample ID: 320-71386-8

Date Collected: 03/17/21 14:50
Matrix: Water

Date Received: 03/17/21 17:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	50 mL	50 mL	472644	03/22/21 14:24	SS	TAL SAC
Total/NA	Analysis	8260B/CA_LUFTMS		1	50 mL	50 mL	473460	03/24/21 16:29	SS	TAL SAC
Silica Gel Cleanup	Prep	3510C SGC			1009.7 mL	3 mL	472853	03/22/21 15:16	MAD	TAL SAC
Silica Gel Cleanup	Analysis	8015B		1			473165	03/24/21 03:08	K1D	TAL SAC

Laboratory References:

EMLab P&K = EMLab P&K - South San Francisco, 6000 Shoreline Court, Suite 205, South San Francisco, CA 94080, TEL (866)888-6653

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: GSI Environmental, Inc
Job ID: 320-71386-1
Project/Site: Integral Communities Pittsburg Project

Laboratory: Eurofins TestAmerica, Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
California	State	2897	01-31-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B	3510C SGC	Water	Motor Oil Range Organics [C28-C40]
8015B	3550B	Solid	Motor Oil Range Organics [C28-C40]

Method Summary

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71386-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAC
8260B/CA_LUFTMS	Volatile Organic Compounds by GC/MS	SW846	TAL SAC
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL SAC
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL SAC
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SAC
6010B	Metals (ICP)	SW846	TAL SAC
7471A	Mercury (CVAA)	SW846	TAL SAC
CARB435	CARB 435 Asbestos	EM P&K	EMLab P&K
3050B	Preparation, Metals	SW846	TAL SAC
3510C SGC	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL SAC
3546	Microwave Extraction	SW846	TAL SAC
3550B	Ultrasonic Extraction	SW846	TAL SAC
5030B	Purge and Trap	SW846	TAL SAC
7471A	Preparation, Mercury	SW846	TAL SAC

Protocol References:

EM P&K = EMLab P&K, Faciltiy Standard Operating Procedure

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EMLab P&K = EMLab P&K - South San Francisco, 6000 Shoreline Court, Suite 205, South San Francisco, CA 94080, TEL (866)888-6653

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: GSI Environmental, Inc
Job ID: 320-71386-1
Project/Site: Integral Communities Pittsburg Project

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
320-71386-1	SB-18-3.0	Solid	03/17/21 11:00	03/17/21 17:10	
320-71386-2	SB-18-9.0	Solid	03/17/21 11:15	03/17/21 17:10	
320-71386-3	SB-08-3.0	Solid	03/17/21 14:00	03/17/21 17:10	
320-71386-4	SB-08-8.0	Solid	03/17/21 14:15	03/17/21 17:10	
320-71386-5	SB-17-GW	Water	03/17/21 09:55	03/17/21 17:10	
320-71386-6	TRIP BLANK	Water	03/17/21 10:05	03/17/21 17:10	
320-71386-7	SB-18-GW	Water	03/17/21 12:40	03/17/21 17:10	
320-71386-8	SB-08-GW	Water	03/17/21 14:50	03/17/21 17:10	

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Report for:

Ms. Afsaneh Salimpour
TestAmerica-Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566

Regarding: Project: 320-71386-1; Integral Communities Pittsburg Project
EML ID: 2601136

Approved by:

Technical Manager
Murali Putty

Dates of Analysis:
Asbestos-CARB 435 (400 pt ct): 03-26-2021

Service SOPs: Asbestos-CARB 435 (400 pt ct) (EM-AS-S-1265)
NVLAP Lab Code 200728-0

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the samples as received and tested.

Eurofins EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Eurofins EMLab P&K
6000 Shoreline Ct, Ste 205, So. San Francisco, CA 94080
(866) 888-6653 Fax (623) 780-7695 www.emlab.com

Client: TestAmerica-Pleasanton
C/O: Ms. Afsaneh Salimpour
Re: 320-71386-1; Integral Communities Pittsburg Project

Date of Sampling: 03-17-2021
Date of Receipt: 03-19-2021
Date of Report: 03-26-2021

ASBESTOS POINT COUNT REPORT: CARB METHOD 435

Location:	SB-18-3.0 (320-71386-1)		
Total Points Counted:	400		
Lab ID-Version‡:	12414634-1		
Sample Layers	**Asbestos Type**	**Asbestos Points Counted**	**Asbestos Concentration (%)**
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: No asbestos was detected and no points were counted.

Location:	SB-08-3.0 (320-71386-2)		
Total Points Counted:	400		
Lab ID-Version‡:	12414635-1		
Sample Layers	**Asbestos Type**	**Asbestos Points Counted**	**Asbestos Concentration (%)**
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: No asbestos was detected and no points were counted.

Location:	SB-08-8.0 (320-71386-3)		
Total Points Counted:	400		
Lab ID-Version‡:	12414636-1		
Sample Layers	**Asbestos Type**	**Asbestos Points Counted**	**Asbestos Concentration (%)**
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: No asbestos was detected and no points were counted.

The analytical sensitivity is 1 asbestos point. The limit of detection is 1 asbestos point divided by the total number of points counted and multiplied by 100.

The results relate only to the items tested. Interpretation is left to the company and/or persons who conducted the field work. The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by any agency of the federal government.

All samples were received in acceptable condition unless otherwise noted. Eurofins EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

GSI ENVIRONMENTAL

320-71386 # 199135

CHAIN-OF-CUSTODY RECORD
Date: 3/17/21
Page 2 of 2

FROM: GSI Environmental Inc. 155 Grand Ave. Suite 704 Oakland, CA 94612 (510) 463-8484	PROJECT NAME: Integral Communities Pittsburg 420 E. 3RD ST PROJECT CONTACT: Matt Goerz GLOBAL ID:	PROJECT NO.: 5785 LAB CONTACT: Afsaneh Salimpour SAMPLER(S): (PRINT) MATT GOERZ
TEL: (510) 463-8484	E-MAIL: mpgoerz@gsi-env.com	

LABORATORY: EUROFINS TEST AMERICA - SACRAMENTO

TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

SPECIAL INSTRUCTIONS: Please run silica gel preparation before TPH diesel and motor oil analysis.

REQUESTED ANALYSES
Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved HCL	Field Filtered	VOCs and TPH gas 8260B	TPH d, mo EPA 8015	Silica Gel Preparation
	SB-17-GW	3/17/21	0955	W	2	X				X	X
	SB-17-GW		0955	W	3		X		X		
	TRIP BLANK		1005	W	2		X		X		
	SB-18-GW		1240	W	2	X				X	X
	SB-18-GW		1240	W	3		X		X		
	SB-08-GW		1450	W	2	X				X	X
	SB-08-GW		1450	W	3		X		X		

320-71386 Chain of Custody

MPG

MPG

Relinquished by: (Signature)	Received by: (Signature) A Fisk FTA SS	Date: 3/17/21	Time: 1524
Relinquished by: (Signature) A Fisk 3.17.21 17:10	Received by: (Signature)	Date: 3/17/21	Time: 1710
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

GSI ENVIRONMENTAL

320-71986

#199135

CHAIN-OF-CUSTODY RECORD
Date: 3/17/21
Page 1 of 2

FROM: GSI Environmental Inc. 155 Grand Ave. Suite 704 Oakland, CA 94612 (510) 463-8484	PROJECT NAME: Integral Communities Pittsburg 420 E 3RD ST PROJECT CONTACT: Matt Goerz GLOBAL ID:	PROJECT NO.: 5785 LAB CONTACT: Afsaneh Salimpour SAMPLER(S): (PRINT) MATT GOERZ
TEL: (510) 463-8484	E-MAIL: mpgoerz@gsi-env.com	

LABORATORY: EUROFINS TEST AMERICA - SACRAMENT

TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

SPECIAL INSTRUCTIONS:

REQUESTED ANALYSES
Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH d, mo EPA 8015	PAHs EPA 8270 SIM	Title 22 Metals 6010/7470	PCB EPA 8082	Asbestos by CARB 435
	SB-18-3.0	3/17/21	1100	S-L	3	X			X	X	X	X	X
	SB-18-9.0	↓	1115	↓	1				X	X	X	X	
	SB-08-3.0		1400		3				X	X	X	X	X
	SB-08-8.0	↓	1415	↓	2				X	X	X	X	X

MPG

Relinquished by: (Signature)	Received by: (Signature) A. Fisher ETA CJ	Date: 3/17/21	Time: 1524
Relinquished by: (Signature) A. Fisher 3.17.21 17:10	Received by: (Signature)	Date: 3/17/21	Time: 1710
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

3.8 C°

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600 Fax: 916-372-1059

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Salimpour, Afsaneh F	Carrier Tracking No(s):	COC No: 320-216455.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Afsaneh.Salimpour@Eurofinset.com	State of Origin: California	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State - California		Job #: 320-71386-1
Address: 880 Riverside Parkway,	Due Date Requested: 3/23/2021			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Integral Communities Pittsburg Project	Project #: 32017420			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015B_DRO/3550B DRO/MRO	8270C_SIM/3546 PAHs	6010B/3050B CAM 17 List, minus Mercury	7471A/7471A_Prep Mercury Only	8082/3546 PCBs, Standard List	~~Moisture (MOD) Local Method~~ 3/18/21	8260B/CA_LUFTMS/5030B GRO C4-C12	8260B/5030B VOCs, Standard List	8015B_DRO/3510C_SGC DRO/MRO	Total Number of containers	Special Instructions/Note:
			Preservation Code:														
SB-18-3.0 (320-71386-1)	3/17/21	11:00 Pacific		Solid			X	X	X	X	X	X				2	
SB-18-9.0 (320-71386-2)	3/17/21	11:15 Pacific		Solid			X	X	X	X	X	X				1	
SB-08-3.0 (320-71386-3)	3/17/21	14:00 Pacific		Solid			X	X	X	X	X	X					
SB-08-8.0 (320-71386-4)	3/17/21	14:15 Pacific		Solid			X	X	X	X	X	X					
SB-17-GW (320-71386-5)	3/17/21	09:55 Pacific		Water									X	X	X	5	
TRIP BLANK (320-71386-6)	3/17/21	10:05 Pacific		Water									X	X		2	
SB-18-GW (320-71386-7)	3/17/21	12:40 Pacific		Water									X	X	X		
SB-08-GW (320-71386-8)	3/17/21	14:50 Pacific		Water									X	X	X	5	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		3/18/21 1630	FEDEX	Reagan	3/18/21 1630	DCS
2	Reagan	3-18-21 2000	DCS		3/18/21 2000	EMSAC
3		Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.7 & 3.3 & 4.5

Ver: 11/01/2020

Login Sample Receipt Checklist

Client: GSI Environmental, Inc

Job Number: 320-71386-1

Login Number: 71386
List Number: 1
Creator: Garcia, Hilario A

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GSI Environmental, Inc

Job Number: 320-71386-1

Login Number: 71386
List Number: 2
Creator: Guzman, Juan

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.7 & 3.3 & 4.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-71537-1
Client Project/Site: Integral Communities Pittsburg Project

For:
GSI Environmental, Inc
155 Grand Avenue
Suite 704
Oakland, California 94612

Attn: Matt Goerz

Authorized for release by:
4/2/2021 1:29:14 PM

Afsaneh Salimpour, Senior Project Manager
(925)484-1919
Afsaneh.Salimpour@Eurofinset.com

LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: GSI Environmental, Inc
Job ID: 320-71537-1
Project/Site: Integral Communities Pittsburg Project

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.

GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 320-71537-1

Laboratory: Eurofins TestAmerica, Sacramento

Narrative

Job Narrative
320-71537-1

Comments
No additional comments.

Receipt
The samples were received on 3/19/2021 4:25 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 4.2º C and 5.1º C.

GC/MS VOA
Method 8260B: Internal standard (ISTD) response for Dioxane-d8 and TBA-d9 for the following sample was outside acceptance criteria: SB-05-GW (320-71537-3). This ISTD does not correspond to any of the requested target compounds; therefore, the data have been reported.

Method 8260B: Internal standard (ISTD) response for Dioxane-d8, 2-Butanone-d5 and TBA-d9 for the following sample was outside acceptance criteria: DUP-01 (320-71537-4). This ISTD does not correspond to any of the requested target compounds; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270C SIM: The following samples were diluted due to the nature of the sample matrix: SB-07-3.0 (320-71537-8), SB-05-8.0 (320-71537-12) and SB-03-3.0 (320-71537-14). As such, surrogate recoveries are below the calibration range or are not reported, and elevated reporting limits (RLs) are provided.

Method 8270C SIM: The following samples were diluted due to the nature of the sample matrix: SB-07-3.0 (320-71537-8), SB-05-8.0 (320-71537-12) and SB-03-3.0 (320-71537-14). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method 8015B: The following samples contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: SB-07-3.0 (320-71537-8), SB-05-3.0 (320-71537-11), SB-05-8.0 (320-71537-12), SB-03-3.0 (320-71537-14) and SB-19-3.0 (320-71537-15).

Method 8015B: Surrogate recovery for the following samples were outside control limits: SB-05-GW (320-71537-3) and DUP-01 (320-71537-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8082: The following sample(s) contained more than one Aroclor with insufficient separation to quantify individually. The PCBs present are quantified as the predominant Aroclor: SB-05-8.0 (320-71537-12).

Method 8082: Surrogate recovery for the following samples were outside control limits: SB-05-3.0 (320-71537-11) and SB-05-8.0 (320-71537-12). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8082: The method blank (MB) associated with batch 320-475867 recovery was outside control limits for surrogate Tetrachloro-m-xylene. Surrogate Decachlorobiphenyl (DCB) is used for control purposes, and DCB recovery was within control limits; therefore, the data have been reported.

Method 8082: The continuing calibration verification (CCV) associated with batch 320-475867 recovered above the upper control limit for PCB-1016, PCB-1260, PCB-1254, Decachlorobiphenyl (DCB) and Tetrachloro-m-xylene (TCX). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Job ID: 320-71537-1 (Continued)

Laboratory: Eurofins TestAmerica, Sacramento (Continued)

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
Method 3510C SGC: The following samples formed emulsions during the extraction procedure: SB-05-GW (320-71537-3) and DUP-01 (320-71537-4). The emulsions were broken up using sodium sulfate. These samples are associated with method 8015B_DRO aqueous in preparation batch 320-473761 and 320-473761.

Method 3510C SGC: Elevated reporting limits are provided for the following sample due to insufficient sample provided for preparation: SB-05-GW (320-71537-3). This sample is associated with method 8015B_DRO aqueous in preparation batch 320-473761.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71537-1

Client Sample ID: SB-04-GW — Lab Sample ID: 320-71537-1

No Detections.

Client Sample ID: SB-01-GW — Lab Sample ID: 320-71537-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	1.5		0.50		ug/L	1		8260B	Total/NA
Trichloroethene	0.66		0.50		ug/L	1		8260B	Total/NA

Client Sample ID: SB-05-GW — Lab Sample ID: 320-71537-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO)-C4-C12	53		50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Benzene	1.3		0.50		ug/L	1		8260B	Total/NA
Diesel Range Organics [C10-C28]	61		56		ug/L	1		8015B	Silica Gel Cleanup

Client Sample ID: DUP-01 — Lab Sample ID: 320-71537-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.4		0.50		ug/L	1		8260B	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 320-71537-5

No Detections.

Client Sample ID: SB-04-3.0 — Lab Sample ID: 320-71537-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.5		2.0		mg/Kg	1		6010B	Total/NA
Barium	92		1.0		mg/Kg	1		6010B	Total/NA
Beryllium	0.22		0.20		mg/Kg	1		6010B	Total/NA
Chromium	42		0.50		mg/Kg	1		6010B	Total/NA
Cobalt	12		0.50		mg/Kg	1		6010B	Total/NA
Copper	21		1.5		mg/Kg	1		6010B	Total/NA
Lead	5.2		1.0		mg/Kg	1		6010B	Total/NA
Nickel	66		1.0		mg/Kg	1		6010B	Total/NA
Vanadium	47		0.50		mg/Kg	1		6010B	Total/NA
Zinc	44		2.0		mg/Kg	1		6010B	Total/NA

Client Sample ID: SB-04-8.0 — Lab Sample ID: 320-71537-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	54		0.97		mg/Kg	1		6010B	Total/NA
Chromium	40		0.49		mg/Kg	1		6010B	Total/NA
Cobalt	11		0.49		mg/Kg	1		6010B	Total/NA
Copper	13		1.5		mg/Kg	1		6010B	Total/NA
Lead	3.6		0.97		mg/Kg	1		6010B	Total/NA
Nickel	61		0.97		mg/Kg	1		6010B	Total/NA
Vanadium	40		0.49		mg/Kg	1		6010B	Total/NA
Zinc	33		1.9		mg/Kg	1		6010B	Total/NA

Client Sample ID: SB-07-3.0 — Lab Sample ID: 320-71537-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chrysene	0.027		0.025		mg/Kg	5		8270C SIM	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SB-07-3.0 (Continued) — Lab Sample ID: 320-71537-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoranthene	0.030		0.025		mg/Kg	5		8270C SIM	Total/NA
Naphthalene	0.081		0.025		mg/Kg	5		8270C SIM	Total/NA
Pyrene	0.040		0.025		mg/Kg	5		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	10		0.97		mg/Kg	1		8015B	Total/NA
Motor Oil Range Organics [C28-C40]	27		4.9		mg/Kg	1		8015B	Total/NA
Arsenic	3.4		1.3		mg/Kg	1		6010B	Total/NA
Barium	86		0.66		mg/Kg	1		6010B	Total/NA
Beryllium	0.26		0.13		mg/Kg	1		6010B	Total/NA
Chromium	34		0.33		mg/Kg	1		6010B	Total/NA
Cobalt	14		0.33		mg/Kg	1		6010B	Total/NA
Copper	21		0.99		mg/Kg	1		6010B	Total/NA
Lead	7.7		0.66		mg/Kg	1		6010B	Total/NA
Nickel	46		0.66		mg/Kg	1		6010B	Total/NA
Vanadium	35		0.33		mg/Kg	1		6010B	Total/NA
Zinc	46		1.3		mg/Kg	1		6010B	Total/NA
Mercury	0.044		0.039		mg/Kg	1		7471A	Total/NA

Client Sample ID: SB-01-3.0 — Lab Sample ID: 320-71537-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	5.6		1.9		mg/Kg	1		6010B	Total/NA
Barium	290		0.97		mg/Kg	1		6010B	Total/NA
Beryllium	0.53		0.19		mg/Kg	1		6010B	Total/NA
Cadmium	0.19		0.19		mg/Kg	1		6010B	Total/NA
Chromium	33		0.49		mg/Kg	1		6010B	Total/NA
Cobalt	9.5		0.49		mg/Kg	1		6010B	Total/NA
Copper	23		1.5		mg/Kg	1		6010B	Total/NA
Lead	6.8		0.97		mg/Kg	1		6010B	Total/NA
Nickel	32		0.97		mg/Kg	1		6010B	Total/NA
Vanadium	56		0.49		mg/Kg	1		6010B	Total/NA
Zinc	54		1.9		mg/Kg	1		6010B	Total/NA

Client Sample ID: SB-01-8.0 — Lab Sample ID: 320-71537-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	6.9		2.0		mg/Kg	1		6010B	Total/NA
Barium	290		0.99		mg/Kg	1		6010B	Total/NA
Beryllium	0.65		0.20		mg/Kg	1		6010B	Total/NA
Chromium	28		0.50		mg/Kg	1		6010B	Total/NA
Cobalt	10		0.50		mg/Kg	1		6010B	Total/NA
Copper	27		1.5		mg/Kg	1		6010B	Total/NA
Lead	9.4		0.99		mg/Kg	1		6010B	Total/NA
Nickel	30		0.99		mg/Kg	1		6010B	Total/NA
Vanadium	49		0.50		mg/Kg	1		6010B	Total/NA
Zinc	65		2.0		mg/Kg	1		6010B	Total/NA

Client Sample ID: SB-05-3.0 — Lab Sample ID: 320-71537-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.019		0.0050		mg/Kg	1		8270C SIM	Total/NA
Anthracene	0.021		0.0050		mg/Kg	1		8270C SIM	Total/NA
Benzo[a]anthracene	0.061		0.0050		mg/Kg	1		8270C SIM	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SB-05-3.0 (Continued)
Lab Sample ID: 320-71537-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]pyrene	0.057		0.0050		mg/Kg	1		8270C SIM	Total/NA
Benzo[b]fluoranthene	0.056		0.0050		mg/Kg	1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	0.029		0.0050		mg/Kg	1		8270C SIM	Total/NA
Benzo[k]fluoranthene	0.021		0.0050		mg/Kg	1		8270C SIM	Total/NA
Chrysene	0.070		0.0050		mg/Kg	1		8270C SIM	Total/NA
Dibenz(a,h)anthracene	0.0091		0.0050		mg/Kg	1		8270C SIM	Total/NA
Fluoranthene	0.096		0.0050		mg/Kg	1		8270C SIM	Total/NA
Fluorene	0.0095		0.0050		mg/Kg	1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	0.033		0.0050		mg/Kg	1		8270C SIM	Total/NA
Naphthalene	0.0098		0.0050		mg/Kg	1		8270C SIM	Total/NA
Phenanthrene	0.097		0.0050		mg/Kg	1		8270C SIM	Total/NA
Pyrene	0.14		0.0050		mg/Kg	1		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	25		0.99		mg/Kg	1		8015B	Total/NA
Motor Oil Range Organics [C28-C40]	68		4.9		mg/Kg	1		8015B	Total/NA
Arsenic	4.6		2.0		mg/Kg	1		6010B	Total/NA
Barium	110		0.99		mg/Kg	1		6010B	Total/NA
Beryllium	0.42		0.20		mg/Kg	1		6010B	Total/NA
Chromium	26		0.50		mg/Kg	1		6010B	Total/NA
Cobalt	8.5		0.50		mg/Kg	1		6010B	Total/NA
Copper	19		1.5		mg/Kg	1		6010B	Total/NA
Lead	9.5		0.99		mg/Kg	1		6010B	Total/NA
Nickel	28		0.99		mg/Kg	1		6010B	Total/NA
Vanadium	41		0.50		mg/Kg	1		6010B	Total/NA
Zinc	48		2.0		mg/Kg	1		6010B	Total/NA

Client Sample ID: SB-05-8.0
Lab Sample ID: 320-71537-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoranthene	0.032		0.025		mg/Kg	5		8270C SIM	Total/NA
Pyrene	0.034		0.025		mg/Kg	5		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	4.6		0.98		mg/Kg	1		8015B	Total/NA
Motor Oil Range Organics [C28-C40]	9.9		4.9		mg/Kg	1		8015B	Total/NA
PCB-1254	0.079		0.031		mg/Kg	1		8082	Total/NA
Arsenic	4.1		2.0		mg/Kg	1		6010B	Total/NA
Barium	140		0.99		mg/Kg	1		6010B	Total/NA
Beryllium	0.42		0.20		mg/Kg	1		6010B	Total/NA
Chromium	25		0.50		mg/Kg	1		6010B	Total/NA
Cobalt	9.0		0.50		mg/Kg	1		6010B	Total/NA
Copper	17		1.5		mg/Kg	1		6010B	Total/NA
Lead	7.8		0.99		mg/Kg	1		6010B	Total/NA
Nickel	27		0.99		mg/Kg	1		6010B	Total/NA
Vanadium	39		0.50		mg/Kg	1		6010B	Total/NA
Zinc	42		2.0		mg/Kg	1		6010B	Total/NA

Client Sample ID: SB-03-3.0
Lab Sample ID: 320-71537-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	11		0.98		mg/Kg	1		8015B	Total/NA
Motor Oil Range Organics [C28-C40]	43		4.9		mg/Kg	1		8015B	Total/NA
Arsenic	4.5		2.0		mg/Kg	1		6010B	Total/NA
Barium	110		0.99		mg/Kg	1		6010B	Total/NA
Beryllium	0.38		0.20		mg/Kg	1		6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SB-03-3.0 (Continued) — Lab Sample ID: 320-71537-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	21		0.50		mg/Kg	1		6010B	Total/NA
Cobalt	7.6		0.50		mg/Kg	1		6010B	Total/NA
Copper	16		1.5		mg/Kg	1		6010B	Total/NA
Lead	5.9		0.99		mg/Kg	1		6010B	Total/NA
Nickel	21		0.99		mg/Kg	1		6010B	Total/NA
Vanadium	37		0.50		mg/Kg	1		6010B	Total/NA
Zinc	45		2.0		mg/Kg	1		6010B	Total/NA
Mercury	0.044		0.039		mg/Kg	1		7471A	Total/NA

Client Sample ID: SB-19-3.0 — Lab Sample ID: 320-71537-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	13		0.99		mg/Kg	1		8015B	Total/NA
Motor Oil Range Organics [C28-C40]	34		5.0		mg/Kg	1		8015B	Total/NA
Arsenic	4.3		1.9		mg/Kg	1		6010B	Total/NA
Barium	110		0.96		mg/Kg	1		6010B	Total/NA
Beryllium	0.41		0.19		mg/Kg	1		6010B	Total/NA
Chromium	24		0.48		mg/Kg	1		6010B	Total/NA
Cobalt	9.0		0.48		mg/Kg	1		6010B	Total/NA
Copper	18		1.4		mg/Kg	1		6010B	Total/NA
Lead	10		0.96		mg/Kg	1		6010B	Total/NA
Nickel	28		0.96		mg/Kg	1		6010B	Total/NA
Vanadium	39		0.48		mg/Kg	1		6010B	Total/NA
Zinc	43		1.9		mg/Kg	1		6010B	Total/NA

Client Sample ID: SB-06-3.0 — Lab Sample ID: 320-71537-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	4.3		1.9		mg/Kg	1		6010B	Total/NA
Barium	55		0.97		mg/Kg	1		6010B	Total/NA
Chromium	36		0.49		mg/Kg	1		6010B	Total/NA
Cobalt	9.7		0.49		mg/Kg	1		6010B	Total/NA
Copper	10		1.5		mg/Kg	1		6010B	Total/NA
Lead	3.1		0.97		mg/Kg	1		6010B	Total/NA
Nickel	55		0.97		mg/Kg	1		6010B	Total/NA
Vanadium	39		0.49		mg/Kg	1		6010B	Total/NA
Zinc	27		1.9		mg/Kg	1		6010B	Total/NA

Client Sample ID: SB-21-3.0 — Lab Sample ID: 320-71537-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	3.5		1.9		mg/Kg	1		6010B	Total/NA
Barium	92		0.97		mg/Kg	1		6010B	Total/NA
Beryllium	0.37		0.19		mg/Kg	1		6010B	Total/NA
Chromium	25		0.49		mg/Kg	1		6010B	Total/NA
Cobalt	8.3		0.49		mg/Kg	1		6010B	Total/NA
Copper	15		1.5		mg/Kg	1		6010B	Total/NA
Lead	5.7		0.97		mg/Kg	1		6010B	Total/NA
Nickel	29		0.97		mg/Kg	1		6010B	Total/NA
Vanadium	38		0.49		mg/Kg	1		6010B	Total/NA
Zinc	38		1.9		mg/Kg	1		6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71537-1

Client Sample ID: SB-04-GW

Date Collected: 03/17/21 16:40
Date Received: 03/19/21 16:25

Lab Sample ID: 320-71537-1

Matrix: Water

Method: 8260B/CA_LUFTMS - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C4-C12	ND		50		ug/L			03/25/21 13:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*73 - 115*		*03/25/21 13:29*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			03/25/21 13:29	1
Bromobenzene	ND		1.0		ug/L			03/25/21 13:29	1
Bromochloromethane	ND		1.0		ug/L			03/25/21 13:29	1
Bromodichloromethane	ND		0.50		ug/L			03/25/21 13:29	1
Bromoform	ND		1.0		ug/L			03/25/21 13:29	1
Bromomethane	ND		1.0		ug/L			03/25/21 13:29	1
Carbon tetrachloride	ND		0.50		ug/L			03/25/21 13:29	1
Chlorobenzene	ND		0.50		ug/L			03/25/21 13:29	1
Chloroethane	ND		1.0		ug/L			03/25/21 13:29	1
Chloroform	ND		1.0		ug/L			03/25/21 13:29	1
Chloromethane	ND		1.0		ug/L			03/25/21 13:29	1
2-Chlorotoluene	ND		0.50		ug/L			03/25/21 13:29	1
4-Chlorotoluene	ND		0.50		ug/L			03/25/21 13:29	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			03/25/21 13:29	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			03/25/21 13:29	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			03/25/21 13:29	1
1,2-Dibromoethane (EDB)	ND		0.50		ug/L			03/25/21 13:29	1
Dibromomethane	ND		0.50		ug/L			03/25/21 13:29	1
1,2-Dichlorobenzene	ND		0.50		ug/L			03/25/21 13:29	1
1,3-Dichlorobenzene	ND		0.50		ug/L			03/25/21 13:29	1
1,4-Dichlorobenzene	ND		0.50		ug/L			03/25/21 13:29	1
Dichlorodifluoromethane	ND		1.0		ug/L			03/25/21 13:29	1
1,1-Dichloroethane	ND		0.50		ug/L			03/25/21 13:29	1
1,2-Dichloroethane	ND		0.50		ug/L			03/25/21 13:29	1
1,1-Dichloroethene	ND		0.50		ug/L			03/25/21 13:29	1
1,2-Dichloropropane	ND		0.50		ug/L			03/25/21 13:29	1
1,3-Dichloropropane	ND		1.0		ug/L			03/25/21 13:29	1
2,2-Dichloropropane	ND		1.0		ug/L			03/25/21 13:29	1
1,1-Dichloropropene	ND		0.50		ug/L			03/25/21 13:29	1
Ethylbenzene	ND		0.50		ug/L			03/25/21 13:29	1
Hexachlorobutadiene	ND		1.0		ug/L			03/25/21 13:29	1
Isopropylbenzene	ND		0.50		ug/L			03/25/21 13:29	1
Methylene Chloride	ND		1.0		ug/L			03/25/21 13:29	1
m-Xylene & p-Xylene	ND		0.50		ug/L			03/25/21 13:29	1
Naphthalene	ND		1.0		ug/L			03/25/21 13:29	1
n-Butylbenzene	ND		1.0		ug/L			03/25/21 13:29	1
N-Propylbenzene	ND		1.0		ug/L			03/25/21 13:29	1
o-Xylene	ND		0.50		ug/L			03/25/21 13:29	1
p-Isopropyltoluene	ND		1.0		ug/L			03/25/21 13:29	1
sec-Butylbenzene	ND		1.0		ug/L			03/25/21 13:29	1
Styrene	ND		0.50		ug/L			03/25/21 13:29	1
tert-Butylbenzene	ND		1.0		ug/L			03/25/21 13:29	1

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71537-1

Client Sample ID: SB-04-GW
Date Collected: 03/17/21 16:40
Date Received: 03/19/21 16:25

Lab Sample ID: 320-71537-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			03/25/21 13:29	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			03/25/21 13:29	1
Tetrachloroethene	ND		0.50		ug/L			03/25/21 13:29	1
Toluene	ND		0.50		ug/L			03/25/21 13:29	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			03/25/21 13:29	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			03/25/21 13:29	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			03/25/21 13:29	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			03/25/21 13:29	1
1,1,1-Trichloroethane	ND		0.50		ug/L			03/25/21 13:29	1
1,1,2-Trichloroethane	ND		0.50		ug/L			03/25/21 13:29	1
Trichloroethene	ND		0.50		ug/L			03/25/21 13:29	1
Trichlorofluoromethane	ND		1.0		ug/L			03/25/21 13:29	1
1,2,3-Trichloropropane	ND		1.0		ug/L			03/25/21 13:29	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			03/25/21 13:29	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			03/25/21 13:29	1
Vinyl chloride	ND		0.50		ug/L			03/25/21 13:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*74 - 120*		*03/25/21 13:29*	*1*
Dibromofluoromethane (Surr)	*109*		*80 - 123*		*03/25/21 13:29*	*1*
1,2-Dichloroethane-d4 (Surr)	*116*		*72 - 123*		*03/25/21 13:29*	*1*
Toluene-d8 (Surr)	*116*		*78 - 120*		*03/25/21 13:29*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		48		ug/L		03/24/21 16:36	03/25/21 22:38	1
Motor Oil Range Organics [C28-C40]	ND		480		ug/L		03/24/21 16:36	03/25/21 22:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*60*		*56 - 145*	*03/24/21 16:36*	*03/25/21 22:38*	*1*

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71537-1

Client Sample ID: SB-01-GW

Date Collected: 03/17/21 09:20
Date Received: 03/19/21 16:25

Lab Sample ID: 320-71537-2

Matrix: Water

Method: 8260B/CA_LUFTMS - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C4-C12	ND		50		ug/L			03/25/21 13:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*73 - 115*		*03/25/21 13:52*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			03/25/21 13:52	1
Bromobenzene	ND		1.0		ug/L			03/25/21 13:52	1
Bromochloromethane	ND		1.0		ug/L			03/25/21 13:52	1
Bromodichloromethane	ND		0.50		ug/L			03/25/21 13:52	1
Bromoform	ND		1.0		ug/L			03/25/21 13:52	1
Bromomethane	ND		1.0		ug/L			03/25/21 13:52	1
Carbon tetrachloride	ND		0.50		ug/L			03/25/21 13:52	1
Chlorobenzene	ND		0.50		ug/L			03/25/21 13:52	1
Chloroethane	ND		1.0		ug/L			03/25/21 13:52	1
Chloroform	ND		1.0		ug/L			03/25/21 13:52	1
Chloromethane	ND		1.0		ug/L			03/25/21 13:52	1
2-Chlorotoluene	ND		0.50		ug/L			03/25/21 13:52	1
4-Chlorotoluene	ND		0.50		ug/L			03/25/21 13:52	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			03/25/21 13:52	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			03/25/21 13:52	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			03/25/21 13:52	1
1,2-Dibromoethane (EDB)	ND		0.50		ug/L			03/25/21 13:52	1
Dibromomethane	ND		0.50		ug/L			03/25/21 13:52	1
1,2-Dichlorobenzene	ND		0.50		ug/L			03/25/21 13:52	1
1,3-Dichlorobenzene	ND		0.50		ug/L			03/25/21 13:52	1
1,4-Dichlorobenzene	ND		0.50		ug/L			03/25/21 13:52	1
Dichlorodifluoromethane	ND		1.0		ug/L			03/25/21 13:52	1
1,1-Dichloroethane	ND		0.50		ug/L			03/25/21 13:52	1
1,2-Dichloroethane	ND		0.50		ug/L			03/25/21 13:52	1
1,1-Dichloroethene	ND		0.50		ug/L			03/25/21 13:52	1
1,2-Dichloropropane	ND		0.50		ug/L			03/25/21 13:52	1
1,3-Dichloropropane	ND		1.0		ug/L			03/25/21 13:52	1
2,2-Dichloropropane	ND		1.0		ug/L			03/25/21 13:52	1
1,1-Dichloropropene	ND		0.50		ug/L			03/25/21 13:52	1
Ethylbenzene	ND		0.50		ug/L			03/25/21 13:52	1
Hexachlorobutadiene	ND		1.0		ug/L			03/25/21 13:52	1
Isopropylbenzene	ND		0.50		ug/L			03/25/21 13:52	1
Methylene Chloride	ND		1.0		ug/L			03/25/21 13:52	1
m-Xylene & p-Xylene	ND		0.50		ug/L			03/25/21 13:52	1
Naphthalene	ND		1.0		ug/L			03/25/21 13:52	1
n-Butylbenzene	ND		1.0		ug/L			03/25/21 13:52	1
N-Propylbenzene	ND		1.0		ug/L			03/25/21 13:52	1
o-Xylene	ND		0.50		ug/L			03/25/21 13:52	1
p-Isopropyltoluene	ND		1.0		ug/L			03/25/21 13:52	1
sec-Butylbenzene	ND		1.0		ug/L			03/25/21 13:52	1
Styrene	ND		0.50		ug/L			03/25/21 13:52	1
tert-Butylbenzene	ND		1.0		ug/L			03/25/21 13:52	1

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71537-1

Client Sample ID: SB-01-GW
Date Collected: 03/17/21 09:20
Date Received: 03/19/21 16:25

Lab Sample ID: 320-71537-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			03/25/21 13:52	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			03/25/21 13:52	1
Tetrachloroethene	**1.5**		0.50		ug/L			03/25/21 13:52	1
Toluene	ND		0.50		ug/L			03/25/21 13:52	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			03/25/21 13:52	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			03/25/21 13:52	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			03/25/21 13:52	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			03/25/21 13:52	1
1,1,1-Trichloroethane	ND		0.50		ug/L			03/25/21 13:52	1
1,1,2-Trichloroethane	ND		0.50		ug/L			03/25/21 13:52	1
Trichloroethene	**0.66**		0.50		ug/L			03/25/21 13:52	1
Trichlorofluoromethane	ND		1.0		ug/L			03/25/21 13:52	1
1,2,3-Trichloropropane	ND		1.0		ug/L			03/25/21 13:52	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			03/25/21 13:52	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			03/25/21 13:52	1
Vinyl chloride	ND		0.50		ug/L			03/25/21 13:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*74 - 120*		*03/25/21 13:52*	*1*
Dibromofluoromethane (Surr)	*111*		*80 - 123*		*03/25/21 13:52*	*1*
1,2-Dichloroethane-d4 (Surr)	*115*		*72 - 123*		*03/25/21 13:52*	*1*
Toluene-d8 (Surr)	*115*		*78 - 120*		*03/25/21 13:52*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		48		ug/L		03/24/21 16:36	03/25/21 23:03	1
Motor Oil Range Organics [C28-C40]	ND		480		ug/L		03/24/21 16:36	03/25/21 23:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*63*		*56 - 145*	*03/24/21 16:36*	*03/25/21 23:03*	*1*

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71537-1

Client Sample ID: SB-05-GW

Date Collected: 03/19/21 13:00
Date Received: 03/19/21 16:25

Lab Sample ID: 320-71537-3

Matrix: Water

Method: 8260B/CA_LUFTMS - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C4-C12	**53**		50		ug/L			03/25/21 14:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*73 - 115*		*03/25/21 14:15*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1.3**		0.50		ug/L			03/25/21 14:15	1
Bromobenzene	ND		1.0		ug/L			03/25/21 14:15	1
Bromochloromethane	ND		1.0		ug/L			03/25/21 14:15	1
Bromodichloromethane	ND		0.50		ug/L			03/25/21 14:15	1
Bromoform	ND		1.0		ug/L			03/25/21 14:15	1
Bromomethane	ND		1.0		ug/L			03/25/21 14:15	1
Carbon tetrachloride	ND		0.50		ug/L			03/25/21 14:15	1
Chlorobenzene	ND		0.50		ug/L			03/25/21 14:15	1
Chloroethane	ND		1.0		ug/L			03/25/21 14:15	1
Chloroform	ND		1.0		ug/L			03/25/21 14:15	1
Chloromethane	ND		1.0		ug/L			03/25/21 14:15	1
2-Chlorotoluene	ND		0.50		ug/L			03/25/21 14:15	1
4-Chlorotoluene	ND		0.50		ug/L			03/25/21 14:15	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			03/25/21 14:15	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			03/25/21 14:15	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			03/25/21 14:15	1
1,2-Dibromoethane (EDB)	ND		0.50		ug/L			03/25/21 14:15	1
Dibromomethane	ND		0.50		ug/L			03/25/21 14:15	1
1,2-Dichlorobenzene	ND		0.50		ug/L			03/25/21 14:15	1
1,3-Dichlorobenzene	ND		0.50		ug/L			03/25/21 14:15	1
1,4-Dichlorobenzene	ND		0.50		ug/L			03/25/21 14:15	1
Dichlorodifluoromethane	ND		1.0		ug/L			03/25/21 14:15	1
1,1-Dichloroethane	ND		0.50		ug/L			03/25/21 14:15	1
1,2-Dichloroethane	ND		0.50		ug/L			03/25/21 14:15	1
1,1-Dichloroethene	ND		0.50		ug/L			03/25/21 14:15	1
1,2-Dichloropropane	ND		0.50		ug/L			03/25/21 14:15	1
1,3-Dichloropropane	ND		1.0		ug/L			03/25/21 14:15	1
2,2-Dichloropropane	ND		1.0		ug/L			03/25/21 14:15	1
1,1-Dichloropropene	ND		0.50		ug/L			03/25/21 14:15	1
Ethylbenzene	ND		0.50		ug/L			03/25/21 14:15	1
Hexachlorobutadiene	ND		1.0		ug/L			03/25/21 14:15	1
Isopropylbenzene	ND		0.50		ug/L			03/25/21 14:15	1
Methylene Chloride	ND		1.0		ug/L			03/25/21 14:15	1
m-Xylene & p-Xylene	ND		0.50		ug/L			03/25/21 14:15	1
Naphthalene	ND		1.0		ug/L			03/25/21 14:15	1
n-Butylbenzene	ND		1.0		ug/L			03/25/21 14:15	1
N-Propylbenzene	ND		1.0		ug/L			03/25/21 14:15	1
o-Xylene	ND		0.50		ug/L			03/25/21 14:15	1
p-Isopropyltoluene	ND		1.0		ug/L			03/25/21 14:15	1
sec-Butylbenzene	ND		1.0		ug/L			03/25/21 14:15	1
Styrene	ND		0.50		ug/L			03/25/21 14:15	1
tert-Butylbenzene	ND		1.0		ug/L			03/25/21 14:15	1

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71537-1

Client Sample ID: SB-05-GW
Date Collected: 03/19/21 13:00
Date Received: 03/19/21 16:25

Lab Sample ID: 320-71537-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			03/25/21 14:15	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			03/25/21 14:15	1
Tetrachloroethene	ND		0.50		ug/L			03/25/21 14:15	1
Toluene	ND		0.50		ug/L			03/25/21 14:15	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			03/25/21 14:15	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			03/25/21 14:15	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			03/25/21 14:15	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			03/25/21 14:15	1
1,1,1-Trichloroethane	ND		0.50		ug/L			03/25/21 14:15	1
1,1,2-Trichloroethane	ND		0.50		ug/L			03/25/21 14:15	1
Trichloroethene	ND		0.50		ug/L			03/25/21 14:15	1
Trichlorofluoromethane	ND		1.0		ug/L			03/25/21 14:15	1
1,2,3-Trichloropropane	ND		1.0		ug/L			03/25/21 14:15	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			03/25/21 14:15	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			03/25/21 14:15	1
Vinyl chloride	ND		0.50		ug/L			03/25/21 14:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*74 - 120*		*03/25/21 14:15*	*1*
Dibromofluoromethane (Surr)	*108*		*80 - 123*		*03/25/21 14:15*	*1*
1,2-Dichloroethane-d4 (Surr)	*114*		*72 - 123*		*03/25/21 14:15*	*1*
Toluene-d8 (Surr)	*113*		*78 - 120*		*03/25/21 14:15*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**61**		56		ug/L		03/25/21 10:14	03/30/21 01:46	1
Motor Oil Range Organics [C28-C40]	ND		560		ug/L		03/25/21 10:14	03/30/21 01:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*41*	*S1-*	*56 - 145*	*03/25/21 10:14*	*03/30/21 01:46*	*1*

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71537-1

Client Sample ID: DUP-01

Date Collected: 03/19/21 13:30
Date Received: 03/19/21 16:25

Lab Sample ID: 320-71537-4

Matrix: Water

Method: 8260B/CA_LUFTMS - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C4-C12	ND		50		ug/L			03/25/21 14:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*73 - 115*		*03/25/21 14:37*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1.4**		0.50		ug/L			03/25/21 14:37	1
Bromobenzene	ND		1.0		ug/L			03/25/21 14:37	1
Bromochloromethane	ND		1.0		ug/L			03/25/21 14:37	1
Bromodichloromethane	ND		0.50		ug/L			03/25/21 14:37	1
Bromoform	ND		1.0		ug/L			03/25/21 14:37	1
Bromomethane	ND		1.0		ug/L			03/25/21 14:37	1
Carbon tetrachloride	ND		0.50		ug/L			03/25/21 14:37	1
Chlorobenzene	ND		0.50		ug/L			03/25/21 14:37	1
Chloroethane	ND		1.0		ug/L			03/25/21 14:37	1
Chloroform	ND		1.0		ug/L			03/25/21 14:37	1
Chloromethane	ND		1.0		ug/L			03/25/21 14:37	1
2-Chlorotoluene	ND		0.50		ug/L			03/25/21 14:37	1
4-Chlorotoluene	ND		0.50		ug/L			03/25/21 14:37	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			03/25/21 14:37	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			03/25/21 14:37	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			03/25/21 14:37	1
1,2-Dibromoethane (EDB)	ND		0.50		ug/L			03/25/21 14:37	1
Dibromomethane	ND		0.50		ug/L			03/25/21 14:37	1
1,2-Dichlorobenzene	ND		0.50		ug/L			03/25/21 14:37	1
1,3-Dichlorobenzene	ND		0.50		ug/L			03/25/21 14:37	1
1,4-Dichlorobenzene	ND		0.50		ug/L			03/25/21 14:37	1
Dichlorodifluoromethane	ND		1.0		ug/L			03/25/21 14:37	1
1,1-Dichloroethane	ND		0.50		ug/L			03/25/21 14:37	1
1,2-Dichloroethane	ND		0.50		ug/L			03/25/21 14:37	1
1,1-Dichloroethene	ND		0.50		ug/L			03/25/21 14:37	1
1,2-Dichloropropane	ND		0.50		ug/L			03/25/21 14:37	1
1,3-Dichloropropane	ND		1.0		ug/L			03/25/21 14:37	1
2,2-Dichloropropane	ND		1.0		ug/L			03/25/21 14:37	1
1,1-Dichloropropene	ND		0.50		ug/L			03/25/21 14:37	1
Ethylbenzene	ND		0.50		ug/L			03/25/21 14:37	1
Hexachlorobutadiene	ND		1.0		ug/L			03/25/21 14:37	1
Isopropylbenzene	ND		0.50		ug/L			03/25/21 14:37	1
Methylene Chloride	ND		1.0		ug/L			03/25/21 14:37	1
m-Xylene & p-Xylene	ND		0.50		ug/L			03/25/21 14:37	1
Naphthalene	ND		1.0		ug/L			03/25/21 14:37	1
n-Butylbenzene	ND		1.0		ug/L			03/25/21 14:37	1
N-Propylbenzene	ND		1.0		ug/L			03/25/21 14:37	1
o-Xylene	ND		0.50		ug/L			03/25/21 14:37	1
p-Isopropyltoluene	ND		1.0		ug/L			03/25/21 14:37	1
sec-Butylbenzene	ND		1.0		ug/L			03/25/21 14:37	1
Styrene	ND		0.50		ug/L			03/25/21 14:37	1
tert-Butylbenzene	ND		1.0		ug/L			03/25/21 14:37	1

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71537-1

Client Sample ID: DUP-01
Date Collected: 03/19/21 13:30
Date Received: 03/19/21 16:25

Lab Sample ID: 320-71537-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			03/25/21 14:37	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			03/25/21 14:37	1
Tetrachloroethene	ND		0.50		ug/L			03/25/21 14:37	1
Toluene	ND		0.50		ug/L			03/25/21 14:37	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			03/25/21 14:37	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			03/25/21 14:37	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			03/25/21 14:37	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			03/25/21 14:37	1
1,1,1-Trichloroethane	ND		0.50		ug/L			03/25/21 14:37	1
1,1,2-Trichloroethane	ND		0.50		ug/L			03/25/21 14:37	1
Trichloroethene	ND		0.50		ug/L			03/25/21 14:37	1
Trichlorofluoromethane	ND		1.0		ug/L			03/25/21 14:37	1
1,2,3-Trichloropropane	ND		1.0		ug/L			03/25/21 14:37	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			03/25/21 14:37	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			03/25/21 14:37	1
Vinyl chloride	ND		0.50		ug/L			03/25/21 14:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*74 - 120*		*03/25/21 14:37*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 123*		*03/25/21 14:37*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*72 - 123*		*03/25/21 14:37*	*1*
Toluene-d8 (Surr)	*115*		*78 - 120*		*03/25/21 14:37*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		48		ug/L		03/25/21 10:14	03/30/21 02:10	1
Motor Oil Range Organics [C28-C40]	ND		480		ug/L		03/25/21 10:14	03/30/21 02:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*48*	*S1-*	*56 - 145*	*03/25/21 10:14*	*03/30/21 02:10*	*1*

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71537-1

Client Sample ID: TRIP BLANK

Date Collected: 03/19/21 00:00
Date Received: 03/19/21 16:25

Lab Sample ID: 320-71537-5

Matrix: Water

Method: 8260B/CA_LUFTMS - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C4-C12	ND		50		ug/L			03/25/21 12:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*73 - 115*		*03/25/21 12:37*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			03/25/21 12:37	1
Bromobenzene	ND		1.0		ug/L			03/25/21 12:37	1
Bromochloromethane	ND		1.0		ug/L			03/25/21 12:37	1
Bromodichloromethane	ND		0.50		ug/L			03/25/21 12:37	1
Bromoform	ND		1.0		ug/L			03/25/21 12:37	1
Bromomethane	ND		1.0		ug/L			03/25/21 12:37	1
Carbon tetrachloride	ND		0.50		ug/L			03/25/21 12:37	1
Chlorobenzene	ND		0.50		ug/L			03/25/21 12:37	1
Chloroethane	ND		1.0		ug/L			03/25/21 12:37	1
Chloroform	ND		1.0		ug/L			03/25/21 12:37	1
Chloromethane	ND		1.0		ug/L			03/25/21 12:37	1
2-Chlorotoluene	ND		0.50		ug/L			03/25/21 12:37	1
4-Chlorotoluene	ND		0.50		ug/L			03/25/21 12:37	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			03/25/21 12:37	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			03/25/21 12:37	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			03/25/21 12:37	1
1,2-Dibromoethane (EDB)	ND		0.50		ug/L			03/25/21 12:37	1
Dibromomethane	ND		0.50		ug/L			03/25/21 12:37	1
1,2-Dichlorobenzene	ND		0.50		ug/L			03/25/21 12:37	1
1,3-Dichlorobenzene	ND		0.50		ug/L			03/25/21 12:37	1
1,4-Dichlorobenzene	ND		0.50		ug/L			03/25/21 12:37	1
Dichlorodifluoromethane	ND		1.0		ug/L			03/25/21 12:37	1
1,1-Dichloroethane	ND		0.50		ug/L			03/25/21 12:37	1
1,2-Dichloroethane	ND		0.50		ug/L			03/25/21 12:37	1
1,1-Dichloroethene	ND		0.50		ug/L			03/25/21 12:37	1
1,2-Dichloropropane	ND		0.50		ug/L			03/25/21 12:37	1
1,3-Dichloropropane	ND		1.0		ug/L			03/25/21 12:37	1
2,2-Dichloropropane	ND		1.0		ug/L			03/25/21 12:37	1
1,1-Dichloropropene	ND		0.50		ug/L			03/25/21 12:37	1
Ethylbenzene	ND		0.50		ug/L			03/25/21 12:37	1
Hexachlorobutadiene	ND		1.0		ug/L			03/25/21 12:37	1
Isopropylbenzene	ND		0.50		ug/L			03/25/21 12:37	1
Methylene Chloride	ND		1.0		ug/L			03/25/21 12:37	1
m-Xylene & p-Xylene	ND		0.50		ug/L			03/25/21 12:37	1
Naphthalene	ND		1.0		ug/L			03/25/21 12:37	1
n-Butylbenzene	ND		1.0		ug/L			03/25/21 12:37	1
N-Propylbenzene	ND		1.0		ug/L			03/25/21 12:37	1
o-Xylene	ND		0.50		ug/L			03/25/21 12:37	1
p-Isopropyltoluene	ND		1.0		ug/L			03/25/21 12:37	1
sec-Butylbenzene	ND		1.0		ug/L			03/25/21 12:37	1
Styrene	ND		0.50		ug/L			03/25/21 12:37	1
tert-Butylbenzene	ND		1.0		ug/L			03/25/21 12:37	1

Client: GSI Environmental, Inc
Job ID: 320-71537-1
Project/Site: Integral Communities Pittsburg Project

Client Sample ID: TRIP BLANK
Lab Sample ID: 320-71537-5
Date Collected: 03/19/21 00:00
Matrix: Water
Date Received: 03/19/21 16:25

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			03/25/21 12:37	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			03/25/21 12:37	1
Tetrachloroethene	ND		0.50		ug/L			03/25/21 12:37	1
Toluene	ND		0.50		ug/L			03/25/21 12:37	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			03/25/21 12:37	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			03/25/21 12:37	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			03/25/21 12:37	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			03/25/21 12:37	1
1,1,1-Trichloroethane	ND		0.50		ug/L			03/25/21 12:37	1
1,1,2-Trichloroethane	ND		0.50		ug/L			03/25/21 12:37	1
Trichloroethene	ND		0.50		ug/L			03/25/21 12:37	1
Trichlorofluoromethane	ND		1.0		ug/L			03/25/21 12:37	1
1,2,3-Trichloropropane	ND		1.0		ug/L			03/25/21 12:37	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			03/25/21 12:37	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			03/25/21 12:37	1
Vinyl chloride	ND		0.50		ug/L			03/25/21 12:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*74 - 120*		*03/25/21 12:37*	*1*
Dibromofluoromethane (Surr)	*112*		*80 - 123*		*03/25/21 12:37*	*1*
1,2-Dichloroethane-d4 (Surr)	*116*		*72 - 123*		*03/25/21 12:37*	*1*
Toluene-d8 (Surr)	*116*		*78 - 120*		*03/25/21 12:37*	*1*

Client Sample ID: SB-04-3.0
Date Collected: 03/17/21 15:40
Date Received: 03/19/21 16:25

Lab Sample ID: 320-71537-6
Matrix: Solid

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0049		mg/Kg		03/25/21 13:44	03/26/21 23:41	1
Acenaphthylene	ND		0.0049		mg/Kg		03/25/21 13:44	03/26/21 23:41	1
Anthracene	ND		0.0049		mg/Kg		03/25/21 13:44	03/26/21 23:41	1
Benzo[a]anthracene	ND		0.0049		mg/Kg		03/25/21 13:44	03/26/21 23:41	1
Benzo[a]pyrene	ND		0.0049		mg/Kg		03/25/21 13:44	03/26/21 23:41	1
Benzo[b]fluoranthene	ND		0.0049		mg/Kg		03/25/21 13:44	03/26/21 23:41	1
Benzo[g,h,i]perylene	ND		0.0049		mg/Kg		03/25/21 13:44	03/26/21 23:41	1
Benzo[k]fluoranthene	ND		0.0049		mg/Kg		03/25/21 13:44	03/26/21 23:41	1
Chrysene	ND		0.0049		mg/Kg		03/25/21 13:44	03/26/21 23:41	1
Dibenz(a,h)anthracene	ND		0.0049		mg/Kg		03/25/21 13:44	03/26/21 23:41	1
Fluoranthene	ND		0.0049		mg/Kg		03/25/21 13:44	03/26/21 23:41	1
Fluorene	ND		0.0049		mg/Kg		03/25/21 13:44	03/26/21 23:41	1
Indeno[1,2,3-cd]pyrene	ND		0.0049		mg/Kg		03/25/21 13:44	03/26/21 23:41	1
Naphthalene	ND		0.0049		mg/Kg		03/25/21 13:44	03/26/21 23:41	1
Phenanthrene	ND		0.0049		mg/Kg		03/25/21 13:44	03/26/21 23:41	1
Pyrene	ND		0.0049		mg/Kg		03/25/21 13:44	03/26/21 23:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*81*		*43 - 109*	*03/25/21 13:44*	*03/26/21 23:41*	*1*
2-methylnaphthalene-d10	*92*		*50 - 150*	*03/25/21 13:44*	*03/26/21 23:41*	*1*
Fluoranthene-d10 (Surr)	*106*		*50 - 150*	*03/25/21 13:44*	*03/26/21 23:41*	*1*
Nitrobenzene-d5	*87*		*49 - 114*	*03/25/21 13:44*	*03/26/21 23:41*	*1*
Terphenyl-d14	*91*		*53 - 121*	*03/25/21 13:44*	*03/26/21 23:41*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.97		mg/Kg		03/24/21 10:12	03/25/21 18:46	1
Motor Oil Range Organics [C28-C40]	ND		4.9		mg/Kg		03/24/21 10:12	03/25/21 18:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*68*		*51 - 111*	*03/24/21 10:12*	*03/25/21 18:46*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.031		mg/Kg		03/25/21 17:06	03/31/21 20:52	1
PCB-1221	ND		0.031		mg/Kg		03/25/21 17:06	03/31/21 20:52	1
PCB-1232	ND		0.031		mg/Kg		03/25/21 17:06	03/31/21 20:52	1
PCB-1242	ND		0.031		mg/Kg		03/25/21 17:06	03/31/21 20:52	1
PCB-1248	ND		0.031		mg/Kg		03/25/21 17:06	03/31/21 20:52	1
PCB-1254	ND		0.031		mg/Kg		03/25/21 17:06	03/31/21 20:52	1
PCB-1260	ND		0.031		mg/Kg		03/25/21 17:06	03/31/21 20:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*73*		*52 - 138*	*03/25/21 17:06*	*03/31/21 20:52*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 11:28	1
Arsenic	**2.5**		2.0		mg/Kg		03/23/21 13:16	03/24/21 11:28	1
Barium	**92**		1.0		mg/Kg		03/23/21 13:16	03/24/21 11:28	1
Beryllium	**0.22**		0.20		mg/Kg		03/23/21 13:16	03/24/21 11:28	1

Client: GSI Environmental, Inc
Job ID: 320-71537-1
Project/Site: Integral Communities Pittsburg Project

Client Sample ID: SB-04-3.0
Lab Sample ID: 320-71537-6
Date Collected: 03/17/21 15:40
Matrix: Solid
Date Received: 03/19/21 16:25

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.20		mg/Kg		03/23/21 13:16	03/24/21 11:28	1
Chromium	**42**		0.50		mg/Kg		03/23/21 13:16	03/24/21 11:28	1
Cobalt	**12**		0.50		mg/Kg		03/23/21 13:16	03/24/21 11:28	1
Copper	**21**		1.5		mg/Kg		03/23/21 13:16	03/24/21 11:28	1
Lead	**5.2**		1.0		mg/Kg		03/23/21 13:16	03/24/21 11:28	1
Molybdenum	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 11:28	1
Nickel	**66**		1.0		mg/Kg		03/23/21 13:16	03/24/21 11:28	1
Selenium	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 11:28	1
Silver	ND		0.50		mg/Kg		03/23/21 13:16	03/24/21 11:28	1
Thallium	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 11:28	1
Vanadium	**47**		0.50		mg/Kg		03/23/21 13:16	03/24/21 11:28	1
Zinc	**44**		2.0		mg/Kg		03/23/21 13:16	03/24/21 11:28	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.037		mg/Kg		03/24/21 11:30	03/25/21 10:39	1

Client Sample ID: SB-04-8.0
Date Collected: 03/17/21 15:40
Date Received: 03/19/21 16:25

Lab Sample ID: 320-71537-7
Matrix: Solid

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0049		mg/Kg		03/25/21 13:44	03/27/21 00:11	1
Acenaphthylene	ND		0.0049		mg/Kg		03/25/21 13:44	03/27/21 00:11	1
Anthracene	ND		0.0049		mg/Kg		03/25/21 13:44	03/27/21 00:11	1
Benzo[a]anthracene	ND		0.0049		mg/Kg		03/25/21 13:44	03/27/21 00:11	1
Benzo[a]pyrene	ND		0.0049		mg/Kg		03/25/21 13:44	03/27/21 00:11	1
Benzo[b]fluoranthene	ND		0.0049		mg/Kg		03/25/21 13:44	03/27/21 00:11	1
Benzo[g,h,i]perylene	ND		0.0049		mg/Kg		03/25/21 13:44	03/27/21 00:11	1
Benzo[k]fluoranthene	ND		0.0049		mg/Kg		03/25/21 13:44	03/27/21 00:11	1
Chrysene	ND		0.0049		mg/Kg		03/25/21 13:44	03/27/21 00:11	1
Dibenz(a,h)anthracene	ND		0.0049		mg/Kg		03/25/21 13:44	03/27/21 00:11	1
Fluoranthene	ND		0.0049		mg/Kg		03/25/21 13:44	03/27/21 00:11	1
Fluorene	ND		0.0049		mg/Kg		03/25/21 13:44	03/27/21 00:11	1
Indeno[1,2,3-cd]pyrene	ND		0.0049		mg/Kg		03/25/21 13:44	03/27/21 00:11	1
Naphthalene	ND		0.0049		mg/Kg		03/25/21 13:44	03/27/21 00:11	1
Phenanthrene	ND		0.0049		mg/Kg		03/25/21 13:44	03/27/21 00:11	1
Pyrene	ND		0.0049		mg/Kg		03/25/21 13:44	03/27/21 00:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*73*		*43 - 109*	*03/25/21 13:44*	*03/27/21 00:11*	*1*
2-methylnaphthalene-d10	*82*		*50 - 150*	*03/25/21 13:44*	*03/27/21 00:11*	*1*
Fluoranthene-d10 (Surr)	*88*		*50 - 150*	*03/25/21 13:44*	*03/27/21 00:11*	*1*
Nitrobenzene-d5	*80*		*49 - 114*	*03/25/21 13:44*	*03/27/21 00:11*	*1*
Terphenyl-d14	*83*		*53 - 121*	*03/25/21 13:44*	*03/27/21 00:11*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		03/24/21 10:12	03/25/21 19:16	1
Motor Oil Range Organics [C28-C40]	ND		4.9		mg/Kg		03/24/21 10:12	03/25/21 19:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*72*		*51 - 111*	*03/24/21 10:12*	*03/25/21 19:16*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.033		mg/Kg		03/25/21 17:06	03/31/21 21:13	1
PCB-1221	ND		0.033		mg/Kg		03/25/21 17:06	03/31/21 21:13	1
PCB-1232	ND		0.033		mg/Kg		03/25/21 17:06	03/31/21 21:13	1
PCB-1242	ND		0.033		mg/Kg		03/25/21 17:06	03/31/21 21:13	1
PCB-1248	ND		0.033		mg/Kg		03/25/21 17:06	03/31/21 21:13	1
PCB-1254	ND		0.033		mg/Kg		03/25/21 17:06	03/31/21 21:13	1
PCB-1260	ND		0.033		mg/Kg		03/25/21 17:06	03/31/21 21:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*75*		*52 - 138*	*03/25/21 17:06*	*03/31/21 21:13*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.9		mg/Kg		03/23/21 13:16	03/24/21 11:32	1
Arsenic	ND		1.9		mg/Kg		03/23/21 13:16	03/24/21 11:32	1
Barium	**54**		0.97		mg/Kg		03/23/21 13:16	03/24/21 11:32	1
Beryllium	ND		0.19		mg/Kg		03/23/21 13:16	03/24/21 11:32	1

Client: GSI Environmental, Inc
Job ID: 320-71537-1
Project/Site: Integral Communities Pittsburg Project

Client Sample ID: SB-04-8.0
Lab Sample ID: 320-71537-7
Date Collected: 03/17/21 15:40
Matrix: Solid
Date Received: 03/19/21 16:25

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.19		mg/Kg		03/23/21 13:16	03/24/21 11:32	1
Chromium	**40**		0.49		mg/Kg		03/23/21 13:16	03/24/21 11:32	1
Cobalt	**11**		0.49		mg/Kg		03/23/21 13:16	03/24/21 11:32	1
Copper	**13**		1.5		mg/Kg		03/23/21 13:16	03/24/21 11:32	1
Lead	**3.6**		0.97		mg/Kg		03/23/21 13:16	03/24/21 11:32	1
Molybdenum	ND		1.9		mg/Kg		03/23/21 13:16	03/24/21 11:32	1
Nickel	**61**		0.97		mg/Kg		03/23/21 13:16	03/24/21 11:32	1
Selenium	ND		1.9		mg/Kg		03/23/21 13:16	03/24/21 11:32	1
Silver	ND		0.49		mg/Kg		03/23/21 13:16	03/24/21 11:32	1
Thallium	ND		1.9		mg/Kg		03/23/21 13:16	03/24/21 11:32	1
Vanadium	**40**		0.49		mg/Kg		03/23/21 13:16	03/24/21 11:32	1
Zinc	**33**		1.9		mg/Kg		03/23/21 13:16	03/24/21 11:32	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.040		mg/Kg		03/24/21 11:30	03/25/21 10:42	1

Client Sample ID: SB-07-3.0
Date Collected: 03/17/21 17:20
Date Received: 03/19/21 16:25

Lab Sample ID: 320-71537-8
Matrix: Solid

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 00:40	5
Acenaphthylene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 00:40	5
Anthracene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 00:40	5
Benzo[a]anthracene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 00:40	5
Benzo[a]pyrene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 00:40	5
Benzo[b]fluoranthene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 00:40	5
Benzo[g,h,i]perylene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 00:40	5
Benzo[k]fluoranthene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 00:40	5
Chrysene	**0.027**		0.025		mg/Kg		03/25/21 13:44	03/27/21 00:40	5
Dibenz(a,h)anthracene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 00:40	5
Fluoranthene	**0.030**		0.025		mg/Kg		03/25/21 13:44	03/27/21 00:40	5
Fluorene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 00:40	5
Indeno[1,2,3-cd]pyrene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 00:40	5
Naphthalene	**0.081**		0.025		mg/Kg		03/25/21 13:44	03/27/21 00:40	5
Phenanthrene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 00:40	5
Pyrene	**0.040**		0.025		mg/Kg		03/25/21 13:44	03/27/21 00:40	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*45*		*43 - 109*	*03/25/21 13:44*	*03/27/21 00:40*	*5*
2-methylnaphthalene-d10	*51*		*50 - 150*	*03/25/21 13:44*	*03/27/21 00:40*	*5*
Fluoranthene-d10 (Surr)	*59*		*50 - 150*	*03/25/21 13:44*	*03/27/21 00:40*	*5*
Nitrobenzene-d5	*45*	*S1-*	*49 - 114*	*03/25/21 13:44*	*03/27/21 00:40*	*5*
Terphenyl-d14	*51*	*S1-*	*53 - 121*	*03/25/21 13:44*	*03/27/21 00:40*	*5*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**10**		0.97		mg/Kg		03/24/21 10:12	03/25/21 19:47	1
Motor Oil Range Organics [C28-C40]	**27**		4.9		mg/Kg		03/24/21 10:12	03/25/21 19:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*56*		*51 - 111*	*03/24/21 10:12*	*03/25/21 19:47*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.032		mg/Kg		03/25/21 17:06	03/31/21 21:33	1
PCB-1221	ND		0.032		mg/Kg		03/25/21 17:06	03/31/21 21:33	1
PCB-1232	ND		0.032		mg/Kg		03/25/21 17:06	03/31/21 21:33	1
PCB-1242	ND		0.032		mg/Kg		03/25/21 17:06	03/31/21 21:33	1
PCB-1248	ND		0.032		mg/Kg		03/25/21 17:06	03/31/21 21:33	1
PCB-1254	ND		0.032		mg/Kg		03/25/21 17:06	03/31/21 21:33	1
PCB-1260	ND		0.032		mg/Kg		03/25/21 17:06	03/31/21 21:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*54*		*52 - 138*	*03/25/21 17:06*	*03/31/21 21:33*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.3		mg/Kg		03/23/21 13:16	03/24/21 11:36	1
Arsenic	**3.4**		1.3		mg/Kg		03/23/21 13:16	03/24/21 11:36	1
Barium	**86**		0.66		mg/Kg		03/23/21 13:16	03/24/21 11:36	1

Client: GSI Environmental, Inc
Job ID: 320-71537-1
Project/Site: Integral Communities Pittsburg Project

Client Sample ID: SB-07-3.0
Lab Sample ID: 320-71537-8
Date Collected: 03/17/21 17:20
Matrix: Solid
Date Received: 03/19/21 16:25

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	**0.26**		0.13		mg/Kg		03/23/21 13:16	03/24/21 11:36	1
Cadmium	ND		0.13		mg/Kg		03/23/21 13:16	03/24/21 11:36	1
Chromium	**34**		0.33		mg/Kg		03/23/21 13:16	03/24/21 11:36	1
Cobalt	**14**		0.33		mg/Kg		03/23/21 13:16	03/24/21 11:36	1
Copper	**21**		0.99		mg/Kg		03/23/21 13:16	03/24/21 11:36	1
Lead	**7.7**		0.66		mg/Kg		03/23/21 13:16	03/24/21 11:36	1
Molybdenum	ND		1.3		mg/Kg		03/23/21 13:16	03/24/21 11:36	1
Nickel	**46**		0.66		mg/Kg		03/23/21 13:16	03/24/21 11:36	1
Selenium	ND		1.3		mg/Kg		03/23/21 13:16	03/24/21 11:36	1
Silver	ND		0.33		mg/Kg		03/23/21 13:16	03/24/21 11:36	1
Thallium	ND		1.3		mg/Kg		03/23/21 13:16	03/24/21 11:36	1
Vanadium	**35**		0.33		mg/Kg		03/23/21 13:16	03/24/21 11:36	1
Zinc	**46**		1.3		mg/Kg		03/23/21 13:16	03/24/21 11:36	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.044**		0.039		mg/Kg		03/24/21 11:30	03/25/21 10:44	1

Client Sample ID: SB-01-3.0
Date Collected: 03/19/21 08:10
Date Received: 03/19/21 16:25

Lab Sample ID: 320-71537-9
Matrix: Solid

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:10	1
Acenaphthylene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:10	1
Anthracene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:10	1
Benzo[a]anthracene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:10	1
Benzo[a]pyrene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:10	1
Benzo[b]fluoranthene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:10	1
Benzo[g,h,i]perylene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:10	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:10	1
Chrysene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:10	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:10	1
Fluoranthene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:10	1
Fluorene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:10	1
Indeno[1,2,3-cd]pyrene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:10	1
Naphthalene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:10	1
Phenanthrene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:10	1
Pyrene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*76*		*43 - 109*	*03/25/21 13:44*	*03/27/21 01:10*	*1*
2-methylnaphthalene-d10	*86*		*50 - 150*	*03/25/21 13:44*	*03/27/21 01:10*	*1*
Fluoranthene-d10 (Surr)	*93*		*50 - 150*	*03/25/21 13:44*	*03/27/21 01:10*	*1*
Nitrobenzene-d5	*83*		*49 - 114*	*03/25/21 13:44*	*03/27/21 01:10*	*1*
Terphenyl-d14	*85*		*53 - 121*	*03/25/21 13:44*	*03/27/21 01:10*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.97		mg/Kg		03/24/21 10:12	03/25/21 20:17	1
Motor Oil Range Organics [C28-C40]	ND		4.9		mg/Kg		03/24/21 10:12	03/25/21 20:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*67*		*51 - 111*	*03/24/21 10:12*	*03/25/21 20:17*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.031		mg/Kg		03/25/21 17:06	03/31/21 22:35	1
PCB-1221	ND		0.031		mg/Kg		03/25/21 17:06	03/31/21 22:35	1
PCB-1232	ND		0.031		mg/Kg		03/25/21 17:06	03/31/21 22:35	1
PCB-1242	ND		0.031		mg/Kg		03/25/21 17:06	03/31/21 22:35	1
PCB-1248	ND		0.031		mg/Kg		03/25/21 17:06	03/31/21 22:35	1
PCB-1254	ND		0.031		mg/Kg		03/25/21 17:06	03/31/21 22:35	1
PCB-1260	ND		0.031		mg/Kg		03/25/21 17:06	03/31/21 22:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*67*		*52 - 138*	*03/25/21 17:06*	*03/31/21 22:35*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.9		mg/Kg		03/23/21 13:16	03/24/21 11:40	1
Arsenic	**5.6**		1.9		mg/Kg		03/23/21 13:16	03/24/21 11:40	1
Barium	**290**		0.97		mg/Kg		03/23/21 13:16	03/24/21 11:40	1
Beryllium	**0.53**		0.19		mg/Kg		03/23/21 13:16	03/24/21 11:40	1

Client: GSI Environmental, Inc
Job ID: 320-71537-1
Project/Site: Integral Communities Pittsburg Project

Client Sample ID: SB-01-3.0
Lab Sample ID: 320-71537-9
Date Collected: 03/19/21 08:10
Matrix: Solid
Date Received: 03/19/21 16:25

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	**0.19**		0.19		mg/Kg		03/23/21 13:16	03/24/21 11:40	1
Chromium	**33**		0.49		mg/Kg		03/23/21 13:16	03/24/21 11:40	1
Cobalt	**9.5**		0.49		mg/Kg		03/23/21 13:16	03/24/21 11:40	1
Copper	**23**		1.5		mg/Kg		03/23/21 13:16	03/24/21 11:40	1
Lead	**6.8**		0.97		mg/Kg		03/23/21 13:16	03/24/21 11:40	1
Molybdenum	ND		1.9		mg/Kg		03/23/21 13:16	03/24/21 11:40	1
Nickel	**32**		0.97		mg/Kg		03/23/21 13:16	03/24/21 11:40	1
Selenium	ND		1.9		mg/Kg		03/23/21 13:16	03/24/21 11:40	1
Silver	ND		0.49		mg/Kg		03/23/21 13:16	03/24/21 11:40	1
Thallium	ND		1.9		mg/Kg		03/23/21 13:16	03/24/21 11:40	1
Vanadium	**56**		0.49		mg/Kg		03/23/21 13:16	03/24/21 11:40	1
Zinc	**54**		1.9		mg/Kg		03/23/21 13:16	03/24/21 11:40	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.038		mg/Kg		03/24/21 11:30	03/25/21 10:47	1

Client Sample ID: SB-01-8.0
Lab Sample ID: 320-71537-10

Date Collected: 03/19/21 08:30
Matrix: Solid
Date Received: 03/19/21 16:25

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:39	1
Acenaphthylene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:39	1
Anthracene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:39	1
Benzo[a]anthracene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:39	1
Benzo[a]pyrene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:39	1
Benzo[b]fluoranthene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:39	1
Benzo[g,h,i]perylene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:39	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:39	1
Chrysene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:39	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:39	1
Fluoranthene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:39	1
Fluorene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:39	1
Indeno[1,2,3-cd]pyrene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:39	1
Naphthalene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:39	1
Phenanthrene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:39	1
Pyrene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 01:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*74*		*43 - 109*	*03/25/21 13:44*	*03/27/21 01:39*	*1*
2-methylnaphthalene-d10	*83*		*50 - 150*	*03/25/21 13:44*	*03/27/21 01:39*	*1*
Fluoranthene-d10 (Surr)	*87*		*50 - 150*	*03/25/21 13:44*	*03/27/21 01:39*	*1*
Nitrobenzene-d5	*81*		*49 - 114*	*03/25/21 13:44*	*03/27/21 01:39*	*1*
Terphenyl-d14	*81*		*53 - 121*	*03/25/21 13:44*	*03/27/21 01:39*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.98		mg/Kg		03/24/21 10:12	03/25/21 20:47	1
Motor Oil Range Organics [C28-C40]	ND		4.9		mg/Kg		03/24/21 10:12	03/25/21 20:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*59*		*51 - 111*	*03/24/21 10:12*	*03/25/21 20:47*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.032		mg/Kg		03/25/21 17:06	03/31/21 22:56	1
PCB-1221	ND		0.032		mg/Kg		03/25/21 17:06	03/31/21 22:56	1
PCB-1232	ND		0.032		mg/Kg		03/25/21 17:06	03/31/21 22:56	1
PCB-1242	ND		0.032		mg/Kg		03/25/21 17:06	03/31/21 22:56	1
PCB-1248	ND		0.032		mg/Kg		03/25/21 17:06	03/31/21 22:56	1
PCB-1254	ND		0.032		mg/Kg		03/25/21 17:06	03/31/21 22:56	1
PCB-1260	ND		0.032		mg/Kg		03/25/21 17:06	03/31/21 22:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*72*		*52 - 138*	*03/25/21 17:06*	*03/31/21 22:56*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 11:44	1
Arsenic	**6.9**		2.0		mg/Kg		03/23/21 13:16	03/24/21 11:44	1
Barium	**290**		0.99		mg/Kg		03/23/21 13:16	03/24/21 11:44	1
Beryllium	**0.65**		0.20		mg/Kg		03/23/21 13:16	03/24/21 11:44	1

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71537-1

Client Sample ID: SB-01-8.0
Date Collected: 03/19/21 08:30
Date Received: 03/19/21 16:25

Lab Sample ID: 320-71537-10
Matrix: Solid

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.20		mg/Kg		03/23/21 13:16	03/24/21 11:44	1
Chromium	**28**		0.50		mg/Kg		03/23/21 13:16	03/24/21 11:44	1
Cobalt	**10**		0.50		mg/Kg		03/23/21 13:16	03/24/21 11:44	1
Copper	**27**		1.5		mg/Kg		03/23/21 13:16	03/24/21 11:44	1
Lead	**9.4**		0.99		mg/Kg		03/23/21 13:16	03/24/21 11:44	1
Molybdenum	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 11:44	1
Nickel	**30**		0.99		mg/Kg		03/23/21 13:16	03/24/21 11:44	1
Selenium	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 11:44	1
Silver	ND		0.50		mg/Kg		03/23/21 13:16	03/24/21 11:44	1
Thallium	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 11:44	1
Vanadium	**49**		0.50		mg/Kg		03/23/21 13:16	03/24/21 11:44	1
Zinc	**65**		2.0		mg/Kg		03/23/21 13:16	03/24/21 11:44	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.044		mg/Kg		03/24/21 11:30	03/25/21 10:49	1

Client Sample ID: SB-05-3.0
Date Collected: 03/19/21 10:10
Date Received: 03/19/21 16:25

Lab Sample ID: 320-71537-11
Matrix: Solid

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 02:08	1
Acenaphthylene	**0.019**		0.0050		mg/Kg		03/25/21 13:44	03/27/21 02:08	1
Anthracene	**0.021**		0.0050		mg/Kg		03/25/21 13:44	03/27/21 02:08	1
Benzo[a]anthracene	**0.061**		0.0050		mg/Kg		03/25/21 13:44	03/27/21 02:08	1
Benzo[a]pyrene	**0.057**		0.0050		mg/Kg		03/25/21 13:44	03/27/21 02:08	1
Benzo[b]fluoranthene	**0.056**		0.0050		mg/Kg		03/25/21 13:44	03/27/21 02:08	1
Benzo[g,h,i]perylene	**0.029**		0.0050		mg/Kg		03/25/21 13:44	03/27/21 02:08	1
Benzo[k]fluoranthene	**0.021**		0.0050		mg/Kg		03/25/21 13:44	03/27/21 02:08	1
Chrysene	**0.070**		0.0050		mg/Kg		03/25/21 13:44	03/27/21 02:08	1
Dibenz(a,h)anthracene	**0.0091**		0.0050		mg/Kg		03/25/21 13:44	03/27/21 02:08	1
Fluoranthene	**0.096**		0.0050		mg/Kg		03/25/21 13:44	03/27/21 02:08	1
Fluorene	**0.0095**		0.0050		mg/Kg		03/25/21 13:44	03/27/21 02:08	1
Indeno[1,2,3-cd]pyrene	**0.033**		0.0050		mg/Kg		03/25/21 13:44	03/27/21 02:08	1
Naphthalene	**0.0098**		0.0050		mg/Kg		03/25/21 13:44	03/27/21 02:08	1
Phenanthrene	**0.097**		0.0050		mg/Kg		03/25/21 13:44	03/27/21 02:08	1
Pyrene	**0.14**		0.0050		mg/Kg		03/25/21 13:44	03/27/21 02:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*76*		*43 - 109*	*03/25/21 13:44*	*03/27/21 02:08*	*1*
2-methylnaphthalene-d10	*86*		*50 - 150*	*03/25/21 13:44*	*03/27/21 02:08*	*1*
Fluoranthene-d10 (Surr)	*99*		*50 - 150*	*03/25/21 13:44*	*03/27/21 02:08*	*1*
Nitrobenzene-d5	*80*		*49 - 114*	*03/25/21 13:44*	*03/27/21 02:08*	*1*
Terphenyl-d14	*84*		*53 - 121*	*03/25/21 13:44*	*03/27/21 02:08*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**25**		0.99		mg/Kg		03/24/21 10:12	03/25/21 21:18	1
Motor Oil Range Organics [C28-C40]	**68**		4.9		mg/Kg		03/24/21 10:12	03/25/21 21:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*70*		*51 - 111*	*03/24/21 10:12*	*03/25/21 21:18*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.032		mg/Kg		03/25/21 17:06	03/31/21 23:16	1
PCB-1221	ND		0.032		mg/Kg		03/25/21 17:06	03/31/21 23:16	1
PCB-1232	ND		0.032		mg/Kg		03/25/21 17:06	03/31/21 23:16	1
PCB-1242	ND		0.032		mg/Kg		03/25/21 17:06	03/31/21 23:16	1
PCB-1248	ND		0.032		mg/Kg		03/25/21 17:06	03/31/21 23:16	1
PCB-1254	ND		0.032		mg/Kg		03/25/21 17:06	03/31/21 23:16	1
PCB-1260	ND		0.032		mg/Kg		03/25/21 17:06	03/31/21 23:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*34*	*S1-*	*52 - 138*	*03/25/21 17:06*	*03/31/21 23:16*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 11:56	1
Arsenic	**4.6**		2.0		mg/Kg		03/23/21 13:16	03/24/21 11:56	1
Barium	**110**		0.99		mg/Kg		03/23/21 13:16	03/24/21 11:56	1

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71537-1

Client Sample ID: SB-05-3.0
Date Collected: 03/19/21 10:10
Date Received: 03/19/21 16:25

Lab Sample ID: 320-71537-11
Matrix: Solid

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	**0.42**		0.20		mg/Kg		03/23/21 13:16	03/24/21 11:56	1
Cadmium	ND		0.20		mg/Kg		03/23/21 13:16	03/24/21 11:56	1
Chromium	**26**		0.50		mg/Kg		03/23/21 13:16	03/24/21 11:56	1
Cobalt	**8.5**		0.50		mg/Kg		03/23/21 13:16	03/24/21 11:56	1
Copper	**19**		1.5		mg/Kg		03/23/21 13:16	03/24/21 11:56	1
Lead	**9.5**		0.99		mg/Kg		03/23/21 13:16	03/24/21 11:56	1
Molybdenum	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 11:56	1
Nickel	**28**		0.99		mg/Kg		03/23/21 13:16	03/24/21 11:56	1
Selenium	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 11:56	1
Silver	ND		0.50		mg/Kg		03/23/21 13:16	03/24/21 11:56	1
Thallium	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 11:56	1
Vanadium	**41**		0.50		mg/Kg		03/23/21 13:16	03/24/21 11:56	1
Zinc	**48**		2.0		mg/Kg		03/23/21 13:16	03/24/21 11:56	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.038		mg/Kg		03/24/21 11:30	03/25/21 10:58	1

Client Sample ID: SB-05-8.0
Date Collected: 03/19/21 10:45
Date Received: 03/19/21 16:25

Lab Sample ID: 320-71537-12
Matrix: Solid

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 02:38	5
Acenaphthylene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 02:38	5
Anthracene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 02:38	5
Benzo[a]anthracene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 02:38	5
Benzo[a]pyrene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 02:38	5
Benzo[b]fluoranthene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 02:38	5
Benzo[g,h,i]perylene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 02:38	5
Benzo[k]fluoranthene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 02:38	5
Chrysene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 02:38	5
Dibenz(a,h)anthracene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 02:38	5
Fluoranthene	**0.032**		0.025		mg/Kg		03/25/21 13:44	03/27/21 02:38	5
Fluorene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 02:38	5
Indeno[1,2,3-cd]pyrene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 02:38	5
Naphthalene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 02:38	5
Phenanthrene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 02:38	5
Pyrene	**0.034**		0.025		mg/Kg		03/25/21 13:44	03/27/21 02:38	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*43*		*43 - 109*	*03/25/21 13:44*	*03/27/21 02:38*	*5*
2-methylnaphthalene-d10	*48*	*S1-*	*50 - 150*	*03/25/21 13:44*	*03/27/21 02:38*	*5*
Fluoranthene-d10 (Surr)	*55*		*50 - 150*	*03/25/21 13:44*	*03/27/21 02:38*	*5*
Nitrobenzene-d5	*42*	*S1-*	*49 - 114*	*03/25/21 13:44*	*03/27/21 02:38*	*5*
Terphenyl-d14	*47*	*S1-*	*53 - 121*	*03/25/21 13:44*	*03/27/21 02:38*	*5*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**4.6**		0.98		mg/Kg		03/24/21 10:12	03/25/21 21:48	1
Motor Oil Range Organics [C28-C40]	**9.9**		4.9		mg/Kg		03/24/21 10:12	03/25/21 21:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*60*		*51 - 111*	*03/24/21 10:12*	*03/25/21 21:48*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.031		mg/Kg		03/25/21 17:06	03/31/21 23:37	1
PCB-1221	ND		0.031		mg/Kg		03/25/21 17:06	03/31/21 23:37	1
PCB-1232	ND		0.031		mg/Kg		03/25/21 17:06	03/31/21 23:37	1
PCB-1242	ND		0.031		mg/Kg		03/25/21 17:06	03/31/21 23:37	1
PCB-1248	ND		0.031		mg/Kg		03/25/21 17:06	03/31/21 23:37	1
PCB-1254	**0.079**		0.031		mg/Kg		03/25/21 17:06	03/31/21 23:37	1
PCB-1260	ND		0.031		mg/Kg		03/25/21 17:06	03/31/21 23:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*25*	*S1-*	*52 - 138*	*03/25/21 17:06*	*03/31/21 23:37*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 11:59	1
Arsenic	**4.1**		2.0		mg/Kg		03/23/21 13:16	03/24/21 11:59	1
Barium	**140**		0.99		mg/Kg		03/23/21 13:16	03/24/21 11:59	1

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71537-1

Client Sample ID: SB-05-8.0
Date Collected: 03/19/21 10:45
Date Received: 03/19/21 16:25

Lab Sample ID: 320-71537-12
Matrix: Solid

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	**0.42**		0.20		mg/Kg		03/23/21 13:16	03/24/21 11:59	1
Cadmium	ND		0.20		mg/Kg		03/23/21 13:16	03/24/21 11:59	1
Chromium	**25**		0.50		mg/Kg		03/23/21 13:16	03/24/21 11:59	1
Cobalt	**9.0**		0.50		mg/Kg		03/23/21 13:16	03/24/21 11:59	1
Copper	**17**		1.5		mg/Kg		03/23/21 13:16	03/24/21 11:59	1
Lead	**7.8**		0.99		mg/Kg		03/23/21 13:16	03/24/21 11:59	1
Molybdenum	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 11:59	1
Nickel	**27**		0.99		mg/Kg		03/23/21 13:16	03/24/21 11:59	1
Selenium	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 11:59	1
Silver	ND		0.50		mg/Kg		03/23/21 13:16	03/24/21 11:59	1
Thallium	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 11:59	1
Vanadium	**39**		0.50		mg/Kg		03/23/21 13:16	03/24/21 11:59	1
Zinc	**42**		2.0		mg/Kg		03/23/21 13:16	03/24/21 11:59	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.037		mg/Kg		03/24/21 11:30	03/25/21 11:01	1

Client Sample ID: SB-03-3.0
Date Collected: 03/19/21 11:55
Date Received: 03/19/21 16:25

Lab Sample ID: 320-71537-14
Matrix: Solid

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 03:07	5
Acenaphthylene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 03:07	5
Anthracene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 03:07	5
Benzo[a]anthracene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 03:07	5
Benzo[a]pyrene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 03:07	5
Benzo[b]fluoranthene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 03:07	5
Benzo[g,h,i]perylene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 03:07	5
Benzo[k]fluoranthene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 03:07	5
Chrysene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 03:07	5
Dibenz(a,h)anthracene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 03:07	5
Fluoranthene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 03:07	5
Fluorene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 03:07	5
Indeno[1,2,3-cd]pyrene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 03:07	5
Naphthalene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 03:07	5
Phenanthrene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 03:07	5
Pyrene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 03:07	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*40*	*S1-*	*43 - 109*	*03/25/21 13:44*	*03/27/21 03:07*	*5*
2-methylnaphthalene-d10	*45*	*S1-*	*50 - 150*	*03/25/21 13:44*	*03/27/21 03:07*	*5*
Fluoranthene-d10 (Surr)	*56*		*50 - 150*	*03/25/21 13:44*	*03/27/21 03:07*	*5*
Nitrobenzene-d5	*42*	*S1-*	*49 - 114*	*03/25/21 13:44*	*03/27/21 03:07*	*5*
Terphenyl-d14	*49*	*S1-*	*53 - 121*	*03/25/21 13:44*	*03/27/21 03:07*	*5*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**11**		0.98		mg/Kg		03/24/21 10:12	03/25/21 22:18	1
Motor Oil Range Organics [C28-C40]	**43**		4.9		mg/Kg		03/24/21 10:12	03/25/21 22:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*66*		*51 - 111*	*03/24/21 10:12*	*03/25/21 22:18*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.031		mg/Kg		03/25/21 17:06	03/31/21 23:57	1
PCB-1221	ND		0.031		mg/Kg		03/25/21 17:06	03/31/21 23:57	1
PCB-1232	ND		0.031		mg/Kg		03/25/21 17:06	03/31/21 23:57	1
PCB-1242	ND		0.031		mg/Kg		03/25/21 17:06	03/31/21 23:57	1
PCB-1248	ND		0.031		mg/Kg		03/25/21 17:06	03/31/21 23:57	1
PCB-1254	ND		0.031		mg/Kg		03/25/21 17:06	03/31/21 23:57	1
PCB-1260	ND		0.031		mg/Kg		03/25/21 17:06	03/31/21 23:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*63*		*52 - 138*	*03/25/21 17:06*	*03/31/21 23:57*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 12:03	1
Arsenic	**4.5**		2.0		mg/Kg		03/23/21 13:16	03/24/21 12:03	1
Barium	**110**		0.99		mg/Kg		03/23/21 13:16	03/24/21 12:03	1

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71537-1

Client Sample ID: SB-03-3.0
Date Collected: 03/19/21 11:55
Date Received: 03/19/21 16:25

Lab Sample ID: 320-71537-14
Matrix: Solid

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	**0.38**		0.20		mg/Kg		03/23/21 13:16	03/24/21 12:03	1
Cadmium	ND		0.20		mg/Kg		03/23/21 13:16	03/24/21 12:03	1
Chromium	**21**		0.50		mg/Kg		03/23/21 13:16	03/24/21 12:03	1
Cobalt	**7.6**		0.50		mg/Kg		03/23/21 13:16	03/24/21 12:03	1
Copper	**16**		1.5		mg/Kg		03/23/21 13:16	03/24/21 12:03	1
Lead	**5.9**		0.99		mg/Kg		03/23/21 13:16	03/24/21 12:03	1
Molybdenum	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 12:03	1
Nickel	**21**		0.99		mg/Kg		03/23/21 13:16	03/24/21 12:03	1
Selenium	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 12:03	1
Silver	ND		0.50		mg/Kg		03/23/21 13:16	03/24/21 12:03	1
Thallium	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 12:03	1
Vanadium	**37**		0.50		mg/Kg		03/23/21 13:16	03/24/21 12:03	1
Zinc	**45**		2.0		mg/Kg		03/23/21 13:16	03/24/21 12:03	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.044**		0.039		mg/Kg		03/24/21 11:30	03/25/21 11:03	1

Client Sample ID: SB-19-3.0
Date Collected: 03/19/21 13:20
Date Received: 03/19/21 16:25

Lab Sample ID: 320-71537-15
Matrix: Solid

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 03:37	1
Acenaphthylene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 03:37	1
Anthracene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 03:37	1
Benzo[a]anthracene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 03:37	1
Benzo[a]pyrene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 03:37	1
Benzo[b]fluoranthene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 03:37	1
Benzo[g,h,i]perylene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 03:37	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 03:37	1
Chrysene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 03:37	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 03:37	1
Fluoranthene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 03:37	1
Fluorene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 03:37	1
Indeno[1,2,3-cd]pyrene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 03:37	1
Naphthalene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 03:37	1
Phenanthrene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 03:37	1
Pyrene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 03:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*78*		*43 - 109*	*03/25/21 13:44*	*03/27/21 03:37*	*1*
2-methylnaphthalene-d10	*89*		*50 - 150*	*03/25/21 13:44*	*03/27/21 03:37*	*1*
Fluoranthene-d10 (Surr)	*101*		*50 - 150*	*03/25/21 13:44*	*03/27/21 03:37*	*1*
Nitrobenzene-d5	*88*		*49 - 114*	*03/25/21 13:44*	*03/27/21 03:37*	*1*
Terphenyl-d14	*89*		*53 - 121*	*03/25/21 13:44*	*03/27/21 03:37*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**13**		0.99		mg/Kg		03/24/21 10:12	03/25/21 22:49	1
Motor Oil Range Organics [C28-C40]	**34**		5.0		mg/Kg		03/24/21 10:12	03/25/21 22:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*74*		*51 - 111*	*03/24/21 10:12*	*03/25/21 22:49*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.033		mg/Kg		03/25/21 17:06	04/01/21 00:18	1
PCB-1221	ND		0.033		mg/Kg		03/25/21 17:06	04/01/21 00:18	1
PCB-1232	ND		0.033		mg/Kg		03/25/21 17:06	04/01/21 00:18	1
PCB-1242	ND		0.033		mg/Kg		03/25/21 17:06	04/01/21 00:18	1
PCB-1248	ND		0.033		mg/Kg		03/25/21 17:06	04/01/21 00:18	1
PCB-1254	ND		0.033		mg/Kg		03/25/21 17:06	04/01/21 00:18	1
PCB-1260	ND		0.033		mg/Kg		03/25/21 17:06	04/01/21 00:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*67*		*52 - 138*	*03/25/21 17:06*	*04/01/21 00:18*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.9		mg/Kg		03/23/21 13:16	03/24/21 12:07	1
Arsenic	**4.3**		1.9		mg/Kg		03/23/21 13:16	03/24/21 12:07	1
Barium	**110**		0.96		mg/Kg		03/23/21 13:16	03/24/21 12:07	1

Client: GSI Environmental, Inc
Job ID: 320-71537-1
Project/Site: Integral Communities Pittsburg Project

Client Sample ID: SB-19-3.0
Lab Sample ID: 320-71537-15
Date Collected: 03/19/21 13:20
Matrix: Solid
Date Received: 03/19/21 16:25

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	**0.41**		0.19		mg/Kg		03/23/21 13:16	03/24/21 12:07	1
Cadmium	ND		0.19		mg/Kg		03/23/21 13:16	03/24/21 12:07	1
Chromium	**24**		0.48		mg/Kg		03/23/21 13:16	03/24/21 12:07	1
Cobalt	**9.0**		0.48		mg/Kg		03/23/21 13:16	03/24/21 12:07	1
Copper	**18**		1.4		mg/Kg		03/23/21 13:16	03/24/21 12:07	1
Lead	**10**		0.96		mg/Kg		03/23/21 13:16	03/24/21 12:07	1
Molybdenum	ND		1.9		mg/Kg		03/23/21 13:16	03/24/21 12:07	1
Nickel	**28**		0.96		mg/Kg		03/23/21 13:16	03/24/21 12:07	1
Selenium	ND		1.9		mg/Kg		03/23/21 13:16	03/24/21 12:07	1
Silver	ND		0.48		mg/Kg		03/23/21 13:16	03/24/21 12:07	1
Thallium	ND		1.9		mg/Kg		03/23/21 13:16	03/24/21 12:07	1
Vanadium	**39**		0.48		mg/Kg		03/23/21 13:16	03/24/21 12:07	1
Zinc	**43**		1.9		mg/Kg		03/23/21 13:16	03/24/21 12:07	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.037		mg/Kg		03/24/21 11:30	03/25/21 11:06	1

Client Sample ID: SB-06-3.0
Lab Sample ID: 320-71537-16

Date Collected: 03/19/21 13:50
Matrix: Solid
Date Received: 03/19/21 16:25

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:06	1
Acenaphthylene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:06	1
Anthracene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:06	1
Benzo[a]anthracene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:06	1
Benzo[a]pyrene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:06	1
Benzo[b]fluoranthene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:06	1
Benzo[g,h,i]perylene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:06	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:06	1
Chrysene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:06	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:06	1
Fluoranthene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:06	1
Fluorene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:06	1
Indeno[1,2,3-cd]pyrene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:06	1
Naphthalene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:06	1
Phenanthrene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:06	1
Pyrene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*82*		*43 - 109*	*03/25/21 13:44*	*03/27/21 04:06*	*1*
2-methylnaphthalene-d10	*92*		*50 - 150*	*03/25/21 13:44*	*03/27/21 04:06*	*1*
Fluoranthene-d10 (Surr)	*102*		*50 - 150*	*03/25/21 13:44*	*03/27/21 04:06*	*1*
Nitrobenzene-d5	*86*		*49 - 114*	*03/25/21 13:44*	*03/27/21 04:06*	*1*
Terphenyl-d14	*89*		*53 - 121*	*03/25/21 13:44*	*03/27/21 04:06*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.97		mg/Kg		03/24/21 10:12	03/25/21 23:19	1
Motor Oil Range Organics [C28-C40]	ND		4.8		mg/Kg		03/24/21 10:12	03/25/21 23:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*74*		*51 - 111*	*03/24/21 10:12*	*03/25/21 23:19*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.032		mg/Kg		03/25/21 17:06	04/01/21 00:38	1
PCB-1221	ND		0.032		mg/Kg		03/25/21 17:06	04/01/21 00:38	1
PCB-1232	ND		0.032		mg/Kg		03/25/21 17:06	04/01/21 00:38	1
PCB-1242	ND		0.032		mg/Kg		03/25/21 17:06	04/01/21 00:38	1
PCB-1248	ND		0.032		mg/Kg		03/25/21 17:06	04/01/21 00:38	1
PCB-1254	ND		0.032		mg/Kg		03/25/21 17:06	04/01/21 00:38	1
PCB-1260	ND		0.032		mg/Kg		03/25/21 17:06	04/01/21 00:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*71*		*52 - 138*	*03/25/21 17:06*	*04/01/21 00:38*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.9		mg/Kg		03/23/21 13:16	03/24/21 12:11	1
Arsenic	**4.3**		1.9		mg/Kg		03/23/21 13:16	03/24/21 12:11	1
Barium	**55**		0.97		mg/Kg		03/23/21 13:16	03/24/21 12:11	1
Beryllium	ND		0.19		mg/Kg		03/23/21 13:16	03/24/21 12:11	1

Client: GSI Environmental, Inc
Job ID: 320-71537-1
Project/Site: Integral Communities Pittsburg Project

Client Sample ID: SB-06-3.0
Lab Sample ID: 320-71537-16
Date Collected: 03/19/21 13:50
Matrix: Solid
Date Received: 03/19/21 16:25

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.19		mg/Kg		03/23/21 13:16	03/24/21 12:11	1
Chromium	**36**		0.49		mg/Kg		03/23/21 13:16	03/24/21 12:11	1
Cobalt	**9.7**		0.49		mg/Kg		03/23/21 13:16	03/24/21 12:11	1
Copper	**10**		1.5		mg/Kg		03/23/21 13:16	03/24/21 12:11	1
Lead	**3.1**		0.97		mg/Kg		03/23/21 13:16	03/24/21 12:11	1
Molybdenum	ND		1.9		mg/Kg		03/23/21 13:16	03/24/21 12:11	1
Nickel	**55**		0.97		mg/Kg		03/23/21 13:16	03/24/21 12:11	1
Selenium	ND		1.9		mg/Kg		03/23/21 13:16	03/24/21 12:11	1
Silver	ND		0.49		mg/Kg		03/23/21 13:16	03/24/21 12:11	1
Thallium	ND		1.9		mg/Kg		03/23/21 13:16	03/24/21 12:11	1
Vanadium	**39**		0.49		mg/Kg		03/23/21 13:16	03/24/21 12:11	1
Zinc	**27**		1.9		mg/Kg		03/23/21 13:16	03/24/21 12:11	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.037		mg/Kg		03/24/21 11:30	03/25/21 11:08	1

Client Sample ID: SB-21-3.0
Date Collected: 03/19/21 14:35
Date Received: 03/19/21 16:25

Lab Sample ID: 320-71537-17
Matrix: Solid

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:35	1
Acenaphthylene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:35	1
Anthracene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:35	1
Benzo[a]anthracene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:35	1
Benzo[a]pyrene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:35	1
Benzo[b]fluoranthene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:35	1
Benzo[g,h,i]perylene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:35	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:35	1
Chrysene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:35	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:35	1
Fluoranthene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:35	1
Fluorene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:35	1
Indeno[1,2,3-cd]pyrene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:35	1
Naphthalene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:35	1
Phenanthrene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:35	1
Pyrene	ND		0.0050		mg/Kg		03/25/21 13:44	03/27/21 04:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*80*		*43 - 109*	*03/25/21 13:44*	*03/27/21 04:35*	*1*
2-methylnaphthalene-d10	*93*		*50 - 150*	*03/25/21 13:44*	*03/27/21 04:35*	*1*
Fluoranthene-d10 (Surr)	*100*		*50 - 150*	*03/25/21 13:44*	*03/27/21 04:35*	*1*
Nitrobenzene-d5	*89*		*49 - 114*	*03/25/21 13:44*	*03/27/21 04:35*	*1*
Terphenyl-d14	*86*		*53 - 121*	*03/25/21 13:44*	*03/27/21 04:35*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		03/24/21 10:12	03/26/21 00:50	1
Motor Oil Range Organics [C28-C40]	ND		5.0		mg/Kg		03/24/21 10:12	03/26/21 00:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*67*		*51 - 111*	*03/24/21 10:12*	*03/26/21 00:50*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.031		mg/Kg		03/25/21 17:06	04/01/21 00:59	1
PCB-1221	ND		0.031		mg/Kg		03/25/21 17:06	04/01/21 00:59	1
PCB-1232	ND		0.031		mg/Kg		03/25/21 17:06	04/01/21 00:59	1
PCB-1242	ND		0.031		mg/Kg		03/25/21 17:06	04/01/21 00:59	1
PCB-1248	ND		0.031		mg/Kg		03/25/21 17:06	04/01/21 00:59	1
PCB-1254	ND		0.031		mg/Kg		03/25/21 17:06	04/01/21 00:59	1
PCB-1260	ND		0.031		mg/Kg		03/25/21 17:06	04/01/21 00:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*79*		*52 - 138*	*03/25/21 17:06*	*04/01/21 00:59*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.9		mg/Kg		03/23/21 13:16	03/24/21 12:15	1
Arsenic	**3.5**		1.9		mg/Kg		03/23/21 13:16	03/24/21 12:15	1
Barium	**92**		0.97		mg/Kg		03/23/21 13:16	03/24/21 12:15	1
Beryllium	**0.37**		0.19		mg/Kg		03/23/21 13:16	03/24/21 12:15	1

Client: GSI Environmental, Inc
Job ID: 320-71537-1
Project/Site: Integral Communities Pittsburg Project

Client Sample ID: SB-21-3.0
Lab Sample ID: 320-71537-17
Date Collected: 03/19/21 14:35
Matrix: Solid
Date Received: 03/19/21 16:25

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.19		mg/Kg		03/23/21 13:16	03/24/21 12:15	1
Chromium	**25**		0.49		mg/Kg		03/23/21 13:16	03/24/21 12:15	1
Cobalt	**8.3**		0.49		mg/Kg		03/23/21 13:16	03/24/21 12:15	1
Copper	**15**		1.5		mg/Kg		03/23/21 13:16	03/24/21 12:15	1
Lead	**5.7**		0.97		mg/Kg		03/23/21 13:16	03/24/21 12:15	1
Molybdenum	ND		1.9		mg/Kg		03/23/21 13:16	03/24/21 12:15	1
Nickel	**29**		0.97		mg/Kg		03/23/21 13:16	03/24/21 12:15	1
Selenium	ND		1.9		mg/Kg		03/23/21 13:16	03/24/21 12:15	1
Silver	ND		0.49		mg/Kg		03/23/21 13:16	03/24/21 12:15	1
Thallium	ND		1.9		mg/Kg		03/23/21 13:16	03/24/21 12:15	1
Vanadium	**38**		0.49		mg/Kg		03/23/21 13:16	03/24/21 12:15	1
Zinc	**38**		1.9		mg/Kg		03/23/21 13:16	03/24/21 12:15	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.044		mg/Kg		03/24/21 11:30	03/25/21 11:11	1

Surrogate Summary

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71537-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		BFB	DBFM	DCA	TOL
Lab Sample ID	Client Sample ID	(74-120)	(80-123)	(72-123)	(78-120)
320-71537-1	SB-04-GW	105	109	116	116
320-71537-2	SB-01-GW	106	111	115	115
320-71537-3	SB-05-GW	106	108	114	113
320-71537-4	DUP-01	106	106	103	115
320-71537-5	TRIP BLANK	109	112	116	116
LCS 320-473709/7	Lab Control Sample	107	113	112	113
LCSD 320-473709/8	Lab Control Sample Dup	106	113	111	114
MB 320-473709/11	Method Blank	100	106	110	111

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260B/CA_LUFTMS - Volatile Organic Compounds by GC/MS

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		BFB
Lab Sample ID	Client Sample ID	(73-115)
320-71537-1	SB-04-GW	105
320-71537-2	SB-01-GW	106
320-71537-3	SB-05-GW	106
320-71537-4	DUP-01	106
320-71537-5	TRIP BLANK	109
LCS 320-473707/4	Lab Control Sample	102
LCSD 320-473707/5	Lab Control Sample Dup	104
MB 320-473707/11	Method Blank	100

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)				
		FBP	2MN	FLN10	NBZ	TPHL
Lab Sample ID	Client Sample ID	(43-109)	(50-150)	(50-150)	(49-114)	(53-121)
320-71537-6	SB-04-3.0	81	92	106	87	91
320-71537-7	SB-04-8.0	73	82	88	80	83
320-71537-8	SB-07-3.0	45	51	59	45 S1-	51 S1-
320-71537-9	SB-01-3.0	76	86	93	83	85
320-71537-10	SB-01-8.0	74	83	87	81	81
320-71537-11	SB-05-3.0	76	86	99	80	84
320-71537-12	SB-05-8.0	43	48 S1-	55	42 S1-	47 S1-
320-71537-14	SB-03-3.0	40 S1-	45 S1-	56	42 S1-	49 S1-
320-71537-15	SB-19-3.0	78	89	101	88	89
320-71537-16	SB-06-3.0	82	92	102	86	89
320-71537-17	SB-21-3.0	80	93	100	89	86
LCS 320-473892/2-A	Lab Control Sample	76	84	85	77	79

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	FBP (43-109)	2MN (50-150)	FLN10 (50-150)	NBZ (49-114)	TPHL (53-121)			
MB 320-473892/1-A	Method Blank	73	80	82	75	81			

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2MN = 2-methylnaphthalene-d10
FLN10 = Fluoranthene-d10 (Surr)
NBZ = Nitrobenzene-d5
TPHL = Terphenyl-d14

Method: 8015B - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	OTPH1 (51-111)							
320-71537-6	SB-04-3.0	68							
320-71537-7	SB-04-8.0	72							
320-71537-8	SB-07-3.0	56							
320-71537-9	SB-01-3.0	67							
320-71537-10	SB-01-8.0	59							
320-71537-11	SB-05-3.0	70							
320-71537-12	SB-05-8.0	60							
320-71537-14	SB-03-3.0	66							
320-71537-15	SB-19-3.0	74							
320-71537-16	SB-06-3.0	74							
320-71537-16 MS	SB-06-3.0	79							
320-71537-16 MSD	SB-06-3.0	80							
320-71537-17	SB-21-3.0	67							
LCS 320-473353/2-A	Lab Control Sample	84							
MB 320-473353/1-A	Method Blank	76							

Surrogate Legend

OTPH = o-Terphenyl (Surr)

Method: 8015B - Diesel Range Organics (DRO) (GC)

Matrix: Water **Prep Type: Silica Gel Cleanup**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	OTPH1 (56-145)							
320-71537-1	SB-04-GW	60							
320-71537-2	SB-01-GW	63							
320-71537-3	SB-05-GW	41 S1-							
320-71537-4	DUP-01	48 S1-							
LCS 320-473626/2-A	Lab Control Sample	74							
LCS 320-473761/2-A	Lab Control Sample	74							
LCSD 320-473626/3-A	Lab Control Sample Dup	73							
LCSD 320-473761/3-A	Lab Control Sample Dup	78							
MB 320-473626/1-A	Method Blank	63							
MB 320-473761/1-A	Method Blank	65							

Surrogate Legend

Surrogate Summary

Client: GSI Environmental, Inc
Job ID: 320-71537-1
Project/Site: Integral Communities Pittsburg Project

OTPH = o-Terphenyl (Surr)

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	DCBP2 (52-138)									
320-71537-6	SB-04-3.0	73									
320-71537-7	SB-04-8.0	75									
320-71537-8	SB-07-3.0	54									
320-71537-8 MS	SB-07-3.0	61									
320-71537-8 MSD	SB-07-3.0	60									
320-71537-9	SB-01-3.0	67									
320-71537-10	SB-01-8.0	72									
320-71537-11	SB-05-3.0	34 S1-									
320-71537-12	SB-05-8.0	25 S1-									
320-71537-14	SB-03-3.0	63									
320-71537-15	SB-19-3.0	67									
320-71537-16	SB-06-3.0	71									
320-71537-17	SB-21-3.0	79									
LCS 320-474059/2-A	Lab Control Sample	58									
MB 320-474059/1-A	Method Blank	138									

Surrogate Legend

DCBP = DCB Decachlorobiphenyl

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 320-473709/11
Matrix: Water
Analysis Batch: 473709

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			03/25/21 11:52	1
Bromobenzene	ND		1.0		ug/L			03/25/21 11:52	1
Bromochloromethane	ND		1.0		ug/L			03/25/21 11:52	1
Bromodichloromethane	ND		0.50		ug/L			03/25/21 11:52	1
Bromoform	ND		1.0		ug/L			03/25/21 11:52	1
Bromomethane	ND		1.0		ug/L			03/25/21 11:52	1
Carbon tetrachloride	ND		0.50		ug/L			03/25/21 11:52	1
Chlorobenzene	ND		0.50		ug/L			03/25/21 11:52	1
Chloroethane	ND		1.0		ug/L			03/25/21 11:52	1
Chloroform	ND		1.0		ug/L			03/25/21 11:52	1
Chloromethane	ND		1.0		ug/L			03/25/21 11:52	1
2-Chlorotoluene	ND		0.50		ug/L			03/25/21 11:52	1
4-Chlorotoluene	ND		0.50		ug/L			03/25/21 11:52	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			03/25/21 11:52	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			03/25/21 11:52	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			03/25/21 11:52	1
1,2-Dibromoethane (EDB)	ND		0.50		ug/L			03/25/21 11:52	1
Dibromomethane	ND		0.50		ug/L			03/25/21 11:52	1
1,2-Dichlorobenzene	ND		0.50		ug/L			03/25/21 11:52	1
1,3-Dichlorobenzene	ND		0.50		ug/L			03/25/21 11:52	1
1,4-Dichlorobenzene	ND		0.50		ug/L			03/25/21 11:52	1
Dichlorodifluoromethane	ND		1.0		ug/L			03/25/21 11:52	1
1,1-Dichloroethane	ND		0.50		ug/L			03/25/21 11:52	1
1,2-Dichloroethane	ND		0.50		ug/L			03/25/21 11:52	1
1,1-Dichloroethene	ND		0.50		ug/L			03/25/21 11:52	1
1,2-Dichloropropane	ND		0.50		ug/L			03/25/21 11:52	1
1,3-Dichloropropane	ND		1.0		ug/L			03/25/21 11:52	1
2,2-Dichloropropane	ND		1.0		ug/L			03/25/21 11:52	1
1,1-Dichloropropene	ND		0.50		ug/L			03/25/21 11:52	1
Ethylbenzene	ND		0.50		ug/L			03/25/21 11:52	1
Hexachlorobutadiene	ND		1.0		ug/L			03/25/21 11:52	1
Isopropylbenzene	ND		0.50		ug/L			03/25/21 11:52	1
Methylene Chloride	ND		1.0		ug/L			03/25/21 11:52	1
m-Xylene & p-Xylene	ND		0.50		ug/L			03/25/21 11:52	1
Naphthalene	ND		1.0		ug/L			03/25/21 11:52	1
n-Butylbenzene	ND		1.0		ug/L			03/25/21 11:52	1
N-Propylbenzene	ND		1.0		ug/L			03/25/21 11:52	1
o-Xylene	ND		0.50		ug/L			03/25/21 11:52	1
p-Isopropyltoluene	ND		1.0		ug/L			03/25/21 11:52	1
sec-Butylbenzene	ND		1.0		ug/L			03/25/21 11:52	1
Styrene	ND		0.50		ug/L			03/25/21 11:52	1
tert-Butylbenzene	ND		1.0		ug/L			03/25/21 11:52	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			03/25/21 11:52	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			03/25/21 11:52	1
Tetrachloroethene	ND		0.50		ug/L			03/25/21 11:52	1
Toluene	ND		0.50		ug/L			03/25/21 11:52	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			03/25/21 11:52	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			03/25/21 11:52	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 320-473709/11
Matrix: Water
Analysis Batch: 473709

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	ND		1.0		ug/L			03/25/21 11:52	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			03/25/21 11:52	1
1,1,1-Trichloroethane	ND		0.50		ug/L			03/25/21 11:52	1
1,1,2-Trichloroethane	ND		0.50		ug/L			03/25/21 11:52	1
Trichloroethene	ND		0.50		ug/L			03/25/21 11:52	1
Trichlorofluoromethane	ND		1.0		ug/L			03/25/21 11:52	1
1,2,3-Trichloropropane	ND		1.0		ug/L			03/25/21 11:52	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			03/25/21 11:52	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			03/25/21 11:52	1
Vinyl chloride	ND		0.50		ug/L			03/25/21 11:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*74 - 120*		*03/25/21 11:52*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 123*		*03/25/21 11:52*	*1*
1,2-Dichloroethane-d4 (Surr)	*110*		*72 - 123*		*03/25/21 11:52*	*1*
Toluene-d8 (Surr)	*111*		*78 - 120*		*03/25/21 11:52*	*1*

Lab Sample ID: LCS 320-473709/7
Matrix: Water
Analysis Batch: 473709

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	20.0	20.3		ug/L		101	79 - 120
Bromobenzene	20.0	21.0		ug/L		105	80 - 120
Bromochloromethane	20.0	21.6		ug/L		108	80 - 120
Bromodichloromethane	20.0	20.6		ug/L		103	80 - 124
Bromoform	20.0	22.0		ug/L		110	80 - 120
Bromomethane	20.0	21.7		ug/L		108	65 - 132
Carbon tetrachloride	20.0	21.4		ug/L		107	78 - 124
Chlorobenzene	20.0	20.0		ug/L		100	78 - 120
Chloroethane	20.0	21.3		ug/L		106	65 - 123
Chloroform	20.0	20.5		ug/L		102	80 - 120
Chloromethane	20.0	19.8		ug/L		99	62 - 129
2-Chlorotoluene	20.0	19.8		ug/L		99	79 - 120
4-Chlorotoluene	20.0	20.4		ug/L		102	80 - 121
cis-1,2-Dichloroethene	20.0	20.2		ug/L		101	78 - 120
cis-1,3-Dichloropropene	20.0	21.8		ug/L		109	80 - 131
1,2-Dibromo-3-Chloropropane	20.0	17.9		ug/L		89	66 - 121
1,2-Dibromoethane (EDB)	20.0	21.1		ug/L		105	78 - 120
Dibromomethane	20.0	21.2		ug/L		106	80 - 121
1,2-Dichlorobenzene	20.0	18.5		ug/L		93	77 - 120
1,3-Dichlorobenzene	20.0	19.1		ug/L		96	78 - 120
1,4-Dichlorobenzene	20.0	19.3		ug/L		97	74 - 120
Dichlorodifluoromethane	20.0	22.8		ug/L		114	39 - 161
1,1-Dichloroethane	20.0	20.3		ug/L		102	79 - 120
1,2-Dichloroethane	20.0	21.8		ug/L		109	77 - 128
1,1-Dichloroethene	20.0	21.4		ug/L		107	74 - 120
1,2-Dichloropropane	20.0	20.4		ug/L		102	75 - 125

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 320-473709/7
Matrix: Water
Analysis Batch: 473709

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichloropropane	20.0	21.2		ug/L		106	79 - 120
2,2-Dichloropropane	20.0	18.1		ug/L		91	75 - 127
1,1-Dichloropropene	20.0	21.4		ug/L		107	77 - 120
Ethylbenzene	20.0	20.1		ug/L		100	80 - 120
Hexachlorobutadiene	20.0	15.8		ug/L		79	69 - 120
Isopropylbenzene	20.0	19.7		ug/L		98	80 - 121
Methylene Chloride	20.0	19.8		ug/L		99	77 - 120
m-Xylene & p-Xylene	20.0	20.2		ug/L		101	80 - 121
Naphthalene	20.0	16.6		ug/L		83	56 - 143
n-Butylbenzene	20.0	18.7		ug/L		94	72 - 120
N-Propylbenzene	20.0	20.5		ug/L		103	76 - 120
o-Xylene	20.0	20.2		ug/L		101	80 - 124
p-Isopropyltoluene	20.0	19.6		ug/L		98	76 - 120
sec-Butylbenzene	20.0	19.7		ug/L		98	77 - 120
Styrene	20.0	20.9		ug/L		105	80 - 120
tert-Butylbenzene	20.0	19.7		ug/L		99	78 - 120
1,1,1,2-Tetrachloroethane	20.0	20.6		ug/L		103	79 - 120
1,1,2,2-Tetrachloroethane	20.0	21.4		ug/L		107	74 - 137
Tetrachloroethene	20.0	20.1		ug/L		100	74 - 120
Toluene	20.0	20.2		ug/L		101	79 - 126
trans-1,2-Dichloroethene	20.0	20.8		ug/L		104	76 - 120
trans-1,3-Dichloropropene	20.0	21.8		ug/L		109	75 - 133
1,2,3-Trichlorobenzene	20.0	14.8		ug/L		74	47 - 162
1,2,4-Trichlorobenzene	20.0	15.6		ug/L		78	61 - 130
1,1,1-Trichloroethane	20.0	21.2		ug/L		106	79 - 121
1,1,2-Trichloroethane	20.0	21.4		ug/L		107	79 - 127
Trichloroethene	20.0	20.5		ug/L		102	74 - 120
Trichlorofluoromethane	20.0	21.0		ug/L		105	60 - 135
1,2,3-Trichloropropane	20.0	21.3		ug/L		106	73 - 120
1,2,4-Trimethylbenzene	20.0	19.9		ug/L		100	76 - 120
1,3,5-Trimethylbenzene	20.0	20.2		ug/L		101	79 - 120
Vinyl chloride	20.0	20.4		ug/L		102	68 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*74 - 120*
Dibromofluoromethane (Surr)	*113*		*80 - 123*
1,2-Dichloroethane-d4 (Surr)	*112*		*72 - 123*
Toluene-d8 (Surr)	*113*		*78 - 120*

Lab Sample ID: LCSD 320-473709/8
Matrix: Water
Analysis Batch: 473709

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	20.0	20.3		ug/L		102	79 - 120	0	21
Bromobenzene	20.0	21.0		ug/L		105	80 - 120	0	17
Bromochloromethane	20.0	21.4		ug/L		107	80 - 120	1	19
Bromodichloromethane	20.0	21.0		ug/L		105	80 - 124	2	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 320-473709/8
Matrix: Water
Analysis Batch: 473709

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromoform	20.0	23.0		ug/L		115	80 - 120	4	16
Bromomethane	20.0	21.7		ug/L		108	65 - 132	0	40
Carbon tetrachloride	20.0	21.9		ug/L		109	78 - 124	2	25
Chlorobenzene	20.0	20.3		ug/L		101	78 - 120	1	15
Chloroethane	20.0	21.5		ug/L		108	65 - 123	1	40
Chloroform	20.0	20.4		ug/L		102	80 - 120	0	22
Chloromethane	20.0	20.1		ug/L		100	62 - 129	1	25
2-Chlorotoluene	20.0	20.3		ug/L		101	79 - 120	2	19
4-Chlorotoluene	20.0	20.9		ug/L		105	80 - 121	3	19
cis-1,2-Dichloroethene	20.0	20.2		ug/L		101	78 - 120	0	18
cis-1,3-Dichloropropene	20.0	21.9		ug/L		110	80 - 131	0	24
1,2-Dibromo-3-Chloropropane	20.0	19.0		ug/L		95	66 - 121	6	33
1,2-Dibromoethane (EDB)	20.0	21.8		ug/L		109	78 - 120	3	15
Dibromomethane	20.0	21.4		ug/L		107	80 - 121	1	17
1,2-Dichlorobenzene	20.0	19.0		ug/L		95	77 - 120	2	19
1,3-Dichlorobenzene	20.0	19.5		ug/L		97	78 - 120	2	17
1,4-Dichlorobenzene	20.0	19.5		ug/L		97	74 - 120	1	15
Dichlorodifluoromethane	20.0	22.7		ug/L		114	39 - 161	0	51
1,1-Dichloroethane	20.0	20.4		ug/L		102	79 - 120	1	21
1,2-Dichloroethane	20.0	21.5		ug/L		107	77 - 128	1	25
1,1-Dichloroethene	20.0	21.5		ug/L		107	74 - 120	1	22
1,2-Dichloropropane	20.0	20.0		ug/L		100	75 - 125	2	27
1,3-Dichloropropane	20.0	21.8		ug/L		109	79 - 120	3	15
2,2-Dichloropropane	20.0	20.1		ug/L		101	75 - 127	10	25
1,1-Dichloropropene	20.0	21.2		ug/L		106	77 - 120	1	20
Ethylbenzene	20.0	20.6		ug/L		103	80 - 120	2	15
Hexachlorobutadiene	20.0	16.3		ug/L		82	69 - 120	3	30
Isopropylbenzene	20.0	20.1		ug/L		100	80 - 121	2	17
Methylene Chloride	20.0	19.8		ug/L		99	77 - 120	0	20
m-Xylene & p-Xylene	20.0	20.7		ug/L		103	80 - 121	2	15
Naphthalene	20.0	17.5		ug/L		87	56 - 143	5	48
n-Butylbenzene	20.0	19.3		ug/L		96	72 - 120	3	25
N-Propylbenzene	20.0	21.1		ug/L		105	76 - 120	3	26
o-Xylene	20.0	21.0		ug/L		105	80 - 124	4	18
p-Isopropyltoluene	20.0	20.3		ug/L		101	76 - 120	3	18
sec-Butylbenzene	20.0	20.4		ug/L		102	77 - 120	4	19
Styrene	20.0	21.7		ug/L		108	80 - 120	4	15
tert-Butylbenzene	20.0	20.1		ug/L		101	78 - 120	2	19
1,1,1,2-Tetrachloroethane	20.0	20.6		ug/L		103	79 - 120	0	23
1,1,2,2-Tetrachloroethane	20.0	21.5		ug/L		107	74 - 137	0	27
Tetrachloroethene	20.0	20.6		ug/L		103	74 - 120	2	18
Toluene	20.0	20.7		ug/L		103	79 - 126	2	20
trans-1,2-Dichloroethene	20.0	20.8		ug/L		104	76 - 120	0	20
trans-1,3-Dichloropropene	20.0	22.1		ug/L		111	75 - 133	1	29
1,2,3-Trichlorobenzene	20.0	15.9		ug/L		80	47 - 162	7	45
1,2,4-Trichlorobenzene	20.0	16.6		ug/L		83	61 - 130	7	40
1,1,1-Trichloroethane	20.0	21.3		ug/L		106	79 - 121	0	25
1,1,2-Trichloroethane	20.0	21.1		ug/L		106	79 - 127	1	30
Trichloroethene	20.0	20.6		ug/L		103	74 - 120	1	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 320-473709/8
Matrix: Water
Analysis Batch: 473709

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichlorofluoromethane			20.0	21.0		ug/L		105	60 - 135	0	41
1,2,3-Trichloropropane			20.0	22.2		ug/L		111	73 - 120	4	22
1,2,4-Trimethylbenzene			20.0	20.5		ug/L		102	76 - 120	3	17
1,3,5-Trimethylbenzene			20.0	20.5		ug/L		103	79 - 120	2	20
Vinyl chloride			20.0	20.6		ug/L		103	68 - 121	1	33

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*74 - 120*
Dibromofluoromethane (Surr)	*113*		*80 - 123*
1,2-Dichloroethane-d4 (Surr)	*111*		*72 - 123*
Toluene-d8 (Surr)	*114*		*78 - 120*

Method: 8260B/CA_LUFTMS - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 320-473707/11
Matrix: Water
Analysis Batch: 473707

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C4-C12	ND		50		ug/L			03/25/21 11:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*73 - 115*		*03/25/21 11:52*	*1*

Lab Sample ID: LCS 320-473707/4
Matrix: Water
Analysis Batch: 473707

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C4-C12			1000	907		ug/L		91	78 - 118

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*73 - 115*

Lab Sample ID: LCSD 320-473707/5
Matrix: Water
Analysis Batch: 473707

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C4-C12			1000	931		ug/L		93	78 - 118	3	23

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*73 - 115*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 320-473892/1-A
Matrix: Solid
Analysis Batch: 474170

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 473892

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1
Acenaphthylene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1
Anthracene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1
Benzo[a]anthracene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1
Benzo[a]pyrene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1
Benzo[b]fluoranthene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1
Benzo[g,h,i]perylene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1
Chrysene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1
Fluoranthene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1
Fluorene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1
Indeno[1,2,3-cd]pyrene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1
Naphthalene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1
Phenanthrene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1
Pyrene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*73*		*43 - 109*	*03/25/21 13:44*	*03/26/21 19:16*	*1*
2-methylnaphthalene-d10	*80*		*50 - 150*	*03/25/21 13:44*	*03/26/21 19:16*	*1*
Fluoranthene-d10 (Surr)	*82*		*50 - 150*	*03/25/21 13:44*	*03/26/21 19:16*	*1*
Nitrobenzene-d5	*75*		*49 - 114*	*03/25/21 13:44*	*03/26/21 19:16*	*1*
Terphenyl-d14	*81*		*53 - 121*	*03/25/21 13:44*	*03/26/21 19:16*	*1*

Lab Sample ID: LCS 320-473892/2-A
Matrix: Solid
Analysis Batch: 474170

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 473892

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	0.0250	0.0171		mg/Kg		68	54 - 97
Acenaphthylene	0.0250	0.0168		mg/Kg		67	52 - 99
Anthracene	0.0250	0.0170		mg/Kg		68	52 - 102
Benzo[a]anthracene	0.0250	0.0177		mg/Kg		71	55 - 109
Benzo[a]pyrene	0.0250	0.0158		mg/Kg		63	54 - 110
Benzo[b]fluoranthene	0.0250	0.0170		mg/Kg		68	52 - 112
Benzo[g,h,i]perylene	0.0250	0.0159		mg/Kg		63	51 - 119
Benzo[k]fluoranthene	0.0250	0.0179		mg/Kg		72	56 - 106
Chrysene	0.0250	0.0179		mg/Kg		72	54 - 110
Dibenz(a,h)anthracene	0.0250	0.0156		mg/Kg		62	55 - 119
Fluoranthene	0.0250	0.0181		mg/Kg		72	53 - 110
Fluorene	0.0250	0.0173		mg/Kg		69	53 - 100
Indeno[1,2,3-cd]pyrene	0.0250	0.0153		mg/Kg		61	52 - 120
Naphthalene	0.0250	0.0176		mg/Kg		70	55 - 100
Phenanthrene	0.0250	0.0171		mg/Kg		68	54 - 98
Pyrene	0.0250	0.0182		mg/Kg		73	53 - 108

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*76*		*43 - 109*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCS 320-473892/2-A
Matrix: Solid
Analysis Batch: 474170

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 473892

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-methylnaphthalene-d10	*84*		*50 - 150*
Fluoranthene-d10 (Surr)	*85*		*50 - 150*
Nitrobenzene-d5	*77*		*49 - 114*
Terphenyl-d14	*79*		*53 - 121*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 320-473353/1-A
Matrix: Solid
Analysis Batch: 473893

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 473353

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		03/24/21 10:12	03/25/21 15:43	1
Motor Oil Range Organics [C28-C40]	ND		5.0		mg/Kg		03/24/21 10:12	03/25/21 15:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*76*		*51 - 111*	*03/24/21 10:12*	*03/25/21 15:43*	*1*

Lab Sample ID: LCS 320-473353/2-A
Matrix: Solid
Analysis Batch: 473893

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 473353

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	10.0	9.51		mg/Kg		95	57 - 132

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl (Surr)	*84*		*51 - 111*

Lab Sample ID: 320-71537-16 MS
Matrix: Solid
Analysis Batch: 473893

Client Sample ID: SB-06-3.0
Prep Type: Total/NA
Prep Batch: 473353

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	ND		9.87	9.07		mg/Kg		92	57 - 132

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
o-Terphenyl (Surr)	*79*		*51 - 111*

Lab Sample ID: 320-71537-16 MSD
Matrix: Solid
Analysis Batch: 473893

Client Sample ID: SB-06-3.0
Prep Type: Total/NA
Prep Batch: 473353

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	ND		9.76	8.91		mg/Kg		91	57 - 132	2	30

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 320-71537-16 MSD
Matrix: Solid
Analysis Batch: 473893

Client Sample ID: SB-06-3.0
Prep Type: Total/NA
Prep Batch: 473353

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl (Surr)	80		51 - 111

Lab Sample ID: MB 320-473626/1-A
Matrix: Water
Analysis Batch: 473897

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 473626

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		03/24/21 16:36	03/25/21 21:25	1
Motor Oil Range Organics [C28-C40]	ND		500		ug/L		03/24/21 16:36	03/25/21 21:25	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	63		56 - 145	03/24/21 16:36	03/25/21 21:25	1

Lab Sample ID: LCS 320-473626/2-A
Matrix: Water
Analysis Batch: 473897

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 473626

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	300	236		ug/L		79	53 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl (Surr)	74		56 - 145

Lab Sample ID: LCSD 320-473626/3-A
Matrix: Water
Analysis Batch: 473897

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 473626

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	300	239		ug/L		80	53 - 123	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl (Surr)	73		56 - 145

Lab Sample ID: MB 320-473761/1-A
Matrix: Water
Analysis Batch: 474604

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 473761

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		03/25/21 10:02	03/29/21 22:29	1
Motor Oil Range Organics [C28-C40]	ND		500		ug/L		03/25/21 10:02	03/29/21 22:29	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	65		56 - 145	03/25/21 10:02	03/29/21 22:29	1

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 320-473761/2-A
Matrix: Water
Analysis Batch: 474604

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 473761

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			300	244		ug/L		81	53 - 123		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl (Surr)	*74*		*56 - 145*

Lab Sample ID: LCSD 320-473761/3-A
Matrix: Water
Analysis Batch: 474604

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 473761

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			300	248		ug/L		83	53 - 123	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl (Surr)	*78*		*56 - 145*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 320-474059/1-A
Matrix: Solid
Analysis Batch: 475867

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 474059

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.033		mg/Kg		03/25/21 17:06	04/01/21 14:48	1
PCB-1221	ND		0.033		mg/Kg		03/25/21 17:06	04/01/21 14:48	1
PCB-1232	ND		0.033		mg/Kg		03/25/21 17:06	04/01/21 14:48	1
PCB-1242	ND		0.033		mg/Kg		03/25/21 17:06	04/01/21 14:48	1
PCB-1248	ND		0.033		mg/Kg		03/25/21 17:06	04/01/21 14:48	1
PCB-1254	ND		0.033		mg/Kg		03/25/21 17:06	04/01/21 14:48	1
PCB-1260	ND		0.033		mg/Kg		03/25/21 17:06	04/01/21 14:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*138*		*52 - 138*	*03/25/21 17:06*	*04/01/21 14:48*	*1*

Lab Sample ID: LCS 320-474059/2-A
Matrix: Solid
Analysis Batch: 475596

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 474059

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			0.0667	0.0634		mg/Kg		95	58 - 124		
PCB-1260			0.0667	0.0533		mg/Kg		80	55 - 138		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*58*		*52 - 138*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: 320-71537-8 MS
Matrix: Solid
Analysis Batch: 475596

Client Sample ID: SB-07-3.0
Prep Type: Total/NA
Prep Batch: 474059

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	ND		0.0639	0.0591		mg/Kg		93	58 - 124
PCB-1260	ND		0.0639	0.0515		mg/Kg		81	55 - 138

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*61*		*52 - 138*

Lab Sample ID: 320-71537-8 MSD
Matrix: Solid
Analysis Batch: 475596

Client Sample ID: SB-07-3.0
Prep Type: Total/NA
Prep Batch: 474059

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	ND		0.0640	0.0537		mg/Kg		84	58 - 124	10	20
PCB-1260	ND		0.0640	0.0474		mg/Kg		74	55 - 138	8	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*60*		*52 - 138*

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 320-473071/1-A
Matrix: Solid
Analysis Batch: 473587

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 473071

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 10:29	1
Arsenic	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 10:29	1
Barium	ND		1.0		mg/Kg		03/23/21 13:16	03/24/21 10:29	1
Beryllium	ND		0.20		mg/Kg		03/23/21 13:16	03/24/21 10:29	1
Cadmium	ND		0.20		mg/Kg		03/23/21 13:16	03/24/21 10:29	1
Chromium	ND		0.50		mg/Kg		03/23/21 13:16	03/24/21 10:29	1
Cobalt	ND		0.50		mg/Kg		03/23/21 13:16	03/24/21 10:29	1
Copper	ND		1.5		mg/Kg		03/23/21 13:16	03/24/21 10:29	1
Lead	ND		1.0		mg/Kg		03/23/21 13:16	03/24/21 10:29	1
Molybdenum	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 10:29	1
Nickel	ND		1.0		mg/Kg		03/23/21 13:16	03/24/21 10:29	1
Selenium	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 10:29	1
Silver	ND		0.50		mg/Kg		03/23/21 13:16	03/24/21 10:29	1
Thallium	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 10:29	1
Vanadium	ND		0.50		mg/Kg		03/23/21 13:16	03/24/21 10:29	1
Zinc	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 10:29	1

Lab Sample ID: LCS 320-473071/2-A
Matrix: Solid
Analysis Batch: 473587

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 473071

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	49.5	41.0		mg/Kg		83	80 - 120
Arsenic	50.0	44.2		mg/Kg		88	80 - 120

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 320-473071/2-A
Matrix: Solid
Analysis Batch: 473587

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 473071

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	50.0	44.4		mg/Kg		89	80 - 120
Beryllium	25.0	23.0		mg/Kg		92	80 - 120
Cadmium	25.0	22.4		mg/Kg		90	80 - 120
Chromium	25.0	22.3		mg/Kg		89	80 - 120
Cobalt	25.0	22.9		mg/Kg		91	80 - 120
Copper	25.0	21.0		mg/Kg		84	80 - 120
Lead	25.0	23.2		mg/Kg		93	80 - 120
Molybdenum	25.0	23.1		mg/Kg		93	80 - 120
Nickel	25.0	22.5		mg/Kg		90	80 - 120
Selenium	50.0	42.7		mg/Kg		85	80 - 120
Silver	5.05	4.33		mg/Kg		86	80 - 120
Thallium	50.0	45.0		mg/Kg		90	80 - 120
Vanadium	25.0	22.2		mg/Kg		89	80 - 120
Zinc	50.0	44.6		mg/Kg		89	80 - 120

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 320-473351/11-A
Matrix: Solid
Analysis Batch: 474000

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 473351

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.040		mg/Kg		03/24/21 11:30	03/25/21 09:23	1

Lab Sample ID: LCS 320-473351/12-A
Matrix: Solid
Analysis Batch: 474000

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 473351

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.167	0.162		mg/Kg		97	86 - 114

Lab Sample ID: LCSD 320-473351/13-A
Matrix: Solid
Analysis Batch: 474000

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 473351

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.167	0.172		mg/Kg		103	86 - 114	6	17

Lab Sample ID: MB 320-473376/11-A
Matrix: Solid
Analysis Batch: 474000

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 473376

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.040		mg/Kg		03/24/21 11:30	03/25/21 09:30	1

Method: 7471A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 320-473376/12-A
Matrix: Solid
Analysis Batch: 474000

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 473376

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.167	0.174		mg/Kg		104	86 - 114

Lab Sample ID: LCSD 320-473376/13-A
Matrix: Solid
Analysis Batch: 474000

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 473376

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.167	0.172		mg/Kg		103	86 - 114	1	17

Lab Sample ID: 320-71537-17 MS
Matrix: Solid
Analysis Batch: 474000

Client Sample ID: SB-21-3.0
Prep Type: Total/NA
Prep Batch: 473376

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.167	0.209		mg/Kg		112	86 - 114

Lab Sample ID: 320-71537-17 MSD
Matrix: Solid
Analysis Batch: 474000

Client Sample ID: SB-21-3.0
Prep Type: Total/NA
Prep Batch: 473376

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.167	0.206		mg/Kg		110	86 - 114	2	17

GC/MS VOA

Analysis Batch: 473707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71537-1	SB-04-GW	Total/NA	Water	8260B/CA_LUFT MS	
320-71537-2	SB-01-GW	Total/NA	Water	8260B/CA_LUFT MS	
320-71537-3	SB-05-GW	Total/NA	Water	8260B/CA_LUFT MS	
320-71537-4	DUP-01	Total/NA	Water	8260B/CA_LUFT MS	
320-71537-5	TRIP BLANK	Total/NA	Water	8260B/CA_LUFT MS	
MB 320-473707/11	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	
LCS 320-473707/4	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 320-473707/5	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	

Analysis Batch: 473709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71537-1	SB-04-GW	Total/NA	Water	8260B	
320-71537-2	SB-01-GW	Total/NA	Water	8260B	
320-71537-3	SB-05-GW	Total/NA	Water	8260B	
320-71537-4	DUP-01	Total/NA	Water	8260B	
320-71537-5	TRIP BLANK	Total/NA	Water	8260B	
MB 320-473709/11	Method Blank	Total/NA	Water	8260B	
LCS 320-473709/7	Lab Control Sample	Total/NA	Water	8260B	
LCSD 320-473709/8	Lab Control Sample Dup	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 473892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71537-6	SB-04-3.0	Total/NA	Solid	3546	
320-71537-7	SB-04-8.0	Total/NA	Solid	3546	
320-71537-8	SB-07-3.0	Total/NA	Solid	3546	
320-71537-9	SB-01-3.0	Total/NA	Solid	3546	
320-71537-10	SB-01-8.0	Total/NA	Solid	3546	
320-71537-11	SB-05-3.0	Total/NA	Solid	3546	
320-71537-12	SB-05-8.0	Total/NA	Solid	3546	
320-71537-14	SB-03-3.0	Total/NA	Solid	3546	
320-71537-15	SB-19-3.0	Total/NA	Solid	3546	
320-71537-16	SB-06-3.0	Total/NA	Solid	3546	
320-71537-17	SB-21-3.0	Total/NA	Solid	3546	
MB 320-473892/1-A	Method Blank	Total/NA	Solid	3546	
LCS 320-473892/2-A	Lab Control Sample	Total/NA	Solid	3546	

Analysis Batch: 474170

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-473892/1-A	Method Blank	Total/NA	Solid	8270C SIM	473892
LCS 320-473892/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM	473892

GC/MS Semi VOA

Analysis Batch: 474357

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71537-6	SB-04-3.0	Total/NA	Solid	8270C SIM	473892
320-71537-7	SB-04-8.0	Total/NA	Solid	8270C SIM	473892
320-71537-8	SB-07-3.0	Total/NA	Solid	8270C SIM	473892
320-71537-9	SB-01-3.0	Total/NA	Solid	8270C SIM	473892
320-71537-10	SB-01-8.0	Total/NA	Solid	8270C SIM	473892
320-71537-11	SB-05-3.0	Total/NA	Solid	8270C SIM	473892
320-71537-12	SB-05-8.0	Total/NA	Solid	8270C SIM	473892
320-71537-14	SB-03-3.0	Total/NA	Solid	8270C SIM	473892
320-71537-15	SB-19-3.0	Total/NA	Solid	8270C SIM	473892
320-71537-16	SB-06-3.0	Total/NA	Solid	8270C SIM	473892
320-71537-17	SB-21-3.0	Total/NA	Solid	8270C SIM	473892

GC Semi VOA

Prep Batch: 473353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71537-6	SB-04-3.0	Total/NA	Solid	3550B	
320-71537-7	SB-04-8.0	Total/NA	Solid	3550B	
320-71537-8	SB-07-3.0	Total/NA	Solid	3550B	
320-71537-9	SB-01-3.0	Total/NA	Solid	3550B	
320-71537-10	SB-01-8.0	Total/NA	Solid	3550B	
320-71537-11	SB-05-3.0	Total/NA	Solid	3550B	
320-71537-12	SB-05-8.0	Total/NA	Solid	3550B	
320-71537-14	SB-03-3.0	Total/NA	Solid	3550B	
320-71537-15	SB-19-3.0	Total/NA	Solid	3550B	
320-71537-16	SB-06-3.0	Total/NA	Solid	3550B	
320-71537-17	SB-21-3.0	Total/NA	Solid	3550B	
MB 320-473353/1-A	Method Blank	Total/NA	Solid	3550B	
LCS 320-473353/2-A	Lab Control Sample	Total/NA	Solid	3550B	
320-71537-16 MS	SB-06-3.0	Total/NA	Solid	3550B	
320-71537-16 MSD	SB-06-3.0	Total/NA	Solid	3550B	

Prep Batch: 473626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71537-1	SB-04-GW	Silica Gel Cleanup	Water	3510C SGC	
320-71537-2	SB-01-GW	Silica Gel Cleanup	Water	3510C SGC	
MB 320-473626/1-A	Method Blank	Silica Gel Cleanup	Water	3510C SGC	
LCS 320-473626/2-A	Lab Control Sample	Silica Gel Cleanup	Water	3510C SGC	
LCSD 320-473626/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	3510C SGC	

Prep Batch: 473761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71537-3	SB-05-GW	Silica Gel Cleanup	Water	3510C SGC	
320-71537-4	DUP-01	Silica Gel Cleanup	Water	3510C SGC	
MB 320-473761/1-A	Method Blank	Silica Gel Cleanup	Water	3510C SGC	
LCS 320-473761/2-A	Lab Control Sample	Silica Gel Cleanup	Water	3510C SGC	
LCSD 320-473761/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	3510C SGC	

Analysis Batch: 473893

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71537-6	SB-04-3.0	Total/NA	Solid	8015B	473353

GC Semi VOA (Continued)

Analysis Batch: 473893 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71537-7	SB-04-8.0	Total/NA	Solid	8015B	473353
320-71537-8	SB-07-3.0	Total/NA	Solid	8015B	473353
320-71537-9	SB-01-3.0	Total/NA	Solid	8015B	473353
320-71537-10	SB-01-8.0	Total/NA	Solid	8015B	473353
320-71537-11	SB-05-3.0	Total/NA	Solid	8015B	473353
320-71537-12	SB-05-8.0	Total/NA	Solid	8015B	473353
320-71537-14	SB-03-3.0	Total/NA	Solid	8015B	473353
320-71537-15	SB-19-3.0	Total/NA	Solid	8015B	473353
320-71537-16	SB-06-3.0	Total/NA	Solid	8015B	473353
320-71537-17	SB-21-3.0	Total/NA	Solid	8015B	473353
MB 320-473353/1-A	Method Blank	Total/NA	Solid	8015B	473353
LCS 320-473353/2-A	Lab Control Sample	Total/NA	Solid	8015B	473353
320-71537-16 MS	SB-06-3.0	Total/NA	Solid	8015B	473353
320-71537-16 MSD	SB-06-3.0	Total/NA	Solid	8015B	473353

Analysis Batch: 473897

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71537-1	SB-04-GW	Silica Gel Cleanup	Water	8015B	473626
320-71537-2	SB-01-GW	Silica Gel Cleanup	Water	8015B	473626
MB 320-473626/1-A	Method Blank	Silica Gel Cleanup	Water	8015B	473626
LCS 320-473626/2-A	Lab Control Sample	Silica Gel Cleanup	Water	8015B	473626
LCSD 320-473626/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	8015B	473626

Prep Batch: 474059

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71537-6	SB-04-3.0	Total/NA	Solid	3546	
320-71537-7	SB-04-8.0	Total/NA	Solid	3546	
320-71537-8	SB-07-3.0	Total/NA	Solid	3546	
320-71537-9	SB-01-3.0	Total/NA	Solid	3546	
320-71537-10	SB-01-8.0	Total/NA	Solid	3546	
320-71537-11	SB-05-3.0	Total/NA	Solid	3546	
320-71537-12	SB-05-8.0	Total/NA	Solid	3546	
320-71537-14	SB-03-3.0	Total/NA	Solid	3546	
320-71537-15	SB-19-3.0	Total/NA	Solid	3546	
320-71537-16	SB-06-3.0	Total/NA	Solid	3546	
320-71537-17	SB-21-3.0	Total/NA	Solid	3546	
MB 320-474059/1-A	Method Blank	Total/NA	Solid	3546	
LCS 320-474059/2-A	Lab Control Sample	Total/NA	Solid	3546	
320-71537-8 MS	SB-07-3.0	Total/NA	Solid	3546	
320-71537-8 MSD	SB-07-3.0	Total/NA	Solid	3546	

Analysis Batch: 474604

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71537-3	SB-05-GW	Silica Gel Cleanup	Water	8015B	473761
320-71537-4	DUP-01	Silica Gel Cleanup	Water	8015B	473761
MB 320-473761/1-A	Method Blank	Silica Gel Cleanup	Water	8015B	473761
LCS 320-473761/2-A	Lab Control Sample	Silica Gel Cleanup	Water	8015B	473761
LCSD 320-473761/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	8015B	473761

GC Semi VOA

Analysis Batch: 475596

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71537-6	SB-04-3.0	Total/NA	Solid	8082	474059
320-71537-7	SB-04-8.0	Total/NA	Solid	8082	474059
320-71537-8	SB-07-3.0	Total/NA	Solid	8082	474059
320-71537-9	SB-01-3.0	Total/NA	Solid	8082	474059
320-71537-10	SB-01-8.0	Total/NA	Solid	8082	474059
320-71537-11	SB-05-3.0	Total/NA	Solid	8082	474059
320-71537-12	SB-05-8.0	Total/NA	Solid	8082	474059
320-71537-14	SB-03-3.0	Total/NA	Solid	8082	474059
320-71537-15	SB-19-3.0	Total/NA	Solid	8082	474059
320-71537-16	SB-06-3.0	Total/NA	Solid	8082	474059
320-71537-17	SB-21-3.0	Total/NA	Solid	8082	474059
LCS 320-474059/2-A	Lab Control Sample	Total/NA	Solid	8082	474059
320-71537-8 MS	SB-07-3.0	Total/NA	Solid	8082	474059
320-71537-8 MSD	SB-07-3.0	Total/NA	Solid	8082	474059

Analysis Batch: 475867

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-474059/1-A	Method Blank	Total/NA	Solid	8082	474059

Metals

Prep Batch: 473071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71537-6	SB-04-3.0	Total/NA	Solid	3050B	
320-71537-7	SB-04-8.0	Total/NA	Solid	3050B	
320-71537-8	SB-07-3.0	Total/NA	Solid	3050B	
320-71537-9	SB-01-3.0	Total/NA	Solid	3050B	
320-71537-10	SB-01-8.0	Total/NA	Solid	3050B	
320-71537-11	SB-05-3.0	Total/NA	Solid	3050B	
320-71537-12	SB-05-8.0	Total/NA	Solid	3050B	
320-71537-14	SB-03-3.0	Total/NA	Solid	3050B	
320-71537-15	SB-19-3.0	Total/NA	Solid	3050B	
320-71537-16	SB-06-3.0	Total/NA	Solid	3050B	
320-71537-17	SB-21-3.0	Total/NA	Solid	3050B	
MB 320-473071/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 320-473071/2-A	Lab Control Sample	Total/NA	Solid	3050B	

Prep Batch: 473351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71537-6	SB-04-3.0	Total/NA	Solid	7471A	
320-71537-7	SB-04-8.0	Total/NA	Solid	7471A	
320-71537-8	SB-07-3.0	Total/NA	Solid	7471A	
320-71537-9	SB-01-3.0	Total/NA	Solid	7471A	
320-71537-10	SB-01-8.0	Total/NA	Solid	7471A	
320-71537-11	SB-05-3.0	Total/NA	Solid	7471A	
320-71537-12	SB-05-8.0	Total/NA	Solid	7471A	
320-71537-14	SB-03-3.0	Total/NA	Solid	7471A	
320-71537-15	SB-19-3.0	Total/NA	Solid	7471A	
320-71537-16	SB-06-3.0	Total/NA	Solid	7471A	
MB 320-473351/11-A	Method Blank	Total/NA	Solid	7471A	
LCS 320-473351/12-A	Lab Control Sample	Total/NA	Solid	7471A	

Metals (Continued)

Prep Batch: 473351 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 320-473351/13-A	Lab Control Sample Dup	Total/NA	Solid	7471A	

Prep Batch: 473376

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71537-17	SB-21-3.0	Total/NA	Solid	7471A	
MB 320-473376/11-A	Method Blank	Total/NA	Solid	7471A	
LCS 320-473376/12-A	Lab Control Sample	Total/NA	Solid	7471A	
LCSD 320-473376/13-A	Lab Control Sample Dup	Total/NA	Solid	7471A	
320-71537-17 MS	SB-21-3.0	Total/NA	Solid	7471A	
320-71537-17 MSD	SB-21-3.0	Total/NA	Solid	7471A	

Analysis Batch: 473587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71537-6	SB-04-3.0	Total/NA	Solid	6010B	473071
320-71537-7	SB-04-8.0	Total/NA	Solid	6010B	473071
320-71537-8	SB-07-3.0	Total/NA	Solid	6010B	473071
320-71537-9	SB-01-3.0	Total/NA	Solid	6010B	473071
320-71537-10	SB-01-8.0	Total/NA	Solid	6010B	473071
320-71537-11	SB-05-3.0	Total/NA	Solid	6010B	473071
320-71537-12	SB-05-8.0	Total/NA	Solid	6010B	473071
320-71537-14	SB-03-3.0	Total/NA	Solid	6010B	473071
320-71537-15	SB-19-3.0	Total/NA	Solid	6010B	473071
320-71537-16	SB-06-3.0	Total/NA	Solid	6010B	473071
320-71537-17	SB-21-3.0	Total/NA	Solid	6010B	473071
MB 320-473071/1-A	Method Blank	Total/NA	Solid	6010B	473071
LCS 320-473071/2-A	Lab Control Sample	Total/NA	Solid	6010B	473071

Analysis Batch: 474000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71537-6	SB-04-3.0	Total/NA	Solid	7471A	473351
320-71537-7	SB-04-8.0	Total/NA	Solid	7471A	473351
320-71537-8	SB-07-3.0	Total/NA	Solid	7471A	473351
320-71537-9	SB-01-3.0	Total/NA	Solid	7471A	473351
320-71537-10	SB-01-8.0	Total/NA	Solid	7471A	473351
320-71537-11	SB-05-3.0	Total/NA	Solid	7471A	473351
320-71537-12	SB-05-8.0	Total/NA	Solid	7471A	473351
320-71537-14	SB-03-3.0	Total/NA	Solid	7471A	473351
320-71537-15	SB-19-3.0	Total/NA	Solid	7471A	473351
320-71537-16	SB-06-3.0	Total/NA	Solid	7471A	473351
320-71537-17	SB-21-3.0	Total/NA	Solid	7471A	473376
MB 320-473351/11-A	Method Blank	Total/NA	Solid	7471A	473351
MB 320-473376/11-A	Method Blank	Total/NA	Solid	7471A	473376
LCS 320-473351/12-A	Lab Control Sample	Total/NA	Solid	7471A	473351
LCS 320-473376/12-A	Lab Control Sample	Total/NA	Solid	7471A	473376
LCSD 320-473351/13-A	Lab Control Sample Dup	Total/NA	Solid	7471A	473351
LCSD 320-473376/13-A	Lab Control Sample Dup	Total/NA	Solid	7471A	473376
320-71537-17 MS	SB-21-3.0	Total/NA	Solid	7471A	473376
320-71537-17 MSD	SB-21-3.0	Total/NA	Solid	7471A	473376

Lab Chronicle

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71537-1

Client Sample ID: SB-04-GW
Date Collected: 03/17/21 16:40
Date Received: 03/19/21 16:25

Lab Sample ID: 320-71537-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	50 mL	50 mL	473709	03/25/21 13:29	BAJ	TAL SAC
Total/NA	Analysis	8260B/CA_LUFTMS		1	50 mL	50 mL	473707	03/25/21 13:29	SS	TAL SAC
Silica Gel Cleanup	Prep	3510C SGC			1050.5 mL	3 mL	473626	03/24/21 16:36	AWK	TAL SAC
Silica Gel Cleanup	Analysis	8015B		1			473897	03/25/21 22:38	K1D	TAL SAC

Client Sample ID: SB-01-GW
Date Collected: 03/17/21 09:20
Date Received: 03/19/21 16:25

Lab Sample ID: 320-71537-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	50 mL	50 mL	473709	03/25/21 13:52	BAJ	TAL SAC
Total/NA	Analysis	8260B/CA_LUFTMS		1	50 mL	50 mL	473707	03/25/21 13:52	SS	TAL SAC
Silica Gel Cleanup	Prep	3510C SGC			1051.6 mL	3 mL	473626	03/24/21 16:36	AWK	TAL SAC
Silica Gel Cleanup	Analysis	8015B		1			473897	03/25/21 23:03	K1D	TAL SAC

Client Sample ID: SB-05-GW
Date Collected: 03/19/21 13:00
Date Received: 03/19/21 16:25

Lab Sample ID: 320-71537-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	50 mL	50 mL	473709	03/25/21 14:15	BAJ	TAL SAC
Total/NA	Analysis	8260B/CA_LUFTMS		1	50 mL	50 mL	473707	03/25/21 14:15	SS	TAL SAC
Silica Gel Cleanup	Prep	3510C SGC			891.8 mL	3 mL	473761	03/25/21 10:14	AWK	TAL SAC
Silica Gel Cleanup	Analysis	8015B		1			474604	03/30/21 01:46	K1D	TAL SAC

Client Sample ID: DUP-01
Date Collected: 03/19/21 13:30
Date Received: 03/19/21 16:25

Lab Sample ID: 320-71537-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	50 mL	50 mL	473709	03/25/21 14:37	BAJ	TAL SAC
Total/NA	Analysis	8260B/CA_LUFTMS		1	50 mL	50 mL	473707	03/25/21 14:37	SS	TAL SAC
Silica Gel Cleanup	Prep	3510C SGC			1051.9 mL	3 mL	473761	03/25/21 10:14	AWK	TAL SAC
Silica Gel Cleanup	Analysis	8015B		1			474604	03/30/21 02:10	K1D	TAL SAC

Client Sample ID: TRIP BLANK
Date Collected: 03/19/21 00:00
Date Received: 03/19/21 16:25

Lab Sample ID: 320-71537-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	50 mL	50 mL	473709	03/25/21 12:37	BAJ	TAL SAC

Client Sample ID: TRIP BLANK

Lab Sample ID: 320-71537-5

Date Collected: 03/19/21 00:00

Matrix: Water

Date Received: 03/19/21 16:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	50 mL	50 mL	473707	03/25/21 12:37	SS	TAL SAC

Client Sample ID: SB-04-3.0

Lab Sample ID: 320-71537-6

Date Collected: 03/17/21 15:40

Matrix: Solid

Date Received: 03/19/21 16:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			10.20 g	1 mL	473892	03/25/21 13:44	MBG	TAL SAC
Total/NA	Analysis	8270C SIM		1			474357	03/26/21 23:41	D1R	TAL SAC
Total/NA	Prep	3550B			30.81 g	3 mL	473353	03/24/21 10:12	MBG	TAL SAC
Total/NA	Analysis	8015B		1			473893	03/25/21 18:46	K1D	TAL SAC
Total/NA	Prep	3546			15.80 g	5 mL	474059	03/25/21 17:06	TL	TAL SAC
Total/NA	Analysis	8082		1			475596	03/31/21 20:52	K1D	TAL SAC
Total/NA	Prep	3050B			1.00 g	100 mL	473071	03/23/21 13:16	JP	TAL SAC
Total/NA	Analysis	6010B		1			473587	03/24/21 11:28	GSH	TAL SAC
Total/NA	Prep	7471A			0.65 g	50 mL	473351	03/24/21 11:30	IM	TAL SAC
Total/NA	Analysis	7471A		1			474000	03/25/21 10:39	IM	TAL SAC

Client Sample ID: SB-04-8.0

Lab Sample ID: 320-71537-7

Date Collected: 03/17/21 15:40

Matrix: Solid

Date Received: 03/19/21 16:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			10.23 g	1 mL	473892	03/25/21 13:44	MBG	TAL SAC
Total/NA	Analysis	8270C SIM		1			474357	03/27/21 00:11	D1R	TAL SAC
Total/NA	Prep	3550B			30.39 g	3 mL	473353	03/24/21 10:12	MBG	TAL SAC
Total/NA	Analysis	8015B		1			473893	03/25/21 19:16	K1D	TAL SAC
Total/NA	Prep	3546			15.13 g	5 mL	474059	03/25/21 17:06	TL	TAL SAC
Total/NA	Analysis	8082		1			475596	03/31/21 21:13	K1D	TAL SAC
Total/NA	Prep	3050B			1.03 g	100 mL	473071	03/23/21 13:16	JP	TAL SAC
Total/NA	Analysis	6010B		1			473587	03/24/21 11:32	GSH	TAL SAC
Total/NA	Prep	7471A			0.60 g	50 mL	473351	03/24/21 11:30	IM	TAL SAC
Total/NA	Analysis	7471A		1			474000	03/25/21 10:42	IM	TAL SAC

Client Sample ID: SB-07-3.0

Lab Sample ID: 320-71537-8

Date Collected: 03/17/21 17:20

Matrix: Solid

Date Received: 03/19/21 16:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			10.11 g	1 mL	473892	03/25/21 13:44	MBG	TAL SAC
Total/NA	Analysis	8270C SIM		5			474357	03/27/21 00:40	D1R	TAL SAC
Total/NA	Prep	3550B			30.80 g	3 mL	473353	03/24/21 10:12	MBG	TAL SAC
Total/NA	Analysis	8015B		1			473893	03/25/21 19:47	K1D	TAL SAC
Total/NA	Prep	3546			15.25 g	5 mL	474059	03/25/21 17:06	TL	TAL SAC
Total/NA	Analysis	8082		1			475596	03/31/21 21:33	K1D	TAL SAC

Client Sample ID: SB-07-3.0

Lab Sample ID: 320-71537-8

Date Collected: 03/17/21 17:20

Matrix: Solid

Date Received: 03/19/21 16:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.51 g	100 mL	473071	03/23/21 13:16	JP	TAL SAC
Total/NA	Analysis	6010B		1			473587	03/24/21 11:36	GSH	TAL SAC
Total/NA	Prep	7471A			0.61 g	50 mL	473351	03/24/21 11:30	IM	TAL SAC
Total/NA	Analysis	7471A		1			474000	03/25/21 10:44	IM	TAL SAC

Client Sample ID: SB-01-3.0

Lab Sample ID: 320-71537-9

Date Collected: 03/19/21 08:10

Matrix: Solid

Date Received: 03/19/21 16:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			10.09 g	1 mL	473892	03/25/21 13:44	MBG	TAL SAC
Total/NA	Analysis	8270C SIM		1			474357	03/27/21 01:10	D1R	TAL SAC
Total/NA	Prep	3550B			30.86 g	3 mL	473353	03/24/21 10:12	MBG	TAL SAC
Total/NA	Analysis	8015B		1			473893	03/25/21 20:17	K1D	TAL SAC
Total/NA	Prep	3546			15.85 g	5 mL	474059	03/25/21 17:06	TL	TAL SAC
Total/NA	Analysis	8082		1			475596	03/31/21 22:35	K1D	TAL SAC
Total/NA	Prep	3050B			1.03 g	100 mL	473071	03/23/21 13:16	JP	TAL SAC
Total/NA	Analysis	6010B		1			473587	03/24/21 11:40	GSH	TAL SAC
Total/NA	Prep	7471A			0.63 g	50 mL	473351	03/24/21 11:30	IM	TAL SAC
Total/NA	Analysis	7471A		1			474000	03/25/21 10:47	IM	TAL SAC

Client Sample ID: SB-01-8.0

Lab Sample ID: 320-71537-10

Date Collected: 03/19/21 08:30

Matrix: Solid

Date Received: 03/19/21 16:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			10.05 g	1 mL	473892	03/25/21 13:44	MBG	TAL SAC
Total/NA	Analysis	8270C SIM		1			474357	03/27/21 01:39	D1R	TAL SAC
Total/NA	Prep	3550B			30.51 g	3 mL	473353	03/24/21 10:12	MBG	TAL SAC
Total/NA	Analysis	8015B		1			473893	03/25/21 20:47	K1D	TAL SAC
Total/NA	Prep	3546			15.45 g	5 mL	474059	03/25/21 17:06	TL	TAL SAC
Total/NA	Analysis	8082		1			475596	03/31/21 22:56	K1D	TAL SAC
Total/NA	Prep	3050B			1.01 g	100 mL	473071	03/23/21 13:16	JP	TAL SAC
Total/NA	Analysis	6010B		1			473587	03/24/21 11:44	GSH	TAL SAC
Total/NA	Prep	7471A			0.55 g	50 mL	473351	03/24/21 11:30	IM	TAL SAC
Total/NA	Analysis	7471A		1			474000	03/25/21 10:49	IM	TAL SAC

Client Sample ID: SB-05-3.0

Lab Sample ID: 320-71537-11

Date Collected: 03/19/21 10:10

Matrix: Solid

Date Received: 03/19/21 16:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			10.01 g	1 mL	473892	03/25/21 13:44	MBG	TAL SAC
Total/NA	Analysis	8270C SIM		1			474357	03/27/21 02:08	D1R	TAL SAC

Client Sample ID: SB-05-3.0
Lab Sample ID: 320-71537-11

Date Collected: 03/19/21 10:10
Matrix: Solid
Date Received: 03/19/21 16:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550B			30.37 g	3 mL	473353	03/24/21 10:12	MBG	TAL SAC
Total/NA	Analysis	8015B		1			473893	03/25/21 21:18	K1D	TAL SAC
Total/NA	Prep	3546			15.59 g	5 mL	474059	03/25/21 17:06	TL	TAL SAC
Total/NA	Analysis	8082		1			475596	03/31/21 23:16	K1D	TAL SAC
Total/NA	Prep	3050B			1.01 g	100 mL	473071	03/23/21 13:16	JP	TAL SAC
Total/NA	Analysis	6010B		1			473587	03/24/21 11:56	GSH	TAL SAC
Total/NA	Prep	7471A			0.63 g	50 mL	473351	03/24/21 11:30	IM	TAL SAC
Total/NA	Analysis	7471A		1			474000	03/25/21 10:58	IM	TAL SAC

Client Sample ID: SB-05-8.0
Lab Sample ID: 320-71537-12

Date Collected: 03/19/21 10:45
Matrix: Solid
Date Received: 03/19/21 16:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			10.18 g	1 mL	473892	03/25/21 13:44	MBG	TAL SAC
Total/NA	Analysis	8270C SIM		5			474357	03/27/21 02:38	D1R	TAL SAC
Total/NA	Prep	3550B			30.76 g	3 mL	473353	03/24/21 10:12	MBG	TAL SAC
Total/NA	Analysis	8015B		1			473893	03/25/21 21:48	K1D	TAL SAC
Total/NA	Prep	3546			15.98 g	5 mL	474059	03/25/21 17:06	TL	TAL SAC
Total/NA	Analysis	8082		1			475596	03/31/21 23:37	K1D	TAL SAC
Total/NA	Prep	3050B			1.01 g	100 mL	473071	03/23/21 13:16	JP	TAL SAC
Total/NA	Analysis	6010B		1			473587	03/24/21 11:59	GSH	TAL SAC
Total/NA	Prep	7471A			0.65 g	50 mL	473351	03/24/21 11:30	IM	TAL SAC
Total/NA	Analysis	7471A		1			474000	03/25/21 11:01	IM	TAL SAC

Client Sample ID: SB-03-3.0
Lab Sample ID: 320-71537-14

Date Collected: 03/19/21 11:55
Matrix: Solid
Date Received: 03/19/21 16:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			10.04 g	1 mL	473892	03/25/21 13:44	MBG	TAL SAC
Total/NA	Analysis	8270C SIM		5			474357	03/27/21 03:07	D1R	TAL SAC
Total/NA	Prep	3550B			30.72 g	3 mL	473353	03/24/21 10:12	MBG	TAL SAC
Total/NA	Analysis	8015B		1			473893	03/25/21 22:18	K1D	TAL SAC
Total/NA	Prep	3546			15.73 g	5 mL	474059	03/25/21 17:06	TL	TAL SAC
Total/NA	Analysis	8082		1			475596	03/31/21 23:57	K1D	TAL SAC
Total/NA	Prep	3050B			1.01 g	100 mL	473071	03/23/21 13:16	JP	TAL SAC
Total/NA	Analysis	6010B		1			473587	03/24/21 12:03	GSH	TAL SAC
Total/NA	Prep	7471A			0.61 g	50 mL	473351	03/24/21 11:30	IM	TAL SAC
Total/NA	Analysis	7471A		1			474000	03/25/21 11:03	IM	TAL SAC

Client Sample ID: SB-19-3.0

Lab Sample ID: 320-71537-15

Date Collected: 03/19/21 13:20

Matrix: Solid

Date Received: 03/19/21 16:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			10.07 g	1 mL	473892	03/25/21 13:44	MBG	TAL SAC
Total/NA	Analysis	8270C SIM		1			474357	03/27/21 03:37	D1R	TAL SAC
Total/NA	Prep	3550B			30.18 g	3 mL	473353	03/24/21 10:12	MBG	TAL SAC
Total/NA	Analysis	8015B		1			473893	03/25/21 22:49	K1D	TAL SAC
Total/NA	Prep	3546			15.14 g	5 mL	474059	03/25/21 17:06	TL	TAL SAC
Total/NA	Analysis	8082		1			475596	04/01/21 00:18	K1D	TAL SAC
Total/NA	Prep	3050B			1.04 g	100 mL	473071	03/23/21 13:16	JP	TAL SAC
Total/NA	Analysis	6010B		1			473587	03/24/21 12:07	GSH	TAL SAC
Total/NA	Prep	7471A			0.65 g	50 mL	473351	03/24/21 11:30	IM	TAL SAC
Total/NA	Analysis	7471A		1			474000	03/25/21 11:06	IM	TAL SAC

Client Sample ID: SB-06-3.0

Lab Sample ID: 320-71537-16

Date Collected: 03/19/21 13:50

Matrix: Solid

Date Received: 03/19/21 16:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			10.03 g	1 mL	473892	03/25/21 13:44	MBG	TAL SAC
Total/NA	Analysis	8270C SIM		1			474357	03/27/21 04:06	D1R	TAL SAC
Total/NA	Prep	3550B			30.97 g	3 mL	473353	03/24/21 10:12	MBG	TAL SAC
Total/NA	Analysis	8015B		1			473893	03/25/21 23:19	K1D	TAL SAC
Total/NA	Prep	3546			15.51 g	5 mL	474059	03/25/21 17:06	TL	TAL SAC
Total/NA	Analysis	8082		1			475596	04/01/21 00:38	K1D	TAL SAC
Total/NA	Prep	3050B			1.03 g	100 mL	473071	03/23/21 13:16	JP	TAL SAC
Total/NA	Analysis	6010B		1			473587	03/24/21 12:11	GSH	TAL SAC
Total/NA	Prep	7471A			0.65 g	50 mL	473351	03/24/21 11:30	IM	TAL SAC
Total/NA	Analysis	7471A		1			474000	03/25/21 11:08	IM	TAL SAC

Client Sample ID: SB-21-3.0

Lab Sample ID: 320-71537-17

Date Collected: 03/19/21 14:35

Matrix: Solid

Date Received: 03/19/21 16:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			10.02 g	1 mL	473892	03/25/21 13:44	MBG	TAL SAC
Total/NA	Analysis	8270C SIM		1			474357	03/27/21 04:35	D1R	TAL SAC
Total/NA	Prep	3550B			30.16 g	3 mL	473353	03/24/21 10:12	MBG	TAL SAC
Total/NA	Analysis	8015B		1			473893	03/26/21 00:50	K1D	TAL SAC
Total/NA	Prep	3546			15.76 g	5 mL	474059	03/25/21 17:06	TL	TAL SAC
Total/NA	Analysis	8082		1			475596	04/01/21 00:59	K1D	TAL SAC
Total/NA	Prep	3050B			1.03 g	100 mL	473071	03/23/21 13:16	JP	TAL SAC
Total/NA	Analysis	6010B		1			473587	03/24/21 12:15	GSH	TAL SAC
Total/NA	Prep	7471A			0.55 g	50 mL	473376	03/24/21 11:30	IM	TAL SAC
Total/NA	Analysis	7471A		1			474000	03/25/21 11:11	IM	TAL SAC

Lab Chronicle

Client: GSI Environmental, Inc
Job ID: 320-71537-1
Project/Site: Integral Communities Pittsburg Project

Laboratory References:

EMLab P&K = EMLab P&K - South San Francisco, 6000 Shoreline Court, Suite 205, South San Francisco, CA 94080, TEL (866)888-6653

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: GSI Environmental, Inc
Job ID: 320-71537-1
Project/Site: Integral Communities Pittsburg Project

Laboratory: Eurofins TestAmerica, Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
California	State	2897	01-31-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B	3510C SGC	Water	Motor Oil Range Organics [C28-C40]
8015B	3550B	Solid	Motor Oil Range Organics [C28-C40]

Method Summary

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg Project

Job ID: 320-71537-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAC
8260B/CA_LUFTMS	Volatile Organic Compounds by GC/MS	SW846	TAL SAC
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL SAC
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL SAC
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SAC
6010B	Metals (ICP)	SW846	TAL SAC
7471A	Mercury (CVAA)	SW846	TAL SAC
CARB435	CARB 435 Asbestos	EM P&K	EMLab P&K
3050B	Preparation, Metals	SW846	TAL SAC
3510C SGC	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL SAC
3546	Microwave Extraction	SW846	TAL SAC
3550B	Ultrasonic Extraction	SW846	TAL SAC
5030B	Purge and Trap	SW846	TAL SAC
7471A	Preparation, Mercury	SW846	TAL SAC

Protocol References:

EM P&K = EMLab P&K, Faciltiy Standard Operating Procedure

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EMLab P&K = EMLab P&K - South San Francisco, 6000 Shoreline Court, Suite 205, South San Francisco, CA 94080, TEL (866)888-6653

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: GSI Environmental, Inc
Job ID: 320-71537-1
Project/Site: Integral Communities Pittsburg Project

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
320-71537-1	SB-04-GW	Water	03/17/21 16:40	03/19/21 16:25	
320-71537-2	SB-01-GW	Water	03/17/21 09:20	03/19/21 16:25	
320-71537-3	SB-05-GW	Water	03/19/21 13:00	03/19/21 16:25	
320-71537-4	DUP-01	Water	03/19/21 13:30	03/19/21 16:25	
320-71537-5	TRIP BLANK	Water	03/19/21 00:00	03/19/21 16:25	
320-71537-6	SB-04-3.0	Solid	03/17/21 15:40	03/19/21 16:25	
320-71537-7	SB-04-8.0	Solid	03/17/21 15:40	03/19/21 16:25	
320-71537-8	SB-07-3.0	Solid	03/17/21 17:20	03/19/21 16:25	
320-71537-9	SB-01-3.0	Solid	03/19/21 08:10	03/19/21 16:25	
320-71537-10	SB-01-8.0	Solid	03/19/21 08:30	03/19/21 16:25	
320-71537-11	SB-05-3.0	Solid	03/19/21 10:10	03/19/21 16:25	
320-71537-12	SB-05-8.0	Solid	03/19/21 10:45	03/19/21 16:25	
320-71537-14	SB-03-3.0	Solid	03/19/21 11:55	03/19/21 16:25	
320-71537-15	SB-19-3.0	Solid	03/19/21 13:20	03/19/21 16:25	
320-71537-16	SB-06-3.0	Solid	03/19/21 13:50	03/19/21 16:25	
320-71537-17	SB-21-3.0	Solid	03/19/21 14:35	03/19/21 16:25	

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Report for:

Ms. Afsaneh Salimpour
TestAmerica-Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566

Regarding: Project: 320-71537-1; Integral Communities Pittsburg Project
EML ID: 2603039

Approved by:



Technical Manager
Murali Putty

Dates of Analysis:
Asbestos-CARB 435 (400 pt ct): 03-30-2021

Service SOPs: Asbestos-CARB 435 (400 pt ct) (EM-AS-S-1265)
NVLAP Lab Code 200728-0

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the samples as received and tested.

Eurofins EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Eurofins EMLab P&K
6000 Shoreline Ct, Ste 205, So. San Francisco, CA 94080
(866) 888-6653 Fax (623) 780-7695 www.emlab.com

Client: TestAmerica-Pleasanton
C/O: Ms. Afsaneh Salimpour
Re: 320-71537-1; Integral Communities Pittsburg Project

Date of Sampling: 03-17-2021
Date of Receipt: 03-23-2021
Date of Report: 03-30-2021

ASBESTOS POINT COUNT REPORT: CARB METHOD 435

Location:	SB-04-3.0 (320-71537-6)		
Total Points Counted:	400		
Lab ID-Version‡:	12423627-1		
Sample Layers	**Asbestos Type**	**Asbestos Points Counted**	**Asbestos Concentration (%)**
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: No asbestos was detected and no points were counted.

Location:	SB-04-8.0 (320-71537-7)		
Total Points Counted:	400		
Lab ID-Version‡:	12423628-1		
Sample Layers	**Asbestos Type**	**Asbestos Points Counted**	**Asbestos Concentration (%)**
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: No asbestos was detected and no points were counted.

Location:	SB-07-3.0 (320-71537-8)		
Total Points Counted:	400		
Lab ID-Version‡:	12423629-1		
Sample Layers	**Asbestos Type**	**Asbestos Points Counted**	**Asbestos Concentration (%)**
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: No asbestos was detected and no points were counted.

The analytical sensitivity is 1 asbestos point. The limit of detection is 1 asbestos point divided by the total number of points counted and multiplied by 100.

The results relate only to the items tested. Interpretation is left to the company and/or persons who conducted the field work. The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by any agency of the federal government.

All samples were received in acceptable condition unless otherwise noted. Eurofins EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Eurofins EMLab P&K
6000 Shoreline Ct, Ste 205, So. San Francisco, CA 94080
(866) 888-6653 Fax (623) 780-7695 www.emlab.com

Client: TestAmerica-Pleasanton
C/O: Ms. Afsaneh Salimpour
Re: 320-71537-1; Integral Communities Pittsburg Project

Date of Sampling: 03-17-2021
Date of Receipt: 03-23-2021
Date of Report: 03-30-2021

ASBESTOS POINT COUNT REPORT: CARB METHOD 435

Location:	SB-01-3.0 (320-71537-9)		
Total Points Counted:	400		
Lab ID-Version‡:	12423630-1		
Sample Layers	**Asbestos Type**	**Asbestos Points Counted**	**Asbestos Concentration (%)**
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: No asbestos was detected and no points were counted.

Location:	SB-01-8.0 (320-7153710)		
Total Points Counted:	400		
Lab ID-Version‡:	12423631-1		
Sample Layers	**Asbestos Type**	**Asbestos Points Counted**	**Asbestos Concentration (%)**
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: No asbestos was detected and no points were counted.

Location:	SB-05-3.0 (320-71537-11)		
Total Points Counted:	400		
Lab ID-Version‡:	12423632-1		
Sample Layers	**Asbestos Type**	**Asbestos Points Counted**	**Asbestos Concentration (%)**
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: No asbestos was detected and no points were counted.

The analytical sensitivity is 1 asbestos point. The limit of detection is 1 asbestos point divided by the total number of points counted and multiplied by 100.

The results relate only to the items tested. Interpretation is left to the company and/or persons who conducted the field work. The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by any agency of the federal government.

All samples were received in acceptable condition unless otherwise noted. Eurofins EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.
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Eurofins EMLab P&K
6000 Shoreline Ct, Ste 205, So. San Francisco, CA 94080
(866) 888-6653 Fax (623) 780-7695 www.emlab.com

Client: TestAmerica-Pleasanton
C/O: Ms. Afsaneh Salimpour
Re: 320-71537-1; Integral Communities Pittsburg Project

Date of Sampling: 03-17-2021
Date of Receipt: 03-23-2021
Date of Report: 03-30-2021

ASBESTOS POINT COUNT REPORT: CARB METHOD 435

Location:	SB-05-8.0 (320-71537-12)		
Total Points Counted:	400		
Lab ID-Version‡:	12423633-1		
Sample Layers	**Asbestos Type**	**Asbestos Points Counted**	**Asbestos Concentration (%)**
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: No asbestos was detected and no points were counted.

Location:	SB-03-3.0 (320-71537-14)		
Total Points Counted:	400		
Lab ID-Version‡:	12423634-1		
Sample Layers	**Asbestos Type**	**Asbestos Points Counted**	**Asbestos Concentration (%)**
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: No asbestos was detected and no points were counted.

Location:	SB-19-3.0 (320-71537-15)		
Total Points Counted:	400		
Lab ID-Version‡:	12423635-1		
Sample Layers	**Asbestos Type**	**Asbestos Points Counted**	**Asbestos Concentration (%)**
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: No asbestos was detected and no points were counted.

The analytical sensitivity is 1 asbestos point. The limit of detection is 1 asbestos point divided by the total number of points counted and multiplied by 100.

The results relate only to the items tested. Interpretation is left to the company and/or persons who conducted the field work. The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by any agency of the federal government.

All samples were received in acceptable condition unless otherwise noted. Eurofins EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Eurofins EMLab P&K
6000 Shoreline Ct, Ste 205, So. San Francisco, CA 94080
(866) 888-6653 Fax (623) 780-7695 www.emlab.com

Client: TestAmerica-Pleasanton
C/O: Ms. Afsaneh Salimpour
Re: 320-71537-1; Integral Communities Pittsburg Project

Date of Sampling: 03-17-2021
Date of Receipt: 03-23-2021
Date of Report: 03-30-2021

ASBESTOS POINT COUNT REPORT: CARB METHOD 435

Location:	SB-06-3.0 (320-71537-16)		
Total Points Counted:	400		
Lab ID-Version‡:	12423636-1		
Sample Layers	**Asbestos Type**	**Asbestos Points Counted**	**Asbestos Concentration (%)**
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: No asbestos was detected and no points were counted.

Location:	SB-21-3.0 (320-71537-17)		
Total Points Counted:	400		
Lab ID-Version‡:	12423637-1		
Sample Layers	**Asbestos Type**	**Asbestos Points Counted**	**Asbestos Concentration (%)**
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: No asbestos was detected and no points were counted.

The analytical sensitivity is 1 asbestos point. The limit of detection is 1 asbestos point divided by the total number of points counted and multiplied by 100.

The results relate only to the items tested. Interpretation is left to the company and/or persons who conducted the field work. The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by any agency of the federal government.

All samples were received in acceptable condition unless otherwise noted. Eurofins EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600 Fax: 916-372-1059

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Salimpour, Afsaneh F	Carrier Tracking No(s):	COC No: 320-216895.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Afsaneh.Salimpour@Eurofinset.com	State of Origin: California	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State - California		Job #: 320-71537-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 3/25/2021			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Integral Communities Pittsburg Project	Project #: 32017420			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B/CA_LUFTMS/5030B GRO C4-C12	8260B/5030B VOCs, Standard List	8015B_DRO/3510C_SGC DRO/MRO	8015B_DRO/3550B DRO/MRO	8270C_SIM/3546 PAHs	6010B/3050B CAM 17 List, minus Mercury	7471A/7471A_Prep Mercury Only	8082/3546 PCBs, Standard List	8015B_DRO/3550B DRO/MRO (Hold)	8270C_SIM/3546 PAHs (Hold)	6010B/3050B CAM 17 List, minus Mercury (Hold)	7471A/7471A_Prep Mercury Only (Hold)	8082/3546 PCBs, Standard List (Hold)	Total Number of containers	Special Instructions/Note:
			Preservation Code:																		
SB-04-GW (320-71537-1)	3/17/21	16:40 Pacific		Water			X	X	X											5	
SB-01-GW (320-71537-2)	3/17/21	09:20 Pacific		Water			X	X	X											5	
SB-05-GW (320-71537-3)	3/19/21	13:00 Pacific		Water			X	X	X											5	
DUP-01 (320-71537-4)	3/19/21	13:30 Pacific		Water			X	X	X												
TRIP BLANK (320-71537-5)	3/19/21	Pacific		Water			X	X													
SB-04-3.0 (320-71537-6)	3/17/21	15:40 Pacific		Solid						X	X	X	X	X						2	
SB-04-8.0 (320-71537-7)	3/17/21	15:40 Pacific		Solid						X	X	X	X	X						2	
SB-07-3.0 (320-71537-8)	3/17/21	17:20 Pacific		Solid						X	X	X	X	X						2	
SB-01-3.0 (320-71537-9)	3/19/21	08:10 Pacific		Solid						X	X	X	X	X						2	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	3-22-21 1600	SJ	[signature]	3-22-21 1600	DCS
2	[signature]	3-22-21 1820	DCS	[signature]	3/22/21-1820	EDASAC
3						

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.9 & 2.0

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600 Fax: 916-372-1059

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Salimpour, Afsaneh F	Carrier Tracking No(s):	COC No: 320-216895.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Afsaneh.Salimpour@Eurofinset.com	State of Origin: California	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State - California		Job #: 320-71537-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 3/25/2021			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Integral Communities Pittsburg Project	Project #: 32017420			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B/CA_LUFTMS/5030B GRO C4-C12	8260B/5030B VOCs, Standard List	8015B_DRO/3510C_SGC DRO/MRO	8015B_DRO/3550B DRO/MRO	8270C_SIM/3546 PAHs	6010B/3050B CAM 17 List, minus Mercury	7471A/7471A_Prep Mercury Only	8082/3546 PCBs, Standard List	8015B_DRO/3550B DRO/MRO (Hold)	8270C_SIM/3546 PAHs (Hold)	6010B/3050B CAM 17 List, minus Mercury (Hold)	7471A/7471A_Prep Mercury Only (Hold)	8082/3546 PCBs, Standard List (Hold)	Total Number of containers	Special Instructions/Note:
			Preservation Code:																		
SB-01-8.0 (320-71537-10)	3/19/21	08:30 Pacific		Solid						X	X	X	X	X						2	
SB-05-3.0 (320-71537-11)	3/19/21	10:10 Pacific		Solid						X	X	X	X	X						2	
SB-05-8.0 (320-71537-12)	3/19/21	10:45 Pacific		Solid						X	X	X	X	X						2	
SB-05-17.0 (320-71537-13)	3/19/21	10:50 Pacific		Solid											X	X	X	X	X	1	
SB-03-3.0 (320-71537-14)	3/19/21	11:55 Pacific		Solid						X	X	X	X	X						2	
SB-19-3.0 (320-71537-15)	3/19/21	13:20 Pacific		Solid						X	X	X	X	X						2	
SB-06-3.0 (320-71537-16)	3/19/21	13:50 Pacific		Solid						X	X	X	X	X						2	
SB-21-3.0 (320-71537-17)	3/19/21	14:35 Pacific		Solid						X	X	X	X	X						2	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	3-22-21 1600	SJ	[signature]	3-22-21 1600	DCS
2	[signature]	3-22-21 1800	DCS	[signature]	3/22/21 1820	GTEL
3		Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 11/01/2020

GSI ENVIRONMENTAL

320-71537

CHAIN-OF-CUSTODY RECORD
Date: 3/17/21 - 3/19/21
Page 1 of 2

199158

FROM: GSI Environmental Inc. 155 Grand Ave. Suite 704 Oakland, CA 94612 (510) 463-8484	PROJECT NAME: Integral Communities Pittsburg	PROJECT NO.: 5785
	PROJECT CONTACT: Matt Goerz	LAB CONTACT: Afsaneh Salimpour
	GLOBAL ID:	SAMPLER(S): (PRINT) MATT GOERZ
TEL: (510) 463-8484	E-MAIL: mpgoerz@gsi-env.com	

LABORATORY: EUROFINS TEST AMERICA - SACRAMENTO

TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD

SPECIAL INSTRUCTIONS: Please run silica gel preparation before TPH diesel and motor oil analysis.

REQUESTED ANALYSES
Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved HCl	Field Filtered	VOCs and TPH gas 8260B	TPH d, mo EPA 8015	Silica Gel Preparation
	SB-04-GW	3/17/21	1640	WATER	3		X		X		
	SB-04-GW	3/17/21	1640	WATER	2	X				X	X
	SB-01-GW	3/19/21	0920		3		X		X		
	SB-01-GW		0920		2	X				X	X
	SB-05-GW		1300		3		X		X		
	SB-05-GW		1300		2					X	X
	DUP-01		1330		3		X		X		
	DUP-01		1330		2	X				X	X
	TRIP BLANK	↓		↓	3		X		X		

MPG

MPG

320-71537 Chain of Custody

Relinquished by: (Signature)	Received by: (Signature)	Date: 3/19/21	Time: 1505
Relinquished by: (Signature)	Received by: (Signature)	Date: 3/19/21	Time: 1625
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

4.2°C
5.1°C

GSI ENVIRONMENTAL

320-71537

CHAIN-OF-CUSTODY RECORD
Date: 3/17/21
Page 2 of 2

FROM: GSI Environmental Inc. 155 Grand Ave. Suite 704 Oakland, CA 94612 (510) 463-8484	PROJECT NAME: Integral Communities Pittsburg	PROJECT NO.: 5785
	PROJECT CONTACT: Matt Goerz	LAB CONTACT: Afsaneh Salimpour
	GLOBAL ID:	SAMPLER(S): (PRINT) MATT GOERZ
TEL: (510) 463-8484	E-MAIL: mpgoerz@gsi-env.com	

LABORATORY: EUROFINS TEST AMERICA

TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

SPECIAL INSTRUCTIONS:

REQUESTED ANALYSES
Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH d, mo EPA 8015	PAHs EPA 8270 SIM	Title 22 Metals 6010/7470	PCB EPA 8082	Asbestos by CARB 435	HOLD
	SB-04-3.0	3/17/21	1540	SOIL	3	X			X	X	X	X	X	
	SB-04-8.0	3/17/21	1540	SOIL	3	X			X	X	X	X	X	
	SB-07-3.0	3/17/21	1720	SOIL	3	X			X	X	X	X	X	
	SB-01-3.0	3/19/21	0810		3	X			X	X	X	X	X	
	SB-01-8.0	3/19/21	0830		3	X			X	X	X	X	X	
	SB-05-3.0		1010		3	X			X	X	X	X	X	
	SB-05-8.0		1045		3	X			X	X	X	X	X	
	SB-05-17.0		1050		1	X								X
	SB-03-3.0		1155		3	X			X	X	X	X	X	
	SB-19-3.0		1320		3	X			X	X	X	X	X	
	SB-06-3.0		1350		3	X			X	X	X	X	X	
	SB-21-3.0		1435		3	X			X	X	X	X	X	

MPG

MPG

Relinquished by: (Signature)	Received by: (Signature)	Date: 3/19/21	Time: 505
Relinquished by: (Signature)	Received by: (Signature)	Date: 3/19/21	Time: 1625
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

4.2c 5°c

Login Sample Receipt Checklist

Client: GSI Environmental, Inc

Job Number: 320-71537-1

Login Number: 71537
List Number: 1
Creator: Garcia, Hilario A

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GSI Environmental, Inc

Job Number: 320-71537-1

Login Number: 71537
List Number: 2
Creator: Guzman, Juan

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.9 & 2.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-71548-1
Client Project/Site: Integral Communities Pittsburg

For:
GSI Environmental, Inc
155 Grand Avenue
Suite 704
Oakland, California 94612

Attn: Matt Goerz

Authorized for release by:
4/2/2021 1:35:25 PM

Afsaneh Salimpour, Senior Project Manager
(925)484-1919
Afsaneh.Salimpour@Eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg

Job ID: 320-71548-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.

GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 320-71548-1

Laboratory: Eurofins TestAmerica, Sacramento

Narrative

Job Narrative
320-71548-1

Comments
No additional comments.

Receipt
The samples were received on 3/22/2021 2:05 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.4º C.

GC/MS Semi VOA
Method 8270C SIM: The following sample was diluted due to the nature of the sample matrix: SB-20-3.0 (320-71548-1). As such, surrogate recoveries are below the calibration range or are not reported, and elevated reporting limits (RLs) are provided.

Method 8270C SIM: The following sample was diluted due to the nature of the sample matrix: SB-20-3.0 (320-71548-1). Elevated reporting limits (RLs) are provided.

Method 8270C SIM: The matrix spike duplicate (MSD) recovery for preparation batch 320-474519 and analytical batch 320-474615 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8270C SIM: The following samples were diluted due to the nature of the sample matrix: (320-71548-A-3-D MS) and (320-71548-A-3-E MSD). Because of this dilution, the surrogate spike and matrix spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method 8270C SIM: The following samples were diluted due to the nature of the sample matrix: SB-09-3.0 (320-71548-3), SB-10-3.0 (320-71548-4), (320-71548-A-3-D MS) and (320-71548-A-3-E MSD). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method 8015B: The following sample was diluted to bring the concentration of target analytes within the calibration range: SB-09-3.0 (320-71548-3). Elevated reporting limits (RLs) are provided.

Method 8015B: The following samples were diluted due to abundance of target analytes: SB-10-3.0 (320-71548-4) and (320-71248-A-10-H). As such, surrogate recoveries are below the calibration range or are not reported, and elevated reporting limits (RLs) are provided.

Method 8015B: The following samples contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: SB-20-3.0 (320-71548-1), SB-11-3.0 (320-71548-2), SB-09-3.0 (320-71548-3), SB-10-3.0 (320-71548-4), SB-14-3.0 (320-71548-5), SB-13-3.0 (320-71548-6), SB-12-3.0 (320-71548-7), SB-16-3.0 (320-71548-8) and (320-71248-A-10-H).

Method 8082: Surrogate recovery for the following samples were outside control limits: SB-20-3.0 (320-71548-1), SB-11-3.0 (320-71548-2), SB-09-3.0 (320-71548-3), SB-10-3.0 (320-71548-4), SB-13-3.0 (320-71548-6), SB-12-3.0 (320-71548-7) and (320-71548-A-1-D MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8082: The continuing calibration verification (CCV) associated with batch 320-475867 recovered above the upper control limit for PCB-1016, PCB-1260, PCB-1254, Decachlorobiphenyl (DCB) and Tetrachloro-m-xylene (TCX). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8082: Surrogate recovery for the method blank (MB) was outside the upper control limit: (MB 320-474546/1-A). The associated samples did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Job ID: 320-71548-1 (Continued)

Laboratory: Eurofins TestAmerica, Sacramento (Continued)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

Method 7471A: The following sample was diluted to bring the concentration of target analytes within the calibration range: SB-10-3.0 (320-71548-4). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

Method 3550B: Due to the matrix, the following sample could not be concentrated to the final method required volume of 3 mL: SB-10-3.0 (320-71548-4). The reporting limits (RLs) are elevated proportionately. These samples are associated with 320-474186 solid 8015B_DRO.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg

Job ID: 320-71548-1

Client Sample ID: SB-20-3.0 — Lab Sample ID: 320-71548-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoranthene	0.031		0.025		mg/Kg	5		8270C SIM	Total/NA
Pyrene	0.044		0.025		mg/Kg	5		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	30		1.0		mg/Kg	1		8015B	Total/NA
Motor Oil Range Organics [C28-C40]	64		5.0		mg/Kg	1		8015B	Total/NA
Arsenic	7.6		2.0		mg/Kg	1		6010B	Total/NA
Barium	66		1.0		mg/Kg	1		6010B	Total/NA
Chromium	39		0.50		mg/Kg	1		6010B	Total/NA
Cobalt	8.9		0.50		mg/Kg	1		6010B	Total/NA
Copper	12		1.5		mg/Kg	1		6010B	Total/NA
Lead	4.3		1.0		mg/Kg	1		6010B	Total/NA
Nickel	49		1.0		mg/Kg	1		6010B	Total/NA
Vanadium	32		0.50		mg/Kg	1		6010B	Total/NA
Zinc	28		2.0		mg/Kg	1		6010B	Total/NA
Mercury	0.040		0.039		mg/Kg	1		7471A	Total/NA

Client Sample ID: SB-11-3.0 — Lab Sample ID: 320-71548-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	16		1.0		mg/Kg	1		8015B	Total/NA
Motor Oil Range Organics [C28-C40]	34		5.0		mg/Kg	1		8015B	Total/NA
Arsenic	3.7		2.0		mg/Kg	1		6010B	Total/NA
Barium	120		0.99		mg/Kg	1		6010B	Total/NA
Beryllium	0.31		0.20		mg/Kg	1		6010B	Total/NA
Chromium	23		0.50		mg/Kg	1		6010B	Total/NA
Cobalt	8.6		0.50		mg/Kg	1		6010B	Total/NA
Copper	17		1.5		mg/Kg	1		6010B	Total/NA
Lead	8.2		0.99		mg/Kg	1		6010B	Total/NA
Nickel	24		0.99		mg/Kg	1		6010B	Total/NA
Vanadium	39		0.50		mg/Kg	1		6010B	Total/NA
Zinc	43		2.0		mg/Kg	1		6010B	Total/NA

Client Sample ID: SB-09-3.0 — Lab Sample ID: 320-71548-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	91		5.0		mg/Kg	5		8015B	Total/NA
Motor Oil Range Organics [C28-C40]	410		25		mg/Kg	5		8015B	Total/NA
Arsenic	4.3		2.0		mg/Kg	1		6010B	Total/NA
Barium	130		0.98		mg/Kg	1		6010B	Total/NA
Beryllium	0.41		0.20		mg/Kg	1		6010B	Total/NA
Chromium	26		0.49		mg/Kg	1		6010B	Total/NA
Cobalt	8.7		0.49		mg/Kg	1		6010B	Total/NA
Copper	23		1.5		mg/Kg	1		6010B	Total/NA
Lead	24		0.98		mg/Kg	1		6010B	Total/NA
Nickel	29		0.98		mg/Kg	1		6010B	Total/NA
Vanadium	41		0.49		mg/Kg	1		6010B	Total/NA
Zinc	68		2.0		mg/Kg	1		6010B	Total/NA
Mercury	0.043		0.039		mg/Kg	1		7471A	Total/NA

Client Sample ID: SB-10-3.0 — Lab Sample ID: 320-71548-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chrysene	0.11		0.096		mg/Kg	20		8270C SIM	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SB-10-3.0 (Continued)

Lab Sample ID: 320-71548-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	830		170		mg/Kg	50		8015B	Total/NA
Motor Oil Range Organics [C28-C40]	3800		830		mg/Kg	50		8015B	Total/NA
Arsenic	6.2		2.0		mg/Kg	1		6010B	Total/NA
Barium	160		0.98		mg/Kg	1		6010B	Total/NA
Beryllium	0.48		0.20		mg/Kg	1		6010B	Total/NA
Chromium	28		0.49		mg/Kg	1		6010B	Total/NA
Cobalt	9.1		0.49		mg/Kg	1		6010B	Total/NA
Copper	31		1.5		mg/Kg	1		6010B	Total/NA
Lead	21		0.98		mg/Kg	1		6010B	Total/NA
Nickel	37		0.98		mg/Kg	1		6010B	Total/NA
Vanadium	50		0.49		mg/Kg	1		6010B	Total/NA
Zinc	70		2.0		mg/Kg	1		6010B	Total/NA
Mercury	1.0		0.21		mg/Kg	5		7471A	Total/NA

Client Sample ID: SB-14-3.0

Lab Sample ID: 320-71548-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	1.8		1.0		mg/Kg	1		8015B	Total/NA
Motor Oil Range Organics [C28-C40]	6.5		5.0		mg/Kg	1		8015B	Total/NA
Arsenic	4.6		2.0		mg/Kg	1		6010B	Total/NA
Barium	70		0.99		mg/Kg	1		6010B	Total/NA
Beryllium	0.48		0.20		mg/Kg	1		6010B	Total/NA
Chromium	31		0.50		mg/Kg	1		6010B	Total/NA
Cobalt	8.7		0.50		mg/Kg	1		6010B	Total/NA
Copper	17		1.5		mg/Kg	1		6010B	Total/NA
Lead	5.8		0.99		mg/Kg	1		6010B	Total/NA
Nickel	35		0.99		mg/Kg	1		6010B	Total/NA
Vanadium	45		0.50		mg/Kg	1		6010B	Total/NA
Zinc	41		2.0		mg/Kg	1		6010B	Total/NA

Client Sample ID: SB-13-3.0

Lab Sample ID: 320-71548-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	0.013		0.0050		mg/Kg	1		8270C SIM	Total/NA
Benzo[a]pyrene	0.010		0.0050		mg/Kg	1		8270C SIM	Total/NA
Benzo[b]fluoranthene	0.012		0.0050		mg/Kg	1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	0.0069		0.0050		mg/Kg	1		8270C SIM	Total/NA
Chrysene	0.015		0.0050		mg/Kg	1		8270C SIM	Total/NA
Fluoranthene	0.016		0.0050		mg/Kg	1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	0.0066		0.0050		mg/Kg	1		8270C SIM	Total/NA
Phenanthrene	0.0084		0.0050		mg/Kg	1		8270C SIM	Total/NA
Pyrene	0.023		0.0050		mg/Kg	1		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	15		0.99		mg/Kg	1		8015B	Total/NA
Motor Oil Range Organics [C28-C40]	49		5.0		mg/Kg	1		8015B	Total/NA
Arsenic	4.9		2.0		mg/Kg	1		6010B	Total/NA
Barium	150		1.0		mg/Kg	1		6010B	Total/NA
Beryllium	0.40		0.20		mg/Kg	1		6010B	Total/NA
Chromium	27		0.50		mg/Kg	1		6010B	Total/NA
Cobalt	8.5		0.50		mg/Kg	1		6010B	Total/NA
Copper	22		1.5		mg/Kg	1		6010B	Total/NA
Lead	9.9		1.0		mg/Kg	1		6010B	Total/NA
Nickel	30		1.0		mg/Kg	1		6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SB-13-3.0 (Continued) — Lab Sample ID: 320-71548-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vanadium	40		0.50		mg/Kg	1		6010B	Total/NA
Zinc	60		2.0		mg/Kg	1		6010B	Total/NA

Client Sample ID: SB-12-3.0 — Lab Sample ID: 320-71548-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Anthracene	0.022		0.0047		mg/Kg	1		8270C SIM	Total/NA
Naphthalene	0.023		0.0047		mg/Kg	1		8270C SIM	Total/NA
Phenanthrene	0.0080		0.0047		mg/Kg	1		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	1.3		0.99		mg/Kg	1		8015B	Total/NA
Motor Oil Range Organics [C28-C40]	5.7		5.0		mg/Kg	1		8015B	Total/NA
Arsenic	4.2		1.9		mg/Kg	1		6010B	Total/NA
Barium	130		0.95		mg/Kg	1		6010B	Total/NA
Beryllium	0.37		0.19		mg/Kg	1		6010B	Total/NA
Chromium	29		0.48		mg/Kg	1		6010B	Total/NA
Cobalt	9.4		0.48		mg/Kg	1		6010B	Total/NA
Copper	20		1.4		mg/Kg	1		6010B	Total/NA
Lead	5.8		0.95		mg/Kg	1		6010B	Total/NA
Nickel	33		0.95		mg/Kg	1		6010B	Total/NA
Vanadium	42		0.48		mg/Kg	1		6010B	Total/NA
Zinc	47		1.9		mg/Kg	1		6010B	Total/NA

Client Sample ID: SB-16-3.0 — Lab Sample ID: 320-71548-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	9.0		1.0		mg/Kg	1		8015B	Total/NA
Motor Oil Range Organics [C28-C40]	46		5.0		mg/Kg	1		8015B	Total/NA
Arsenic	4.1		1.9		mg/Kg	1		6010B	Total/NA
Barium	150		0.96		mg/Kg	1		6010B	Total/NA
Beryllium	0.44		0.19		mg/Kg	1		6010B	Total/NA
Chromium	28		0.48		mg/Kg	1		6010B	Total/NA
Cobalt	9.0		0.48		mg/Kg	1		6010B	Total/NA
Copper	19		1.4		mg/Kg	1		6010B	Total/NA
Lead	8.2		0.96		mg/Kg	1		6010B	Total/NA
Nickel	32		0.96		mg/Kg	1		6010B	Total/NA
Vanadium	43		0.48		mg/Kg	1		6010B	Total/NA
Zinc	47		1.9		mg/Kg	1		6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SB-20-3.0

Date Collected: 03/19/21 15:30
Date Received: 03/22/21 14:05

Lab Sample ID: 320-71548-1

Matrix: Solid

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 05:05	5
Acenaphthylene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 05:05	5
Anthracene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 05:05	5
Benzo[a]anthracene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 05:05	5
Benzo[a]pyrene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 05:05	5
Benzo[b]fluoranthene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 05:05	5
Benzo[g,h,i]perylene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 05:05	5
Benzo[k]fluoranthene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 05:05	5
Chrysene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 05:05	5
Dibenz(a,h)anthracene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 05:05	5
Fluoranthene	**0.031**		0.025		mg/Kg		03/25/21 13:44	03/27/21 05:05	5
Fluorene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 05:05	5
Indeno[1,2,3-cd]pyrene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 05:05	5
Naphthalene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 05:05	5
Phenanthrene	ND		0.025		mg/Kg		03/25/21 13:44	03/27/21 05:05	5
Pyrene	**0.044**		0.025		mg/Kg		03/25/21 13:44	03/27/21 05:05	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*38*	*S1-*	*43 - 109*	*03/25/21 13:44*	*03/27/21 05:05*	*5*
2-methylnaphthalene-d10	*43*	*S1-*	*50 - 150*	*03/25/21 13:44*	*03/27/21 05:05*	*5*
Fluoranthene-d10 (Surr)	*52*		*50 - 150*	*03/25/21 13:44*	*03/27/21 05:05*	*5*
Nitrobenzene-d5	*42*	*S1-*	*49 - 114*	*03/25/21 13:44*	*03/27/21 05:05*	*5*
Terphenyl-d14	*45*	*S1-*	*53 - 121*	*03/25/21 13:44*	*03/27/21 05:05*	*5*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**30**		1.0		mg/Kg		03/26/21 11:02	03/29/21 16:44	1
Motor Oil Range Organics [C28-C40]	**64**		5.0		mg/Kg		03/26/21 11:02	03/29/21 16:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*80*		*51 - 111*	*03/26/21 11:02*	*03/29/21 16:44*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.033		mg/Kg		03/29/21 08:27	04/01/21 03:23	1
PCB-1221	ND		0.033		mg/Kg		03/29/21 08:27	04/01/21 03:23	1
PCB-1232	ND		0.033		mg/Kg		03/29/21 08:27	04/01/21 03:23	1
PCB-1242	ND		0.033		mg/Kg		03/29/21 08:27	04/01/21 03:23	1
PCB-1248	ND		0.033		mg/Kg		03/29/21 08:27	04/01/21 03:23	1
PCB-1254	ND		0.033		mg/Kg		03/29/21 08:27	04/01/21 03:23	1
PCB-1260	ND		0.033		mg/Kg		03/29/21 08:27	04/01/21 03:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*46*	*S1-*	*52 - 138*	*03/29/21 08:27*	*04/01/21 03:23*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:21	1
Arsenic	**7.6**		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:21	1
Barium	**66**		1.0		mg/Kg		03/23/21 13:16	03/24/21 18:21	1

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg

Job ID: 320-71548-1

Client Sample ID: SB-20-3.0
Date Collected: 03/19/21 15:30
Date Received: 03/22/21 14:05

Lab Sample ID: 320-71548-1
Matrix: Solid

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.20		mg/Kg		03/23/21 13:16	03/24/21 18:21	1
Cadmium	ND		0.20		mg/Kg		03/23/21 13:16	03/24/21 18:21	1
Chromium	**39**		0.50		mg/Kg		03/23/21 13:16	03/24/21 18:21	1
Cobalt	**8.9**		0.50		mg/Kg		03/23/21 13:16	03/24/21 18:21	1
Copper	**12**		1.5		mg/Kg		03/23/21 13:16	03/24/21 18:21	1
Lead	**4.3**		1.0		mg/Kg		03/23/21 13:16	03/24/21 18:21	1
Molybdenum	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:21	1
Nickel	**49**		1.0		mg/Kg		03/23/21 13:16	03/24/21 18:21	1
Selenium	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:21	1
Silver	ND		0.50		mg/Kg		03/23/21 13:16	03/24/21 18:21	1
Thallium	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:21	1
Vanadium	**32**		0.50		mg/Kg		03/23/21 13:16	03/24/21 18:21	1
Zinc	**28**		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:21	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.040**		0.039		mg/Kg		03/24/21 11:30	03/25/21 11:30	1

Client Sample ID: SB-11-3.0

Date Collected: 03/19/21 16:00
Date Received: 03/22/21 14:05

Lab Sample ID: 320-71548-2

Matrix: Solid

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0049		mg/Kg		03/29/21 07:20	03/29/21 17:52	1
Acenaphthylene	ND		0.0049		mg/Kg		03/29/21 07:20	03/29/21 17:52	1
Anthracene	ND		0.0049		mg/Kg		03/29/21 07:20	03/29/21 17:52	1
Benzo[a]anthracene	ND		0.0049		mg/Kg		03/29/21 07:20	03/29/21 17:52	1
Benzo[a]pyrene	ND		0.0049		mg/Kg		03/29/21 07:20	03/29/21 17:52	1
Benzo[b]fluoranthene	ND		0.0049		mg/Kg		03/29/21 07:20	03/29/21 17:52	1
Benzo[g,h,i]perylene	ND		0.0049		mg/Kg		03/29/21 07:20	03/29/21 17:52	1
Benzo[k]fluoranthene	ND		0.0049		mg/Kg		03/29/21 07:20	03/29/21 17:52	1
Chrysene	ND		0.0049		mg/Kg		03/29/21 07:20	03/29/21 17:52	1
Dibenz(a,h)anthracene	ND		0.0049		mg/Kg		03/29/21 07:20	03/29/21 17:52	1
Fluoranthene	ND		0.0049		mg/Kg		03/29/21 07:20	03/29/21 17:52	1
Fluorene	ND		0.0049		mg/Kg		03/29/21 07:20	03/29/21 17:52	1
Indeno[1,2,3-cd]pyrene	ND		0.0049		mg/Kg		03/29/21 07:20	03/29/21 17:52	1
Naphthalene	ND		0.0049		mg/Kg		03/29/21 07:20	03/29/21 17:52	1
Phenanthrene	ND		0.0049		mg/Kg		03/29/21 07:20	03/29/21 17:52	1
Pyrene	ND		0.0049		mg/Kg		03/29/21 07:20	03/29/21 17:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*73*		*43 - 109*	*03/29/21 07:20*	*03/29/21 17:52*	*1*
2-methylnaphthalene-d10	*81*		*50 - 150*	*03/29/21 07:20*	*03/29/21 17:52*	*1*
Fluoranthene-d10 (Surr)	*99*		*50 - 150*	*03/29/21 07:20*	*03/29/21 17:52*	*1*
Nitrobenzene-d5	*79*		*49 - 114*	*03/29/21 07:20*	*03/29/21 17:52*	*1*
Terphenyl-d14	*86*		*53 - 121*	*03/29/21 07:20*	*03/29/21 17:52*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**16**		1.0		mg/Kg		03/26/21 11:02	03/29/21 17:12	1
Motor Oil Range Organics [C28-C40]	**34**		5.0		mg/Kg		03/26/21 11:02	03/29/21 17:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*77*		*51 - 111*	*03/26/21 11:02*	*03/29/21 17:12*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.032		mg/Kg		03/29/21 08:27	04/01/21 04:25	1
PCB-1221	ND		0.032		mg/Kg		03/29/21 08:27	04/01/21 04:25	1
PCB-1232	ND		0.032		mg/Kg		03/29/21 08:27	04/01/21 04:25	1
PCB-1242	ND		0.032		mg/Kg		03/29/21 08:27	04/01/21 04:25	1
PCB-1248	ND		0.032		mg/Kg		03/29/21 08:27	04/01/21 04:25	1
PCB-1254	ND		0.032		mg/Kg		03/29/21 08:27	04/01/21 04:25	1
PCB-1260	ND		0.032		mg/Kg		03/29/21 08:27	04/01/21 04:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*47*	*S1-*	*52 - 138*	*03/29/21 08:27*	*04/01/21 04:25*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:25	1
Arsenic	**3.7**		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:25	1
Barium	**120**		0.99		mg/Kg		03/23/21 13:16	03/24/21 18:25	1

Client Sample ID: SB-11-3.0
Date Collected: 03/19/21 16:00
Date Received: 03/22/21 14:05

Lab Sample ID: 320-71548-2
Matrix: Solid

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	**0.31**		0.20		mg/Kg		03/23/21 13:16	03/24/21 18:25	1
Cadmium	ND		0.20		mg/Kg		03/23/21 13:16	03/24/21 18:25	1
Chromium	**23**		0.50		mg/Kg		03/23/21 13:16	03/24/21 18:25	1
Cobalt	**8.6**		0.50		mg/Kg		03/23/21 13:16	03/24/21 18:25	1
Copper	**17**		1.5		mg/Kg		03/23/21 13:16	03/24/21 18:25	1
Lead	**8.2**		0.99		mg/Kg		03/23/21 13:16	03/24/21 18:25	1
Molybdenum	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:25	1
Nickel	**24**		0.99		mg/Kg		03/23/21 13:16	03/24/21 18:25	1
Selenium	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:25	1
Silver	ND		0.50		mg/Kg		03/23/21 13:16	03/24/21 18:25	1
Thallium	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:25	1
Vanadium	**39**		0.50		mg/Kg		03/23/21 13:16	03/24/21 18:25	1
Zinc	**43**		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:25	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.041		mg/Kg		03/24/21 11:30	03/25/21 11:33	1

Client Sample ID: SB-09-3.0

Date Collected: 03/22/21 08:00
Date Received: 03/22/21 14:05

Lab Sample ID: 320-71548-3

Matrix: Solid

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.046		mg/Kg		03/29/21 07:20	03/29/21 18:21	10
Acenaphthylene	ND		0.046		mg/Kg		03/29/21 07:20	03/29/21 18:21	10
Anthracene	ND		0.046		mg/Kg		03/29/21 07:20	03/29/21 18:21	10
Benzo[a]anthracene	ND	F2 F1	0.046		mg/Kg		03/29/21 07:20	03/29/21 18:21	10
Benzo[a]pyrene	ND	F2 F1	0.046		mg/Kg		03/29/21 07:20	03/29/21 18:21	10
Benzo[b]fluoranthene	ND	F2 F1	0.046		mg/Kg		03/29/21 07:20	03/29/21 18:21	10
Benzo[g,h,i]perylene	ND	F1	0.046		mg/Kg		03/29/21 07:20	03/29/21 18:21	10
Benzo[k]fluoranthene	ND		0.046		mg/Kg		03/29/21 07:20	03/29/21 18:21	10
Chrysene	ND	F2 F1	0.046		mg/Kg		03/29/21 07:20	03/29/21 18:21	10
Dibenz(a,h)anthracene	ND		0.046		mg/Kg		03/29/21 07:20	03/29/21 18:21	10
Fluoranthene	ND	F2 F1	0.046		mg/Kg		03/29/21 07:20	03/29/21 18:21	10
Fluorene	ND		0.046		mg/Kg		03/29/21 07:20	03/29/21 18:21	10
Indeno[1,2,3-cd]pyrene	ND	F1	0.046		mg/Kg		03/29/21 07:20	03/29/21 18:21	10
Naphthalene	ND		0.046		mg/Kg		03/29/21 07:20	03/29/21 18:21	10
Phenanthrene	ND	F1	0.046		mg/Kg		03/29/21 07:20	03/29/21 18:21	10
Pyrene	ND	F2 F1	0.046		mg/Kg		03/29/21 07:20	03/29/21 18:21	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*77*		*43 - 109*	*03/29/21 07:20*	*03/29/21 18:21*	*10*
2-methylnaphthalene-d10	*82*		*50 - 150*	*03/29/21 07:20*	*03/29/21 18:21*	*10*
Fluoranthene-d10 (Surr)	*98*		*50 - 150*	*03/29/21 07:20*	*03/29/21 18:21*	*10*
Nitrobenzene-d5	*73*		*49 - 114*	*03/29/21 07:20*	*03/29/21 18:21*	*10*
Terphenyl-d14	*88*		*53 - 121*	*03/29/21 07:20*	*03/29/21 18:21*	*10*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**91**		5.0		mg/Kg		03/26/21 11:02	03/29/21 17:41	5
Motor Oil Range Organics [C28-C40]	**410**		25		mg/Kg		03/26/21 11:02	03/29/21 17:41	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*74*		*51 - 111*	*03/26/21 11:02*	*03/29/21 17:41*	*5*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.032		mg/Kg		03/29/21 08:27	04/01/21 04:46	1
PCB-1221	ND		0.032		mg/Kg		03/29/21 08:27	04/01/21 04:46	1
PCB-1232	ND		0.032		mg/Kg		03/29/21 08:27	04/01/21 04:46	1
PCB-1242	ND		0.032		mg/Kg		03/29/21 08:27	04/01/21 04:46	1
PCB-1248	ND		0.032		mg/Kg		03/29/21 08:27	04/01/21 04:46	1
PCB-1254	ND		0.032		mg/Kg		03/29/21 08:27	04/01/21 04:46	1
PCB-1260	ND		0.032		mg/Kg		03/29/21 08:27	04/01/21 04:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*47*	*S1-*	*52 - 138*	*03/29/21 08:27*	*04/01/21 04:46*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:29	1
Arsenic	**4.3**		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:29	1
Barium	**130**		0.98		mg/Kg		03/23/21 13:16	03/24/21 18:29	1

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg

Job ID: 320-71548-1

Client Sample ID: SB-09-3.0
Date Collected: 03/22/21 08:00
Date Received: 03/22/21 14:05

Lab Sample ID: 320-71548-3
Matrix: Solid

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	**0.41**		0.20		mg/Kg		03/23/21 13:16	03/24/21 18:29	1
Cadmium	ND		0.20		mg/Kg		03/23/21 13:16	03/24/21 18:29	1
Chromium	**26**		0.49		mg/Kg		03/23/21 13:16	03/24/21 18:29	1
Cobalt	**8.7**		0.49		mg/Kg		03/23/21 13:16	03/24/21 18:29	1
Copper	**23**		1.5		mg/Kg		03/23/21 13:16	03/24/21 18:29	1
Lead	**24**		0.98		mg/Kg		03/23/21 13:16	03/24/21 18:29	1
Molybdenum	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:29	1
Nickel	**29**		0.98		mg/Kg		03/23/21 13:16	03/24/21 18:29	1
Selenium	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:29	1
Silver	ND		0.49		mg/Kg		03/23/21 13:16	03/24/21 18:29	1
Thallium	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:29	1
Vanadium	**41**		0.49		mg/Kg		03/23/21 13:16	03/24/21 18:29	1
Zinc	**68**		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:29	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.043**		0.039		mg/Kg		03/24/21 11:30	03/25/21 11:35	1

Client Sample ID: SB-10-3.0

Date Collected: 03/22/21 08:45
Date Received: 03/22/21 14:05

Lab Sample ID: 320-71548-4

Matrix: Solid

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.096		mg/Kg		03/29/21 07:20	03/29/21 19:50	20
Acenaphthylene	ND		0.096		mg/Kg		03/29/21 07:20	03/29/21 19:50	20
Anthracene	ND		0.096		mg/Kg		03/29/21 07:20	03/29/21 19:50	20
Benzo[a]anthracene	ND		0.096		mg/Kg		03/29/21 07:20	03/29/21 19:50	20
Benzo[a]pyrene	ND		0.096		mg/Kg		03/29/21 07:20	03/29/21 19:50	20
Benzo[b]fluoranthene	ND		0.096		mg/Kg		03/29/21 07:20	03/29/21 19:50	20
Benzo[g,h,i]perylene	ND		0.096		mg/Kg		03/29/21 07:20	03/29/21 19:50	20
Benzo[k]fluoranthene	ND		0.096		mg/Kg		03/29/21 07:20	03/29/21 19:50	20
Chrysene	**0.11**		0.096		mg/Kg		03/29/21 07:20	03/29/21 19:50	20
Dibenz(a,h)anthracene	ND		0.096		mg/Kg		03/29/21 07:20	03/29/21 19:50	20
Fluoranthene	ND		0.096		mg/Kg		03/29/21 07:20	03/29/21 19:50	20
Fluorene	ND		0.096		mg/Kg		03/29/21 07:20	03/29/21 19:50	20
Indeno[1,2,3-cd]pyrene	ND		0.096		mg/Kg		03/29/21 07:20	03/29/21 19:50	20
Naphthalene	ND		0.096		mg/Kg		03/29/21 07:20	03/29/21 19:50	20
Phenanthrene	ND		0.096		mg/Kg		03/29/21 07:20	03/29/21 19:50	20
Pyrene	ND		0.096		mg/Kg		03/29/21 07:20	03/29/21 19:50	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*86*		*43 - 109*	*03/29/21 07:20*	*03/29/21 19:50*	*20*
2-methylnaphthalene-d10	*94*		*50 - 150*	*03/29/21 07:20*	*03/29/21 19:50*	*20*
Fluoranthene-d10 (Surr)	*111*		*50 - 150*	*03/29/21 07:20*	*03/29/21 19:50*	*20*
Nitrobenzene-d5	*86*		*49 - 114*	*03/29/21 07:20*	*03/29/21 19:50*	*20*
Terphenyl-d14	*103*		*53 - 121*	*03/29/21 07:20*	*03/29/21 19:50*	*20*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**830**		170		mg/Kg		03/26/21 11:02	03/29/21 18:10	50
Motor Oil Range Organics [C28-C40]	**3800**		830		mg/Kg		03/26/21 11:02	03/29/21 18:10	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*66*		*51 - 111*	*03/26/21 11:02*	*03/29/21 18:10*	*50*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.031		mg/Kg		03/29/21 08:27	04/01/21 15:29	1
PCB-1221	ND		0.031		mg/Kg		03/29/21 08:27	04/01/21 15:29	1
PCB-1232	ND		0.031		mg/Kg		03/29/21 08:27	04/01/21 15:29	1
PCB-1242	ND		0.031		mg/Kg		03/29/21 08:27	04/01/21 15:29	1
PCB-1248	ND		0.031		mg/Kg		03/29/21 08:27	04/01/21 15:29	1
PCB-1254	ND		0.031		mg/Kg		03/29/21 08:27	04/01/21 15:29	1
PCB-1260	ND		0.031		mg/Kg		03/29/21 08:27	04/01/21 15:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*49*	*S1-*	*52 - 138*	*03/29/21 08:27*	*04/01/21 15:29*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:33	1
Arsenic	**6.2**		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:33	1
Barium	**160**		0.98		mg/Kg		03/23/21 13:16	03/24/21 18:33	1

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg

Job ID: 320-71548-1

Client Sample ID: SB-10-3.0
Date Collected: 03/22/21 08:45
Date Received: 03/22/21 14:05

Lab Sample ID: 320-71548-4
Matrix: Solid

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	**0.48**		0.20		mg/Kg		03/23/21 13:16	03/24/21 18:33	1
Cadmium	ND		0.20		mg/Kg		03/23/21 13:16	03/24/21 18:33	1
Chromium	**28**		0.49		mg/Kg		03/23/21 13:16	03/24/21 18:33	1
Cobalt	**9.1**		0.49		mg/Kg		03/23/21 13:16	03/24/21 18:33	1
Copper	**31**		1.5		mg/Kg		03/23/21 13:16	03/24/21 18:33	1
Lead	**21**		0.98		mg/Kg		03/23/21 13:16	03/24/21 18:33	1
Molybdenum	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:33	1
Nickel	**37**		0.98		mg/Kg		03/23/21 13:16	03/24/21 18:33	1
Selenium	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:33	1
Silver	ND		0.49		mg/Kg		03/23/21 13:16	03/24/21 18:33	1
Thallium	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:33	1
Vanadium	**50**		0.49		mg/Kg		03/23/21 13:16	03/24/21 18:33	1
Zinc	**70**		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:33	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**1.0**		0.21		mg/Kg		03/24/21 11:30	03/25/21 14:45	5

Client Sample ID: SB-14-3.0

Date Collected: 03/22/21 09:40
Date Received: 03/22/21 14:05

Lab Sample ID: 320-71548-5

Matrix: Solid

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0048		mg/Kg		03/29/21 07:20	03/29/21 20:19	1
Acenaphthylene	ND		0.0048		mg/Kg		03/29/21 07:20	03/29/21 20:19	1
Anthracene	ND		0.0048		mg/Kg		03/29/21 07:20	03/29/21 20:19	1
Benzo[a]anthracene	ND		0.0048		mg/Kg		03/29/21 07:20	03/29/21 20:19	1
Benzo[a]pyrene	ND		0.0048		mg/Kg		03/29/21 07:20	03/29/21 20:19	1
Benzo[b]fluoranthene	ND		0.0048		mg/Kg		03/29/21 07:20	03/29/21 20:19	1
Benzo[g,h,i]perylene	ND		0.0048		mg/Kg		03/29/21 07:20	03/29/21 20:19	1
Benzo[k]fluoranthene	ND		0.0048		mg/Kg		03/29/21 07:20	03/29/21 20:19	1
Chrysene	ND		0.0048		mg/Kg		03/29/21 07:20	03/29/21 20:19	1
Dibenz(a,h)anthracene	ND		0.0048		mg/Kg		03/29/21 07:20	03/29/21 20:19	1
Fluoranthene	ND		0.0048		mg/Kg		03/29/21 07:20	03/29/21 20:19	1
Fluorene	ND		0.0048		mg/Kg		03/29/21 07:20	03/29/21 20:19	1
Indeno[1,2,3-cd]pyrene	ND		0.0048		mg/Kg		03/29/21 07:20	03/29/21 20:19	1
Naphthalene	ND		0.0048		mg/Kg		03/29/21 07:20	03/29/21 20:19	1
Phenanthrene	ND		0.0048		mg/Kg		03/29/21 07:20	03/29/21 20:19	1
Pyrene	ND		0.0048		mg/Kg		03/29/21 07:20	03/29/21 20:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*77*		*43 - 109*	*03/29/21 07:20*	*03/29/21 20:19*	*1*
2-methylnaphthalene-d10	*87*		*50 - 150*	*03/29/21 07:20*	*03/29/21 20:19*	*1*
Fluoranthene-d10 (Surr)	*94*		*50 - 150*	*03/29/21 07:20*	*03/29/21 20:19*	*1*
Nitrobenzene-d5	*85*		*49 - 114*	*03/29/21 07:20*	*03/29/21 20:19*	*1*
Terphenyl-d14	*84*		*53 - 121*	*03/29/21 07:20*	*03/29/21 20:19*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**1.8**		1.0		mg/Kg		03/26/21 11:02	03/29/21 18:38	1
Motor Oil Range Organics [C28-C40]	**6.5**		5.0		mg/Kg		03/26/21 11:02	03/29/21 18:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*68*		*51 - 111*	*03/26/21 11:02*	*03/29/21 18:38*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.032		mg/Kg		03/29/21 08:29	04/01/21 15:50	1
PCB-1221	ND		0.032		mg/Kg		03/29/21 08:29	04/01/21 15:50	1
PCB-1232	ND		0.032		mg/Kg		03/29/21 08:29	04/01/21 15:50	1
PCB-1242	ND		0.032		mg/Kg		03/29/21 08:29	04/01/21 15:50	1
PCB-1248	ND		0.032		mg/Kg		03/29/21 08:29	04/01/21 15:50	1
PCB-1254	ND		0.032		mg/Kg		03/29/21 08:29	04/01/21 15:50	1
PCB-1260	ND		0.032		mg/Kg		03/29/21 08:29	04/01/21 15:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*57*		*52 - 138*	*03/29/21 08:29*	*04/01/21 15:50*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:37	1
Arsenic	**4.6**		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:37	1
Barium	**70**		0.99		mg/Kg		03/23/21 13:16	03/24/21 18:37	1

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg

Job ID: 320-71548-1

Client Sample ID: SB-14-3.0
Date Collected: 03/22/21 09:40
Date Received: 03/22/21 14:05

Lab Sample ID: 320-71548-5
Matrix: Solid

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	**0.48**		0.20		mg/Kg		03/23/21 13:16	03/24/21 18:37	1
Cadmium	ND		0.20		mg/Kg		03/23/21 13:16	03/24/21 18:37	1
Chromium	**31**		0.50		mg/Kg		03/23/21 13:16	03/24/21 18:37	1
Cobalt	**8.7**		0.50		mg/Kg		03/23/21 13:16	03/24/21 18:37	1
Copper	**17**		1.5		mg/Kg		03/23/21 13:16	03/24/21 18:37	1
Lead	**5.8**		0.99		mg/Kg		03/23/21 13:16	03/24/21 18:37	1
Molybdenum	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:37	1
Nickel	**35**		0.99		mg/Kg		03/23/21 13:16	03/24/21 18:37	1
Selenium	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:37	1
Silver	ND		0.50		mg/Kg		03/23/21 13:16	03/24/21 18:37	1
Thallium	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:37	1
Vanadium	**45**		0.50		mg/Kg		03/23/21 13:16	03/24/21 18:37	1
Zinc	**41**		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:37	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.039		mg/Kg		03/24/21 11:30	03/25/21 11:43	1

Client Sample ID: SB-13-3.0

Date Collected: 03/22/21 10:10
Date Received: 03/22/21 14:05

Lab Sample ID: 320-71548-6

Matrix: Solid

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		03/29/21 07:20	03/29/21 20:49	1
Acenaphthylene	ND		0.0050		mg/Kg		03/29/21 07:20	03/29/21 20:49	1
Anthracene	ND		0.0050		mg/Kg		03/29/21 07:20	03/29/21 20:49	1
Benzo[a]anthracene	**0.013**		0.0050		mg/Kg		03/29/21 07:20	03/29/21 20:49	1
Benzo[a]pyrene	**0.010**		0.0050		mg/Kg		03/29/21 07:20	03/29/21 20:49	1
Benzo[b]fluoranthene	**0.012**		0.0050		mg/Kg		03/29/21 07:20	03/29/21 20:49	1
Benzo[g,h,i]perylene	**0.0069**		0.0050		mg/Kg		03/29/21 07:20	03/29/21 20:49	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		03/29/21 07:20	03/29/21 20:49	1
Chrysene	**0.015**		0.0050		mg/Kg		03/29/21 07:20	03/29/21 20:49	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		03/29/21 07:20	03/29/21 20:49	1
Fluoranthene	**0.016**		0.0050		mg/Kg		03/29/21 07:20	03/29/21 20:49	1
Fluorene	ND		0.0050		mg/Kg		03/29/21 07:20	03/29/21 20:49	1
Indeno[1,2,3-cd]pyrene	**0.0066**		0.0050		mg/Kg		03/29/21 07:20	03/29/21 20:49	1
Naphthalene	ND		0.0050		mg/Kg		03/29/21 07:20	03/29/21 20:49	1
Phenanthrene	**0.0084**		0.0050		mg/Kg		03/29/21 07:20	03/29/21 20:49	1
Pyrene	**0.023**		0.0050		mg/Kg		03/29/21 07:20	03/29/21 20:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*77*		*43 - 109*	*03/29/21 07:20*	*03/29/21 20:49*	*1*
2-methylnaphthalene-d10	*86*		*50 - 150*	*03/29/21 07:20*	*03/29/21 20:49*	*1*
Fluoranthene-d10 (Surr)	*105*		*50 - 150*	*03/29/21 07:20*	*03/29/21 20:49*	*1*
Nitrobenzene-d5	*84*		*49 - 114*	*03/29/21 07:20*	*03/29/21 20:49*	*1*
Terphenyl-d14	*91*		*53 - 121*	*03/29/21 07:20*	*03/29/21 20:49*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**15**		0.99		mg/Kg		03/26/21 11:02	03/29/21 19:07	1
Motor Oil Range Organics [C28-C40]	**49**		5.0		mg/Kg		03/26/21 11:02	03/29/21 19:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*76*		*51 - 111*	*03/26/21 11:02*	*03/29/21 19:07*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.032		mg/Kg		03/29/21 08:29	04/01/21 16:10	1
PCB-1221	ND		0.032		mg/Kg		03/29/21 08:29	04/01/21 16:10	1
PCB-1232	ND		0.032		mg/Kg		03/29/21 08:29	04/01/21 16:10	1
PCB-1242	ND		0.032		mg/Kg		03/29/21 08:29	04/01/21 16:10	1
PCB-1248	ND		0.032		mg/Kg		03/29/21 08:29	04/01/21 16:10	1
PCB-1254	ND		0.032		mg/Kg		03/29/21 08:29	04/01/21 16:10	1
PCB-1260	ND		0.032		mg/Kg		03/29/21 08:29	04/01/21 16:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*44*	*S1-*	*52 - 138*	*03/29/21 08:29*	*04/01/21 16:10*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:41	1
Arsenic	**4.9**		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:41	1
Barium	**150**		1.0		mg/Kg		03/23/21 13:16	03/24/21 18:41	1

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg

Job ID: 320-71548-1

Client Sample ID: SB-13-3.0
Date Collected: 03/22/21 10:10
Date Received: 03/22/21 14:05

Lab Sample ID: 320-71548-6
Matrix: Solid

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	**0.40**		0.20		mg/Kg		03/23/21 13:16	03/24/21 18:41	1
Cadmium	ND		0.20		mg/Kg		03/23/21 13:16	03/24/21 18:41	1
Chromium	**27**		0.50		mg/Kg		03/23/21 13:16	03/24/21 18:41	1
Cobalt	**8.5**		0.50		mg/Kg		03/23/21 13:16	03/24/21 18:41	1
Copper	**22**		1.5		mg/Kg		03/23/21 13:16	03/24/21 18:41	1
Lead	**9.9**		1.0		mg/Kg		03/23/21 13:16	03/24/21 18:41	1
Molybdenum	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:41	1
Nickel	**30**		1.0		mg/Kg		03/23/21 13:16	03/24/21 18:41	1
Selenium	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:41	1
Silver	ND		0.50		mg/Kg		03/23/21 13:16	03/24/21 18:41	1
Thallium	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:41	1
Vanadium	**40**		0.50		mg/Kg		03/23/21 13:16	03/24/21 18:41	1
Zinc	**60**		2.0		mg/Kg		03/23/21 13:16	03/24/21 18:41	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.041		mg/Kg		03/24/21 11:30	03/25/21 11:45	1

Client Sample ID: SB-12-3.0

Date Collected: 03/22/21 10:45
Date Received: 03/22/21 14:05

Lab Sample ID: 320-71548-7

Matrix: Solid

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:18	1
Acenaphthylene	ND		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:18	1
Anthracene	**0.022**		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:18	1
Benzo[a]anthracene	ND		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:18	1
Benzo[a]pyrene	ND		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:18	1
Benzo[b]fluoranthene	ND		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:18	1
Benzo[g,h,i]perylene	ND		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:18	1
Benzo[k]fluoranthene	ND		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:18	1
Chrysene	ND		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:18	1
Dibenz(a,h)anthracene	ND		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:18	1
Fluoranthene	ND		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:18	1
Fluorene	ND		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:18	1
Indeno[1,2,3-cd]pyrene	ND		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:18	1
Naphthalene	**0.023**		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:18	1
Phenanthrene	**0.0080**		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:18	1
Pyrene	ND		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*76*		*43 - 109*	*03/29/21 07:20*	*03/29/21 21:18*	*1*
2-methylnaphthalene-d10	*88*		*50 - 150*	*03/29/21 07:20*	*03/29/21 21:18*	*1*
Fluoranthene-d10 (Surr)	*96*		*50 - 150*	*03/29/21 07:20*	*03/29/21 21:18*	*1*
Nitrobenzene-d5	*84*		*49 - 114*	*03/29/21 07:20*	*03/29/21 21:18*	*1*
Terphenyl-d14	*86*		*53 - 121*	*03/29/21 07:20*	*03/29/21 21:18*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**1.3**		0.99		mg/Kg		03/26/21 11:02	03/29/21 19:36	1
Motor Oil Range Organics [C28-C40]	**5.7**		5.0		mg/Kg		03/26/21 11:02	03/29/21 19:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*78*		*51 - 111*	*03/26/21 11:02*	*03/29/21 19:36*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.032		mg/Kg		03/29/21 08:29	04/01/21 16:31	1
PCB-1221	ND		0.032		mg/Kg		03/29/21 08:29	04/01/21 16:31	1
PCB-1232	ND		0.032		mg/Kg		03/29/21 08:29	04/01/21 16:31	1
PCB-1242	ND		0.032		mg/Kg		03/29/21 08:29	04/01/21 16:31	1
PCB-1248	ND		0.032		mg/Kg		03/29/21 08:29	04/01/21 16:31	1
PCB-1254	ND		0.032		mg/Kg		03/29/21 08:29	04/01/21 16:31	1
PCB-1260	ND		0.032		mg/Kg		03/29/21 08:29	04/01/21 16:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*53*		*52 - 138*	*03/29/21 08:29*	*04/01/21 16:31*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.9		mg/Kg		03/23/21 13:16	03/24/21 18:44	1
Arsenic	**4.2**		1.9		mg/Kg		03/23/21 13:16	03/24/21 18:44	1
Barium	**130**		0.95		mg/Kg		03/23/21 13:16	03/24/21 18:44	1

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg

Job ID: 320-71548-1

Client Sample ID: SB-12-3.0
Date Collected: 03/22/21 10:45
Date Received: 03/22/21 14:05

Lab Sample ID: 320-71548-7
Matrix: Solid

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	**0.37**		0.19		mg/Kg		03/23/21 13:16	03/24/21 18:44	1
Cadmium	ND		0.19		mg/Kg		03/23/21 13:16	03/24/21 18:44	1
Chromium	**29**		0.48		mg/Kg		03/23/21 13:16	03/24/21 18:44	1
Cobalt	**9.4**		0.48		mg/Kg		03/23/21 13:16	03/24/21 18:44	1
Copper	**20**		1.4		mg/Kg		03/23/21 13:16	03/24/21 18:44	1
Lead	**5.8**		0.95		mg/Kg		03/23/21 13:16	03/24/21 18:44	1
Molybdenum	ND		1.9		mg/Kg		03/23/21 13:16	03/24/21 18:44	1
Nickel	**33**		0.95		mg/Kg		03/23/21 13:16	03/24/21 18:44	1
Selenium	ND		1.9		mg/Kg		03/23/21 13:16	03/24/21 18:44	1
Silver	ND		0.48		mg/Kg		03/23/21 13:16	03/24/21 18:44	1
Thallium	ND		1.9		mg/Kg		03/23/21 13:16	03/24/21 18:44	1
Vanadium	**42**		0.48		mg/Kg		03/23/21 13:16	03/24/21 18:44	1
Zinc	**47**		1.9		mg/Kg		03/23/21 13:16	03/24/21 18:44	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.039		mg/Kg		03/24/21 11:30	03/25/21 11:48	1

Client Sample ID: SB-16-3.0

Date Collected: 03/22/21 11:40
Date Received: 03/22/21 14:05

Lab Sample ID: 320-71548-8

Matrix: Solid

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:48	1
Acenaphthylene	ND		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:48	1
Anthracene	ND		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:48	1
Benzo[a]anthracene	ND		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:48	1
Benzo[a]pyrene	ND		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:48	1
Benzo[b]fluoranthene	ND		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:48	1
Benzo[g,h,i]perylene	ND		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:48	1
Benzo[k]fluoranthene	ND		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:48	1
Chrysene	ND		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:48	1
Dibenz(a,h)anthracene	ND		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:48	1
Fluoranthene	ND		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:48	1
Fluorene	ND		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:48	1
Indeno[1,2,3-cd]pyrene	ND		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:48	1
Naphthalene	ND		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:48	1
Phenanthrene	ND		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:48	1
Pyrene	ND		0.0047		mg/Kg		03/29/21 07:20	03/29/21 21:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*81*		*43 - 109*	*03/29/21 07:20*	*03/29/21 21:48*	*1*
2-methylnaphthalene-d10	*91*		*50 - 150*	*03/29/21 07:20*	*03/29/21 21:48*	*1*
Fluoranthene-d10 (Surr)	*101*		*50 - 150*	*03/29/21 07:20*	*03/29/21 21:48*	*1*
Nitrobenzene-d5	*88*		*49 - 114*	*03/29/21 07:20*	*03/29/21 21:48*	*1*
Terphenyl-d14	*89*		*53 - 121*	*03/29/21 07:20*	*03/29/21 21:48*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**9.0**		1.0		mg/Kg		03/26/21 11:02	03/29/21 20:04	1
Motor Oil Range Organics [C28-C40]	**46**		5.0		mg/Kg		03/26/21 11:02	03/29/21 20:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*78*		*51 - 111*	*03/26/21 11:02*	*03/29/21 20:04*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.031		mg/Kg		03/29/21 08:29	04/01/21 16:51	1
PCB-1221	ND		0.031		mg/Kg		03/29/21 08:29	04/01/21 16:51	1
PCB-1232	ND		0.031		mg/Kg		03/29/21 08:29	04/01/21 16:51	1
PCB-1242	ND		0.031		mg/Kg		03/29/21 08:29	04/01/21 16:51	1
PCB-1248	ND		0.031		mg/Kg		03/29/21 08:29	04/01/21 16:51	1
PCB-1254	ND		0.031		mg/Kg		03/29/21 08:29	04/01/21 16:51	1
PCB-1260	ND		0.031		mg/Kg		03/29/21 08:29	04/01/21 16:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*57*		*52 - 138*	*03/29/21 08:29*	*04/01/21 16:51*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.9		mg/Kg		03/23/21 13:16	03/24/21 18:48	1
Arsenic	**4.1**		1.9		mg/Kg		03/23/21 13:16	03/24/21 18:48	1
Barium	**150**		0.96		mg/Kg		03/23/21 13:16	03/24/21 18:48	1

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg

Job ID: 320-71548-1

Client Sample ID: SB-16-3.0
Date Collected: 03/22/21 11:40
Date Received: 03/22/21 14:05

Lab Sample ID: 320-71548-8
Matrix: Solid

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	**0.44**		0.19		mg/Kg		03/23/21 13:16	03/24/21 18:48	1
Cadmium	ND		0.19		mg/Kg		03/23/21 13:16	03/24/21 18:48	1
Chromium	**28**		0.48		mg/Kg		03/23/21 13:16	03/24/21 18:48	1
Cobalt	**9.0**		0.48		mg/Kg		03/23/21 13:16	03/24/21 18:48	1
Copper	**19**		1.4		mg/Kg		03/23/21 13:16	03/24/21 18:48	1
Lead	**8.2**		0.96		mg/Kg		03/23/21 13:16	03/24/21 18:48	1
Molybdenum	ND		1.9		mg/Kg		03/23/21 13:16	03/24/21 18:48	1
Nickel	**32**		0.96		mg/Kg		03/23/21 13:16	03/24/21 18:48	1
Selenium	ND		1.9		mg/Kg		03/23/21 13:16	03/24/21 18:48	1
Silver	ND		0.48		mg/Kg		03/23/21 13:16	03/24/21 18:48	1
Thallium	ND		1.9		mg/Kg		03/23/21 13:16	03/24/21 18:48	1
Vanadium	**43**		0.48		mg/Kg		03/23/21 13:16	03/24/21 18:48	1
Zinc	**47**		1.9		mg/Kg		03/23/21 13:16	03/24/21 18:48	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.041		mg/Kg		03/24/21 11:30	03/25/21 11:50	1

Surrogate Summary

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg

Job ID: 320-71548-1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)				
Lab Sample ID	Client Sample ID	FBP (43-109)	2MN (50-150)	FLN10 (50-150)	NBZ (49-114)	TPHL (53-121)
320-71548-1	SB-20-3.0	38 S1-	43 S1-	52	42 S1-	45 S1-
320-71548-2	SB-11-3.0	73	81	99	79	86
320-71548-3	SB-09-3.0	77	82	98	73	88
320-71548-3 MS	SB-09-3.0	72	79	92	71	85
320-71548-3 MSD	SB-09-3.0	71	79	92	74	82
320-71548-4	SB-10-3.0	86	94	111	86	103
320-71548-5	SB-14-3.0	77	87	94	85	84
320-71548-6	SB-13-3.0	77	86	105	84	91
320-71548-7	SB-12-3.0	76	88	96	84	86
320-71548-8	SB-16-3.0	81	91	101	88	89
LCS 320-473892/2-A	Lab Control Sample	76	84	85	77	79
LCS 320-474519/2-A	Lab Control Sample	78	85	90	82	84
MB 320-473892/1-A	Method Blank	73	80	82	75	81
MB 320-474519/1-A	Method Blank	82	92	91	86	87

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2MN = 2-methylnaphthalene-d10
FLN10 = Fluoranthene-d10 (Surr)
NBZ = Nitrobenzene-d5
TPHL = Terphenyl-d14

Method: 8015B - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	OTPH1 (51-111)
320-71548-1	SB-20-3.0	80
320-71548-2	SB-11-3.0	77
320-71548-3	SB-09-3.0	74
320-71548-4	SB-10-3.0	66
320-71548-5	SB-14-3.0	68
320-71548-6	SB-13-3.0	76
320-71548-7	SB-12-3.0	78
320-71548-8	SB-16-3.0	78
LCS 320-474186/2-A	Lab Control Sample	83
MB 320-474186/1-A	Method Blank	78

Surrogate Legend

OTPH = o-Terphenyl (Surr)

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	DCBP2 (52-138)
320-71548-1	SB-20-3.0	46 S1-
320-71548-1 MS	SB-20-3.0	46 S1-
320-71548-1 MSD	SB-20-3.0	55

Surrogate Summary

Client: GSI Environmental, Inc
Job ID: 320-71548-1
Project/Site: Integral Communities Pittsburg

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)						
		DCBP2						
Lab Sample ID	Client Sample ID	(52-138)						
320-71548-2	SB-11-3.0	47 S1-						
320-71548-3	SB-09-3.0	47 S1-						
320-71548-4	SB-10-3.0	49 S1-						
320-71548-5	SB-14-3.0	57						
320-71548-6	SB-13-3.0	44 S1-						
320-71548-7	SB-12-3.0	53						
320-71548-8	SB-16-3.0	57						
LCS 320-474546/2-A	Lab Control Sample	70						
MB 320-474546/1-A	Method Blank	141 S1+						

Surrogate Legend

DCBP = DCB Decachlorobiphenyl

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 320-473892/1-A
Matrix: Solid
Analysis Batch: 474170

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 473892

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1
Acenaphthylene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1
Anthracene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1
Benzo[a]anthracene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1
Benzo[a]pyrene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1
Benzo[b]fluoranthene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1
Benzo[g,h,i]perylene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1
Chrysene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1
Fluoranthene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1
Fluorene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1
Indeno[1,2,3-cd]pyrene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1
Naphthalene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1
Phenanthrene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1
Pyrene	ND		0.0050		mg/Kg		03/25/21 13:44	03/26/21 19:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*73*		*43 - 109*	*03/25/21 13:44*	*03/26/21 19:16*	*1*
2-methylnaphthalene-d10	*80*		*50 - 150*	*03/25/21 13:44*	*03/26/21 19:16*	*1*
Fluoranthene-d10 (Surr)	*82*		*50 - 150*	*03/25/21 13:44*	*03/26/21 19:16*	*1*
Nitrobenzene-d5	*75*		*49 - 114*	*03/25/21 13:44*	*03/26/21 19:16*	*1*
Terphenyl-d14	*81*		*53 - 121*	*03/25/21 13:44*	*03/26/21 19:16*	*1*

Lab Sample ID: LCS 320-473892/2-A
Matrix: Solid
Analysis Batch: 474170

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 473892

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	0.0250	0.0171		mg/Kg		68	54 - 97
Acenaphthylene	0.0250	0.0168		mg/Kg		67	52 - 99
Anthracene	0.0250	0.0170		mg/Kg		68	52 - 102
Benzo[a]anthracene	0.0250	0.0177		mg/Kg		71	55 - 109
Benzo[a]pyrene	0.0250	0.0158		mg/Kg		63	54 - 110
Benzo[b]fluoranthene	0.0250	0.0170		mg/Kg		68	52 - 112
Benzo[g,h,i]perylene	0.0250	0.0159		mg/Kg		63	51 - 119
Benzo[k]fluoranthene	0.0250	0.0179		mg/Kg		72	56 - 106
Chrysene	0.0250	0.0179		mg/Kg		72	54 - 110
Dibenz(a,h)anthracene	0.0250	0.0156		mg/Kg		62	55 - 119
Fluoranthene	0.0250	0.0181		mg/Kg		72	53 - 110
Fluorene	0.0250	0.0173		mg/Kg		69	53 - 100
Indeno[1,2,3-cd]pyrene	0.0250	0.0153		mg/Kg		61	52 - 120
Naphthalene	0.0250	0.0176		mg/Kg		70	55 - 100
Phenanthrene	0.0250	0.0171		mg/Kg		68	54 - 98
Pyrene	0.0250	0.0182		mg/Kg		73	53 - 108

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*76*		*43 - 109*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCS 320-473892/2-A
Matrix: Solid
Analysis Batch: 474170

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 473892

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-methylnaphthalene-d10	*84*		*50 - 150*
Fluoranthene-d10 (Surr)	*85*		*50 - 150*
Nitrobenzene-d5	*77*		*49 - 114*
Terphenyl-d14	*79*		*53 - 121*

Lab Sample ID: MB 320-474519/1-A
Matrix: Solid
Analysis Batch: 474615

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 474519

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		03/29/21 07:20	03/29/21 16:53	1
Acenaphthylene	ND		0.0050		mg/Kg		03/29/21 07:20	03/29/21 16:53	1
Anthracene	ND		0.0050		mg/Kg		03/29/21 07:20	03/29/21 16:53	1
Benzo[a]anthracene	ND		0.0050		mg/Kg		03/29/21 07:20	03/29/21 16:53	1
Benzo[a]pyrene	ND		0.0050		mg/Kg		03/29/21 07:20	03/29/21 16:53	1
Benzo[b]fluoranthene	ND		0.0050		mg/Kg		03/29/21 07:20	03/29/21 16:53	1
Benzo[g,h,i]perylene	ND		0.0050		mg/Kg		03/29/21 07:20	03/29/21 16:53	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		03/29/21 07:20	03/29/21 16:53	1
Chrysene	ND		0.0050		mg/Kg		03/29/21 07:20	03/29/21 16:53	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		03/29/21 07:20	03/29/21 16:53	1
Fluoranthene	ND		0.0050		mg/Kg		03/29/21 07:20	03/29/21 16:53	1
Fluorene	ND		0.0050		mg/Kg		03/29/21 07:20	03/29/21 16:53	1
Indeno[1,2,3-cd]pyrene	ND		0.0050		mg/Kg		03/29/21 07:20	03/29/21 16:53	1
Naphthalene	ND		0.0050		mg/Kg		03/29/21 07:20	03/29/21 16:53	1
Phenanthrene	ND		0.0050		mg/Kg		03/29/21 07:20	03/29/21 16:53	1
Pyrene	ND		0.0050		mg/Kg		03/29/21 07:20	03/29/21 16:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*82*		*43 - 109*	*03/29/21 07:20*	*03/29/21 16:53*	*1*
2-methylnaphthalene-d10	*92*		*50 - 150*	*03/29/21 07:20*	*03/29/21 16:53*	*1*
Fluoranthene-d10 (Surr)	*91*		*50 - 150*	*03/29/21 07:20*	*03/29/21 16:53*	*1*
Nitrobenzene-d5	*86*		*49 - 114*	*03/29/21 07:20*	*03/29/21 16:53*	*1*
Terphenyl-d14	*87*		*53 - 121*	*03/29/21 07:20*	*03/29/21 16:53*	*1*

Lab Sample ID: LCS 320-474519/2-A
Matrix: Solid
Analysis Batch: 474615

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 474519

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	0.0250	0.0177		mg/Kg		71	54 - 97
Acenaphthylene	0.0250	0.0178		mg/Kg		71	52 - 99
Anthracene	0.0250	0.0184		mg/Kg		74	52 - 102
Benzo[a]anthracene	0.0250	0.0204		mg/Kg		82	55 - 109
Benzo[a]pyrene	0.0250	0.0178		mg/Kg		71	54 - 110
Benzo[b]fluoranthene	0.0250	0.0181		mg/Kg		72	52 - 112
Benzo[g,h,i]perylene	0.0250	0.0165		mg/Kg		66	51 - 119
Benzo[k]fluoranthene	0.0250	0.0181		mg/Kg		72	56 - 106
Chrysene	0.0250	0.0185		mg/Kg		74	54 - 110

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCS 320-474519/2-A
Matrix: Solid
Analysis Batch: 474615

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 474519

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dibenz(a,h)anthracene	0.0250	0.0172		mg/Kg		69	55 - 119
Fluoranthene	0.0250	0.0194		mg/Kg		78	53 - 110
Fluorene	0.0250	0.0184		mg/Kg		74	53 - 100
Indeno[1,2,3-cd]pyrene	0.0250	0.0169		mg/Kg		67	52 - 120
Naphthalene	0.0250	0.0179		mg/Kg		71	55 - 100
Phenanthrene	0.0250	0.0179		mg/Kg		72	54 - 98
Pyrene	0.0250	0.0195		mg/Kg		78	53 - 108

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*78*		*43 - 109*
2-methylnaphthalene-d10	*85*		*50 - 150*
Fluoranthene-d10 (Surr)	*90*		*50 - 150*
Nitrobenzene-d5	*82*		*49 - 114*
Terphenyl-d14	*84*		*53 - 121*

Lab Sample ID: 320-71548-3 MS
Matrix: Solid
Analysis Batch: 474615

Client Sample ID: SB-09-3.0
Prep Type: Total/NA
Prep Batch: 474519

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	ND		0.0234	ND		mg/Kg		68	54 - 97
Acenaphthylene	ND		0.0234	ND		mg/Kg		82	52 - 99
Anthracene	ND		0.0234	ND		mg/Kg		83	52 - 102
Benzo[a]anthracene	ND	F2 F1	0.0234	ND		mg/Kg		93	55 - 109
Benzo[a]pyrene	ND	F2 F1	0.0234	ND		mg/Kg		79	54 - 110
Benzo[b]fluoranthene	ND	F2 F1	0.0234	ND		mg/Kg		84	52 - 112
Benzo[g,h,i]perylene	ND	F1	0.0234	ND		mg/Kg		69	51 - 119
Benzo[k]fluoranthene	ND		0.0234	ND		mg/Kg		95	56 - 106
Chrysene	ND	F2 F1	0.0234	ND		mg/Kg		63	54 - 110
Dibenz(a,h)anthracene	ND		0.0234	ND		mg/Kg		69	55 - 119
Fluoranthene	ND	F2 F1	0.0234	ND		mg/Kg		84	53 - 110
Fluorene	ND		0.0234	ND		mg/Kg		77	53 - 100
Indeno[1,2,3-cd]pyrene	ND	F1	0.0234	ND		mg/Kg		75	52 - 120
Naphthalene	ND		0.0234	ND		mg/Kg		71	55 - 100
Phenanthrene	ND	F1	0.0234	ND		mg/Kg		57	54 - 98
Pyrene	ND	F2 F1	0.0234	ND		mg/Kg		75	53 - 108

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*72*		*43 - 109*
2-methylnaphthalene-d10	*79*		*50 - 150*
Fluoranthene-d10 (Surr)	*92*		*50 - 150*
Nitrobenzene-d5	*71*		*49 - 114*
Terphenyl-d14	*85*		*53 - 121*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: 320-71548-3 MSD
Matrix: Solid
Analysis Batch: 474615

Client Sample ID: SB-09-3.0
Prep Type: Total/NA
Prep Batch: 474519

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	ND		0.0234	ND		mg/Kg		66	54 - 97	2	30
Acenaphthylene	ND		0.0234	ND		mg/Kg		69	52 - 99	17	30
Anthracene	ND		0.0234	ND		mg/Kg		73	52 - 102	13	30
Benzo[a]anthracene	ND	F2 F1	0.0234	ND	F2 F1	mg/Kg		48	55 - 109	36	30
Benzo[a]pyrene	ND	F2 F1	0.0234	ND	F2 F1	mg/Kg		39	54 - 110	37	30
Benzo[b]fluoranthene	ND	F2 F1	0.0234	ND	F2 F1	mg/Kg		34	52 - 112	43	30
Benzo[g,h,i]perylene	ND	F1	0.0234	ND	F1	mg/Kg		50	51 - 119	18	30
Benzo[k]fluoranthene	ND		0.0234	ND		mg/Kg		74	56 - 106	25	30
Chrysene	ND	F2 F1	0.0234	ND	F2 F1	mg/Kg		27	54 - 110	31	30
Dibenz(a,h)anthracene	ND		0.0234	ND		mg/Kg		72	55 - 119	4	30
Fluoranthene	ND	F2 F1	0.0234	ND	F2 F1	mg/Kg		43	53 - 110	34	30
Fluorene	ND		0.0234	ND		mg/Kg		73	53 - 100	5	30
Indeno[1,2,3-cd]pyrene	ND	F1	0.0234	ND	F1	mg/Kg		50	52 - 120	26	30
Naphthalene	ND		0.0234	ND		mg/Kg		65	55 - 100	9	30
Phenanthrene	ND	F1	0.0234	ND	F1	mg/Kg		46	54 - 98	12	30
Pyrene	ND	F2 F1	0.0234	ND	F2 F1	mg/Kg		26	53 - 108	34	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*71*		*43 - 109*
2-methylnaphthalene-d10	*79*		*50 - 150*
Fluoranthene-d10 (Surr)	*92*		*50 - 150*
Nitrobenzene-d5	*74*		*49 - 114*
Terphenyl-d14	*82*		*53 - 121*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 320-474186/1-A
Matrix: Solid
Analysis Batch: 474764

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 474186

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		03/26/21 11:02	03/29/21 15:46	1
Motor Oil Range Organics [C28-C40]	ND		5.0		mg/Kg		03/26/21 11:02	03/29/21 15:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*78*		*51 - 111*	*03/26/21 11:02*	*03/29/21 15:46*	*1*

Lab Sample ID: LCS 320-474186/2-A
Matrix: Solid
Analysis Batch: 474764

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 474186

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			10.0	11.1		mg/Kg		111	57 - 132		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl (Surr)	*83*		*51 - 111*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 320-474546/1-A
Matrix: Solid
Analysis Batch: 475867

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 474546

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.033		mg/Kg		03/29/21 08:27	04/01/21 15:08	1
PCB-1221	ND		0.033		mg/Kg		03/29/21 08:27	04/01/21 15:08	1
PCB-1232	ND		0.033		mg/Kg		03/29/21 08:27	04/01/21 15:08	1
PCB-1242	ND		0.033		mg/Kg		03/29/21 08:27	04/01/21 15:08	1
PCB-1248	ND		0.033		mg/Kg		03/29/21 08:27	04/01/21 15:08	1
PCB-1254	ND		0.033		mg/Kg		03/29/21 08:27	04/01/21 15:08	1
PCB-1260	ND		0.033		mg/Kg		03/29/21 08:27	04/01/21 15:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*141*	*S1+*	*52 - 138*	*03/29/21 08:27*	*04/01/21 15:08*	*1*

Lab Sample ID: LCS 320-474546/2-A
Matrix: Solid
Analysis Batch: 475596

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 474546

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			0.0667	0.0724		mg/Kg		109	58 - 124		
PCB-1260			0.0667	0.0636		mg/Kg		95	55 - 138		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*70*		*52 - 138*

Lab Sample ID: 320-71548-1 MS
Matrix: Solid
Analysis Batch: 475596

Client Sample ID: SB-20-3.0
Prep Type: Total/NA
Prep Batch: 474546

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016	ND		0.0664	0.0455		mg/Kg		69	58 - 124		
PCB-1260	ND		0.0664	0.0372		mg/Kg		56	55 - 138		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*46*	*S1-*	*52 - 138*

Lab Sample ID: 320-71548-1 MSD
Matrix: Solid
Analysis Batch: 475596

Client Sample ID: SB-20-3.0
Prep Type: Total/NA
Prep Batch: 474546

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	ND		0.0630	0.0531		mg/Kg		84	58 - 124	15	20
PCB-1260	ND		0.0630	0.0423		mg/Kg		67	55 - 138	13	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*55*		*52 - 138*

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 320-473052/1-A
Matrix: Solid
Analysis Batch: 473671

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 473052

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 17:05	1
Arsenic	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 17:05	1
Barium	ND		1.0		mg/Kg		03/23/21 13:16	03/24/21 17:05	1
Beryllium	ND		0.20		mg/Kg		03/23/21 13:16	03/24/21 17:05	1
Cadmium	ND		0.20		mg/Kg		03/23/21 13:16	03/24/21 17:05	1
Chromium	ND		0.50		mg/Kg		03/23/21 13:16	03/24/21 17:05	1
Cobalt	ND		0.50		mg/Kg		03/23/21 13:16	03/24/21 17:05	1
Copper	ND		1.5		mg/Kg		03/23/21 13:16	03/24/21 17:05	1
Lead	ND		1.0		mg/Kg		03/23/21 13:16	03/24/21 17:05	1
Molybdenum	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 17:05	1
Nickel	ND		1.0		mg/Kg		03/23/21 13:16	03/24/21 17:05	1
Selenium	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 17:05	1
Silver	ND		0.50		mg/Kg		03/23/21 13:16	03/24/21 17:05	1
Thallium	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 17:05	1
Vanadium	ND		0.50		mg/Kg		03/23/21 13:16	03/24/21 17:05	1
Zinc	ND		2.0		mg/Kg		03/23/21 13:16	03/24/21 17:05	1

Lab Sample ID: LCS 320-473052/2-A
Matrix: Solid
Analysis Batch: 473671

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 473052

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	49.5	41.0		mg/Kg		83	80 - 120
Arsenic	50.0	44.1		mg/Kg		88	80 - 120
Barium	50.0	44.8		mg/Kg		90	80 - 120
Beryllium	25.0	22.7		mg/Kg		91	80 - 120
Cadmium	25.0	22.2		mg/Kg		89	80 - 120
Chromium	25.0	22.5		mg/Kg		90	80 - 120
Cobalt	25.0	22.7		mg/Kg		91	80 - 120
Copper	25.0	22.1		mg/Kg		89	80 - 120
Lead	25.0	22.7		mg/Kg		91	80 - 120
Molybdenum	25.0	22.7		mg/Kg		91	80 - 120
Nickel	25.0	22.0		mg/Kg		88	80 - 120
Selenium	50.0	41.8		mg/Kg		84	80 - 120
Silver	5.05	4.36		mg/Kg		86	80 - 120
Thallium	50.0	44.0		mg/Kg		88	80 - 120
Vanadium	25.0	22.3		mg/Kg		89	80 - 120
Zinc	50.0	45.6		mg/Kg		91	80 - 120

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 320-473376/11-A
Matrix: Solid
Analysis Batch: 474000

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 473376

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.040		mg/Kg		03/24/21 11:30	03/25/21 09:30	1

Method: 7471A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 320-473376/12-A
Matrix: Solid
Analysis Batch: 474000

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 473376

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			0.167	0.174		mg/Kg		104	86 - 114		

Lab Sample ID: LCSD 320-473376/13-A
Matrix: Solid
Analysis Batch: 474000

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 473376

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury			0.167	0.172		mg/Kg		103	86 - 114	1	17

GC/MS Semi VOA

Prep Batch: 473892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71548-1	SB-20-3.0	Total/NA	Solid	3546	
MB 320-473892/1-A	Method Blank	Total/NA	Solid	3546	
LCS 320-473892/2-A	Lab Control Sample	Total/NA	Solid	3546	

Analysis Batch: 474170

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-473892/1-A	Method Blank	Total/NA	Solid	8270C SIM	473892
LCS 320-473892/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM	473892

Analysis Batch: 474357

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71548-1	SB-20-3.0	Total/NA	Solid	8270C SIM	473892

Prep Batch: 474519

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71548-2	SB-11-3.0	Total/NA	Solid	3546	
320-71548-3	SB-09-3.0	Total/NA	Solid	3546	
320-71548-4	SB-10-3.0	Total/NA	Solid	3546	
320-71548-5	SB-14-3.0	Total/NA	Solid	3546	
320-71548-6	SB-13-3.0	Total/NA	Solid	3546	
320-71548-7	SB-12-3.0	Total/NA	Solid	3546	
320-71548-8	SB-16-3.0	Total/NA	Solid	3546	
MB 320-474519/1-A	Method Blank	Total/NA	Solid	3546	
LCS 320-474519/2-A	Lab Control Sample	Total/NA	Solid	3546	
320-71548-3 MS	SB-09-3.0	Total/NA	Solid	3546	
320-71548-3 MSD	SB-09-3.0	Total/NA	Solid	3546	

Analysis Batch: 474615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71548-2	SB-11-3.0	Total/NA	Solid	8270C SIM	474519
320-71548-3	SB-09-3.0	Total/NA	Solid	8270C SIM	474519
320-71548-4	SB-10-3.0	Total/NA	Solid	8270C SIM	474519
320-71548-5	SB-14-3.0	Total/NA	Solid	8270C SIM	474519
320-71548-6	SB-13-3.0	Total/NA	Solid	8270C SIM	474519
320-71548-7	SB-12-3.0	Total/NA	Solid	8270C SIM	474519
320-71548-8	SB-16-3.0	Total/NA	Solid	8270C SIM	474519
MB 320-474519/1-A	Method Blank	Total/NA	Solid	8270C SIM	474519
LCS 320-474519/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM	474519
320-71548-3 MS	SB-09-3.0	Total/NA	Solid	8270C SIM	474519
320-71548-3 MSD	SB-09-3.0	Total/NA	Solid	8270C SIM	474519

GC Semi VOA

Prep Batch: 474186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71548-1	SB-20-3.0	Total/NA	Solid	3550B	
320-71548-2	SB-11-3.0	Total/NA	Solid	3550B	
320-71548-3	SB-09-3.0	Total/NA	Solid	3550B	
320-71548-4	SB-10-3.0	Total/NA	Solid	3550B	
320-71548-5	SB-14-3.0	Total/NA	Solid	3550B	
320-71548-6	SB-13-3.0	Total/NA	Solid	3550B	

GC Semi VOA (Continued)

Prep Batch: 474186 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71548-7	SB-12-3.0	Total/NA	Solid	3550B	
320-71548-8	SB-16-3.0	Total/NA	Solid	3550B	
MB 320-474186/1-A	Method Blank	Total/NA	Solid	3550B	
LCS 320-474186/2-A	Lab Control Sample	Total/NA	Solid	3550B	

Prep Batch: 474546

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71548-1	SB-20-3.0	Total/NA	Solid	3546	
320-71548-2	SB-11-3.0	Total/NA	Solid	3546	
320-71548-3	SB-09-3.0	Total/NA	Solid	3546	
320-71548-4	SB-10-3.0	Total/NA	Solid	3546	
320-71548-5	SB-14-3.0	Total/NA	Solid	3546	
320-71548-6	SB-13-3.0	Total/NA	Solid	3546	
320-71548-7	SB-12-3.0	Total/NA	Solid	3546	
320-71548-8	SB-16-3.0	Total/NA	Solid	3546	
MB 320-474546/1-A	Method Blank	Total/NA	Solid	3546	
LCS 320-474546/2-A	Lab Control Sample	Total/NA	Solid	3546	
320-71548-1 MS	SB-20-3.0	Total/NA	Solid	3546	
320-71548-1 MSD	SB-20-3.0	Total/NA	Solid	3546	

Analysis Batch: 474764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71548-1	SB-20-3.0	Total/NA	Solid	8015B	474186
320-71548-2	SB-11-3.0	Total/NA	Solid	8015B	474186
320-71548-3	SB-09-3.0	Total/NA	Solid	8015B	474186
320-71548-4	SB-10-3.0	Total/NA	Solid	8015B	474186
320-71548-5	SB-14-3.0	Total/NA	Solid	8015B	474186
320-71548-6	SB-13-3.0	Total/NA	Solid	8015B	474186
320-71548-7	SB-12-3.0	Total/NA	Solid	8015B	474186
320-71548-8	SB-16-3.0	Total/NA	Solid	8015B	474186
MB 320-474186/1-A	Method Blank	Total/NA	Solid	8015B	474186
LCS 320-474186/2-A	Lab Control Sample	Total/NA	Solid	8015B	474186

Analysis Batch: 475596

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71548-1	SB-20-3.0	Total/NA	Solid	8082	474546
320-71548-2	SB-11-3.0	Total/NA	Solid	8082	474546
320-71548-3	SB-09-3.0	Total/NA	Solid	8082	474546
LCS 320-474546/2-A	Lab Control Sample	Total/NA	Solid	8082	474546
320-71548-1 MS	SB-20-3.0	Total/NA	Solid	8082	474546
320-71548-1 MSD	SB-20-3.0	Total/NA	Solid	8082	474546

Analysis Batch: 475867

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71548-4	SB-10-3.0	Total/NA	Solid	8082	474546
320-71548-5	SB-14-3.0	Total/NA	Solid	8082	474546
320-71548-6	SB-13-3.0	Total/NA	Solid	8082	474546
320-71548-7	SB-12-3.0	Total/NA	Solid	8082	474546
320-71548-8	SB-16-3.0	Total/NA	Solid	8082	474546
MB 320-474546/1-A	Method Blank	Total/NA	Solid	8082	474546

Metals

Prep Batch: 473052

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71548-1	SB-20-3.0	Total/NA	Solid	3050B	
320-71548-2	SB-11-3.0	Total/NA	Solid	3050B	
320-71548-3	SB-09-3.0	Total/NA	Solid	3050B	
320-71548-4	SB-10-3.0	Total/NA	Solid	3050B	
320-71548-5	SB-14-3.0	Total/NA	Solid	3050B	
320-71548-6	SB-13-3.0	Total/NA	Solid	3050B	
320-71548-7	SB-12-3.0	Total/NA	Solid	3050B	
320-71548-8	SB-16-3.0	Total/NA	Solid	3050B	
MB 320-473052/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 320-473052/2-A	Lab Control Sample	Total/NA	Solid	3050B	

Prep Batch: 473376

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71548-1	SB-20-3.0	Total/NA	Solid	7471A	
320-71548-2	SB-11-3.0	Total/NA	Solid	7471A	
320-71548-3	SB-09-3.0	Total/NA	Solid	7471A	
320-71548-4	SB-10-3.0	Total/NA	Solid	7471A	
320-71548-5	SB-14-3.0	Total/NA	Solid	7471A	
320-71548-6	SB-13-3.0	Total/NA	Solid	7471A	
320-71548-7	SB-12-3.0	Total/NA	Solid	7471A	
320-71548-8	SB-16-3.0	Total/NA	Solid	7471A	
MB 320-473376/11-A	Method Blank	Total/NA	Solid	7471A	
LCS 320-473376/12-A	Lab Control Sample	Total/NA	Solid	7471A	
LCSD 320-473376/13-A	Lab Control Sample Dup	Total/NA	Solid	7471A	

Analysis Batch: 473671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71548-1	SB-20-3.0	Total/NA	Solid	6010B	473052
320-71548-2	SB-11-3.0	Total/NA	Solid	6010B	473052
320-71548-3	SB-09-3.0	Total/NA	Solid	6010B	473052
320-71548-4	SB-10-3.0	Total/NA	Solid	6010B	473052
320-71548-5	SB-14-3.0	Total/NA	Solid	6010B	473052
320-71548-6	SB-13-3.0	Total/NA	Solid	6010B	473052
320-71548-7	SB-12-3.0	Total/NA	Solid	6010B	473052
320-71548-8	SB-16-3.0	Total/NA	Solid	6010B	473052
MB 320-473052/1-A	Method Blank	Total/NA	Solid	6010B	473052
LCS 320-473052/2-A	Lab Control Sample	Total/NA	Solid	6010B	473052

Analysis Batch: 474000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-71548-1	SB-20-3.0	Total/NA	Solid	7471A	473376
320-71548-2	SB-11-3.0	Total/NA	Solid	7471A	473376
320-71548-3	SB-09-3.0	Total/NA	Solid	7471A	473376
320-71548-4	SB-10-3.0	Total/NA	Solid	7471A	473376
320-71548-5	SB-14-3.0	Total/NA	Solid	7471A	473376
320-71548-6	SB-13-3.0	Total/NA	Solid	7471A	473376
320-71548-7	SB-12-3.0	Total/NA	Solid	7471A	473376
320-71548-8	SB-16-3.0	Total/NA	Solid	7471A	473376
MB 320-473376/11-A	Method Blank	Total/NA	Solid	7471A	473376
LCS 320-473376/12-A	Lab Control Sample	Total/NA	Solid	7471A	473376
LCSD 320-473376/13-A	Lab Control Sample Dup	Total/NA	Solid	7471A	473376

Lab Chronicle

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg

Job ID: 320-71548-1

Client Sample ID: SB-20-3.0
Date Collected: 03/19/21 15:30
Date Received: 03/22/21 14:05

Lab Sample ID: 320-71548-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			10.06 g	1 mL	473892	03/25/21 13:44	MBG	TAL SAC
Total/NA	Analysis	8270C SIM		5			474357	03/27/21 05:05	D1R	TAL SAC
Total/NA	Prep	3550B			30.09 g	3 mL	474186	03/26/21 11:02	MBG	TAL SAC
Total/NA	Analysis	8015B		1			474764	03/29/21 16:44	K1D	TAL SAC
Total/NA	Prep	3546			15.15 g	5 mL	474546	03/29/21 08:27	TL	TAL SAC
Total/NA	Analysis	8082		1			475596	04/01/21 03:23	K1D	TAL SAC
Total/NA	Prep	3050B			1.00 g	100 mL	473052	03/23/21 13:16	JP	TAL SAC
Total/NA	Analysis	6010B		1			473671	03/24/21 18:21	GSH	TAL SAC
Total/NA	Prep	7471A			0.62 g	50 mL	473376	03/24/21 11:30	IM	TAL SAC
Total/NA	Analysis	7471A		1			474000	03/25/21 11:30	IM	TAL SAC

Client Sample ID: SB-11-3.0
Date Collected: 03/19/21 16:00
Date Received: 03/22/21 14:05

Lab Sample ID: 320-71548-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			10.12 g	1 mL	474519	03/29/21 07:20	TL	TAL SAC
Total/NA	Analysis	8270C SIM		1			474615	03/29/21 17:52	Y1S	TAL SAC
Total/NA	Prep	3550B			30.03 g	3 mL	474186	03/26/21 11:02	MBG	TAL SAC
Total/NA	Analysis	8015B		1			474764	03/29/21 17:12	K1D	TAL SAC
Total/NA	Prep	3546			15.60 g	5 mL	474546	03/29/21 08:27	TL	TAL SAC
Total/NA	Analysis	8082		1			475596	04/01/21 04:25	K1D	TAL SAC
Total/NA	Prep	3050B			1.01 g	100 mL	473052	03/23/21 13:16	JP	TAL SAC
Total/NA	Analysis	6010B		1			473671	03/24/21 18:25	GSH	TAL SAC
Total/NA	Prep	7471A			0.58 g	50 mL	473376	03/24/21 11:30	IM	TAL SAC
Total/NA	Analysis	7471A		1			474000	03/25/21 11:33	IM	TAL SAC

Client Sample ID: SB-09-3.0
Date Collected: 03/22/21 08:00
Date Received: 03/22/21 14:05

Lab Sample ID: 320-71548-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			10.97 g	1 mL	474519	03/29/21 07:20	TL	TAL SAC
Total/NA	Analysis	8270C SIM		10			474615	03/29/21 18:21	Y1S	TAL SAC
Total/NA	Prep	3550B			30.24 g	3 mL	474186	03/26/21 11:02	MBG	TAL SAC
Total/NA	Analysis	8015B		5			474764	03/29/21 17:41	K1D	TAL SAC
Total/NA	Prep	3546			15.46 g	5 mL	474546	03/29/21 08:27	TL	TAL SAC
Total/NA	Analysis	8082		1			475596	04/01/21 04:46	K1D	TAL SAC
Total/NA	Prep	3050B			1.02 g	100 mL	473052	03/23/21 13:16	JP	TAL SAC
Total/NA	Analysis	6010B		1			473671	03/24/21 18:29	GSH	TAL SAC
Total/NA	Prep	7471A			0.61 g	50 mL	473376	03/24/21 11:30	IM	TAL SAC
Total/NA	Analysis	7471A		1			474000	03/25/21 11:35	IM	TAL SAC

Client Sample ID: SB-10-3.0

Lab Sample ID: 320-71548-4

Date Collected: 03/22/21 08:45

Matrix: Solid

Date Received: 03/22/21 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			10.47 g	1 mL	474519	03/29/21 07:20	TL	TAL SAC
Total/NA	Analysis	8270C SIM		20			474615	03/29/21 19:50	Y1S	TAL SAC
Total/NA	Prep	3550B			30.21 g	10 mL	474186	03/26/21 11:02	MBG	TAL SAC
Total/NA	Analysis	8015B		50			474764	03/29/21 18:10	K1D	TAL SAC
Total/NA	Prep	3546			15.87 g	5 mL	474546	03/29/21 08:27	TL	TAL SAC
Total/NA	Analysis	8082		1			475867	04/01/21 15:29	K1D	TAL SAC
Total/NA	Prep	3050B			1.02 g	100 mL	473052	03/23/21 13:16	JP	TAL SAC
Total/NA	Analysis	6010B		1			473671	03/24/21 18:33	GSH	TAL SAC
Total/NA	Prep	7471A			0.56 g	50 mL	473376	03/24/21 11:30	IM	TAL SAC
Total/NA	Analysis	7471A		5			474000	03/25/21 14:45	IM	TAL SAC

Client Sample ID: SB-14-3.0

Lab Sample ID: 320-71548-5

Date Collected: 03/22/21 09:40

Matrix: Solid

Date Received: 03/22/21 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			10.36 g	1 mL	474519	03/29/21 07:20	TL	TAL SAC
Total/NA	Analysis	8270C SIM		1			474615	03/29/21 20:19	Y1S	TAL SAC
Total/NA	Prep	3550B			30.14 g	3 mL	474186	03/26/21 11:02	MBG	TAL SAC
Total/NA	Analysis	8015B		1			474764	03/29/21 18:38	K1D	TAL SAC
Total/NA	Prep	3546			15.63 g	5 mL	474546	03/29/21 08:29	TL	TAL SAC
Total/NA	Analysis	8082		1			475867	04/01/21 15:50	K1D	TAL SAC
Total/NA	Prep	3050B			1.01 g	100 mL	473052	03/23/21 13:16	JP	TAL SAC
Total/NA	Analysis	6010B		1			473671	03/24/21 18:37	GSH	TAL SAC
Total/NA	Prep	7471A			0.62 g	50 mL	473376	03/24/21 11:30	IM	TAL SAC
Total/NA	Analysis	7471A		1			474000	03/25/21 11:43	IM	TAL SAC

Client Sample ID: SB-13-3.0

Lab Sample ID: 320-71548-6

Date Collected: 03/22/21 10:10

Matrix: Solid

Date Received: 03/22/21 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			10.10 g	1 mL	474519	03/29/21 07:20	TL	TAL SAC
Total/NA	Analysis	8270C SIM		1			474615	03/29/21 20:49	Y1S	TAL SAC
Total/NA	Prep	3550B			30.19 g	3 mL	474186	03/26/21 11:02	MBG	TAL SAC
Total/NA	Analysis	8015B		1			474764	03/29/21 19:07	K1D	TAL SAC
Total/NA	Prep	3546			15.56 g	5 mL	474546	03/29/21 08:29	TL	TAL SAC
Total/NA	Analysis	8082		1			475867	04/01/21 16:10	K1D	TAL SAC
Total/NA	Prep	3050B			1.00 g	100 mL	473052	03/23/21 13:16	JP	TAL SAC
Total/NA	Analysis	6010B		1			473671	03/24/21 18:41	GSH	TAL SAC
Total/NA	Prep	7471A			0.58 g	50 mL	473376	03/24/21 11:30	IM	TAL SAC
Total/NA	Analysis	7471A		1			474000	03/25/21 11:45	IM	TAL SAC

Lab Chronicle

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg

Job ID: 320-71548-1

Client Sample ID: SB-12-3.0

Date Collected: 03/22/21 10:45
Date Received: 03/22/21 14:05

Lab Sample ID: 320-71548-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			10.74 g	1 mL	474519	03/29/21 07:20	TL	TAL SAC
Total/NA	Analysis	8270C SIM		1			474615	03/29/21 21:18	Y1S	TAL SAC
Total/NA	Prep	3550B			30.16 g	3 mL	474186	03/26/21 11:02	MBG	TAL SAC
Total/NA	Analysis	8015B		1			474764	03/29/21 19:36	K1D	TAL SAC
Total/NA	Prep	3546			15.60 g	5 mL	474546	03/29/21 08:29	TL	TAL SAC
Total/NA	Analysis	8082		1			475867	04/01/21 16:31	K1D	TAL SAC
Total/NA	Prep	3050B			1.05 g	100 mL	473052	03/23/21 13:16	JP	TAL SAC
Total/NA	Analysis	6010B		1			473671	03/24/21 18:44	GSH	TAL SAC
Total/NA	Prep	7471A			0.62 g	50 mL	473376	03/24/21 11:30	IM	TAL SAC
Total/NA	Analysis	7471A		1			474000	03/25/21 11:48	IM	TAL SAC

Client Sample ID: SB-16-3.0

Date Collected: 03/22/21 11:40
Date Received: 03/22/21 14:05

Lab Sample ID: 320-71548-8

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			10.65 g	1 mL	474519	03/29/21 07:20	TL	TAL SAC
Total/NA	Analysis	8270C SIM		1			474615	03/29/21 21:48	Y1S	TAL SAC
Total/NA	Prep	3550B			30.03 g	3 mL	474186	03/26/21 11:02	MBG	TAL SAC
Total/NA	Analysis	8015B		1			474764	03/29/21 20:04	K1D	TAL SAC
Total/NA	Prep	3546			15.78 g	5 mL	474546	03/29/21 08:29	TL	TAL SAC
Total/NA	Analysis	8082		1			475867	04/01/21 16:51	K1D	TAL SAC
Total/NA	Prep	3050B			1.04 g	100 mL	473052	03/23/21 13:16	JP	TAL SAC
Total/NA	Analysis	6010B		1			473671	03/24/21 18:48	GSH	TAL SAC
Total/NA	Prep	7471A			0.59 g	50 mL	473376	03/24/21 11:30	IM	TAL SAC
Total/NA	Analysis	7471A		1			474000	03/25/21 11:50	IM	TAL SAC

Laboratory References:

EMLab P&K = EMLab P&K - South San Francisco, 6000 Shoreline Court, Suite 205, South San Francisco, CA 94080, TEL (866)888-6653

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: GSI Environmental, Inc
Job ID: 320-71548-1
Project/Site: Integral Communities Pittsburg

Laboratory: Eurofins TestAmerica, Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
California	State	2897	01-31-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B	3550B	Solid	Motor Oil Range Organics [C28-C40]

Method Summary

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg

Job ID: 320-71548-1

Method	Method Description	Protocol	Laboratory
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL SAC
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL SAC
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SAC
6010B	Metals (ICP)	SW846	TAL SAC
7471A	Mercury (CVAA)	SW846	TAL SAC
CARB435	CARB 435 Asbestos	EM P&K	EMLab P&K
3050B	Preparation, Metals	SW846	TAL SAC
3546	Microwave Extraction	SW846	TAL SAC
3550B	Ultrasonic Extraction	SW846	TAL SAC
7471A	Preparation, Mercury	SW846	TAL SAC

Protocol References:

EM P&K = EMLab P&K, Faciltiy Standard Operating Procedure

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EMLab P&K = EMLab P&K - South San Francisco, 6000 Shoreline Court, Suite 205, South San Francisco, CA 94080, TEL (866)888-6653

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: GSI Environmental, Inc
Project/Site: Integral Communities Pittsburg

Job ID: 320-71548-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
320-71548-1	SB-20-3.0	Solid	03/19/21 15:30	03/22/21 14:05	
320-71548-2	SB-11-3.0	Solid	03/19/21 16:00	03/22/21 14:05	
320-71548-3	SB-09-3.0	Solid	03/22/21 08:00	03/22/21 14:05	
320-71548-4	SB-10-3.0	Solid	03/22/21 08:45	03/22/21 14:05	
320-71548-5	SB-14-3.0	Solid	03/22/21 09:40	03/22/21 14:05	
320-71548-6	SB-13-3.0	Solid	03/22/21 10:10	03/22/21 14:05	
320-71548-7	SB-12-3.0	Solid	03/22/21 10:45	03/22/21 14:05	
320-71548-8	SB-16-3.0	Solid	03/22/21 11:40	03/22/21 14:05	

eurofins | EMLab P&K

Report for:

Ms. Afsaneh Salimpour
TestAmerica-Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566

Regarding: Project: 320-71548-1; Integral Communities Pittsburg
EML ID: 2603151

Approved by:

Murali R Putty

Technical Manager
Murali Putty

Dates of Analysis:
Asbestos-CARB 435 (400 pt ct): 03-30-2021

Service SOPs: Asbestos-CARB 435 (400 pt ct) (EM-AS-S-1265)
NVLAP Lab Code 200728-0

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the samples as received and tested.

Eurofins EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Eurofins EMLab P&K
6000 Shoreline Ct, Ste 205, So. San Francisco, CA 94080
(866) 888-6653 Fax (623) 780-7695 www.emlab.com

Client: TestAmerica-Pleasanton
C/O: Ms. Afsaneh Salimpour
Re: 320-71548-1; Integral Communities Pittsburg

Date of Submittal: 03-22-2021
Date of Receipt: 03-23-2021
Date of Report: 03-30-2021

ASBESTOS POINT COUNT REPORT: CARB METHOD 435

Location:	SB-20-3.0 (320-71548-1)		
Total Points Counted:	400		
Lab ID-Version‡:	12423911-1		
Sample Layers	**Asbestos Type**	**Asbestos Points Counted**	**Asbestos Concentration (%)**
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: No asbestos was detected and no points were counted.

Location:	SB-11-3.0 (320-71548-2)		
Total Points Counted:	400		
Lab ID-Version‡:	12423912-1		
Sample Layers	**Asbestos Type**	**Asbestos Points Counted**	**Asbestos Concentration (%)**
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: No asbestos was detected and no points were counted.

Location:	SB-09-3.0 (320-71548-3)		
Total Points Counted:	400		
Lab ID-Version‡:	12423913-1		
Sample Layers	**Asbestos Type**	**Asbestos Points Counted**	**Asbestos Concentration (%)**
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: No asbestos was detected and no points were counted.

The analytical sensitivity is 1 asbestos point. The limit of detection is 1 asbestos point divided by the total number of points counted and multiplied by 100.

The results relate only to the items tested. Interpretation is left to the company and/or persons who conducted the field work. The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by any agency of the federal government.

All samples were received in acceptable condition unless otherwise noted. Eurofins EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

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Client: TestAmerica-Pleasanton
C/O: Ms. Afsaneh Salimpour
Re: 320-71548-1; Integral Communities Pittsburg

Date of Submittal: 03-22-2021
Date of Receipt: 03-23-2021
Date of Report: 03-30-2021

ASBESTOS POINT COUNT REPORT: CARB METHOD 435

Location:	SB-10-3.0 (320-71548-4)		
Total Points Counted:	400		
Lab ID-Version‡:	12423914-1		
Sample Layers	**Asbestos Type**	**Asbestos Points Counted**	**Asbestos Concentration (%)**
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: No asbestos was detected and no points were counted.

Location:	SB-14-3.0 (320-71548-5)		
Total Points Counted:	400		
Lab ID-Version‡:	12423915-1		
Sample Layers	**Asbestos Type**	**Asbestos Points Counted**	**Asbestos Concentration (%)**
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: No asbestos was detected and no points were counted.

Location:	SB-13-3.0 (320-71548-6)		
Total Points Counted:	400		
Lab ID-Version‡:	12423916-1		
Sample Layers	**Asbestos Type**	**Asbestos Points Counted**	**Asbestos Concentration (%)**
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: No asbestos was detected and no points were counted.

The analytical sensitivity is 1 asbestos point. The limit of detection is 1 asbestos point divided by the total number of points counted and multiplied by 100.

The results relate only to the items tested. Interpretation is left to the company and/or persons who conducted the field work. The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by any agency of the federal government.

All samples were received in acceptable condition unless otherwise noted. Eurofins EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

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Client: TestAmerica-Pleasanton
C/O: Ms. Afsaneh Salimpour
Re: 320-71548-1; Integral Communities Pittsburg

Date of Submittal: 03-22-2021
Date of Receipt: 03-23-2021
Date of Report: 03-30-2021

ASBESTOS POINT COUNT REPORT: CARB METHOD 435

Location:	SB-12-3.0 (320-71548-7)		
Total Points Counted:	400		
Lab ID-Version‡:	12423917-1		
Sample Layers	**Asbestos Type**	**Asbestos Points Counted**	**Asbestos Concentration (%)**
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: No asbestos was detected and no points were counted.

Location:	SB-16-3.0 (320-71548-8)		
Total Points Counted:	400		
Lab ID-Version‡:	12423918-1		
Sample Layers	**Asbestos Type**	**Asbestos Points Counted**	**Asbestos Concentration (%)**
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: No asbestos was detected and no points were counted.

The analytical sensitivity is 1 asbestos point. The limit of detection is 1 asbestos point divided by the total number of points counted and multiplied by 100.

The results relate only to the items tested. Interpretation is left to the company and/or persons who conducted the field work. The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by any agency of the federal government.

All samples were received in acceptable condition unless otherwise noted. Eurofins EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

GSI ENVIRONMENTAL

CHAIN-OF-CUSTODY RECORD
Date: 3/19/21
Page 1 of 1

320-71548

199164

4/2/2021

FROM: GSI Environmental Inc. 155 Grand Ave. Suite 704 Oakland, CA 94612 (510) 463-8484	PROJECT NAME: Integral Communities Pittsburg	PROJECT NO.: 5785
	PROJECT CONTACT: Matt Goerz	LAB CONTACT: Afsaneh Salimpour
	GLOBAL ID:	SAMPLER(S): (PRINT) MATT GOERZ
TEL: (510) 463-8484	E-MAIL: mpgoerz@gsi-env.com	
LABORATORY: EUROFINS TEST AMERICA		
TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD		
SPECIAL INSTRUCTIONS:		

REQUESTED ANALYSES
Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH d, mo EPA 8015	PAHs EPA 8270 SIM	Title 22 Metals 6010/7470	PCB EPA 8082	Asbestos by CARB 435
	SB-20-3.0	3/19/21	1530	Soil	3	X			X	X	X	X	X
	SB-11-3.0	↓	1600	Soil	3	X			X	X	X	X	X
	SB-09-3.0	3/22/21	0800	↓	3	X			X	X	X	X	X
	SB-10-3.0	↓	0845		3	X			X	X	X	X	X
	SB-14-3.0		0940		3	X			X	X	X	X	X
	SB-13-3.0		1010		3	X			X	X	X	X	X
	SB-12-3.0		1045		3	X			X	X	X	X	X
	SB-16-3.0	↓	1140	↓	3	X			X	X	X	X	X

MPG

MPG

320-71548 Chain of Custody

Relinquished by: (Signature)	3/22/21	1250	Received by: (Signature)
Relinquished by: (Signature)	3/22/21	3.4°C	Received by: (Signature)
Relinquished by: (Signature)			Received by: (Signature)

Date: 3/22/21	Time: 1250
Date: 3/22/21	Time: 1405
Date:	Time:

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600 Fax: 916-372-1059

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Salimpour, Afsaneh F	Carrier Tracking No(s):	COC No: 320-216984.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Afsaneh.Salimpour@Eurofinset.com	State of Origin: California	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State - California		Job #: 320-71548-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 3/26/2021			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Integral Communities Pittsburg	Project #: 32017420			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015B_DRO/3550B DRO/MRO	8270C_SIM/3546 PAHs	6010B/3050B CAM 17 List, minus Mercury	7471A/7471A_Prep Mercury Only	8082/3546 PCBs, Standard List	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
SB-20-3.0 (320-71548-1)	3/19/21	15:30 Pacific		Solid			X	X	X	X	X	2	
SB-11-3.0 (320-71548-2)	3/19/21	16:00 Pacific		Solid			X	X	X	X	X	2	
SB-09-3.0 (320-71548-3)	3/22/21	08:00 Pacific		Solid			X	X	X	X	X	2	
SB-10-3.0 (320-71548-4)	3/22/21	08:45 Pacific		Solid			X	X	X	X	X	2	
SB-14-3.0 (320-71548-5)	3/22/21	09:40 Pacific		Solid			X	X	X	X	X	2	
SB-13-3.0 (320-71548-6)	3/22/21	10:10 Pacific		Solid			X	X	X	X	X	2	
SB-12-3.0 (320-71548-7)	3/22/21	10:45 Pacific		Solid			X	X	X	X	X	2	
SB-16-3.0 (320-71548-8)	3/22/21	11:40 Pacific		Solid			X	X	X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	3-22-21 1600	SS	[signature]	3-22-21 1600	DCS
2	[signature]	3-22-21 1820	DCS	[signature]	3/22/21-1820	ETASAC
3						

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.0

Ver: 11/01/2020

Login Sample Receipt Checklist

Client: GSI Environmental, Inc

Job Number: 320-71548-1

Login Number: 71548
List Number: 1
Creator: Mullen, Joan

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GSI Environmental, Inc

Job Number: 320-71548-1

Login Number: 71548
List Number: 2
Creator: Guzman, Juan

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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4/7/2021
Kalin Howell
GSI Environmental, Inc.
155 Grand Ave
Suite 704
Oakland CA 94612

Project Name: Integral - Pittsburg
Project #: 5785
Workorder #: 2103707A

Dear Kalin Howell

The following report includes the data for the above referenced project for sample(s) received on 3/25/2021 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kathleen Kaneko at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kathleen Kaneko

Project Manager

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WORK ORDER #: 2103707A

Work Order Summary

CLIENT:	Kalin Howell GSI Environmental, Inc. 155 Grand Ave Suite 704 Oakland, CA 94612	**BILL TO:**	Kalin Howell GSI Environmental, Inc. 155 Grand Ave Suite 704 Oakland, CA 94612
PHONE:	(510)463-8484	**P.O. #**	
FAX:		**PROJECT #**	5785 Integral - Pittsburg
DATE RECEIVED:	03/25/2021	**CONTACT:**	Kathleen Kaneko
DATE COMPLETED:	04/07/2021		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	SB-01-05.0-SV	Modified TO-15	5.7 "Hg	9.8 psi
02A	SB-02-05.0-SV	Modified TO-15	4.7 "Hg	10 psi
03A	SB-03-05.0-SV	Modified TO-15	6.1 "Hg	10 psi
04A	SB-04-05.0-SV	Modified TO-15	4.7 "Hg	10.1 psi
05A	SB-05-05.0-SV	Modified TO-15	6.5 "Hg	10.1 psi
06A	SB-06-05.0-SV	Modified TO-15	5.9 "Hg	10 psi
07A	SB-07-05.0-SV	Modified TO-15	6.9 "Hg	9.4 psi
08A	SB-08-05.0-SV	Modified TO-15	6.1 "Hg	9.2 psi
09A	SB-09-04.0-SV	Modified TO-15	6.5 "Hg	9.9 psi
10A	SB-10-05.0-SV	Modified TO-15	4.7 "Hg	9.9 psi
11A	SB-11-05.0-SV	Modified TO-15	5.5 "Hg	10.1 psi
12A	SB-12-05.0-SV	Modified TO-15	6.1 "Hg	9.8 psi
13A	SB-13-05.0-SV	Modified TO-15	6.9 "Hg	10.1 psi
14A	SB-14-05.0-SV	Modified TO-15	6.3 "Hg	9.6 psi
15A	SB-15-05.0-SV	Modified TO-15	6.3 "Hg	9.9 psi
16A	SB-16-05.0-SV	Modified TO-15	6.5 "Hg	9.8 psi
17A	SB-17-05.0-SV	Modified TO-15	6.1 "Hg	9.7 psi
18A	SB-18-05.0-SV	Modified TO-15	6.5 "Hg	10.1 psi
19A	SB-19-03.0-SV	Modified TO-15	5.9 "Hg	9.6 psi
20A	SB-20-03.5-SV	Modified TO-15	6.9 "Hg	10.1 psi
21A	SB-21-3.25-SV	Modified TO-15	6.5 "Hg	10 psi
22A	REP-210322	Modified TO-15	5.5 "Hg	9.8 psi
23A	EQB-20210324	Modified TO-15	4.5 "Hg	10.1 psi

Continued on next page

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WORK ORDER #: 2103707A

Work Order Summary

CLIENT:	Kalin Howell GSI Environmental, Inc. 155 Grand Ave Suite 704 Oakland, CA 94612	**BILL TO:**	Kalin Howell GSI Environmental, Inc. 155 Grand Ave Suite 704 Oakland, CA 94612
PHONE:	(510)463-8484	**P.O. #**	
FAX:		**PROJECT #**	5785 Integral - Pittsburg
DATE RECEIVED:	03/25/2021	**CONTACT:**	Kathleen Kaneko
DATE COMPLETED:	04/07/2021		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
24A	Lab Blank	Modified TO-15	NA	NA
24B	Lab Blank	Modified TO-15	NA	NA
25A	CCV	Modified TO-15	NA	NA
25B	CCV	Modified TO-15	NA	NA
26A	LCS	Modified TO-15	NA	NA
26AA	LCSD	Modified TO-15	NA	NA
26B	LCS	Modified TO-15	NA	NA
26BB	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 04/07/21

Technical Director

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209220, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-20-16, UT NELAP – CA009332020-12, VA NELAP - 10615, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005-014, Effective date: 10/18/2020, Expiration date: 10/17/2021.
Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

LABORATORY NARRATIVE
EPA Method TO-15
GSI Environmental, Inc.
Workorder# 2103707A

Twenty-three 1 Liter Summa Canister (100% Certified) samples were received on March 25, 2021. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

All Quality Control Limit exceedances and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in CCV analyses have not been flagged.

Dilution was performed on sample SB-18-05.0-SV due to the presence of high level non-target species.

The reported result for 4-Ethyltoluene in samples SB-01-05.0-SV, SB-02-05.0-SV, SB-03-05.0-SV, SB-05-05.0-SV, SB-07-05.0-SV, SB-08-05.0-SV, SB-12-05.0-SV, SB-13-05.0-SV, SB-14-05.0-SV, SB-15-05.0-SV and SB-16-05.0-SV may be biased high due to co-elution with a non target compound with similar characteristic ions. Both the primary and secondary ion for 4-Ethyltoluene exhibited potential interference.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SB-01-05.0-SV

Lab ID#: 2103707A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.21	0.87	0.46	1.9
Freon 11	0.21	0.26	1.2	1.5
Ethanol	1.0	3.5	1.9	6.6
1,1-Dichloroethene	0.21	8.0	0.82	32
Acetone	2.1	4.6	4.9	11
2-Propanol	1.0	1.7	2.5	4.3
Chloroform	0.21	6.5	1.0	32
Cyclohexane	1.0	12	3.5	40
Benzene	0.21	2.1	0.66	6.6
Trichloroethene	0.21	2.4	1.1	13
Bromodichloromethane	0.21	1.6	1.4	11
4-Methyl-2-pentanone	0.21	0.24	0.84	0.97
Toluene	0.21	7.2	0.78	27
Tetrachloroethene	0.21	0.41	1.4	2.8
Dibromochloromethane	0.21	0.41	1.8	3.5
Ethyl Benzene	0.21	2.2	0.89	9.7
m,p-Xylene	0.21	6.2	0.89	27
o-Xylene	0.21	2.6	0.89	11
Propylbenzene	0.21	0.46	1.0	2.3
4-Ethyltoluene	0.21	2.3	1.0	11
1,3,5-Trimethylbenzene	0.21	0.55	1.0	2.7
1,2,4-Trimethylbenzene	0.21	1.7	1.0	8.2

Client Sample ID: SB-02-05.0-SV

Lab ID#: 2103707A-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.20	0.25	1.1	1.4
Ethanol	1.0	1.5	1.9	2.9
Acetone	2.0	4.1	4.7	9.8
Chloroform	0.20	0.58	0.97	2.8
4-Methyl-2-pentanone	0.20	0.27	0.82	1.1
Tetrachloroethene	0.20	0.39	1.3	2.6

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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SB-02-05.0-SV

Lab ID#: 2103707A-02A

m,p-Xylene	0.20	0.48	0.86	2.1
o-Xylene	0.20	0.35	0.86	1.5
4-Ethyltoluene	0.20	0.32	0.98	1.6
1,2,4-Trimethylbenzene	0.20	0.38	0.98	1.8

Client Sample ID: SB-03-05.0-SV

Lab ID#: 2103707A-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.21	0.24	1.2	1.3
Ethanol	1.0	5.1	2.0	9.6
Acetone	2.1	14	5.0	32
2-Propanol	1.0	3.4	2.6	8.4
Chloroform	0.21	0.65	1.0	3.2
4-Methyl-2-pentanone	0.21	0.22	0.86	0.92
m,p-Xylene	0.21	0.70	0.92	3.0
o-Xylene	0.21	0.37	0.92	1.6
4-Ethyltoluene	0.21	0.34	1.0	1.7
1,2,4-Trimethylbenzene	0.21	0.35	1.0	1.7

Client Sample ID: SB-04-05.0-SV

Lab ID#: 2103707A-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.20	0.28	1.1	1.6
Acetone	2.0	2.5	4.8	6.0
2-Propanol	1.0	1.2	2.4	2.8

Client Sample ID: SB-05-05.0-SV

Lab ID#: 2103707A-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.22	0.40	0.48	0.88
Freon 11	0.22	0.26	1.2	1.4

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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SB-05-05.0-SV

Lab ID#: 2103707A-05A

Ethanol	1.1	16	2.0	29
Acetone	2.2	9.1	5.1	22
2-Propanol	1.1	7.6	2.6	19
Carbon Disulfide	1.1	6.4	3.4	20
1,1-Dichloroethane	0.22	0.99	0.87	4.0
2-Butanone (Methyl Ethyl Ketone)	1.1	5.4	3.2	16
Chloroform	0.22	1.1	1.0	5.3
1,1,1-Trichloroethane	0.22	0.49	1.2	2.7
Benzene	0.22	2.0	0.69	6.5
Trichloroethene	0.22	0.73	1.2	3.9
Bromodichloromethane	0.22	0.28	1.4	1.9
4-Methyl-2-pentanone	0.22	0.54	0.88	2.2
Toluene	0.22	0.89	0.81	3.4
Tetrachloroethene	0.22	3.8	1.5	26
Ethyl Benzene	0.22	0.50	0.94	2.2
m,p-Xylene	0.22	1.0	0.94	4.4
o-Xylene	0.22	0.61	0.94	2.7
4-Ethyltoluene	0.22	0.31	1.1	1.5
1,2,4-Trimethylbenzene	0.22	0.23	1.1	1.1

Client Sample ID: SB-06-05.0-SV

Lab ID#: 2103707A-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.21	0.24	1.2	1.3
Ethanol	1.0	3.2	2.0	6.0
Acetone	2.1	4.6	5.0	11
2-Propanol	1.0	3.4	2.6	8.4
Chloroform	0.21	0.29	1.0	1.4

Client Sample ID: SB-07-05.0-SV

Lab ID#: 2103707A-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)

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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SB-07-05.0-SV

Lab ID#: 2103707A-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Chloromethane	1.1	6.5	2.2	13
Vinyl Chloride	0.21	0.24	0.54	0.62
Freon 11	0.21	0.30	1.2	1.7
Ethanol	1.1	5.9	2.0	11
Acetone	2.1	26	5.0	62
2-Propanol	1.1	4.6	2.6	11
2-Butanone (Methyl Ethyl Ketone)	1.1	3.7	3.1	11
Chloroform	0.21	1.5	1.0	7.5
1,1,1-Trichloroethane	0.21	0.24	1.2	1.3
Carbon Tetrachloride	0.21	0.23	1.3	1.5
Benzene	0.21	0.55	0.68	1.8
Trichloroethene	0.21	7.4	1.1	40
Bromodichloromethane	0.21	0.40	1.4	2.7
4-Methyl-2-pentanone	0.21	0.29	0.87	1.2
Toluene	0.21	0.94	0.80	3.5
Tetrachloroethene	0.21	23	1.4	160
Dibromochloromethane	0.21	0.36	1.8	3.0
Ethyl Benzene	0.21	0.50	0.92	2.2
m,p-Xylene	0.21	4.2	0.92	18
o-Xylene	0.21	1.6	0.92	6.9
Bromoform	0.21	0.77	2.2	8.0
Cumene	0.21	0.30	1.0	1.5
Propylbenzene	0.21	0.46	1.0	2.3
4-Ethyltoluene	0.21	1.5	1.0	7.2
1,3,5-Trimethylbenzene	0.21	1.2	1.0	5.7
1,2,4-Trimethylbenzene	0.21	2.9	1.0	14

Client Sample ID: SB-08-05.0-SV

Lab ID#: 2103707A-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.20	0.23	1.1	1.3
Ethanol	1.0	2.7	1.9	5.2

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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SB-08-05.0-SV

Lab ID#: 2103707A-08A

Acetone	2.0	7.5	4.8	18
2-Propanol	1.0	2.2	2.5	5.3
Chloroform	0.20	0.57	1.0	2.8
Benzene	0.20	0.35	0.65	1.1
Trichloroethene	0.20	0.43	1.1	2.3
Toluene	0.20	0.32	0.77	1.2
Ethyl Benzene	0.20	0.52	0.88	2.2
m,p-Xylene	0.20	0.57	0.88	2.5
o-Xylene	0.20	0.74	0.88	3.2
Propylbenzene	0.20	0.58	1.0	2.8
4-Ethyltoluene	0.20	2.5	1.0	12
1,3,5-Trimethylbenzene	0.20	0.70	1.0	3.4
1,2,4-Trimethylbenzene	0.20	0.38	1.0	1.8

Client Sample ID: SB-09-04.0-SV

Lab ID#: 2103707A-09A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.21	0.21	1.2	1.2
Acetone	2.1	5.0	5.1	12
2-Propanol	1.1	4.1	2.6	10
Chloroform	0.21	1.2	1.0	6.0
Bromodichloromethane	0.21	0.30	1.4	2.0
Tetrachloroethene	0.21	0.21	1.4	1.4

Client Sample ID: SB-10-05.0-SV

Lab ID#: 2103707A-10A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.20	0.49	1.1	2.7
Ethanol	0.99	3.0	1.9	5.7
Acetone	2.0	7.3	4.7	17
2-Propanol	0.99	1.9	2.4	4.7
Chloroform	0.20	0.41	0.97	2.0

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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SB-10-05.0-SV

Lab ID#: 2103707A-10A

1,1,1-Trichloroethane	0.20	0.60	1.1	3.3
Tetrachloroethene	0.20	0.64	1.3	4.4

Client Sample ID: SB-11-05.0-SV

Lab ID#: 2103707A-11A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.21	0.26	1.2	1.5
Acetone	2.1	6.4	4.9	15
2-Propanol	1.0	1.5	2.5	3.7
Chloroform	0.21	0.34	1.0	1.6

Client Sample ID: SB-12-05.0-SV

Lab ID#: 2103707A-12A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.21	0.23	1.2	1.3
Ethanol	1.0	2.7	2.0	5.1
Acetone	2.1	7.4	5.0	18
2-Propanol	1.0	3.6	2.6	8.8
Chloroform	0.21	0.78	1.0	3.8
Bromodichloromethane	0.21	0.32	1.4	2.1
Toluene	0.21	0.27	0.79	1.0
Tetrachloroethene	0.21	0.22	1.4	1.5
Ethyl Benzene	0.21	0.28	0.91	1.2
m,p-Xylene	0.21	1.2	0.91	5.5
o-Xylene	0.21	0.60	0.91	2.6
Propylbenzene	0.21	0.25	1.0	1.2
4-Ethyltoluene	0.21	1.2	1.0	5.9
1,3,5-Trimethylbenzene	0.21	0.49	1.0	2.4
1,2,4-Trimethylbenzene	0.21	1.4	1.0	6.8

Client Sample ID: SB-13-05.0-SV

Lab ID#: 2103707A-13A

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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SB-13-05.0-SV

Lab ID#: 2103707A-13A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.22	0.26	1.2	1.4
Acetone	2.2	5.8	5.2	14
2-Propanol	1.1	2.4	2.7	6.0
Chloroform	0.22	7.1	1.1	35
Bromodichloromethane	0.22	1.3	1.5	8.6
Toluene	0.22	0.23	0.82	0.86
Tetrachloroethene	0.22	0.38	1.5	2.6
Dibromochloromethane	0.22	0.25	1.9	2.1
m,p-Xylene	0.22	0.38	0.95	1.6
o-Xylene	0.22	0.25	0.95	1.1
4-Ethyltoluene	0.22	0.25	1.1	1.2

Client Sample ID: SB-14-05.0-SV

Lab ID#: 2103707A-14A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Acetone	2.1	2.8	5.0	6.7
2-Propanol	1.0	2.8	2.6	6.8
Chloroform	0.21	2.2	1.0	11
1,1,1-Trichloroethane	0.21	0.22	1.1	1.2
m,p-Xylene	0.21	0.54	0.91	2.3
o-Xylene	0.21	0.26	0.91	1.1
4-Ethyltoluene	0.21	0.34	1.0	1.7
1,2,4-Trimethylbenzene	0.21	0.37	1.0	1.8

Client Sample ID: SB-15-05.0-SV

Lab ID#: 2103707A-15A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.21	0.24	1.2	1.3
Ethanol	1.1	2.8	2.0	5.3
Acetone	2.1	5.4	5.0	13
2-Propanol	1.1	2.2	2.6	5.4

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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SB-15-05.0-SV

Lab ID#: 2103707A-15A

Chloroform	0.21	0.86	1.0	4.2
Bromodichloromethane	0.21	0.24	1.4	1.6
Toluene	0.21	0.48	0.80	1.8
Ethyl Benzene	0.21	0.52	0.92	2.3
m,p-Xylene	0.21	1.8	0.92	8.0
o-Xylene	0.21	0.73	0.92	3.2
Propylbenzene	0.21	0.41	1.0	2.0
4-Ethyltoluene	0.21	1.5	1.0	7.6
1,3,5-Trimethylbenzene	0.21	0.32	1.0	1.6
1,2,4-Trimethylbenzene	0.21	0.89	1.0	4.4

Client Sample ID: SB-16-05.0-SV

Lab ID#: 2103707A-16A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.21	0.41	1.2	2.3
Acetone	2.1	5.6	5.0	13
2-Propanol	1.1	2.8	2.6	6.9
Chloroform	0.21	0.64	1.0	3.1
4-Methyl-2-pentanone	0.21	0.32	0.87	1.3
m,p-Xylene	0.21	0.52	0.92	2.2
o-Xylene	0.21	0.23	0.92	1.0
4-Ethyltoluene	0.21	0.58	1.0	2.8
1,2,4-Trimethylbenzene	0.21	0.64	1.0	3.1

Client Sample ID: SB-17-05.0-SV

Lab ID#: 2103707A-17A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.21	0.23	1.2	1.3
Ethanol	1.0	2.8	2.0	5.2
Acetone	2.1	5.4	4.9	13
2-Propanol	1.0	3.4	2.6	8.4
Chloroform	0.21	0.78	1.0	3.8

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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SB-17-05.0-SV

Lab ID#: 2103707A-17A

Trichloroethene	0.21	0.32	1.1	1.7
Tetrachloroethene	0.21	0.36	1.4	2.4

Client Sample ID: SB-18-05.0-SV

Lab ID#: 2103707A-18A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Hexane	11	440	38	1500
Cyclohexane	11	320	37	1100

Client Sample ID: SB-19-03.0-SV

Lab ID#: 2103707A-19A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.21	0.22	1.2	1.2
Ethanol	1.0	3.8	1.9	7.1
Acetone	2.1	13	4.9	31
2-Propanol	1.0	4.0	2.5	9.9
Chloroform	0.21	2.4	1.0	12
1,1,1-Trichloroethane	0.21	0.26	1.1	1.4
Bromodichloromethane	0.21	0.43	1.4	2.9
4-Methyl-2-pentanone	0.21	0.37	0.84	1.5
Tetrachloroethene	0.21	0.41	1.4	2.8

Client Sample ID: SB-20-03.5-SV

Lab ID#: 2103707A-20A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.22	0.23	1.2	1.3
Ethanol	1.1	4.1	2.1	7.7
Acetone	2.2	6.0	5.2	14
2-Propanol	1.1	11	2.7	28

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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SB-21-3.25-SV

Lab ID#: 2103707A-21A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethanol	1.1	2.8	2.0	5.3
Acetone	2.2	11	5.1	26
2-Propanol	1.1	2.9	2.6	7.2
Carbon Disulfide	1.1	24	3.3	75
Methylene Chloride	0.43	0.68	1.5	2.4
cis-1,2-Dichloroethene	0.22	0.24	0.85	0.95
Chloroform	0.22	1.2	1.0	5.9
Benzene	0.22	0.38	0.69	1.2
Bromodichloromethane	0.22	0.41	1.4	2.8
4-Methyl-2-pentanone	0.22	0.91	0.88	3.7
Tetrachloroethene	0.22	0.23	1.4	1.6
Dibromochloromethane	0.22	0.26	1.8	2.2
m,p-Xylene	0.22	0.31	0.93	1.4

Client Sample ID: REP-210322

Lab ID#: 2103707A-22A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.20	0.21	1.1	1.2
Chloroform	0.20	0.86	1.0	4.2
Trichloroethene	0.20	0.32	1.1	1.7
Tetrachloroethene	0.20	0.34	1.4	2.3

Client Sample ID: EQB-20210324

Lab ID#: 2103707A-23A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.20	0.23	1.1	1.3
Ethanol	0.99	2.7	1.9	5.0
Acetone	2.0	10	4.7	24
2-Propanol	0.99	4.5	2.4	11

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Client Sample ID: SB-01-05.0-SV

Lab ID#: 2103707A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033108**	**Date of Collection:**	**3/22/21 12:13:00 PM**
Dil. Factor:	**2.06**	**Date of Analysis:**	**3/31/21 07:18 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	Not Detected	5.1	Not Detected
Freon 114	0.21	Not Detected	1.4	Not Detected
Chloromethane	1.0	Not Detected	2.1	Not Detected
Vinyl Chloride	0.21	Not Detected	0.53	Not Detected
1,3-Butadiene	0.21	0.87	0.46	1.9
Bromomethane	1.0	Not Detected	4.0	Not Detected
Chloroethane	1.0	Not Detected	2.7	Not Detected
Freon 11	0.21	0.26	1.2	1.5
Ethanol	1.0	3.5	1.9	6.6
Freon 113	0.21	Not Detected	1.6	Not Detected
1,1-Dichloroethene	0.21	8.0	0.82	32
Acetone	2.1	4.6	4.9	11
2-Propanol	1.0	1.7	2.5	4.3
Carbon Disulfide	1.0	Not Detected	3.2	Not Detected
3-Chloropropene	1.0	Not Detected	3.2	Not Detected
Methylene Chloride	0.41	Not Detected	1.4	Not Detected
Methyl tert-butyl ether	0.21	Not Detected	0.74	Not Detected
trans-1,2-Dichloroethene	0.21	Not Detected	0.82	Not Detected
Hexane	1.0	Not Detected	3.6	Not Detected
1,1-Dichloroethane	0.21	Not Detected	0.83	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.0	Not Detected	3.0	Not Detected
cis-1,2-Dichloroethene	0.21	Not Detected	0.82	Not Detected
Tetrahydrofuran	1.0	Not Detected	3.0	Not Detected
Chloroform	0.21	6.5	1.0	32
1,1,1-Trichloroethane	0.21	Not Detected	1.1	Not Detected
Cyclohexane	1.0	12	3.5	40
Carbon Tetrachloride	0.21	Not Detected	1.3	Not Detected
2,2,4-Trimethylpentane	1.0	Not Detected	4.8	Not Detected
Benzene	0.21	2.1	0.66	6.6
1,2-Dichloroethane	0.21	Not Detected	0.83	Not Detected
Heptane	1.0	Not Detected	4.2	Not Detected
Trichloroethene	0.21	2.4	1.1	13
1,2-Dichloropropane	0.21	Not Detected	0.95	Not Detected
Bromodichloromethane	0.21	1.6	1.4	11
cis-1,3-Dichloropropene	0.21	Not Detected	0.93	Not Detected
4-Methyl-2-pentanone	0.21	0.24	0.84	0.97
Toluene	0.21	7.2	0.78	27
trans-1,3-Dichloropropene	0.21	Not Detected	0.93	Not Detected
1,1,2-Trichloroethane	0.21	Not Detected	1.1	Not Detected
Tetrachloroethene	0.21	0.41	1.4	2.8
2-Hexanone	1.0	Not Detected	4.2	Not Detected
Dibromochloromethane	0.21	0.41	1.8	3.5

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Client Sample ID: SB-01-05.0-SV

Lab ID#: 2103707A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033108**	**Date of Collection:**	**3/22/21 12:13:00 PM**
Dil. Factor:	**2.06**	**Date of Analysis:**	**3/31/21 07:18 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dibromoethane (EDB)	0.21	Not Detected	1.6	Not Detected
Chlorobenzene	0.21	Not Detected	0.95	Not Detected
Ethyl Benzene	0.21	2.2	0.89	9.7
m,p-Xylene	0.21	6.2	0.89	27
o-Xylene	0.21	2.6	0.89	11
Styrene	0.21	Not Detected	0.88	Not Detected
Bromoform	0.21	Not Detected	2.1	Not Detected
Cumene	0.21	Not Detected	1.0	Not Detected
1,1,2,2-Tetrachloroethane	0.21	Not Detected	1.4	Not Detected
Propylbenzene	0.21	0.46	1.0	2.3
4-Ethyltoluene	0.21	2.3	1.0	11
1,3,5-Trimethylbenzene	0.21	0.55	1.0	2.7
1,2,4-Trimethylbenzene	0.21	1.7	1.0	8.2
1,3-Dichlorobenzene	0.21	Not Detected	1.2	Not Detected
1,4-Dichlorobenzene	0.21	Not Detected	1.2	Not Detected
alpha-Chlorotoluene	0.21	Not Detected	1.1	Not Detected
1,2-Dichlorobenzene	0.21	Not Detected	1.2	Not Detected
1,2,4-Trichlorobenzene	1.0	Not Detected	7.6	Not Detected
Hexachlorobutadiene	1.0	Not Detected	11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	118	70-130

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Client Sample ID: SB-02-05.0-SV

Lab ID#: 2103707A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20032911**	**Date of Collection: 3/22/21 1:50:00 PM**	
Dil. Factor:	**1.99**	**Date of Analysis: 3/29/21 04:30 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	Not Detected	4.9	Not Detected
Freon 114	0.20	Not Detected	1.4	Not Detected
Chloromethane	1.0	Not Detected	2.0	Not Detected
Vinyl Chloride	0.20	Not Detected	0.51	Not Detected
1,3-Butadiene	0.20	Not Detected	0.44	Not Detected
Bromomethane	1.0	Not Detected	3.9	Not Detected
Chloroethane	1.0	Not Detected	2.6	Not Detected
Freon 11	0.20	0.25	1.1	1.4
Ethanol	1.0	1.5	1.9	2.9
Freon 113	0.20	Not Detected	1.5	Not Detected
1,1-Dichloroethene	0.20	Not Detected	0.79	Not Detected
Acetone	2.0	4.1	4.7	9.8
2-Propanol	1.0	Not Detected	2.4	Not Detected
Carbon Disulfide	1.0	Not Detected	3.1	Not Detected
3-Chloropropene	1.0	Not Detected	3.1	Not Detected
Methylene Chloride	0.40	Not Detected	1.4	Not Detected
Methyl tert-butyl ether	0.20	Not Detected	0.72	Not Detected
trans-1,2-Dichloroethene	0.20	Not Detected	0.79	Not Detected
Hexane	1.0	Not Detected	3.5	Not Detected
1,1-Dichloroethane	0.20	Not Detected	0.80	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.0	Not Detected	2.9	Not Detected
cis-1,2-Dichloroethene	0.20	Not Detected	0.79	Not Detected
Tetrahydrofuran	1.0	Not Detected	2.9	Not Detected
Chloroform	0.20	0.58	0.97	2.8
1,1,1-Trichloroethane	0.20	Not Detected	1.1	Not Detected
Cyclohexane	1.0	Not Detected	3.4	Not Detected
Carbon Tetrachloride	0.20	Not Detected	1.2	Not Detected
2,2,4-Trimethylpentane	1.0	Not Detected	4.6	Not Detected
Benzene	0.20	Not Detected	0.64	Not Detected
1,2-Dichloroethane	0.20	Not Detected	0.80	Not Detected
Heptane	1.0	Not Detected	4.1	Not Detected
Trichloroethene	0.20	Not Detected	1.1	Not Detected
1,2-Dichloropropane	0.20	Not Detected	0.92	Not Detected
Bromodichloromethane	0.20	Not Detected	1.3	Not Detected
cis-1,3-Dichloropropene	0.20	Not Detected	0.90	Not Detected
4-Methyl-2-pentanone	0.20	0.27	0.82	1.1
Toluene	0.20	Not Detected	0.75	Not Detected
trans-1,3-Dichloropropene	0.20	Not Detected	0.90	Not Detected
1,1,2-Trichloroethane	0.20	Not Detected	1.1	Not Detected
Tetrachloroethene	0.20	0.39	1.3	2.6
2-Hexanone	1.0	Not Detected	4.1	Not Detected
Dibromochloromethane	0.20	Not Detected	1.7	Not Detected

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Client Sample ID: SB-02-05.0-SV

Lab ID#: 2103707A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20032911**	**Date of Collection: 3/22/21 1:50:00 PM**	
Dil. Factor:	**1.99**	**Date of Analysis: 3/29/21 04:30 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dibromoethane (EDB)	0.20	Not Detected	1.5	Not Detected
Chlorobenzene	0.20	Not Detected	0.92	Not Detected
Ethyl Benzene	0.20	Not Detected	0.86	Not Detected
m,p-Xylene	0.20	0.48	0.86	2.1
o-Xylene	0.20	0.35	0.86	1.5
Styrene	0.20	Not Detected	0.85	Not Detected
Bromoform	0.20	Not Detected	2.0	Not Detected
Cumene	0.20	Not Detected	0.98	Not Detected
1,1,2,2-Tetrachloroethane	0.20	Not Detected	1.4	Not Detected
Propylbenzene	0.20	Not Detected	0.98	Not Detected
4-Ethyltoluene	0.20	0.32	0.98	1.6
1,3,5-Trimethylbenzene	0.20	Not Detected	0.98	Not Detected
1,2,4-Trimethylbenzene	0.20	0.38	0.98	1.8
1,3-Dichlorobenzene	0.20	Not Detected	1.2	Not Detected
1,4-Dichlorobenzene	0.20	Not Detected	1.2	Not Detected
alpha-Chlorotoluene	0.20	Not Detected	1.0	Not Detected
1,2-Dichlorobenzene	0.20	Not Detected	1.2	Not Detected
1,2,4-Trichlorobenzene	1.0	Not Detected	7.4	Not Detected
Hexachlorobutadiene	1.0	Not Detected	11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	121	70-130

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Client Sample ID: SB-03-05.0-SV

Lab ID#: 2103707A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20032912**	**Date of Collection: 3/22/21 3:08:00 PM**	
Dil. Factor:	**2.11**	**Date of Analysis: 3/29/21 05:26 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	Not Detected	5.2	Not Detected
Freon 114	0.21	Not Detected	1.5	Not Detected
Chloromethane	1.0	Not Detected	2.2	Not Detected
Vinyl Chloride	0.21	Not Detected	0.54	Not Detected
1,3-Butadiene	0.21	Not Detected	0.47	Not Detected
Bromomethane	1.0	Not Detected	4.1	Not Detected
Chloroethane	1.0	Not Detected	2.8	Not Detected
Freon 11	0.21	0.24	1.2	1.3
Ethanol	1.0	5.1	2.0	9.6
Freon 113	0.21	Not Detected	1.6	Not Detected
1,1-Dichloroethene	0.21	Not Detected	0.84	Not Detected
Acetone	2.1	14	5.0	32
2-Propanol	1.0	3.4	2.6	8.4
Carbon Disulfide	1.0	Not Detected	3.3	Not Detected
3-Chloropropene	1.0	Not Detected	3.3	Not Detected
Methylene Chloride	0.42	Not Detected	1.5	Not Detected
Methyl tert-butyl ether	0.21	Not Detected	0.76	Not Detected
trans-1,2-Dichloroethene	0.21	Not Detected	0.84	Not Detected
Hexane	1.0	Not Detected	3.7	Not Detected
1,1-Dichloroethane	0.21	Not Detected	0.85	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.0	Not Detected	3.1	Not Detected
cis-1,2-Dichloroethene	0.21	Not Detected	0.84	Not Detected
Tetrahydrofuran	1.0	Not Detected	3.1	Not Detected
Chloroform	0.21	0.65	1.0	3.2
1,1,1-Trichloroethane	0.21	Not Detected	1.2	Not Detected
Cyclohexane	1.0	Not Detected	3.6	Not Detected
Carbon Tetrachloride	0.21	Not Detected	1.3	Not Detected
2,2,4-Trimethylpentane	1.0	Not Detected	4.9	Not Detected
Benzene	0.21	Not Detected	0.67	Not Detected
1,2-Dichloroethane	0.21	Not Detected	0.85	Not Detected
Heptane	1.0	Not Detected	4.3	Not Detected
Trichloroethene	0.21	Not Detected	1.1	Not Detected
1,2-Dichloropropane	0.21	Not Detected	0.98	Not Detected
Bromodichloromethane	0.21	Not Detected	1.4	Not Detected
cis-1,3-Dichloropropene	0.21	Not Detected	0.96	Not Detected
4-Methyl-2-pentanone	0.21	0.22	0.86	0.92
Toluene	0.21	Not Detected	0.80	Not Detected
trans-1,3-Dichloropropene	0.21	Not Detected	0.96	Not Detected
1,1,2-Trichloroethane	0.21	Not Detected	1.2	Not Detected
Tetrachloroethene	0.21	Not Detected	1.4	Not Detected
2-Hexanone	1.0	Not Detected	4.3	Not Detected
Dibromochloromethane	0.21	Not Detected	1.8	Not Detected

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Client Sample ID: SB-03-05.0-SV

Lab ID#: 2103707A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20032912**	**Date of Collection: 3/22/21 3:08:00 PM**	
Dil. Factor:	**2.11**	**Date of Analysis: 3/29/21 05:26 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dibromoethane (EDB)	0.21	Not Detected	1.6	Not Detected
Chlorobenzene	0.21	Not Detected	0.97	Not Detected
Ethyl Benzene	0.21	Not Detected	0.92	Not Detected
m,p-Xylene	0.21	0.70	0.92	3.0
o-Xylene	0.21	0.37	0.92	1.6
Styrene	0.21	Not Detected	0.90	Not Detected
Bromoform	0.21	Not Detected	2.2	Not Detected
Cumene	0.21	Not Detected	1.0	Not Detected
1,1,2,2-Tetrachloroethane	0.21	Not Detected	1.4	Not Detected
Propylbenzene	0.21	Not Detected	1.0	Not Detected
4-Ethyltoluene	0.21	0.34	1.0	1.7
1,3,5-Trimethylbenzene	0.21	Not Detected	1.0	Not Detected
1,2,4-Trimethylbenzene	0.21	0.35	1.0	1.7
1,3-Dichlorobenzene	0.21	Not Detected	1.3	Not Detected
1,4-Dichlorobenzene	0.21	Not Detected	1.3	Not Detected
alpha-Chlorotoluene	0.21	Not Detected	1.1	Not Detected
1,2-Dichlorobenzene	0.21	Not Detected	1.3	Not Detected
1,2,4-Trichlorobenzene	1.0	Not Detected	7.8	Not Detected
Hexachlorobutadiene	1.0	Not Detected	11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	117	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	122	70-130

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Client Sample ID: SB-04-05.0-SV

Lab ID#: 2103707A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033109**	**Date of Collection:**	**3/23/21 8:55:00 AM**
Dil. Factor:	**2.00**	**Date of Analysis:**	**3/31/21 07:58 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	Not Detected	4.9	Not Detected
Freon 114	0.20	Not Detected	1.4	Not Detected
Chloromethane	1.0	Not Detected	2.1	Not Detected
Vinyl Chloride	0.20	Not Detected	0.51	Not Detected
1,3-Butadiene	0.20	Not Detected	0.44	Not Detected
Bromomethane	1.0	Not Detected	3.9	Not Detected
Chloroethane	1.0	Not Detected	2.6	Not Detected
Freon 11	0.20	0.28	1.1	1.6
Ethanol	1.0	Not Detected	1.9	Not Detected
Freon 113	0.20	Not Detected	1.5	Not Detected
1,1-Dichloroethene	0.20	Not Detected	0.79	Not Detected
Acetone	2.0	2.5	4.8	6.0
2-Propanol	1.0	1.2	2.4	2.8
Carbon Disulfide	1.0	Not Detected	3.1	Not Detected
3-Chloropropene	1.0	Not Detected	3.1	Not Detected
Methylene Chloride	0.40	Not Detected	1.4	Not Detected
Methyl tert-butyl ether	0.20	Not Detected	0.72	Not Detected
trans-1,2-Dichloroethene	0.20	Not Detected	0.79	Not Detected
Hexane	1.0	Not Detected	3.5	Not Detected
1,1-Dichloroethane	0.20	Not Detected	0.81	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.0	Not Detected	2.9	Not Detected
cis-1,2-Dichloroethene	0.20	Not Detected	0.79	Not Detected
Tetrahydrofuran	1.0	Not Detected	2.9	Not Detected
Chloroform	0.20	Not Detected	0.98	Not Detected
1,1,1-Trichloroethane	0.20	Not Detected	1.1	Not Detected
Cyclohexane	1.0	Not Detected	3.4	Not Detected
Carbon Tetrachloride	0.20	Not Detected	1.2	Not Detected
2,2,4-Trimethylpentane	1.0	Not Detected	4.7	Not Detected
Benzene	0.20	Not Detected	0.64	Not Detected
1,2-Dichloroethane	0.20	Not Detected	0.81	Not Detected
Heptane	1.0	Not Detected	4.1	Not Detected
Trichloroethene	0.20	Not Detected	1.1	Not Detected
1,2-Dichloropropane	0.20	Not Detected	0.92	Not Detected
Bromodichloromethane	0.20	Not Detected	1.3	Not Detected
cis-1,3-Dichloropropene	0.20	Not Detected	0.91	Not Detected
4-Methyl-2-pentanone	0.20	Not Detected	0.82	Not Detected
Toluene	0.20	Not Detected	0.75	Not Detected
trans-1,3-Dichloropropene	0.20	Not Detected	0.91	Not Detected
1,1,2-Trichloroethane	0.20	Not Detected	1.1	Not Detected
Tetrachloroethene	0.20	Not Detected	1.4	Not Detected
2-Hexanone	1.0	Not Detected	4.1	Not Detected
Dibromochloromethane	0.20	Not Detected	1.7	Not Detected

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Client Sample ID: SB-04-05.0-SV

Lab ID#: 2103707A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033109**	**Date of Collection: 3/23/21 8:55:00 AM**	
Dil. Factor:	**2.00**	**Date of Analysis: 3/31/21 07:58 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dibromoethane (EDB)	0.20	Not Detected	1.5	Not Detected
Chlorobenzene	0.20	Not Detected	0.92	Not Detected
Ethyl Benzene	0.20	Not Detected	0.87	Not Detected
m,p-Xylene	0.20	Not Detected	0.87	Not Detected
o-Xylene	0.20	Not Detected	0.87	Not Detected
Styrene	0.20	Not Detected	0.85	Not Detected
Bromoform	0.20	Not Detected	2.1	Not Detected
Cumene	0.20	Not Detected	0.98	Not Detected
1,1,2,2-Tetrachloroethane	0.20	Not Detected	1.4	Not Detected
Propylbenzene	0.20	Not Detected	0.98	Not Detected
4-Ethyltoluene	0.20	Not Detected	0.98	Not Detected
1,3,5-Trimethylbenzene	0.20	Not Detected	0.98	Not Detected
1,2,4-Trimethylbenzene	0.20	Not Detected	0.98	Not Detected
1,3-Dichlorobenzene	0.20	Not Detected	1.2	Not Detected
1,4-Dichlorobenzene	0.20	Not Detected	1.2	Not Detected
alpha-Chlorotoluene	0.20	Not Detected	1.0	Not Detected
1,2-Dichlorobenzene	0.20	Not Detected	1.2	Not Detected
1,2,4-Trichlorobenzene	1.0	Not Detected	7.4	Not Detected
Hexachlorobutadiene	1.0	Not Detected	11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	128	70-130

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Client Sample ID: SB-05-05.0-SV

Lab ID#: 2103707A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20032913**	**Date of Collection:**	**3/22/21 4:11:00 PM**
Dil. Factor:	**2.16**	**Date of Analysis:**	**3/29/21 06:24 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.3	Not Detected
Freon 114	0.22	Not Detected	1.5	Not Detected
Chloromethane	1.1	Not Detected	2.2	Not Detected
Vinyl Chloride	0.22	Not Detected	0.55	Not Detected
1,3-Butadiene	0.22	0.40	0.48	0.88
Bromomethane	1.1	Not Detected	4.2	Not Detected
Chloroethane	1.1	Not Detected	2.8	Not Detected
Freon 11	0.22	0.26	1.2	1.4
Ethanol	1.1	16	2.0	29
Freon 113	0.22	Not Detected	1.6	Not Detected
1,1-Dichloroethene	0.22	Not Detected	0.86	Not Detected
Acetone	2.2	9.1	5.1	22
2-Propanol	1.1	7.6	2.6	19
Carbon Disulfide	1.1	6.4	3.4	20
3-Chloropropene	1.1	Not Detected	3.4	Not Detected
Methylene Chloride	0.43	Not Detected	1.5	Not Detected
Methyl tert-butyl ether	0.22	Not Detected	0.78	Not Detected
trans-1,2-Dichloroethene	0.22	Not Detected	0.86	Not Detected
Hexane	1.1	Not Detected	3.8	Not Detected
1,1-Dichloroethane	0.22	0.99	0.87	4.0
2-Butanone (Methyl Ethyl Ketone)	1.1	5.4	3.2	16
cis-1,2-Dichloroethene	0.22	Not Detected	0.86	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.2	Not Detected
Chloroform	0.22	1.1	1.0	5.3
1,1,1-Trichloroethane	0.22	0.49	1.2	2.7
Cyclohexane	1.1	Not Detected	3.7	Not Detected
Carbon Tetrachloride	0.22	Not Detected	1.4	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.0	Not Detected
Benzene	0.22	2.0	0.69	6.5
1,2-Dichloroethane	0.22	Not Detected	0.87	Not Detected
Heptane	1.1	Not Detected	4.4	Not Detected
Trichloroethene	0.22	0.73	1.2	3.9
1,2-Dichloropropane	0.22	Not Detected	1.0	Not Detected
Bromodichloromethane	0.22	0.28	1.4	1.9
cis-1,3-Dichloropropene	0.22	Not Detected	0.98	Not Detected
4-Methyl-2-pentanone	0.22	0.54	0.88	2.2
Toluene	0.22	0.89	0.81	3.4
trans-1,3-Dichloropropene	0.22	Not Detected	0.98	Not Detected
1,1,2-Trichloroethane	0.22	Not Detected	1.2	Not Detected
Tetrachloroethene	0.22	3.8	1.5	26
2-Hexanone	1.1	Not Detected	4.4	Not Detected
Dibromochloromethane	0.22	Not Detected	1.8	Not Detected

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Client Sample ID: SB-05-05.0-SV

Lab ID#: 2103707A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20032913**	**Date of Collection: 3/22/21 4:11:00 PM**	
Dil. Factor:	**2.16**	**Date of Analysis: 3/29/21 06:24 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dibromoethane (EDB)	0.22	Not Detected	1.6	Not Detected
Chlorobenzene	0.22	Not Detected	0.99	Not Detected
Ethyl Benzene	0.22	0.50	0.94	2.2
m,p-Xylene	0.22	1.0	0.94	4.4
o-Xylene	0.22	0.61	0.94	2.7
Styrene	0.22	Not Detected	0.92	Not Detected
Bromoform	0.22	Not Detected	2.2	Not Detected
Cumene	0.22	Not Detected	1.1	Not Detected
1,1,2,2-Tetrachloroethane	0.22	Not Detected	1.5	Not Detected
Propylbenzene	0.22	Not Detected	1.1	Not Detected
4-Ethyltoluene	0.22	0.31	1.1	1.5
1,3,5-Trimethylbenzene	0.22	Not Detected	1.1	Not Detected
1,2,4-Trimethylbenzene	0.22	0.23	1.1	1.1
1,3-Dichlorobenzene	0.22	Not Detected	1.3	Not Detected
1,4-Dichlorobenzene	0.22	Not Detected	1.3	Not Detected
alpha-Chlorotoluene	0.22	Not Detected	1.1	Not Detected
1,2-Dichlorobenzene	0.22	Not Detected	1.3	Not Detected
1,2,4-Trichlorobenzene	1.1	Not Detected	8.0	Not Detected
Hexachlorobutadiene	1.1	Not Detected	12	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	120	70-130

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Client Sample ID: SB-06-05.0-SV

Lab ID#: 2103707A-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20032914**	**Date of Collection:**	**3/23/21 10:30:00 AM**
Dil. Factor:	**2.09**	**Date of Analysis:**	**3/29/21 07:17 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	Not Detected	5.2	Not Detected
Freon 114	0.21	Not Detected	1.5	Not Detected
Chloromethane	1.0	Not Detected	2.2	Not Detected
Vinyl Chloride	0.21	Not Detected	0.53	Not Detected
1,3-Butadiene	0.21	Not Detected	0.46	Not Detected
Bromomethane	1.0	Not Detected	4.0	Not Detected
Chloroethane	1.0	Not Detected	2.8	Not Detected
Freon 11	0.21	0.24	1.2	1.3
Ethanol	1.0	3.2	2.0	6.0
Freon 113	0.21	Not Detected	1.6	Not Detected
1,1-Dichloroethene	0.21	Not Detected	0.83	Not Detected
Acetone	2.1	4.6	5.0	11
2-Propanol	1.0	3.4	2.6	8.4
Carbon Disulfide	1.0	Not Detected	3.2	Not Detected
3-Chloropropene	1.0	Not Detected	3.3	Not Detected
Methylene Chloride	0.42	Not Detected	1.4	Not Detected
Methyl tert-butyl ether	0.21	Not Detected	0.75	Not Detected
trans-1,2-Dichloroethene	0.21	Not Detected	0.83	Not Detected
Hexane	1.0	Not Detected	3.7	Not Detected
1,1-Dichloroethane	0.21	Not Detected	0.85	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.0	Not Detected	3.1	Not Detected
cis-1,2-Dichloroethene	0.21	Not Detected	0.83	Not Detected
Tetrahydrofuran	1.0	Not Detected	3.1	Not Detected
Chloroform	0.21	0.29	1.0	1.4
1,1,1-Trichloroethane	0.21	Not Detected	1.1	Not Detected
Cyclohexane	1.0	Not Detected	3.6	Not Detected
Carbon Tetrachloride	0.21	Not Detected	1.3	Not Detected
2,2,4-Trimethylpentane	1.0	Not Detected	4.9	Not Detected
Benzene	0.21	Not Detected	0.67	Not Detected
1,2-Dichloroethane	0.21	Not Detected	0.84	Not Detected
Heptane	1.0	Not Detected	4.3	Not Detected
Trichloroethene	0.21	Not Detected	1.1	Not Detected
1,2-Dichloropropane	0.21	Not Detected	0.96	Not Detected
Bromodichloromethane	0.21	Not Detected	1.4	Not Detected
cis-1,3-Dichloropropene	0.21	Not Detected	0.95	Not Detected
4-Methyl-2-pentanone	0.21	Not Detected	0.86	Not Detected
Toluene	0.21	Not Detected	0.79	Not Detected
trans-1,3-Dichloropropene	0.21	Not Detected	0.95	Not Detected
1,1,2-Trichloroethane	0.21	Not Detected	1.1	Not Detected
Tetrachloroethene	0.21	Not Detected	1.4	Not Detected
2-Hexanone	1.0	Not Detected	4.3	Not Detected
Dibromochloromethane	0.21	Not Detected	1.8	Not Detected

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Client Sample ID: SB-06-05.0-SV

Lab ID#: 2103707A-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20032914**	**Date of Collection: 3/23/21 10:30:00 AM**	
Dil. Factor:	**2.09**	**Date of Analysis: 3/29/21 07:17 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dibromoethane (EDB)	0.21	Not Detected	1.6	Not Detected
Chlorobenzene	0.21	Not Detected	0.96	Not Detected
Ethyl Benzene	0.21	Not Detected	0.91	Not Detected
m,p-Xylene	0.21	Not Detected	0.91	Not Detected
o-Xylene	0.21	Not Detected	0.91	Not Detected
Styrene	0.21	Not Detected	0.89	Not Detected
Bromoform	0.21	Not Detected	2.2	Not Detected
Cumene	0.21	Not Detected	1.0	Not Detected
1,1,2,2-Tetrachloroethane	0.21	Not Detected	1.4	Not Detected
Propylbenzene	0.21	Not Detected	1.0	Not Detected
4-Ethyltoluene	0.21	Not Detected	1.0	Not Detected
1,3,5-Trimethylbenzene	0.21	Not Detected	1.0	Not Detected
1,2,4-Trimethylbenzene	0.21	Not Detected	1.0	Not Detected
1,3-Dichlorobenzene	0.21	Not Detected	1.2	Not Detected
1,4-Dichlorobenzene	0.21	Not Detected	1.2	Not Detected
alpha-Chlorotoluene	0.21	Not Detected	1.1	Not Detected
1,2-Dichlorobenzene	0.21	Not Detected	1.2	Not Detected
1,2,4-Trichlorobenzene	1.0	Not Detected	7.8	Not Detected
Hexachlorobutadiene	1.0	Not Detected	11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	122	70-130

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Client Sample ID: SB-07-05.0-SV

Lab ID#: 2103707A-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20032915**	**Date of Collection:**	**3/23/21 12:07:00 PM**
Dil. Factor:	**2.13**	**Date of Analysis:**	**3/29/21 08:18 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.3	Not Detected
Freon 114	0.21	Not Detected	1.5	Not Detected
Chloromethane	1.1	6.5	2.2	13
Vinyl Chloride	0.21	0.24	0.54	0.62
1,3-Butadiene	0.21	Not Detected	0.47	Not Detected
Bromomethane	1.1	Not Detected	4.1	Not Detected
Chloroethane	1.1	Not Detected	2.8	Not Detected
Freon 11	0.21	0.30	1.2	1.7
Ethanol	1.1	5.9	2.0	11
Freon 113	0.21	Not Detected	1.6	Not Detected
1,1-Dichloroethene	0.21	Not Detected	0.84	Not Detected
Acetone	2.1	26	5.0	62
2-Propanol	1.1	4.6	2.6	11
Carbon Disulfide	1.1	Not Detected	3.3	Not Detected
3-Chloropropene	1.1	Not Detected	3.3	Not Detected
Methylene Chloride	0.43	Not Detected	1.5	Not Detected
Methyl tert-butyl ether	0.21	Not Detected	0.77	Not Detected
trans-1,2-Dichloroethene	0.21	Not Detected	0.84	Not Detected
Hexane	1.1	Not Detected	3.8	Not Detected
1,1-Dichloroethane	0.21	Not Detected	0.86	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.1	3.7	3.1	11
cis-1,2-Dichloroethene	0.21	Not Detected	0.84	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.1	Not Detected
Chloroform	0.21	1.5	1.0	7.5
1,1,1-Trichloroethane	0.21	0.24	1.2	1.3
Cyclohexane	1.1	Not Detected	3.7	Not Detected
Carbon Tetrachloride	0.21	0.23	1.3	1.5
2,2,4-Trimethylpentane	1.1	Not Detected	5.0	Not Detected
Benzene	0.21	0.55	0.68	1.8
1,2-Dichloroethane	0.21	Not Detected	0.86	Not Detected
Heptane	1.1	Not Detected	4.4	Not Detected
Trichloroethene	0.21	7.4	1.1	40
1,2-Dichloropropane	0.21	Not Detected	0.98	Not Detected
Bromodichloromethane	0.21	0.40	1.4	2.7
cis-1,3-Dichloropropene	0.21	Not Detected	0.97	Not Detected
4-Methyl-2-pentanone	0.21	0.29	0.87	1.2
Toluene	0.21	0.94	0.80	3.5
trans-1,3-Dichloropropene	0.21	Not Detected	0.97	Not Detected
1,1,2-Trichloroethane	0.21	Not Detected	1.2	Not Detected
Tetrachloroethene	0.21	23	1.4	160
2-Hexanone	1.1	Not Detected	4.4	Not Detected
Dibromochloromethane	0.21	0.36	1.8	3.0

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Client Sample ID: SB-07-05.0-SV

Lab ID#: 2103707A-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20032915**	**Date of Collection: 3/23/21 12:07:00 PM**	
Dil. Factor:	**2.13**	**Date of Analysis: 3/29/21 08:18 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dibromoethane (EDB)	0.21	Not Detected	1.6	Not Detected
Chlorobenzene	0.21	Not Detected	0.98	Not Detected
Ethyl Benzene	0.21	0.50	0.92	2.2
m,p-Xylene	0.21	4.2	0.92	18
o-Xylene	0.21	1.6	0.92	6.9
Styrene	0.21	Not Detected	0.91	Not Detected
Bromoform	0.21	0.77	2.2	8.0
Cumene	0.21	0.30	1.0	1.5
1,1,2,2-Tetrachloroethane	0.21	Not Detected	1.5	Not Detected
Propylbenzene	0.21	0.46	1.0	2.3
4-Ethyltoluene	0.21	1.5	1.0	7.2
1,3,5-Trimethylbenzene	0.21	1.2	1.0	5.7
1,2,4-Trimethylbenzene	0.21	2.9	1.0	14
1,3-Dichlorobenzene	0.21	Not Detected	1.3	Not Detected
1,4-Dichlorobenzene	0.21	Not Detected	1.3	Not Detected
alpha-Chlorotoluene	0.21	Not Detected	1.1	Not Detected
1,2-Dichlorobenzene	0.21	Not Detected	1.3	Not Detected
1,2,4-Trichlorobenzene	1.1	Not Detected	7.9	Not Detected
Hexachlorobutadiene	1.1	Not Detected	11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	110	70-130

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Client Sample ID: SB-08-05.0-SV

Lab ID#: 2103707A-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20032916**	**Date of Collection: 3/23/21 1:46:00 PM**	
Dil. Factor:	**2.04**	**Date of Analysis: 3/29/21 09:16 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	Not Detected	5.0	Not Detected
Freon 114	0.20	Not Detected	1.4	Not Detected
Chloromethane	1.0	Not Detected	2.1	Not Detected
Vinyl Chloride	0.20	Not Detected	0.52	Not Detected
1,3-Butadiene	0.20	Not Detected	0.45	Not Detected
Bromomethane	1.0	Not Detected	4.0	Not Detected
Chloroethane	1.0	Not Detected	2.7	Not Detected
Freon 11	0.20	0.23	1.1	1.3
Ethanol	1.0	2.7	1.9	5.2
Freon 113	0.20	Not Detected	1.6	Not Detected
1,1-Dichloroethene	0.20	Not Detected	0.81	Not Detected
Acetone	2.0	7.5	4.8	18
2-Propanol	1.0	2.2	2.5	5.3
Carbon Disulfide	1.0	Not Detected	3.2	Not Detected
3-Chloropropene	1.0	Not Detected	3.2	Not Detected
Methylene Chloride	0.41	Not Detected	1.4	Not Detected
Methyl tert-butyl ether	0.20	Not Detected	0.74	Not Detected
trans-1,2-Dichloroethene	0.20	Not Detected	0.81	Not Detected
Hexane	1.0	Not Detected	3.6	Not Detected
1,1-Dichloroethane	0.20	Not Detected	0.82	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.0	Not Detected	3.0	Not Detected
cis-1,2-Dichloroethene	0.20	Not Detected	0.81	Not Detected
Tetrahydrofuran	1.0	Not Detected	3.0	Not Detected
Chloroform	0.20	0.57	1.0	2.8
1,1,1-Trichloroethane	0.20	Not Detected	1.1	Not Detected
Cyclohexane	1.0	Not Detected	3.5	Not Detected
Carbon Tetrachloride	0.20	Not Detected	1.3	Not Detected
2,2,4-Trimethylpentane	1.0	Not Detected	4.8	Not Detected
Benzene	0.20	0.35	0.65	1.1
1,2-Dichloroethane	0.20	Not Detected	0.82	Not Detected
Heptane	1.0	Not Detected	4.2	Not Detected
Trichloroethene	0.20	0.43	1.1	2.3
1,2-Dichloropropane	0.20	Not Detected	0.94	Not Detected
Bromodichloromethane	0.20	Not Detected	1.4	Not Detected
cis-1,3-Dichloropropene	0.20	Not Detected	0.92	Not Detected
4-Methyl-2-pentanone	0.20	Not Detected	0.84	Not Detected
Toluene	0.20	0.32	0.77	1.2
trans-1,3-Dichloropropene	0.20	Not Detected	0.92	Not Detected
1,1,2-Trichloroethane	0.20	Not Detected	1.1	Not Detected
Tetrachloroethene	0.20	Not Detected	1.4	Not Detected
2-Hexanone	1.0	Not Detected	4.2	Not Detected
Dibromochloromethane	0.20	Not Detected	1.7	Not Detected

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Client Sample ID: SB-08-05.0-SV

Lab ID#: 2103707A-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20032916**	**Date of Collection: 3/23/21 1:46:00 PM**	
Dil. Factor:	**2.04**	**Date of Analysis: 3/29/21 09:16 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dibromoethane (EDB)	0.20	Not Detected	1.6	Not Detected
Chlorobenzene	0.20	Not Detected	0.94	Not Detected
Ethyl Benzene	0.20	0.52	0.88	2.2
m,p-Xylene	0.20	0.57	0.88	2.5
o-Xylene	0.20	0.74	0.88	3.2
Styrene	0.20	Not Detected	0.87	Not Detected
Bromoform	0.20	Not Detected	2.1	Not Detected
Cumene	0.20	Not Detected	1.0	Not Detected
1,1,2,2-Tetrachloroethane	0.20	Not Detected	1.4	Not Detected
Propylbenzene	0.20	0.58	1.0	2.8
4-Ethyltoluene	0.20	2.5	1.0	12
1,3,5-Trimethylbenzene	0.20	0.70	1.0	3.4
1,2,4-Trimethylbenzene	0.20	0.38	1.0	1.8
1,3-Dichlorobenzene	0.20	Not Detected	1.2	Not Detected
1,4-Dichlorobenzene	0.20	Not Detected	1.2	Not Detected
alpha-Chlorotoluene	0.20	Not Detected	1.0	Not Detected
1,2-Dichlorobenzene	0.20	Not Detected	1.2	Not Detected
1,2,4-Trichlorobenzene	1.0	Not Detected	7.6	Not Detected
Hexachlorobutadiene	1.0	Not Detected	11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	94	70-130

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Client Sample ID: SB-09-04.0-SV

Lab ID#: 2103707A-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033110**	**Date of Collection:**	**3/24/21 11:26:00 AM**
Dil. Factor:	**2.14**	**Date of Analysis:**	**3/31/21 08:38 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.3	Not Detected
Freon 114	0.21	Not Detected	1.5	Not Detected
Chloromethane	1.1	Not Detected	2.2	Not Detected
Vinyl Chloride	0.21	Not Detected	0.55	Not Detected
1,3-Butadiene	0.21	Not Detected	0.47	Not Detected
Bromomethane	1.1	Not Detected	4.2	Not Detected
Chloroethane	1.1	Not Detected	2.8	Not Detected
Freon 11	0.21	0.21	1.2	1.2
Ethanol	1.1	Not Detected	2.0	Not Detected
Freon 113	0.21	Not Detected	1.6	Not Detected
1,1-Dichloroethene	0.21	Not Detected	0.85	Not Detected
Acetone	2.1	5.0	5.1	12
2-Propanol	1.1	4.1	2.6	10
Carbon Disulfide	1.1	Not Detected	3.3	Not Detected
3-Chloropropene	1.1	Not Detected	3.3	Not Detected
Methylene Chloride	0.43	Not Detected	1.5	Not Detected
Methyl tert-butyl ether	0.21	Not Detected	0.77	Not Detected
trans-1,2-Dichloroethene	0.21	Not Detected	0.85	Not Detected
Hexane	1.1	Not Detected	3.8	Not Detected
1,1-Dichloroethane	0.21	Not Detected	0.87	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.1	Not Detected	3.2	Not Detected
cis-1,2-Dichloroethene	0.21	Not Detected	0.85	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.2	Not Detected
Chloroform	0.21	1.2	1.0	6.0
1,1,1-Trichloroethane	0.21	Not Detected	1.2	Not Detected
Cyclohexane	1.1	Not Detected	3.7	Not Detected
Carbon Tetrachloride	0.21	Not Detected	1.3	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.0	Not Detected
Benzene	0.21	Not Detected	0.68	Not Detected
1,2-Dichloroethane	0.21	Not Detected	0.87	Not Detected
Heptane	1.1	Not Detected	4.4	Not Detected
Trichloroethene	0.21	Not Detected	1.2	Not Detected
1,2-Dichloropropane	0.21	Not Detected	0.99	Not Detected
Bromodichloromethane	0.21	0.30	1.4	2.0
cis-1,3-Dichloropropene	0.21	Not Detected	0.97	Not Detected
4-Methyl-2-pentanone	0.21	Not Detected	0.88	Not Detected
Toluene	0.21	Not Detected	0.81	Not Detected
trans-1,3-Dichloropropene	0.21	Not Detected	0.97	Not Detected
1,1,2-Trichloroethane	0.21	Not Detected	1.2	Not Detected
Tetrachloroethene	0.21	0.21	1.4	1.4
2-Hexanone	1.1	Not Detected	4.4	Not Detected
Dibromochloromethane	0.21	Not Detected	1.8	Not Detected

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Client Sample ID: SB-09-04.0-SV

Lab ID#: 2103707A-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033110**	**Date of Collection: 3/24/21 11:26:00 AM**	
Dil. Factor:	**2.14**	**Date of Analysis: 3/31/21 08:38 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dibromoethane (EDB)	0.21	Not Detected	1.6	Not Detected
Chlorobenzene	0.21	Not Detected	0.98	Not Detected
Ethyl Benzene	0.21	Not Detected	0.93	Not Detected
m,p-Xylene	0.21	Not Detected	0.93	Not Detected
o-Xylene	0.21	Not Detected	0.93	Not Detected
Styrene	0.21	Not Detected	0.91	Not Detected
Bromoform	0.21	Not Detected	2.2	Not Detected
Cumene	0.21	Not Detected	1.0	Not Detected
1,1,2,2-Tetrachloroethane	0.21	Not Detected	1.5	Not Detected
Propylbenzene	0.21	Not Detected	1.0	Not Detected
4-Ethyltoluene	0.21	Not Detected	1.0	Not Detected
1,3,5-Trimethylbenzene	0.21	Not Detected	1.0	Not Detected
1,2,4-Trimethylbenzene	0.21	Not Detected	1.0	Not Detected
1,3-Dichlorobenzene	0.21	Not Detected	1.3	Not Detected
1,4-Dichlorobenzene	0.21	Not Detected	1.3	Not Detected
alpha-Chlorotoluene	0.21	Not Detected	1.1	Not Detected
1,2-Dichlorobenzene	0.21	Not Detected	1.3	Not Detected
1,2,4-Trichlorobenzene	1.1	Not Detected	7.9	Not Detected
Hexachlorobutadiene	1.1	Not Detected	11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	127	70-130

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Client Sample ID: SB-10-05.0-SV

Lab ID#: 2103707A-10A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20032918**	**Date of Collection:**	**3/24/21 10:04:00 AM**
Dil. Factor:	**1.98**	**Date of Analysis:**	**3/29/21 11:03 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.99	Not Detected	4.9	Not Detected
Freon 114	0.20	Not Detected	1.4	Not Detected
Chloromethane	0.99	Not Detected	2.0	Not Detected
Vinyl Chloride	0.20	Not Detected	0.51	Not Detected
1,3-Butadiene	0.20	Not Detected	0.44	Not Detected
Bromomethane	0.99	Not Detected	3.8	Not Detected
Chloroethane	0.99	Not Detected	2.6	Not Detected
Freon 11	0.20	0.49	1.1	2.7
Ethanol	0.99	3.0	1.9	5.7
Freon 113	0.20	Not Detected	1.5	Not Detected
1,1-Dichloroethene	0.20	Not Detected	0.78	Not Detected
Acetone	2.0	7.3	4.7	17
2-Propanol	0.99	1.9	2.4	4.7
Carbon Disulfide	0.99	Not Detected	3.1	Not Detected
3-Chloropropene	0.99	Not Detected	3.1	Not Detected
Methylene Chloride	0.40	Not Detected	1.4	Not Detected
Methyl tert-butyl ether	0.20	Not Detected	0.71	Not Detected
trans-1,2-Dichloroethene	0.20	Not Detected	0.78	Not Detected
Hexane	0.99	Not Detected	3.5	Not Detected
1,1-Dichloroethane	0.20	Not Detected	0.80	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.99	Not Detected	2.9	Not Detected
cis-1,2-Dichloroethene	0.20	Not Detected	0.78	Not Detected
Tetrahydrofuran	0.99	Not Detected	2.9	Not Detected
Chloroform	0.20	0.41	0.97	2.0
1,1,1-Trichloroethane	0.20	0.60	1.1	3.3
Cyclohexane	0.99	Not Detected	3.4	Not Detected
Carbon Tetrachloride	0.20	Not Detected	1.2	Not Detected
2,2,4-Trimethylpentane	0.99	Not Detected	4.6	Not Detected
Benzene	0.20	Not Detected	0.63	Not Detected
1,2-Dichloroethane	0.20	Not Detected	0.80	Not Detected
Heptane	0.99	Not Detected	4.0	Not Detected
Trichloroethene	0.20	Not Detected	1.1	Not Detected
1,2-Dichloropropane	0.20	Not Detected	0.92	Not Detected
Bromodichloromethane	0.20	Not Detected	1.3	Not Detected
cis-1,3-Dichloropropene	0.20	Not Detected	0.90	Not Detected
4-Methyl-2-pentanone	0.20	Not Detected	0.81	Not Detected
Toluene	0.20	Not Detected	0.75	Not Detected
trans-1,3-Dichloropropene	0.20	Not Detected	0.90	Not Detected
1,1,2-Trichloroethane	0.20	Not Detected	1.1	Not Detected
Tetrachloroethene	0.20	0.64	1.3	4.4
2-Hexanone	0.99	Not Detected	4.0	Not Detected
Dibromochloromethane	0.20	Not Detected	1.7	Not Detected

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Client Sample ID: SB-10-05.0-SV

Lab ID#: 2103707A-10A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20032918**	**Date of Collection:**	**3/24/21 10:04:00 AM**
Dil. Factor:	**1.98**	**Date of Analysis:**	**3/29/21 11:03 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dibromoethane (EDB)	0.20	Not Detected	1.5	Not Detected
Chlorobenzene	0.20	Not Detected	0.91	Not Detected
Ethyl Benzene	0.20	Not Detected	0.86	Not Detected
m,p-Xylene	0.20	Not Detected	0.86	Not Detected
o-Xylene	0.20	Not Detected	0.86	Not Detected
Styrene	0.20	Not Detected	0.84	Not Detected
Bromoform	0.20	Not Detected	2.0	Not Detected
Cumene	0.20	Not Detected	0.97	Not Detected
1,1,2,2-Tetrachloroethane	0.20	Not Detected	1.4	Not Detected
Propylbenzene	0.20	Not Detected	0.97	Not Detected
4-Ethyltoluene	0.20	Not Detected	0.97	Not Detected
1,3,5-Trimethylbenzene	0.20	Not Detected	0.97	Not Detected
1,2,4-Trimethylbenzene	0.20	Not Detected	0.97	Not Detected
1,3-Dichlorobenzene	0.20	Not Detected	1.2	Not Detected
1,4-Dichlorobenzene	0.20	Not Detected	1.2	Not Detected
alpha-Chlorotoluene	0.20	Not Detected	1.0	Not Detected
1,2-Dichlorobenzene	0.20	Not Detected	1.2	Not Detected
1,2,4-Trichlorobenzene	0.99	Not Detected	7.3	Not Detected
Hexachlorobutadiene	0.99	Not Detected	10	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	120	70-130

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Client Sample ID: SB-11-05.0-SV

Lab ID#: 2103707A-11A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20032919**	**Date of Collection: 3/24/21 8:49:00 AM**	
Dil. Factor:	**2.07**	**Date of Analysis: 3/30/21 07:42 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	Not Detected	5.1	Not Detected
Freon 114	0.21	Not Detected	1.4	Not Detected
Chloromethane	1.0	Not Detected	2.1	Not Detected
Vinyl Chloride	0.21	Not Detected	0.53	Not Detected
1,3-Butadiene	0.21	Not Detected	0.46	Not Detected
Bromomethane	1.0	Not Detected	4.0	Not Detected
Chloroethane	1.0	Not Detected	2.7	Not Detected
Freon 11	0.21	0.26	1.2	1.5
Ethanol	1.0	Not Detected	2.0	Not Detected
Freon 113	0.21	Not Detected	1.6	Not Detected
1,1-Dichloroethene	0.21	Not Detected	0.82	Not Detected
Acetone	2.1	6.4	4.9	15
2-Propanol	1.0	1.5	2.5	3.7
Carbon Disulfide	1.0	Not Detected	3.2	Not Detected
3-Chloropropene	1.0	Not Detected	3.2	Not Detected
Methylene Chloride	0.41	Not Detected	1.4	Not Detected
Methyl tert-butyl ether	0.21	Not Detected	0.75	Not Detected
trans-1,2-Dichloroethene	0.21	Not Detected	0.82	Not Detected
Hexane	1.0	Not Detected	3.6	Not Detected
1,1-Dichloroethane	0.21	Not Detected	0.84	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.0	Not Detected	3.0	Not Detected
cis-1,2-Dichloroethene	0.21	Not Detected	0.82	Not Detected
Tetrahydrofuran	1.0	Not Detected	3.0	Not Detected
Chloroform	0.21	0.34	1.0	1.6
1,1,1-Trichloroethane	0.21	Not Detected	1.1	Not Detected
Cyclohexane	1.0	Not Detected	3.6	Not Detected
Carbon Tetrachloride	0.21	Not Detected	1.3	Not Detected
2,2,4-Trimethylpentane	1.0	Not Detected	4.8	Not Detected
Benzene	0.21	Not Detected	0.66	Not Detected
1,2-Dichloroethane	0.21	Not Detected	0.84	Not Detected
Heptane	1.0	Not Detected	4.2	Not Detected
Trichloroethene	0.21	Not Detected	1.1	Not Detected
1,2-Dichloropropane	0.21	Not Detected	0.96	Not Detected
Bromodichloromethane	0.21	Not Detected	1.4	Not Detected
cis-1,3-Dichloropropene	0.21	Not Detected	0.94	Not Detected
4-Methyl-2-pentanone	0.21	Not Detected	0.85	Not Detected
Toluene	0.21	Not Detected	0.78	Not Detected
trans-1,3-Dichloropropene	0.21	Not Detected	0.94	Not Detected
1,1,2-Trichloroethane	0.21	Not Detected	1.1	Not Detected
Tetrachloroethene	0.21	Not Detected	1.4	Not Detected
2-Hexanone	1.0	Not Detected	4.2	Not Detected
Dibromochloromethane	0.21	Not Detected	1.8	Not Detected

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Client Sample ID: SB-11-05.0-SV

Lab ID#: 2103707A-11A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20032919**	**Date of Collection: 3/24/21 8:49:00 AM**	
Dil. Factor:	**2.07**	**Date of Analysis: 3/30/21 07:42 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dibromoethane (EDB)	0.21	Not Detected	1.6	Not Detected
Chlorobenzene	0.21	Not Detected	0.95	Not Detected
Ethyl Benzene	0.21	Not Detected	0.90	Not Detected
m,p-Xylene	0.21	Not Detected	0.90	Not Detected
o-Xylene	0.21	Not Detected	0.90	Not Detected
Styrene	0.21	Not Detected	0.88	Not Detected
Bromoform	0.21	Not Detected	2.1	Not Detected
Cumene	0.21	Not Detected	1.0	Not Detected
1,1,2,2-Tetrachloroethane	0.21	Not Detected	1.4	Not Detected
Propylbenzene	0.21	Not Detected	1.0	Not Detected
4-Ethyltoluene	0.21	Not Detected	1.0	Not Detected
1,3,5-Trimethylbenzene	0.21	Not Detected	1.0	Not Detected
1,2,4-Trimethylbenzene	0.21	Not Detected	1.0	Not Detected
1,3-Dichlorobenzene	0.21	Not Detected	1.2	Not Detected
1,4-Dichlorobenzene	0.21	Not Detected	1.2	Not Detected
alpha-Chlorotoluene	0.21	Not Detected	1.1	Not Detected
1,2-Dichlorobenzene	0.21	Not Detected	1.2	Not Detected
1,2,4-Trichlorobenzene	1.0	Not Detected	7.7	Not Detected
Hexachlorobutadiene	1.0	Not Detected	11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	117	70-130

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Client Sample ID: SB-12-05.0-SV

Lab ID#: 2103707A-12A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033111**	**Date of Collection: 3/24/21 6:24:00 PM**	
Dil. Factor:	**2.09**	**Date of Analysis: 3/31/21 09:17 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	Not Detected	5.2	Not Detected
Freon 114	0.21	Not Detected	1.5	Not Detected
Chloromethane	1.0	Not Detected	2.2	Not Detected
Vinyl Chloride	0.21	Not Detected	0.53	Not Detected
1,3-Butadiene	0.21	Not Detected	0.46	Not Detected
Bromomethane	1.0	Not Detected	4.0	Not Detected
Chloroethane	1.0	Not Detected	2.8	Not Detected
Freon 11	0.21	0.23	1.2	1.3
Ethanol	1.0	2.7	2.0	5.1
Freon 113	0.21	Not Detected	1.6	Not Detected
1,1-Dichloroethene	0.21	Not Detected	0.83	Not Detected
Acetone	2.1	7.4	5.0	18
2-Propanol	1.0	3.6	2.6	8.8
Carbon Disulfide	1.0	Not Detected	3.2	Not Detected
3-Chloropropene	1.0	Not Detected	3.3	Not Detected
Methylene Chloride	0.42	Not Detected	1.4	Not Detected
Methyl tert-butyl ether	0.21	Not Detected	0.75	Not Detected
trans-1,2-Dichloroethene	0.21	Not Detected	0.83	Not Detected
Hexane	1.0	Not Detected	3.7	Not Detected
1,1-Dichloroethane	0.21	Not Detected	0.85	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.0	Not Detected	3.1	Not Detected
cis-1,2-Dichloroethene	0.21	Not Detected	0.83	Not Detected
Tetrahydrofuran	1.0	Not Detected	3.1	Not Detected
Chloroform	0.21	0.78	1.0	3.8
1,1,1-Trichloroethane	0.21	Not Detected	1.1	Not Detected
Cyclohexane	1.0	Not Detected	3.6	Not Detected
Carbon Tetrachloride	0.21	Not Detected	1.3	Not Detected
2,2,4-Trimethylpentane	1.0	Not Detected	4.9	Not Detected
Benzene	0.21	Not Detected	0.67	Not Detected
1,2-Dichloroethane	0.21	Not Detected	0.84	Not Detected
Heptane	1.0	Not Detected	4.3	Not Detected
Trichloroethene	0.21	Not Detected	1.1	Not Detected
1,2-Dichloropropane	0.21	Not Detected	0.96	Not Detected
Bromodichloromethane	0.21	0.32	1.4	2.1
cis-1,3-Dichloropropene	0.21	Not Detected	0.95	Not Detected
4-Methyl-2-pentanone	0.21	Not Detected	0.86	Not Detected
Toluene	0.21	0.27	0.79	1.0
trans-1,3-Dichloropropene	0.21	Not Detected	0.95	Not Detected
1,1,2-Trichloroethane	0.21	Not Detected	1.1	Not Detected
Tetrachloroethene	0.21	0.22	1.4	1.5
2-Hexanone	1.0	Not Detected	4.3	Not Detected
Dibromochloromethane	0.21	Not Detected	1.8	Not Detected

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Client Sample ID: SB-12-05.0-SV

Lab ID#: 2103707A-12A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033111**	**Date of Collection: 3/24/21 6:24:00 PM**	
Dil. Factor:	**2.09**	**Date of Analysis: 3/31/21 09:17 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dibromoethane (EDB)	0.21	Not Detected	1.6	Not Detected
Chlorobenzene	0.21	Not Detected	0.96	Not Detected
Ethyl Benzene	0.21	0.28	0.91	1.2
m,p-Xylene	0.21	1.2	0.91	5.5
o-Xylene	0.21	0.60	0.91	2.6
Styrene	0.21	Not Detected	0.89	Not Detected
Bromoform	0.21	Not Detected	2.2	Not Detected
Cumene	0.21	Not Detected	1.0	Not Detected
1,1,2,2-Tetrachloroethane	0.21	Not Detected	1.4	Not Detected
Propylbenzene	0.21	0.25	1.0	1.2
4-Ethyltoluene	0.21	1.2	1.0	5.9
1,3,5-Trimethylbenzene	0.21	0.49	1.0	2.4
1,2,4-Trimethylbenzene	0.21	1.4	1.0	6.8
1,3-Dichlorobenzene	0.21	Not Detected	1.2	Not Detected
1,4-Dichlorobenzene	0.21	Not Detected	1.2	Not Detected
alpha-Chlorotoluene	0.21	Not Detected	1.1	Not Detected
1,2-Dichlorobenzene	0.21	Not Detected	1.2	Not Detected
1,2,4-Trichlorobenzene	1.0	Not Detected	7.8	Not Detected
Hexachlorobutadiene	1.0	Not Detected	11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	123	70-130

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Client Sample ID: SB-13-05.0-SV

Lab ID#: 2103707A-13A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033112**	**Date of Collection:**	**3/24/21 1:38:00 PM**
Dil. Factor:	**2.19**	**Date of Analysis:**	**3/31/21 09:57 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.4	Not Detected
Freon 114	0.22	Not Detected	1.5	Not Detected
Chloromethane	1.1	Not Detected	2.3	Not Detected
Vinyl Chloride	0.22	Not Detected	0.56	Not Detected
1,3-Butadiene	0.22	Not Detected	0.48	Not Detected
Bromomethane	1.1	Not Detected	4.2	Not Detected
Chloroethane	1.1	Not Detected	2.9	Not Detected
Freon 11	0.22	0.26	1.2	1.4
Ethanol	1.1	Not Detected	2.1	Not Detected
Freon 113	0.22	Not Detected	1.7	Not Detected
1,1-Dichloroethene	0.22	Not Detected	0.87	Not Detected
Acetone	2.2	5.8	5.2	14
2-Propanol	1.1	2.4	2.7	6.0
Carbon Disulfide	1.1	Not Detected	3.4	Not Detected
3-Chloropropene	1.1	Not Detected	3.4	Not Detected
Methylene Chloride	0.44	Not Detected	1.5	Not Detected
Methyl tert-butyl ether	0.22	Not Detected	0.79	Not Detected
trans-1,2-Dichloroethene	0.22	Not Detected	0.87	Not Detected
Hexane	1.1	Not Detected	3.8	Not Detected
1,1-Dichloroethane	0.22	Not Detected	0.89	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.1	Not Detected	3.2	Not Detected
cis-1,2-Dichloroethene	0.22	Not Detected	0.87	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.2	Not Detected
Chloroform	0.22	7.1	1.1	35
1,1,1-Trichloroethane	0.22	Not Detected	1.2	Not Detected
Cyclohexane	1.1	Not Detected	3.8	Not Detected
Carbon Tetrachloride	0.22	Not Detected	1.4	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.1	Not Detected
Benzene	0.22	Not Detected	0.70	Not Detected
1,2-Dichloroethane	0.22	Not Detected	0.89	Not Detected
Heptane	1.1	Not Detected	4.5	Not Detected
Trichloroethene	0.22	Not Detected	1.2	Not Detected
1,2-Dichloropropane	0.22	Not Detected	1.0	Not Detected
Bromodichloromethane	0.22	1.3	1.5	8.6
cis-1,3-Dichloropropene	0.22	Not Detected	0.99	Not Detected
4-Methyl-2-pentanone	0.22	Not Detected	0.90	Not Detected
Toluene	0.22	0.23	0.82	0.86
trans-1,3-Dichloropropene	0.22	Not Detected	0.99	Not Detected
1,1,2-Trichloroethane	0.22	Not Detected	1.2	Not Detected
Tetrachloroethene	0.22	0.38	1.5	2.6
2-Hexanone	1.1	Not Detected	4.5	Not Detected
Dibromochloromethane	0.22	0.25	1.9	2.1

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Client Sample ID: SB-13-05.0-SV

Lab ID#: 2103707A-13A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033112**	**Date of Collection: 3/24/21 1:38:00 PM**	
Dil. Factor:	**2.19**	**Date of Analysis: 3/31/21 09:57 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dibromoethane (EDB)	0.22	Not Detected	1.7	Not Detected
Chlorobenzene	0.22	Not Detected	1.0	Not Detected
Ethyl Benzene	0.22	Not Detected	0.95	Not Detected
m,p-Xylene	0.22	0.38	0.95	1.6
o-Xylene	0.22	0.25	0.95	1.1
Styrene	0.22	Not Detected	0.93	Not Detected
Bromoform	0.22	Not Detected	2.3	Not Detected
Cumene	0.22	Not Detected	1.1	Not Detected
1,1,2,2-Tetrachloroethane	0.22	Not Detected	1.5	Not Detected
Propylbenzene	0.22	Not Detected	1.1	Not Detected
4-Ethyltoluene	0.22	0.25	1.1	1.2
1,3,5-Trimethylbenzene	0.22	Not Detected	1.1	Not Detected
1,2,4-Trimethylbenzene	0.22	Not Detected	1.1	Not Detected
1,3-Dichlorobenzene	0.22	Not Detected	1.3	Not Detected
1,4-Dichlorobenzene	0.22	Not Detected	1.3	Not Detected
alpha-Chlorotoluene	0.22	Not Detected	1.1	Not Detected
1,2-Dichlorobenzene	0.22	Not Detected	1.3	Not Detected
1,2,4-Trichlorobenzene	1.1	Not Detected	8.1	Not Detected
Hexachlorobutadiene	1.1	Not Detected	12	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	127	70-130

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Client Sample ID: SB-14-05.0-SV

Lab ID#: 2103707A-14A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033113**	**Date of Collection: 3/24/21 2:36:00 PM**	
Dil. Factor:	**2.09**	**Date of Analysis: 3/31/21 10:40 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	Not Detected	5.2	Not Detected
Freon 114	0.21	Not Detected	1.5	Not Detected
Chloromethane	1.0	Not Detected	2.2	Not Detected
Vinyl Chloride	0.21	Not Detected	0.53	Not Detected
1,3-Butadiene	0.21	Not Detected	0.46	Not Detected
Bromomethane	1.0	Not Detected	4.0	Not Detected
Chloroethane	1.0	Not Detected	2.8	Not Detected
Freon 11	0.21	Not Detected	1.2	Not Detected
Ethanol	1.0	Not Detected	2.0	Not Detected
Freon 113	0.21	Not Detected	1.6	Not Detected
1,1-Dichloroethene	0.21	Not Detected	0.83	Not Detected
Acetone	2.1	2.8	5.0	6.7
2-Propanol	1.0	2.8	2.6	6.8
Carbon Disulfide	1.0	Not Detected	3.2	Not Detected
3-Chloropropene	1.0	Not Detected	3.3	Not Detected
Methylene Chloride	0.42	Not Detected	1.4	Not Detected
Methyl tert-butyl ether	0.21	Not Detected	0.75	Not Detected
trans-1,2-Dichloroethene	0.21	Not Detected	0.83	Not Detected
Hexane	1.0	Not Detected	3.7	Not Detected
1,1-Dichloroethane	0.21	Not Detected	0.85	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.0	Not Detected	3.1	Not Detected
cis-1,2-Dichloroethene	0.21	Not Detected	0.83	Not Detected
Tetrahydrofuran	1.0	Not Detected	3.1	Not Detected
Chloroform	0.21	2.2	1.0	11
1,1,1-Trichloroethane	0.21	0.22	1.1	1.2
Cyclohexane	1.0	Not Detected	3.6	Not Detected
Carbon Tetrachloride	0.21	Not Detected	1.3	Not Detected
2,2,4-Trimethylpentane	1.0	Not Detected	4.9	Not Detected
Benzene	0.21	Not Detected	0.67	Not Detected
1,2-Dichloroethane	0.21	Not Detected	0.84	Not Detected
Heptane	1.0	Not Detected	4.3	Not Detected
Trichloroethene	0.21	Not Detected	1.1	Not Detected
1,2-Dichloropropane	0.21	Not Detected	0.96	Not Detected
Bromodichloromethane	0.21	Not Detected	1.4	Not Detected
cis-1,3-Dichloropropene	0.21	Not Detected	0.95	Not Detected
4-Methyl-2-pentanone	0.21	Not Detected	0.86	Not Detected
Toluene	0.21	Not Detected	0.79	Not Detected
trans-1,3-Dichloropropene	0.21	Not Detected	0.95	Not Detected
1,1,2-Trichloroethane	0.21	Not Detected	1.1	Not Detected
Tetrachloroethene	0.21	Not Detected	1.4	Not Detected
2-Hexanone	1.0	Not Detected	4.3	Not Detected
Dibromochloromethane	0.21	Not Detected	1.8	Not Detected

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Client Sample ID: SB-14-05.0-SV

Lab ID#: 2103707A-14A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033113**	**Date of Collection: 3/24/21 2:36:00 PM**	
Dil. Factor:	**2.09**	**Date of Analysis: 3/31/21 10:40 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dibromoethane (EDB)	0.21	Not Detected	1.6	Not Detected
Chlorobenzene	0.21	Not Detected	0.96	Not Detected
Ethyl Benzene	0.21	Not Detected	0.91	Not Detected
m,p-Xylene	0.21	0.54	0.91	2.3
o-Xylene	0.21	0.26	0.91	1.1
Styrene	0.21	Not Detected	0.89	Not Detected
Bromoform	0.21	Not Detected	2.2	Not Detected
Cumene	0.21	Not Detected	1.0	Not Detected
1,1,2,2-Tetrachloroethane	0.21	Not Detected	1.4	Not Detected
Propylbenzene	0.21	Not Detected	1.0	Not Detected
4-Ethyltoluene	0.21	0.34	1.0	1.7
1,3,5-Trimethylbenzene	0.21	Not Detected	1.0	Not Detected
1,2,4-Trimethylbenzene	0.21	0.37	1.0	1.8
1,3-Dichlorobenzene	0.21	Not Detected	1.2	Not Detected
1,4-Dichlorobenzene	0.21	Not Detected	1.2	Not Detected
alpha-Chlorotoluene	0.21	Not Detected	1.1	Not Detected
1,2-Dichlorobenzene	0.21	Not Detected	1.2	Not Detected
1,2,4-Trichlorobenzene	1.0	Not Detected	7.8	Not Detected
Hexachlorobutadiene	1.0	Not Detected	11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	125	70-130

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Client Sample ID: SB-15-05.0-SV

Lab ID#: 2103707A-15A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033114**	**Date of Collection: 3/24/21 5:05:00 PM**	
Dil. Factor:	**2.12**	**Date of Analysis: 3/31/21 11:19 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.2	Not Detected
Freon 114	0.21	Not Detected	1.5	Not Detected
Chloromethane	1.1	Not Detected	2.2	Not Detected
Vinyl Chloride	0.21	Not Detected	0.54	Not Detected
1,3-Butadiene	0.21	Not Detected	0.47	Not Detected
Bromomethane	1.1	Not Detected	4.1	Not Detected
Chloroethane	1.1	Not Detected	2.8	Not Detected
Freon 11	0.21	0.24	1.2	1.3
Ethanol	1.1	2.8	2.0	5.3
Freon 113	0.21	Not Detected	1.6	Not Detected
1,1-Dichloroethene	0.21	Not Detected	0.84	Not Detected
Acetone	2.1	5.4	5.0	13
2-Propanol	1.1	2.2	2.6	5.4
Carbon Disulfide	1.1	Not Detected	3.3	Not Detected
3-Chloropropene	1.1	Not Detected	3.3	Not Detected
Methylene Chloride	0.42	Not Detected	1.5	Not Detected
Methyl tert-butyl ether	0.21	Not Detected	0.76	Not Detected
trans-1,2-Dichloroethene	0.21	Not Detected	0.84	Not Detected
Hexane	1.1	Not Detected	3.7	Not Detected
1,1-Dichloroethane	0.21	Not Detected	0.86	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.1	Not Detected	3.1	Not Detected
cis-1,2-Dichloroethene	0.21	Not Detected	0.84	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.1	Not Detected
Chloroform	0.21	0.86	1.0	4.2
1,1,1-Trichloroethane	0.21	Not Detected	1.2	Not Detected
Cyclohexane	1.1	Not Detected	3.6	Not Detected
Carbon Tetrachloride	0.21	Not Detected	1.3	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.0	Not Detected
Benzene	0.21	Not Detected	0.68	Not Detected
1,2-Dichloroethane	0.21	Not Detected	0.86	Not Detected
Heptane	1.1	Not Detected	4.3	Not Detected
Trichloroethene	0.21	Not Detected	1.1	Not Detected
1,2-Dichloropropane	0.21	Not Detected	0.98	Not Detected
Bromodichloromethane	0.21	0.24	1.4	1.6
cis-1,3-Dichloropropene	0.21	Not Detected	0.96	Not Detected
4-Methyl-2-pentanone	0.21	Not Detected	0.87	Not Detected
Toluene	0.21	0.48	0.80	1.8
trans-1,3-Dichloropropene	0.21	Not Detected	0.96	Not Detected
1,1,2-Trichloroethane	0.21	Not Detected	1.2	Not Detected
Tetrachloroethene	0.21	Not Detected	1.4	Not Detected
2-Hexanone	1.1	Not Detected	4.3	Not Detected
Dibromochloromethane	0.21	Not Detected	1.8	Not Detected

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Client Sample ID: SB-15-05.0-SV

Lab ID#: 2103707A-15A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033114**	**Date of Collection: 3/24/21 5:05:00 PM**	
Dil. Factor:	**2.12**	**Date of Analysis: 3/31/21 11:19 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dibromoethane (EDB)	0.21	Not Detected	1.6	Not Detected
Chlorobenzene	0.21	Not Detected	0.98	Not Detected
Ethyl Benzene	0.21	0.52	0.92	2.3
m,p-Xylene	0.21	1.8	0.92	8.0
o-Xylene	0.21	0.73	0.92	3.2
Styrene	0.21	Not Detected	0.90	Not Detected
Bromoform	0.21	Not Detected	2.2	Not Detected
Cumene	0.21	Not Detected	1.0	Not Detected
1,1,2,2-Tetrachloroethane	0.21	Not Detected	1.4	Not Detected
Propylbenzene	0.21	0.41	1.0	2.0
4-Ethyltoluene	0.21	1.5	1.0	7.6
1,3,5-Trimethylbenzene	0.21	0.32	1.0	1.6
1,2,4-Trimethylbenzene	0.21	0.89	1.0	4.4
1,3-Dichlorobenzene	0.21	Not Detected	1.3	Not Detected
1,4-Dichlorobenzene	0.21	Not Detected	1.3	Not Detected
alpha-Chlorotoluene	0.21	Not Detected	1.1	Not Detected
1,2-Dichlorobenzene	0.21	Not Detected	1.3	Not Detected
1,2,4-Trichlorobenzene	1.1	Not Detected	7.9	Not Detected
Hexachlorobutadiene	1.1	Not Detected	11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	122	70-130

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Client Sample ID: SB-16-05.0-SV

Lab ID#: 2103707A-16A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033115**	**Date of Collection: 3/24/21 3:58:00 PM**	
Dil. Factor:	**2.13**	**Date of Analysis: 3/31/21 11:59 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.3	Not Detected
Freon 114	0.21	Not Detected	1.5	Not Detected
Chloromethane	1.1	Not Detected	2.2	Not Detected
Vinyl Chloride	0.21	Not Detected	0.54	Not Detected
1,3-Butadiene	0.21	Not Detected	0.47	Not Detected
Bromomethane	1.1	Not Detected	4.1	Not Detected
Chloroethane	1.1	Not Detected	2.8	Not Detected
Freon 11	0.21	0.41	1.2	2.3
Ethanol	1.1	Not Detected	2.0	Not Detected
Freon 113	0.21	Not Detected	1.6	Not Detected
1,1-Dichloroethene	0.21	Not Detected	0.84	Not Detected
Acetone	2.1	5.6	5.0	13
2-Propanol	1.1	2.8	2.6	6.9
Carbon Disulfide	1.1	Not Detected	3.3	Not Detected
3-Chloropropene	1.1	Not Detected	3.3	Not Detected
Methylene Chloride	0.43	Not Detected	1.5	Not Detected
Methyl tert-butyl ether	0.21	Not Detected	0.77	Not Detected
trans-1,2-Dichloroethene	0.21	Not Detected	0.84	Not Detected
Hexane	1.1	Not Detected	3.8	Not Detected
1,1-Dichloroethane	0.21	Not Detected	0.86	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.1	Not Detected	3.1	Not Detected
cis-1,2-Dichloroethene	0.21	Not Detected	0.84	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.1	Not Detected
Chloroform	0.21	0.64	1.0	3.1
1,1,1-Trichloroethane	0.21	Not Detected	1.2	Not Detected
Cyclohexane	1.1	Not Detected	3.7	Not Detected
Carbon Tetrachloride	0.21	Not Detected	1.3	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.0	Not Detected
Benzene	0.21	Not Detected	0.68	Not Detected
1,2-Dichloroethane	0.21	Not Detected	0.86	Not Detected
Heptane	1.1	Not Detected	4.4	Not Detected
Trichloroethene	0.21	Not Detected	1.1	Not Detected
1,2-Dichloropropane	0.21	Not Detected	0.98	Not Detected
Bromodichloromethane	0.21	Not Detected	1.4	Not Detected
cis-1,3-Dichloropropene	0.21	Not Detected	0.97	Not Detected
4-Methyl-2-pentanone	0.21	0.32	0.87	1.3
Toluene	0.21	Not Detected	0.80	Not Detected
trans-1,3-Dichloropropene	0.21	Not Detected	0.97	Not Detected
1,1,2-Trichloroethane	0.21	Not Detected	1.2	Not Detected
Tetrachloroethene	0.21	Not Detected	1.4	Not Detected
2-Hexanone	1.1	Not Detected	4.4	Not Detected
Dibromochloromethane	0.21	Not Detected	1.8	Not Detected

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Client Sample ID: SB-16-05.0-SV

Lab ID#: 2103707A-16A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033115**	**Date of Collection: 3/24/21 3:58:00 PM**	
Dil. Factor:	**2.13**	**Date of Analysis: 3/31/21 11:59 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dibromoethane (EDB)	0.21	Not Detected	1.6	Not Detected
Chlorobenzene	0.21	Not Detected	0.98	Not Detected
Ethyl Benzene	0.21	Not Detected	0.92	Not Detected
m,p-Xylene	0.21	0.52	0.92	2.2
o-Xylene	0.21	0.23	0.92	1.0
Styrene	0.21	Not Detected	0.91	Not Detected
Bromoform	0.21	Not Detected	2.2	Not Detected
Cumene	0.21	Not Detected	1.0	Not Detected
1,1,2,2-Tetrachloroethane	0.21	Not Detected	1.5	Not Detected
Propylbenzene	0.21	Not Detected	1.0	Not Detected
4-Ethyltoluene	0.21	0.58	1.0	2.8
1,3,5-Trimethylbenzene	0.21	Not Detected	1.0	Not Detected
1,2,4-Trimethylbenzene	0.21	0.64	1.0	3.1
1,3-Dichlorobenzene	0.21	Not Detected	1.3	Not Detected
1,4-Dichlorobenzene	0.21	Not Detected	1.3	Not Detected
alpha-Chlorotoluene	0.21	Not Detected	1.1	Not Detected
1,2-Dichlorobenzene	0.21	Not Detected	1.3	Not Detected
1,2,4-Trichlorobenzene	1.1	Not Detected	7.9	Not Detected
Hexachlorobutadiene	1.1	Not Detected	11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	128	70-130

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Client Sample ID: SB-17-05.0-SV

Lab ID#: 2103707A-17A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033116**	**Date of Collection: 3/22/21 9:09:00 AM**	
Dil. Factor:	**2.08**	**Date of Analysis: 4/1/21 05:52 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	Not Detected	5.1	Not Detected
Freon 114	0.21	Not Detected	1.4	Not Detected
Chloromethane	1.0	Not Detected	2.1	Not Detected
Vinyl Chloride	0.21	Not Detected	0.53	Not Detected
1,3-Butadiene	0.21	Not Detected	0.46	Not Detected
Bromomethane	1.0	Not Detected	4.0	Not Detected
Chloroethane	1.0	Not Detected	2.7	Not Detected
Freon 11	0.21	0.23	1.2	1.3
Ethanol	1.0	2.8	2.0	5.2
Freon 113	0.21	Not Detected	1.6	Not Detected
1,1-Dichloroethene	0.21	Not Detected	0.82	Not Detected
Acetone	2.1	5.4	4.9	13
2-Propanol	1.0	3.4	2.6	8.4
Carbon Disulfide	1.0	Not Detected	3.2	Not Detected
3-Chloropropene	1.0	Not Detected	3.2	Not Detected
Methylene Chloride	0.42	Not Detected	1.4	Not Detected
Methyl tert-butyl ether	0.21	Not Detected	0.75	Not Detected
trans-1,2-Dichloroethene	0.21	Not Detected	0.82	Not Detected
Hexane	1.0	Not Detected	3.7	Not Detected
1,1-Dichloroethane	0.21	Not Detected	0.84	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.0	Not Detected	3.1	Not Detected
cis-1,2-Dichloroethene	0.21	Not Detected	0.82	Not Detected
Tetrahydrofuran	1.0	Not Detected	3.1	Not Detected
Chloroform	0.21	0.78	1.0	3.8
1,1,1-Trichloroethane	0.21	Not Detected	1.1	Not Detected
Cyclohexane	1.0	Not Detected	3.6	Not Detected
Carbon Tetrachloride	0.21	Not Detected	1.3	Not Detected
2,2,4-Trimethylpentane	1.0	Not Detected	4.8	Not Detected
Benzene	0.21	Not Detected	0.66	Not Detected
1,2-Dichloroethane	0.21	Not Detected	0.84	Not Detected
Heptane	1.0	Not Detected	4.3	Not Detected
Trichloroethene	0.21	0.32	1.1	1.7
1,2-Dichloropropane	0.21	Not Detected	0.96	Not Detected
Bromodichloromethane	0.21	Not Detected	1.4	Not Detected
cis-1,3-Dichloropropene	0.21	Not Detected	0.94	Not Detected
4-Methyl-2-pentanone	0.21	Not Detected	0.85	Not Detected
Toluene	0.21	Not Detected	0.78	Not Detected
trans-1,3-Dichloropropene	0.21	Not Detected	0.94	Not Detected
1,1,2-Trichloroethane	0.21	Not Detected	1.1	Not Detected
Tetrachloroethene	0.21	0.36	1.4	2.4
2-Hexanone	1.0	Not Detected	4.3	Not Detected
Dibromochloromethane	0.21	Not Detected	1.8	Not Detected

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Client Sample ID: SB-17-05.0-SV

Lab ID#: 2103707A-17A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033116**	**Date of Collection:**	**3/22/21 9:09:00 AM**
Dil. Factor:	**2.08**	**Date of Analysis:**	**4/1/21 05:52 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dibromoethane (EDB)	0.21	Not Detected	1.6	Not Detected
Chlorobenzene	0.21	Not Detected	0.96	Not Detected
Ethyl Benzene	0.21	Not Detected	0.90	Not Detected
m,p-Xylene	0.21	Not Detected	0.90	Not Detected
o-Xylene	0.21	Not Detected	0.90	Not Detected
Styrene	0.21	Not Detected	0.88	Not Detected
Bromoform	0.21	Not Detected	2.2	Not Detected
Cumene	0.21	Not Detected	1.0	Not Detected
1,1,2,2-Tetrachloroethane	0.21	Not Detected	1.4	Not Detected
Propylbenzene	0.21	Not Detected	1.0	Not Detected
4-Ethyltoluene	0.21	Not Detected	1.0	Not Detected
1,3,5-Trimethylbenzene	0.21	Not Detected	1.0	Not Detected
1,2,4-Trimethylbenzene	0.21	Not Detected	1.0	Not Detected
1,3-Dichlorobenzene	0.21	Not Detected	1.2	Not Detected
1,4-Dichlorobenzene	0.21	Not Detected	1.2	Not Detected
alpha-Chlorotoluene	0.21	Not Detected	1.1	Not Detected
1,2-Dichlorobenzene	0.21	Not Detected	1.2	Not Detected
1,2,4-Trichlorobenzene	1.0	Not Detected	7.7	Not Detected
Hexachlorobutadiene	1.0	Not Detected	11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	125	70-130

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Client Sample ID: SB-18-05.0-SV

Lab ID#: 2103707A-18A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033122**	**Date of Collection:**	**3/22/21 10:44:00 AM**
Dil. Factor:	**21.6**	**Date of Analysis:**	**4/1/21 09:59 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	11	Not Detected	53	Not Detected
Freon 114	2.2	Not Detected	15	Not Detected
Chloromethane	11	Not Detected	22	Not Detected
Vinyl Chloride	2.2	Not Detected	5.5	Not Detected
1,3-Butadiene	2.2	Not Detected	4.8	Not Detected
Bromomethane	11	Not Detected	42	Not Detected
Chloroethane	11	Not Detected	28	Not Detected
Freon 11	2.2	Not Detected	12	Not Detected
Ethanol	11	Not Detected	20	Not Detected
Freon 113	2.2	Not Detected	16	Not Detected
1,1-Dichloroethene	2.2	Not Detected	8.6	Not Detected
Acetone	22	Not Detected	51	Not Detected
2-Propanol	11	Not Detected	26	Not Detected
Carbon Disulfide	11	Not Detected	34	Not Detected
3-Chloropropene	11	Not Detected	34	Not Detected
Methylene Chloride	4.3	Not Detected	15	Not Detected
Methyl tert-butyl ether	2.2	Not Detected	7.8	Not Detected
trans-1,2-Dichloroethene	2.2	Not Detected	8.6	Not Detected
Hexane	11	440	38	1500
1,1-Dichloroethane	2.2	Not Detected	8.7	Not Detected
2-Butanone (Methyl Ethyl Ketone)	11	Not Detected	32	Not Detected
cis-1,2-Dichloroethene	2.2	Not Detected	8.6	Not Detected
Tetrahydrofuran	11	Not Detected	32	Not Detected
Chloroform	2.2	Not Detected	10	Not Detected
1,1,1-Trichloroethane	2.2	Not Detected	12	Not Detected
Cyclohexane	11	320	37	1100
Carbon Tetrachloride	2.2	Not Detected	14	Not Detected
2,2,4-Trimethylpentane	11	Not Detected	50	Not Detected
Benzene	2.2	Not Detected	6.9	Not Detected
1,2-Dichloroethane	2.2	Not Detected	8.7	Not Detected
Heptane	11	Not Detected	44	Not Detected
Trichloroethene	2.2	Not Detected	12	Not Detected
1,2-Dichloropropane	2.2	Not Detected	10	Not Detected
Bromodichloromethane	2.2	Not Detected	14	Not Detected
cis-1,3-Dichloropropene	2.2	Not Detected	9.8	Not Detected
4-Methyl-2-pentanone	2.2	Not Detected	8.8	Not Detected
Toluene	2.2	Not Detected	8.1	Not Detected
trans-1,3-Dichloropropene	2.2	Not Detected	9.8	Not Detected
1,1,2-Trichloroethane	2.2	Not Detected	12	Not Detected
Tetrachloroethene	2.2	Not Detected	15	Not Detected
2-Hexanone	11	Not Detected	44	Not Detected
Dibromochloromethane	2.2	Not Detected	18	Not Detected

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Client Sample ID: SB-18-05.0-SV

Lab ID#: 2103707A-18A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033122**	**Date of Collection:**	**3/22/21 10:44:00 AM**
Dil. Factor:	**21.6**	**Date of Analysis:**	**4/1/21 09:59 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dibromoethane (EDB)	2.2	Not Detected	16	Not Detected
Chlorobenzene	2.2	Not Detected	9.9	Not Detected
Ethyl Benzene	2.2	Not Detected	9.4	Not Detected
m,p-Xylene	2.2	Not Detected	9.4	Not Detected
o-Xylene	2.2	Not Detected	9.4	Not Detected
Styrene	2.2	Not Detected	9.2	Not Detected
Bromoform	2.2	Not Detected	22	Not Detected
Cumene	2.2	Not Detected	11	Not Detected
1,1,2,2-Tetrachloroethane	2.2	Not Detected	15	Not Detected
Propylbenzene	2.2	Not Detected	11	Not Detected
4-Ethyltoluene	2.2	Not Detected	11	Not Detected
1,3,5-Trimethylbenzene	2.2	Not Detected	11	Not Detected
1,2,4-Trimethylbenzene	2.2	Not Detected	11	Not Detected
1,3-Dichlorobenzene	2.2	Not Detected	13	Not Detected
1,4-Dichlorobenzene	2.2	Not Detected	13	Not Detected
alpha-Chlorotoluene	2.2	Not Detected	11	Not Detected
1,2-Dichlorobenzene	2.2	Not Detected	13	Not Detected
1,2,4-Trichlorobenzene	11	Not Detected	80	Not Detected
Hexachlorobutadiene	11	Not Detected	120	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	118	70-130

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Client Sample ID: SB-19-03.0-SV

Lab ID#: 2103707A-19A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033117**	**Date of Collection: 3/22/21 5:20:00 PM**	
Dil. Factor:	**2.06**	**Date of Analysis: 4/1/21 06:41 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	Not Detected	5.1	Not Detected
Freon 114	0.21	Not Detected	1.4	Not Detected
Chloromethane	1.0	Not Detected	2.1	Not Detected
Vinyl Chloride	0.21	Not Detected	0.53	Not Detected
1,3-Butadiene	0.21	Not Detected	0.46	Not Detected
Bromomethane	1.0	Not Detected	4.0	Not Detected
Chloroethane	1.0	Not Detected	2.7	Not Detected
Freon 11	0.21	0.22	1.2	1.2
Ethanol	1.0	3.8	1.9	7.1
Freon 113	0.21	Not Detected	1.6	Not Detected
1,1-Dichloroethene	0.21	Not Detected	0.82	Not Detected
Acetone	2.1	13	4.9	31
2-Propanol	1.0	4.0	2.5	9.9
Carbon Disulfide	1.0	Not Detected	3.2	Not Detected
3-Chloropropene	1.0	Not Detected	3.2	Not Detected
Methylene Chloride	0.41	Not Detected	1.4	Not Detected
Methyl tert-butyl ether	0.21	Not Detected	0.74	Not Detected
trans-1,2-Dichloroethene	0.21	Not Detected	0.82	Not Detected
Hexane	1.0	Not Detected	3.6	Not Detected
1,1-Dichloroethane	0.21	Not Detected	0.83	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.0	Not Detected	3.0	Not Detected
cis-1,2-Dichloroethene	0.21	Not Detected	0.82	Not Detected
Tetrahydrofuran	1.0	Not Detected	3.0	Not Detected
Chloroform	0.21	2.4	1.0	12
1,1,1-Trichloroethane	0.21	0.26	1.1	1.4
Cyclohexane	1.0	Not Detected	3.5	Not Detected
Carbon Tetrachloride	0.21	Not Detected	1.3	Not Detected
2,2,4-Trimethylpentane	1.0	Not Detected	4.8	Not Detected
Benzene	0.21	Not Detected	0.66	Not Detected
1,2-Dichloroethane	0.21	Not Detected	0.83	Not Detected
Heptane	1.0	Not Detected	4.2	Not Detected
Trichloroethene	0.21	Not Detected	1.1	Not Detected
1,2-Dichloropropane	0.21	Not Detected	0.95	Not Detected
Bromodichloromethane	0.21	0.43	1.4	2.9
cis-1,3-Dichloropropene	0.21	Not Detected	0.93	Not Detected
4-Methyl-2-pentanone	0.21	0.37	0.84	1.5
Toluene	0.21	Not Detected	0.78	Not Detected
trans-1,3-Dichloropropene	0.21	Not Detected	0.93	Not Detected
1,1,2-Trichloroethane	0.21	Not Detected	1.1	Not Detected
Tetrachloroethene	0.21	0.41	1.4	2.8
2-Hexanone	1.0	Not Detected	4.2	Not Detected
Dibromochloromethane	0.21	Not Detected	1.8	Not Detected

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Client Sample ID: SB-19-03.0-SV

Lab ID#: 2103707A-19A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033117**	**Date of Collection: 3/22/21 5:20:00 PM**	
Dil. Factor:	**2.06**	**Date of Analysis: 4/1/21 06:41 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dibromoethane (EDB)	0.21	Not Detected	1.6	Not Detected
Chlorobenzene	0.21	Not Detected	0.95	Not Detected
Ethyl Benzene	0.21	Not Detected	0.89	Not Detected
m,p-Xylene	0.21	Not Detected	0.89	Not Detected
o-Xylene	0.21	Not Detected	0.89	Not Detected
Styrene	0.21	Not Detected	0.88	Not Detected
Bromoform	0.21	Not Detected	2.1	Not Detected
Cumene	0.21	Not Detected	1.0	Not Detected
1,1,2,2-Tetrachloroethane	0.21	Not Detected	1.4	Not Detected
Propylbenzene	0.21	Not Detected	1.0	Not Detected
4-Ethyltoluene	0.21	Not Detected	1.0	Not Detected
1,3,5-Trimethylbenzene	0.21	Not Detected	1.0	Not Detected
1,2,4-Trimethylbenzene	0.21	Not Detected	1.0	Not Detected
1,3-Dichlorobenzene	0.21	Not Detected	1.2	Not Detected
1,4-Dichlorobenzene	0.21	Not Detected	1.2	Not Detected
alpha-Chlorotoluene	0.21	Not Detected	1.1	Not Detected
1,2-Dichlorobenzene	0.21	Not Detected	1.2	Not Detected
1,2,4-Trichlorobenzene	1.0	Not Detected	7.6	Not Detected
Hexachlorobutadiene	1.0	Not Detected	11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	121	70-130

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Client Sample ID: SB-20-03.5-SV

Lab ID#: 2103707A-20A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033118**	**Date of Collection: 3/23/21 1:01:00 PM**	
Dil. Factor:	**2.19**	**Date of Analysis: 4/1/21 07:20 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.4	Not Detected
Freon 114	0.22	Not Detected	1.5	Not Detected
Chloromethane	1.1	Not Detected	2.3	Not Detected
Vinyl Chloride	0.22	Not Detected	0.56	Not Detected
1,3-Butadiene	0.22	Not Detected	0.48	Not Detected
Bromomethane	1.1	Not Detected	4.2	Not Detected
Chloroethane	1.1	Not Detected	2.9	Not Detected
Freon 11	0.22	0.23	1.2	1.3
Ethanol	1.1	4.1	2.1	7.7
Freon 113	0.22	Not Detected	1.7	Not Detected
1,1-Dichloroethene	0.22	Not Detected	0.87	Not Detected
Acetone	2.2	6.0	5.2	14
2-Propanol	1.1	11	2.7	28
Carbon Disulfide	1.1	Not Detected	3.4	Not Detected
3-Chloropropene	1.1	Not Detected	3.4	Not Detected
Methylene Chloride	0.44	Not Detected	1.5	Not Detected
Methyl tert-butyl ether	0.22	Not Detected	0.79	Not Detected
trans-1,2-Dichloroethene	0.22	Not Detected	0.87	Not Detected
Hexane	1.1	Not Detected	3.8	Not Detected
1,1-Dichloroethane	0.22	Not Detected	0.89	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.1	Not Detected	3.2	Not Detected
cis-1,2-Dichloroethene	0.22	Not Detected	0.87	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.2	Not Detected
Chloroform	0.22	Not Detected	1.1	Not Detected
1,1,1-Trichloroethane	0.22	Not Detected	1.2	Not Detected
Cyclohexane	1.1	Not Detected	3.8	Not Detected
Carbon Tetrachloride	0.22	Not Detected	1.4	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.1	Not Detected
Benzene	0.22	Not Detected	0.70	Not Detected
1,2-Dichloroethane	0.22	Not Detected	0.89	Not Detected
Heptane	1.1	Not Detected	4.5	Not Detected
Trichloroethene	0.22	Not Detected	1.2	Not Detected
1,2-Dichloropropane	0.22	Not Detected	1.0	Not Detected
Bromodichloromethane	0.22	Not Detected	1.5	Not Detected
cis-1,3-Dichloropropene	0.22	Not Detected	0.99	Not Detected
4-Methyl-2-pentanone	0.22	Not Detected	0.90	Not Detected
Toluene	0.22	Not Detected	0.82	Not Detected
trans-1,3-Dichloropropene	0.22	Not Detected	0.99	Not Detected
1,1,2-Trichloroethane	0.22	Not Detected	1.2	Not Detected
Tetrachloroethene	0.22	Not Detected	1.5	Not Detected
2-Hexanone	1.1	Not Detected	4.5	Not Detected
Dibromochloromethane	0.22	Not Detected	1.9	Not Detected

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Client Sample ID: SB-20-03.5-SV

Lab ID#: 2103707A-20A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033118**	**Date of Collection: 3/23/21 1:01:00 PM**	
Dil. Factor:	**2.19**	**Date of Analysis: 4/1/21 07:20 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dibromoethane (EDB)	0.22	Not Detected	1.7	Not Detected
Chlorobenzene	0.22	Not Detected	1.0	Not Detected
Ethyl Benzene	0.22	Not Detected	0.95	Not Detected
m,p-Xylene	0.22	Not Detected	0.95	Not Detected
o-Xylene	0.22	Not Detected	0.95	Not Detected
Styrene	0.22	Not Detected	0.93	Not Detected
Bromoform	0.22	Not Detected	2.3	Not Detected
Cumene	0.22	Not Detected	1.1	Not Detected
1,1,2,2-Tetrachloroethane	0.22	Not Detected	1.5	Not Detected
Propylbenzene	0.22	Not Detected	1.1	Not Detected
4-Ethyltoluene	0.22	Not Detected	1.1	Not Detected
1,3,5-Trimethylbenzene	0.22	Not Detected	1.1	Not Detected
1,2,4-Trimethylbenzene	0.22	Not Detected	1.1	Not Detected
1,3-Dichlorobenzene	0.22	Not Detected	1.3	Not Detected
1,4-Dichlorobenzene	0.22	Not Detected	1.3	Not Detected
alpha-Chlorotoluene	0.22	Not Detected	1.1	Not Detected
1,2-Dichlorobenzene	0.22	Not Detected	1.3	Not Detected
1,2,4-Trichlorobenzene	1.1	Not Detected	8.1	Not Detected
Hexachlorobutadiene	1.1	Not Detected	12	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	128	70-130

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Client Sample ID: SB-21-3.25-SV

Lab ID#: 2103707A-21A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033119**	**Date of Collection:**	**3/23/21 2:33:00 PM**
Dil. Factor:	**2.15**	**Date of Analysis:**	**4/1/21 08:00 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.3	Not Detected
Freon 114	0.22	Not Detected	1.5	Not Detected
Chloromethane	1.1	Not Detected	2.2	Not Detected
Vinyl Chloride	0.22	Not Detected	0.55	Not Detected
1,3-Butadiene	0.22	Not Detected	0.48	Not Detected
Bromomethane	1.1	Not Detected	4.2	Not Detected
Chloroethane	1.1	Not Detected	2.8	Not Detected
Freon 11	0.22	Not Detected	1.2	Not Detected
Ethanol	1.1	2.8	2.0	5.3
Freon 113	0.22	Not Detected	1.6	Not Detected
1,1-Dichloroethene	0.22	Not Detected	0.85	Not Detected
Acetone	2.2	11	5.1	26
2-Propanol	1.1	2.9	2.6	7.2
Carbon Disulfide	1.1	24	3.3	75
3-Chloropropene	1.1	Not Detected	3.4	Not Detected
Methylene Chloride	0.43	0.68	1.5	2.4
Methyl tert-butyl ether	0.22	Not Detected	0.78	Not Detected
trans-1,2-Dichloroethene	0.22	Not Detected	0.85	Not Detected
Hexane	1.1	Not Detected	3.8	Not Detected
1,1-Dichloroethane	0.22	Not Detected	0.87	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.1	Not Detected	3.2	Not Detected
cis-1,2-Dichloroethene	0.22	0.24	0.85	0.95
Tetrahydrofuran	1.1	Not Detected	3.2	Not Detected
Chloroform	0.22	1.2	1.0	5.9
1,1,1-Trichloroethane	0.22	Not Detected	1.2	Not Detected
Cyclohexane	1.1	Not Detected	3.7	Not Detected
Carbon Tetrachloride	0.22	Not Detected	1.4	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.0	Not Detected
Benzene	0.22	0.38	0.69	1.2
1,2-Dichloroethane	0.22	Not Detected	0.87	Not Detected
Heptane	1.1	Not Detected	4.4	Not Detected
Trichloroethene	0.22	Not Detected	1.2	Not Detected
1,2-Dichloropropane	0.22	Not Detected	0.99	Not Detected
Bromodichloromethane	0.22	0.41	1.4	2.8
cis-1,3-Dichloropropene	0.22	Not Detected	0.98	Not Detected
4-Methyl-2-pentanone	0.22	0.91	0.88	3.7
Toluene	0.22	Not Detected	0.81	Not Detected
trans-1,3-Dichloropropene	0.22	Not Detected	0.98	Not Detected
1,1,2-Trichloroethane	0.22	Not Detected	1.2	Not Detected
Tetrachloroethene	0.22	0.23	1.4	1.6
2-Hexanone	1.1	Not Detected	4.4	Not Detected
Dibromochloromethane	0.22	0.26	1.8	2.2

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Client Sample ID: SB-21-3.25-SV

Lab ID#: 2103707A-21A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033119**	**Date of Collection: 3/23/21 2:33:00 PM**	
Dil. Factor:	**2.15**	**Date of Analysis: 4/1/21 08:00 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dibromoethane (EDB)	0.22	Not Detected	1.6	Not Detected
Chlorobenzene	0.22	Not Detected	0.99	Not Detected
Ethyl Benzene	0.22	Not Detected	0.93	Not Detected
m,p-Xylene	0.22	0.31	0.93	1.4
o-Xylene	0.22	Not Detected	0.93	Not Detected
Styrene	0.22	Not Detected	0.92	Not Detected
Bromoform	0.22	Not Detected	2.2	Not Detected
Cumene	0.22	Not Detected	1.0	Not Detected
1,1,2,2-Tetrachloroethane	0.22	Not Detected	1.5	Not Detected
Propylbenzene	0.22	Not Detected	1.0	Not Detected
4-Ethyltoluene	0.22	Not Detected	1.0	Not Detected
1,3,5-Trimethylbenzene	0.22	Not Detected	1.0	Not Detected
1,2,4-Trimethylbenzene	0.22	Not Detected	1.0	Not Detected
1,3-Dichlorobenzene	0.22	Not Detected	1.3	Not Detected
1,4-Dichlorobenzene	0.22	Not Detected	1.3	Not Detected
alpha-Chlorotoluene	0.22	Not Detected	1.1	Not Detected
1,2-Dichlorobenzene	0.22	Not Detected	1.3	Not Detected
1,2,4-Trichlorobenzene	1.1	Not Detected	8.0	Not Detected
Hexachlorobutadiene	1.1	Not Detected	11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	116	70-130

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Client Sample ID: REP-210322

Lab ID#: 2103707A-22A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033120**	**Date of Collection: NA**	
Dil. Factor:	**2.04**	**Date of Analysis: 4/1/21 08:40 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	Not Detected	5.0	Not Detected
Freon 114	0.20	Not Detected	1.4	Not Detected
Chloromethane	1.0	Not Detected	2.1	Not Detected
Vinyl Chloride	0.20	Not Detected	0.52	Not Detected
1,3-Butadiene	0.20	Not Detected	0.45	Not Detected
Bromomethane	1.0	Not Detected	4.0	Not Detected
Chloroethane	1.0	Not Detected	2.7	Not Detected
Freon 11	0.20	0.21	1.1	1.2
Ethanol	1.0	Not Detected	1.9	Not Detected
Freon 113	0.20	Not Detected	1.6	Not Detected
1,1-Dichloroethene	0.20	Not Detected	0.81	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	1.0	Not Detected	2.5	Not Detected
Carbon Disulfide	1.0	Not Detected	3.2	Not Detected
3-Chloropropene	1.0	Not Detected	3.2	Not Detected
Methylene Chloride	0.41	Not Detected	1.4	Not Detected
Methyl tert-butyl ether	0.20	Not Detected	0.74	Not Detected
trans-1,2-Dichloroethene	0.20	Not Detected	0.81	Not Detected
Hexane	1.0	Not Detected	3.6	Not Detected
1,1-Dichloroethane	0.20	Not Detected	0.82	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.0	Not Detected	3.0	Not Detected
cis-1,2-Dichloroethene	0.20	Not Detected	0.81	Not Detected
Tetrahydrofuran	1.0	Not Detected	3.0	Not Detected
Chloroform	0.20	0.86	1.0	4.2
1,1,1-Trichloroethane	0.20	Not Detected	1.1	Not Detected
Cyclohexane	1.0	Not Detected	3.5	Not Detected
Carbon Tetrachloride	0.20	Not Detected	1.3	Not Detected
2,2,4-Trimethylpentane	1.0	Not Detected	4.8	Not Detected
Benzene	0.20	Not Detected	0.65	Not Detected
1,2-Dichloroethane	0.20	Not Detected	0.82	Not Detected
Heptane	1.0	Not Detected	4.2	Not Detected
Trichloroethene	0.20	0.32	1.1	1.7
1,2-Dichloropropane	0.20	Not Detected	0.94	Not Detected
Bromodichloromethane	0.20	Not Detected	1.4	Not Detected
cis-1,3-Dichloropropene	0.20	Not Detected	0.92	Not Detected
4-Methyl-2-pentanone	0.20	Not Detected	0.84	Not Detected
Toluene	0.20	Not Detected	0.77	Not Detected
trans-1,3-Dichloropropene	0.20	Not Detected	0.92	Not Detected
1,1,2-Trichloroethane	0.20	Not Detected	1.1	Not Detected
Tetrachloroethene	0.20	0.34	1.4	2.3
2-Hexanone	1.0	Not Detected	4.2	Not Detected
Dibromochloromethane	0.20	Not Detected	1.7	Not Detected

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Client Sample ID: REP-210322

Lab ID#: 2103707A-22A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033120**	**Date of Collection: NA**	
Dil. Factor:	**2.04**	**Date of Analysis: 4/1/21 08:40 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dibromoethane (EDB)	0.20	Not Detected	1.6	Not Detected
Chlorobenzene	0.20	Not Detected	0.94	Not Detected
Ethyl Benzene	0.20	Not Detected	0.88	Not Detected
m,p-Xylene	0.20	Not Detected	0.88	Not Detected
o-Xylene	0.20	Not Detected	0.88	Not Detected
Styrene	0.20	Not Detected	0.87	Not Detected
Bromoform	0.20	Not Detected	2.1	Not Detected
Cumene	0.20	Not Detected	1.0	Not Detected
1,1,2,2-Tetrachloroethane	0.20	Not Detected	1.4	Not Detected
Propylbenzene	0.20	Not Detected	1.0	Not Detected
4-Ethyltoluene	0.20	Not Detected	1.0	Not Detected
1,3,5-Trimethylbenzene	0.20	Not Detected	1.0	Not Detected
1,2,4-Trimethylbenzene	0.20	Not Detected	1.0	Not Detected
1,3-Dichlorobenzene	0.20	Not Detected	1.2	Not Detected
1,4-Dichlorobenzene	0.20	Not Detected	1.2	Not Detected
alpha-Chlorotoluene	0.20	Not Detected	1.0	Not Detected
1,2-Dichlorobenzene	0.20	Not Detected	1.2	Not Detected
1,2,4-Trichlorobenzene	1.0	Not Detected	7.6	Not Detected
Hexachlorobutadiene	1.0	Not Detected	11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	129	70-130

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Client Sample ID: EQB-20210324

Lab ID#: 2103707A-23A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033121**	**Date of Collection: 3/23/21 7:49:00 AM**	
Dil. Factor:	**1.98**	**Date of Analysis: 4/1/21 09:19 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.99	Not Detected	4.9	Not Detected
Freon 114	0.20	Not Detected	1.4	Not Detected
Chloromethane	0.99	Not Detected	2.0	Not Detected
Vinyl Chloride	0.20	Not Detected	0.51	Not Detected
1,3-Butadiene	0.20	Not Detected	0.44	Not Detected
Bromomethane	0.99	Not Detected	3.8	Not Detected
Chloroethane	0.99	Not Detected	2.6	Not Detected
Freon 11	0.20	0.23	1.1	1.3
Ethanol	0.99	2.7	1.9	5.0
Freon 113	0.20	Not Detected	1.5	Not Detected
1,1-Dichloroethene	0.20	Not Detected	0.78	Not Detected
Acetone	2.0	10	4.7	24
2-Propanol	0.99	4.5	2.4	11
Carbon Disulfide	0.99	Not Detected	3.1	Not Detected
3-Chloropropene	0.99	Not Detected	3.1	Not Detected
Methylene Chloride	0.40	Not Detected	1.4	Not Detected
Methyl tert-butyl ether	0.20	Not Detected	0.71	Not Detected
trans-1,2-Dichloroethene	0.20	Not Detected	0.78	Not Detected
Hexane	0.99	Not Detected	3.5	Not Detected
1,1-Dichloroethane	0.20	Not Detected	0.80	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.99	Not Detected	2.9	Not Detected
cis-1,2-Dichloroethene	0.20	Not Detected	0.78	Not Detected
Tetrahydrofuran	0.99	Not Detected	2.9	Not Detected
Chloroform	0.20	Not Detected	0.97	Not Detected
1,1,1-Trichloroethane	0.20	Not Detected	1.1	Not Detected
Cyclohexane	0.99	Not Detected	3.4	Not Detected
Carbon Tetrachloride	0.20	Not Detected	1.2	Not Detected
2,2,4-Trimethylpentane	0.99	Not Detected	4.6	Not Detected
Benzene	0.20	Not Detected	0.63	Not Detected
1,2-Dichloroethane	0.20	Not Detected	0.80	Not Detected
Heptane	0.99	Not Detected	4.0	Not Detected
Trichloroethene	0.20	Not Detected	1.1	Not Detected
1,2-Dichloropropane	0.20	Not Detected	0.92	Not Detected
Bromodichloromethane	0.20	Not Detected	1.3	Not Detected
cis-1,3-Dichloropropene	0.20	Not Detected	0.90	Not Detected
4-Methyl-2-pentanone	0.20	Not Detected	0.81	Not Detected
Toluene	0.20	Not Detected	0.75	Not Detected
trans-1,3-Dichloropropene	0.20	Not Detected	0.90	Not Detected
1,1,2-Trichloroethane	0.20	Not Detected	1.1	Not Detected
Tetrachloroethene	0.20	Not Detected	1.3	Not Detected
2-Hexanone	0.99	Not Detected	4.0	Not Detected
Dibromochloromethane	0.20	Not Detected	1.7	Not Detected

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Client Sample ID: EQB-20210324

Lab ID#: 2103707A-23A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033121**	**Date of Collection: 3/23/21 7:49:00 AM**	
Dil. Factor:	**1.98**	**Date of Analysis: 4/1/21 09:19 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dibromoethane (EDB)	0.20	Not Detected	1.5	Not Detected
Chlorobenzene	0.20	Not Detected	0.91	Not Detected
Ethyl Benzene	0.20	Not Detected	0.86	Not Detected
m,p-Xylene	0.20	Not Detected	0.86	Not Detected
o-Xylene	0.20	Not Detected	0.86	Not Detected
Styrene	0.20	Not Detected	0.84	Not Detected
Bromoform	0.20	Not Detected	2.0	Not Detected
Cumene	0.20	Not Detected	0.97	Not Detected
1,1,2,2-Tetrachloroethane	0.20	Not Detected	1.4	Not Detected
Propylbenzene	0.20	Not Detected	0.97	Not Detected
4-Ethyltoluene	0.20	Not Detected	0.97	Not Detected
1,3,5-Trimethylbenzene	0.20	Not Detected	0.97	Not Detected
1,2,4-Trimethylbenzene	0.20	Not Detected	0.97	Not Detected
1,3-Dichlorobenzene	0.20	Not Detected	1.2	Not Detected
1,4-Dichlorobenzene	0.20	Not Detected	1.2	Not Detected
alpha-Chlorotoluene	0.20	Not Detected	1.0	Not Detected
1,2-Dichlorobenzene	0.20	Not Detected	1.2	Not Detected
1,2,4-Trichlorobenzene	0.99	Not Detected	7.3	Not Detected
Hexachlorobutadiene	0.99	Not Detected	10	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	128	70-130

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Client Sample ID: Lab Blank

Lab ID#: 2103707A-24A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20032908**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/29/21 01:32 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.10	Not Detected	0.70	Not Detected
Chloromethane	0.50	Not Detected	1.0	Not Detected
Vinyl Chloride	0.10	Not Detected	0.26	Not Detected
1,3-Butadiene	0.10	Not Detected	0.22	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.10	Not Detected	0.56	Not Detected
Ethanol	0.50	Not Detected	0.94	Not Detected
Freon 113	0.10	Not Detected	0.77	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Acetone	1.0	Not Detected	2.4	Not Detected
2-Propanol	0.50	Not Detected	1.2	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	0.50	Not Detected	1.6	Not Detected
Methylene Chloride	0.20	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.10	Not Detected	0.40	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.10	Not Detected	0.49	Not Detected
1,1,1-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.10	Not Detected	0.63	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.10	Not Detected	0.32	Not Detected
1,2-Dichloroethane	0.10	Not Detected	0.40	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.10	Not Detected	0.54	Not Detected
1,2-Dichloropropane	0.10	Not Detected	0.46	Not Detected
Bromodichloromethane	0.10	Not Detected	0.67	Not Detected
cis-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
4-Methyl-2-pentanone	0.10	Not Detected	0.41	Not Detected
Toluene	0.10	Not Detected	0.38	Not Detected
trans-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
1,1,2-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Tetrachloroethene	0.10	Not Detected	0.68	Not Detected
2-Hexanone	0.50	Not Detected	2.0	Not Detected
Dibromochloromethane	0.10	Not Detected	0.85	Not Detected

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Client Sample ID: Lab Blank

Lab ID#: 2103707A-24A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20032908**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/29/21 01:32 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dibromoethane (EDB)	0.10	Not Detected	0.77	Not Detected
Chlorobenzene	0.10	Not Detected	0.46	Not Detected
Ethyl Benzene	0.10	Not Detected	0.43	Not Detected
m,p-Xylene	0.10	Not Detected	0.43	Not Detected
o-Xylene	0.10	Not Detected	0.43	Not Detected
Styrene	0.10	Not Detected	0.42	Not Detected
Bromoform	0.10	Not Detected	1.0	Not Detected
Cumene	0.10	Not Detected	0.49	Not Detected
1,1,2,2-Tetrachloroethane	0.10	Not Detected	0.69	Not Detected
Propylbenzene	0.10	Not Detected	0.49	Not Detected
4-Ethyltoluene	0.10	Not Detected	0.49	Not Detected
1,3,5-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,2,4-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,3-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,4-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
alpha-Chlorotoluene	0.10	Not Detected	0.52	Not Detected
1,2-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected	3.7	Not Detected
Hexachlorobutadiene	0.50	Not Detected	5.3	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	128	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	125	70-130

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Client Sample ID: Lab Blank

Lab ID#: 2103707A-24B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033107**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/31/21 06:19 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.10	Not Detected	0.70	Not Detected
Chloromethane	0.50	Not Detected	1.0	Not Detected
Vinyl Chloride	0.10	Not Detected	0.26	Not Detected
1,3-Butadiene	0.10	Not Detected	0.22	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.10	Not Detected	0.56	Not Detected
Ethanol	0.50	Not Detected	0.94	Not Detected
Freon 113	0.10	Not Detected	0.77	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Acetone	1.0	Not Detected	2.4	Not Detected
2-Propanol	0.50	Not Detected	1.2	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	0.50	Not Detected	1.6	Not Detected
Methylene Chloride	0.20	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.10	Not Detected	0.40	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.10	Not Detected	0.49	Not Detected
1,1,1-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.10	Not Detected	0.63	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.10	Not Detected	0.32	Not Detected
1,2-Dichloroethane	0.10	Not Detected	0.40	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.10	Not Detected	0.54	Not Detected
1,2-Dichloropropane	0.10	Not Detected	0.46	Not Detected
Bromodichloromethane	0.10	Not Detected	0.67	Not Detected
cis-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
4-Methyl-2-pentanone	0.10	Not Detected	0.41	Not Detected
Toluene	0.10	Not Detected	0.38	Not Detected
trans-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
1,1,2-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Tetrachloroethene	0.10	Not Detected	0.68	Not Detected
2-Hexanone	0.50	Not Detected	2.0	Not Detected
Dibromochloromethane	0.10	Not Detected	0.85	Not Detected

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Client Sample ID: Lab Blank

Lab ID#: 2103707A-24B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033107**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/31/21 06:19 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dibromoethane (EDB)	0.10	Not Detected	0.77	Not Detected
Chlorobenzene	0.10	Not Detected	0.46	Not Detected
Ethyl Benzene	0.10	Not Detected	0.43	Not Detected
m,p-Xylene	0.10	Not Detected	0.43	Not Detected
o-Xylene	0.10	Not Detected	0.43	Not Detected
Styrene	0.10	Not Detected	0.42	Not Detected
Bromoform	0.10	Not Detected	1.0	Not Detected
Cumene	0.10	Not Detected	0.49	Not Detected
1,1,2,2-Tetrachloroethane	0.10	Not Detected	0.69	Not Detected
Propylbenzene	0.10	Not Detected	0.49	Not Detected
4-Ethyltoluene	0.10	Not Detected	0.49	Not Detected
1,3,5-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,2,4-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,3-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,4-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
alpha-Chlorotoluene	0.10	Not Detected	0.52	Not Detected
1,2-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected	3.7	Not Detected
Hexachlorobutadiene	0.50	Not Detected	5.3	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	130	70-130

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Client Sample ID: CCV

Lab ID#: 2103707A-25A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20032902**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 3/29/21 08:40 AM**

Compound	%Recovery
Freon 12	94
Freon 114	101
Chloromethane	94
Vinyl Chloride	108
1,3-Butadiene	103
Bromomethane	120
Chloroethane	122
Freon 11	126
Ethanol	76
Freon 113	114
1,1-Dichloroethene	105
Acetone	106
2-Propanol	94
Carbon Disulfide	114
3-Chloropropene	122
Methylene Chloride	92
Methyl tert-butyl ether	101
trans-1,2-Dichloroethene	100
Hexane	103
1,1-Dichloroethane	104
2-Butanone (Methyl Ethyl Ketone)	97
cis-1,2-Dichloroethene	100
Tetrahydrofuran	100
Chloroform	102
1,1,1-Trichloroethane	94
Cyclohexane	95
Carbon Tetrachloride	90
2,2,4-Trimethylpentane	96
Benzene	99
1,2-Dichloroethane	103
Heptane	104
Trichloroethene	101
1,2-Dichloropropane	106
Bromodichloromethane	98
cis-1,3-Dichloropropene	104
4-Methyl-2-pentanone	100
Toluene	101
trans-1,3-Dichloropropene	106
1,1,2-Trichloroethane	101
Tetrachloroethene	107
2-Hexanone	99
Dibromochloromethane	104

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Client Sample ID: CCV

Lab ID#: 2103707A-25A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20032902**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 3/29/21 08:40 AM**

Compound	%Recovery
1,2-Dibromoethane (EDB)	103
Chlorobenzene	102
Ethyl Benzene	100
m,p-Xylene	98
o-Xylene	97
Styrene	92
Bromoform	110
Cumene	96
1,1,2,2-Tetrachloroethane	97
Propylbenzene	96
4-Ethyltoluene	95
1,3,5-Trimethylbenzene	98
1,2,4-Trimethylbenzene	98
1,3-Dichlorobenzene	90
1,4-Dichlorobenzene	89
alpha-Chlorotoluene	86
1,2-Dichlorobenzene	90
1,2,4-Trichlorobenzene	93
Hexachlorobutadiene	93

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: CCV

Lab ID#: 2103707A-25B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033105**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 3/31/21 04:51 PM**

Compound	%Recovery
Freon 12	92
Freon 114	100
Chloromethane	83
Vinyl Chloride	99
1,3-Butadiene	93
Bromomethane	133 Q
Chloroethane	110
Freon 11	118
Ethanol	73
Freon 113	117
1,1-Dichloroethene	104
Acetone	95
2-Propanol	78
Carbon Disulfide	114
3-Chloropropene	117
Methylene Chloride	96
Methyl tert-butyl ether	97
trans-1,2-Dichloroethene	98
Hexane	92
1,1-Dichloroethane	93
2-Butanone (Methyl Ethyl Ketone)	98
cis-1,2-Dichloroethene	98
Tetrahydrofuran	98
Chloroform	102
1,1,1-Trichloroethane	89
Cyclohexane	97
Carbon Tetrachloride	82
2,2,4-Trimethylpentane	88
Benzene	103
1,2-Dichloroethane	94
Heptane	97
Trichloroethene	101
1,2-Dichloropropane	98
Bromodichloromethane	98
cis-1,3-Dichloropropene	103
4-Methyl-2-pentanone	98
Toluene	101
trans-1,3-Dichloropropene	102
1,1,2-Trichloroethane	99
Tetrachloroethene	119
2-Hexanone	92
Dibromochloromethane	102

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Client Sample ID: CCV

Lab ID#: 2103707A-25B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033105**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/31/21 04:51 PM**	

Compound	%Recovery
1,2-Dibromoethane (EDB)	101
Chlorobenzene	101
Ethyl Benzene	98
m,p-Xylene	97
o-Xylene	97
Styrene	92
Bromoform	123
Cumene	96
1,1,2,2-Tetrachloroethane	102
Propylbenzene	96
4-Ethyltoluene	95
1,3,5-Trimethylbenzene	95
1,2,4-Trimethylbenzene	96
1,3-Dichlorobenzene	91
1,4-Dichlorobenzene	90
alpha-Chlorotoluene	85
1,2-Dichlorobenzene	90
1,2,4-Trichlorobenzene	110
Hexachlorobutadiene	106

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	118	70-130

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Client Sample ID: LCS

Lab ID#: 2103707A-26A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20032903**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/29/21 09:28 AM**	

Compound	%Recovery	Method Limits
Freon 12	93	70-130
Freon 114	103	70-130
Chloromethane	92	70-130
Vinyl Chloride	104	70-130
1,3-Butadiene	99	70-130
Bromomethane	107	70-130
Chloroethane	119	70-130
Freon 11	127	70-130
Ethanol	65 Q	70-130
Freon 113	115	70-130
1,1-Dichloroethene	104	70-130
Acetone	104	70-130
2-Propanol	86	70-130
Carbon Disulfide	110	70-130
3-Chloropropene	124	70-130
Methylene Chloride	89	70-130
Methyl tert-butyl ether	100	70-130
trans-1,2-Dichloroethene	98	70-130
Hexane	100	70-130
1,1-Dichloroethane	101	70-130
2-Butanone (Methyl Ethyl Ketone)	96	70-130
cis-1,2-Dichloroethene	98	70-130
Tetrahydrofuran	99	70-130
Chloroform	99	70-130
1,1,1-Trichloroethane	94	70-130
Cyclohexane	94	70-130
Carbon Tetrachloride	105	70-130
2,2,4-Trimethylpentane	91	70-130
Benzene	98	70-130
1,2-Dichloroethane	101	70-130
Heptane	100	70-130
Trichloroethene	102	70-130
1,2-Dichloropropane	104	70-130
Bromodichloromethane	97	70-130
cis-1,3-Dichloropropene	102	70-130
4-Methyl-2-pentanone	105	70-130
Toluene	99	70-130
trans-1,3-Dichloropropene	107	70-130
1,1,2-Trichloroethane	101	70-130
Tetrachloroethene	106	70-130
2-Hexanone	109	70-130
Dibromochloromethane	106	70-130

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Client Sample ID: LCS

Lab ID#: 2103707A-26A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20032903**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/29/21 09:28 AM**	

Compound	%Recovery	Method Limits
1,2-Dibromoethane (EDB)	103	70-130
Chlorobenzene	101	70-130
Ethyl Benzene	99	70-130
m,p-Xylene	98	70-130
o-Xylene	95	70-130
Styrene	90	70-130
Bromoform	113	70-130
Cumene	93	70-130
1,1,2,2-Tetrachloroethane	97	70-130
Propylbenzene	96	70-130
4-Ethyltoluene	96	70-130
1,3,5-Trimethylbenzene	98	70-130
1,2,4-Trimethylbenzene	101	70-130
1,3-Dichlorobenzene	92	70-130
1,4-Dichlorobenzene	92	70-130
alpha-Chlorotoluene	93	70-130
1,2-Dichlorobenzene	93	70-130
1,2,4-Trichlorobenzene	115	70-130
Hexachlorobutadiene	116	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: LCSD

Lab ID#: 2103707A-26AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20032904**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/29/21 10:21 AM**	

Compound	%Recovery	Method Limits
Freon 12	93	70-130
Freon 114	102	70-130
Chloromethane	89	70-130
Vinyl Chloride	101	70-130
1,3-Butadiene	95	70-130
Bromomethane	106	70-130
Chloroethane	118	70-130
Freon 11	125	70-130
Ethanol	62 Q	70-130
Freon 113	113	70-130
1,1-Dichloroethene	102	70-130
Acetone	103	70-130
2-Propanol	84	70-130
Carbon Disulfide	109	70-130
3-Chloropropene	120	70-130
Methylene Chloride	89	70-130
Methyl tert-butyl ether	97	70-130
trans-1,2-Dichloroethene	97	70-130
Hexane	98	70-130
1,1-Dichloroethane	99	70-130
2-Butanone (Methyl Ethyl Ketone)	94	70-130
cis-1,2-Dichloroethene	97	70-130
Tetrahydrofuran	96	70-130
Chloroform	97	70-130
1,1,1-Trichloroethane	93	70-130
Cyclohexane	91	70-130
Carbon Tetrachloride	105	70-130
2,2,4-Trimethylpentane	90	70-130
Benzene	97	70-130
1,2-Dichloroethane	104	70-130
Heptane	103	70-130
Trichloroethene	103	70-130
1,2-Dichloropropane	104	70-130
Bromodichloromethane	95	70-130
cis-1,3-Dichloropropene	102	70-130
4-Methyl-2-pentanone	106	70-130
Toluene	101	70-130
trans-1,3-Dichloropropene	104	70-130
1,1,2-Trichloroethane	99	70-130
Tetrachloroethene	106	70-130
2-Hexanone	109	70-130
Dibromochloromethane	105	70-130

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Client Sample ID: LCSD

Lab ID#: 2103707A-26AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20032904**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/29/21 10:21 AM**	

Compound	%Recovery	Method Limits
1,2-Dibromoethane (EDB)	101	70-130
Chlorobenzene	100	70-130
Ethyl Benzene	98	70-130
m,p-Xylene	98	70-130
o-Xylene	94	70-130
Styrene	91	70-130
Bromoform	113	70-130
Cumene	93	70-130
1,1,2,2-Tetrachloroethane	96	70-130
Propylbenzene	95	70-130
4-Ethyltoluene	95	70-130
1,3,5-Trimethylbenzene	96	70-130
1,2,4-Trimethylbenzene	100	70-130
1,3-Dichlorobenzene	92	70-130
1,4-Dichlorobenzene	92	70-130
alpha-Chlorotoluene	94	70-130
1,2-Dichlorobenzene	93	70-130
1,2,4-Trichlorobenzene	121	70-130
Hexachlorobutadiene	125	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: LCS

Lab ID#: 2103707A-26B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033103**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/31/21 03:32 PM**	

Compound	%Recovery	Method Limits
Freon 12	95	70-130
Freon 114	102	70-130
Chloromethane	87	70-130
Vinyl Chloride	102	70-130
1,3-Butadiene	96	70-130
Bromomethane	136 Q	70-130
Chloroethane	114	70-130
Freon 11	120	70-130
Ethanol	68 Q	70-130
Freon 113	119	70-130
1,1-Dichloroethene	107	70-130
Acetone	101	70-130
2-Propanol	99	70-130
Carbon Disulfide	118	70-130
3-Chloropropene	122	70-130
Methylene Chloride	96	70-130
Methyl tert-butyl ether	100	70-130
trans-1,2-Dichloroethene	100	70-130
Hexane	97	70-130
1,1-Dichloroethane	96	70-130
2-Butanone (Methyl Ethyl Ketone)	103	70-130
cis-1,2-Dichloroethene	100	70-130
Tetrahydrofuran	104	70-130
Chloroform	104	70-130
1,1,1-Trichloroethane	91	70-130
Cyclohexane	100	70-130
Carbon Tetrachloride	101	70-130
2,2,4-Trimethylpentane	89	70-130
Benzene	105	70-130
1,2-Dichloroethane	95	70-130
Heptane	98	70-130
Trichloroethene	102	70-130
1,2-Dichloropropane	100	70-130
Bromodichloromethane	100	70-130
cis-1,3-Dichloropropene	104	70-130
4-Methyl-2-pentanone	109	70-130
Toluene	101	70-130
trans-1,3-Dichloropropene	105	70-130
1,1,2-Trichloroethane	100	70-130
Tetrachloroethene	118	70-130
2-Hexanone	107	70-130
Dibromochloromethane	103	70-130

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Client Sample ID: LCS

Lab ID#: 2103707A-26B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033103**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/31/21 03:32 PM**	

Compound	%Recovery	Method Limits
1,2-Dibromoethane (EDB)	102	70-130
Chlorobenzene	103	70-130
Ethyl Benzene	99	70-130
m,p-Xylene	98	70-130
o-Xylene	96	70-130
Styrene	91	70-130
Bromoform	127	70-130
Cumene	94	70-130
1,1,2,2-Tetrachloroethane	105	70-130
Propylbenzene	95	70-130
4-Ethyltoluene	96	70-130
1,3,5-Trimethylbenzene	96	70-130
1,2,4-Trimethylbenzene	99	70-130
1,3-Dichlorobenzene	92	70-130
1,4-Dichlorobenzene	90	70-130
alpha-Chlorotoluene	88	70-130
1,2-Dichlorobenzene	91	70-130
1,2,4-Trichlorobenzene	125	70-130
Hexachlorobutadiene	122	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	118	70-130

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Client Sample ID: LCSD

Lab ID#: 2103707A-26BB

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033104**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/31/21 04:12 PM**	

Compound	%Recovery	Method Limits
Freon 12	93	70-130
Freon 114	101	70-130
Chloromethane	84	70-130
Vinyl Chloride	100	70-130
1,3-Butadiene	95	70-130
Bromomethane	132 Q	70-130
Chloroethane	112	70-130
Freon 11	118	70-130
Ethanol	66 Q	70-130
Freon 113	117	70-130
1,1-Dichloroethene	105	70-130
Acetone	98	70-130
2-Propanol	84	70-130
Carbon Disulfide	116	70-130
3-Chloropropene	122	70-130
Methylene Chloride	95	70-130
Methyl tert-butyl ether	98	70-130
trans-1,2-Dichloroethene	98	70-130
Hexane	94	70-130
1,1-Dichloroethane	93	70-130
2-Butanone (Methyl Ethyl Ketone)	100	70-130
cis-1,2-Dichloroethene	98	70-130
Tetrahydrofuran	100	70-130
Chloroform	102	70-130
1,1,1-Trichloroethane	89	70-130
Cyclohexane	98	70-130
Carbon Tetrachloride	99	70-130
2,2,4-Trimethylpentane	87	70-130
Benzene	103	70-130
1,2-Dichloroethane	93	70-130
Heptane	98	70-130
Trichloroethene	101	70-130
1,2-Dichloropropane	97	70-130
Bromodichloromethane	98	70-130
cis-1,3-Dichloropropene	102	70-130
4-Methyl-2-pentanone	108	70-130
Toluene	100	70-130
trans-1,3-Dichloropropene	104	70-130
1,1,2-Trichloroethane	99	70-130
Tetrachloroethene	118	70-130
2-Hexanone	106	70-130
Dibromochloromethane	103	70-130

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Client Sample ID: LCSD

Lab ID#: 2103707A-26BB

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**20033104**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/31/21 04:12 PM**	

Compound	%Recovery	Method Limits
1,2-Dibromoethane (EDB)	101	70-130
Chlorobenzene	102	70-130
Ethyl Benzene	99	70-130
m,p-Xylene	99	70-130
o-Xylene	97	70-130
Styrene	92	70-130
Bromoform	128	70-130
Cumene	94	70-130
1,1,2,2-Tetrachloroethane	104	70-130
Propylbenzene	96	70-130
4-Ethyltoluene	97	70-130
1,3,5-Trimethylbenzene	95	70-130
1,2,4-Trimethylbenzene	98	70-130
1,3-Dichlorobenzene	93	70-130
1,4-Dichlorobenzene	93	70-130
alpha-Chlorotoluene	90	70-130
1,2-Dichlorobenzene	93	70-130
1,2,4-Trichlorobenzene	128	70-130
Hexachlorobutadiene	123	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	119	70-130

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Analysis Request /Canister Chain of Custody

For Laboratory Use Only

PID: _____ Workorder #: 2103707

180 Blue Ravine Rd. Suite B, Folsom, CA 95630
Phone (800) 985-5955; Fax (916) 351-8279

Client: GSI Environmental

Project Name: Integral - Pittsburgh ~~(Ft 3/25/21)~~

Project Manager: Jennifer Duffield Project # 5785

Sampler: Kalin Howell

Site Name:

Special Instructions/Notes: Record canister pressures upon receipt and include in lab report.
Report results to: jpduffield@gsi-net.com
mpgoerz@gsi-net.com

Turnaround Time (Rush surcharges may apply)
Standard X Rush _____ (specify)

Lab ID	Field Sample Identification(Location)	Can #	Flow Controller #	Start Sampling Information		Stop Sampling Information		Canister Vacuum/Pressure		Lab Use Only		Requested Analyses			
				Date	Time	Date	Time	Initial (in Hg)	Final (in Hg)	Receipt	Final (psig) Gas: N_2 / He	TO-15	Helium		
01A	SB-01-05.0-SV	1L1745	30792	3/22/21	1206	3/22/21	1213	-29	-5			X	X		
02A	SB-02-05.0-SV	1L2565	20141	3/22/21	1341	3/22/21	1350	-29	-4			X			
03A	SB-03-05.0-SV	SLC123	30750	3/22/21	1459	3/22/21	1508	-29	-5.5			X			
04A	SB-04-05.0-SV	1L1804	30960	3/23/21	0849	3/23/21	0855	-29	-5			X	X		
05A	SB-05-05.0-SV	1L2523	22408	3/22/21	1605	3/22/21	1611	-29	-6			X			
06A	SB-06-05.0-SV	1L1769	20303	3/23/21	1020	3/23/21	1030	-29	-5			X			
07A	SB-07-05.0-SV	LC124	30575	3/23/21	1200	3/23/21	1207	-29	-5.5			X			
08A	SB-08-05.0-SV	1L2650	30940	3/23/21	1334	3/23/21	1346	-29	-4.5			X			
09A	SB-09-04.0-SV	1L2865	25332	3/24/21	1120	3/24/21	1126	-29	-4.5			X	X		
10A	SB-10-05.0-SV	1L1807	20111	3/24/21	0956	3/24/21	1004	-29	-5			X			
11A	SB-11-05.0-SV	1L1772	25340	3/24/21	0843	3/24/21	0849	-29	-5.5			X			
12A	SB-12-05.0-SV	1L2088	22610	3/24/21	1218	3/24/21	1824	-29	-5			X			
13A	SB-13-05.0-SV	1L1590	25383	3/24/21	1331	3/24/21	1338	-29	-6			X			
14A	SB-14-05.0-SV	1L1784	24006	3/24/21	1429	3/24/21	1436	-29	-4.5			X			
15A	SB-15-05.0-SV	1L2794	30461	3/24/21	1657	3/24/21	1705	-29	-5.5			X			
16A	SB-16-05.0-SV	1L2885	30722	3/24/21	1551	3/24/21	1558	-29	-5			X			

Relinquished by: (Signature/Affiliation) GSI	Date 3/25/21	Time 1132	Received by: (Signature/Affiliation)
Relinquished by: (Signature/Affiliation)	Date 3-25-21	Time 1430	Received by: (Signature/Affiliation)
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)

	Date 3-25-21	Time 1532	
	Date 3/25/21	Time 1430	
	Date	Time	

Lab Use Only

Shipper Name: courier | Custody Seals Intact? | Yes | No | None

Sample Transportation Notice: Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, of shipping of samples. D.O.T Hotline (800) 467-4922

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Analysis Request /Canister Chain of Custody

For Laboratory Use Only

PID: _____ Workorder #: 2103707

180 Blue Ravine Rd. Suite B, Folsom, CA 95630
Phone (800) 985-5955; Fax (916) 351-8279

Client: GSI Environmental (KJH 3/25/21)
Project Name: Integral - Pittsburgh
Project Manager: Jennifer Duffield Project # 5785
Sampler: Kalin Howell
Site Name:

Special Instructions/Notes: See page 1.

Turnaround Time (Rush surcharges may apply)
Standard X Rush _____ (specify)

Lab ID	Field Sample Identification(Location)	Can #	Flow Controller #	Start Sampling Information		Stop Sampling Information		Canister Vacuum/Pressure		Lab Use Only		Requested Analyses			
				Date	Time	Date	Time	Initial (in Hg)	Final (in Hg)	Receipt	Final (psig) Gas: N_2 / He	TO-15	Helium		
17A	SB-16-05.0-SV	1L2729	21469	3/22/21	0859	3/22/21	0909	-29	-6.5			X			
18A	SB-18-05.0-SV	1L1805	30994	3/22/21	1036	3/22/21	1044	-29	-5			X			
19A	SB-19-03.0-SV	1L1682	30810	3/22/21	1713	3/22/21	1720	-29	-6			X			
20A	SB-20-03.5-SV	1L0305	27544	3/23/21	1256	3/23/21	1301	-29	-5			X			
21A	SB-21-3.25-SV	1L2379	25356	3/23/21	1425	3/23/21	1433	-29	-5			X			
22A	REP-210322	1L1742	—	—	—	—	—	-29	-5.5			X			
23A	EQB-20210324	1L2797	20261	3/23/21	0741	3/23/21	0749	-29	-4.5			X			

KJH 3/25/21

Relinquished by: (Signature/Affiliation) GSI	Date 3/25/21	Time 1132	Received by: (Signature/Affiliation)
Relinquished by: (Signature/Affiliation)	Date 3-25-21	Time 1430	Received by: (Signature/Affiliation)
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)

Received by: (Signature/Affiliation)	Date 3.25.21	Time 1132	
Received by: (Signature/Affiliation)	Date 3/25/21	Time 1430	
Received by: (Signature/Affiliation)	Date	Time	

Lab Use Only

Shipper Name: courier | Custody Seals Intact? Yes No None

Sample Transportation Notice: Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, of shipping of samples. D.O.T Hotline (800) 467-4922

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4/6/2021

Kalin Howell
GSI Environmental, Inc.
155 Grand Ave
Suite 704
Oakland CA 94612

Project Name: Integral - Pittsburg
Project #: 5785
Workorder #: 2103707B

Dear Kalin Howell

The following report includes the data for the above referenced project for sample(s) received on 3/25/2021 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Modified ASTM D-1946 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kathleen Kaneko at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kathleen Kaneko

Project Manager

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WORK ORDER #: 2103707B

Work Order Summary

CLIENT:	Kalin Howell GSI Environmental, Inc. 155 Grand Ave Suite 704 Oakland, CA 94612	**BILL TO:**	Kalin Howell GSI Environmental, Inc. 155 Grand Ave Suite 704 Oakland, CA 94612
PHONE:	(510)463-8484	**P.O. #**	
FAX:		**PROJECT #**	5785 Integral - Pittsburg
DATE RECEIVED:	03/25/2021	**CONTACT:**	Kathleen Kaneko
DATE COMPLETED:	04/06/2021		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	SB-01-05.0-SV	Modified ASTM D-1946	5.7 "Hg	9.8 psi
04A	SB-04-05.0-SV	Modified ASTM D-1946	4.7 "Hg	10.1 psi
09A	SB-09-04.0-SV	Modified ASTM D-1946	6.5 "Hg	9.9 psi
10A	Lab Blank	Modified ASTM D-1946	NA	NA
11A	LCS	Modified ASTM D-1946	NA	NA
11AA	LCSD	Modified ASTM D-1946	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 04/06/21

Technical Director

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209220, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-20-16, UT NELAP – CA009332020-12, VA NELAP - 10615, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005-014, Effective date: 10/18/2020, Expiration date: 10/17/2021.
Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

LABORATORY NARRATIVE
Modified ASTM D-1946
GSI Environmental, Inc.
Workorder# 2103707B

Three 1 Liter Summa Canister (100% Certified) samples were received on March 25, 2021. The laboratory performed analysis via Modified ASTM Method D-1946 for Helium in air using GC/TCD. The method involves direct injection of 1.0 mL of sample.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the EATL modifications.

Requirement	***ASTM D-1946***	***ATL Modifications***
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A minimum of 5-point calibration curve is performed. Quantitation is based on average Response Factor.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a >/= 95% accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 25% RPD for detections > 5 X's the RL.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:
B - Compound present in laboratory blank greater than reporting limit.
J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the detection limit.
M - Reported value may be biased due to apparent matrix interferences.
File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
VAPOR ANALYSIS BY MODIFIED ASTM D-1946

Client Sample ID: SB-01-05.0-SV

Lab ID#: 2103707B-01A

No Detections Were Found.

Client Sample ID: SB-04-05.0-SV

Lab ID#: 2103707B-04A

No Detections Were Found.

Client Sample ID: SB-09-04.0-SV

Lab ID#: 2103707B-09A

No Detections Were Found.

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Client Sample ID: SB-01-05.0-SV

Lab ID#: 2103707B-01A

VAPOR ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10032912c**	**Date of Collection: 3/22/21 12:13:00 PM**	
Dil. Factor:	**2.06**	**Date of Analysis: 3/29/21 03:05 PM**	

Compound	**Rpt. Limit (%)**	**Amount (%)**
Helium	0.10	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

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Client Sample ID: SB-04-05.0-SV

Lab ID#: 2103707B-04A

VAPOR ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10032913c**	**Date of Collection: 3/23/21 8:55:00 AM**	
Dil. Factor:	**2.00**	**Date of Analysis: 3/29/21 03:26 PM**	

Compound	**Rpt. Limit (%)**	**Amount (%)**
Helium	0.10	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

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Client Sample ID: SB-09-04.0-SV

Lab ID#: 2103707B-09A

VAPOR ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10032914c**	**Date of Collection: 3/24/21 11:26:00 AM**	
Dil. Factor:	**2.14**	**Date of Analysis: 3/29/21 03:48 PM**	

Compound	**Rpt. Limit (%)**	**Amount (%)**
Helium	0.11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

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Client Sample ID: Lab Blank

Lab ID#: 2103707B-10A

VAPOR ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10032904c**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/29/21 11:06 AM**	

Compound	**Rpt. Limit (%)**	**Amount (%)**
Helium	0.050	Not Detected

Container Type: NA - Not Applicable

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Client Sample ID: LCS

Lab ID#: 2103707B-11A

VAPOR ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10032902c**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/29/21 10:13 AM**	

Compound	%Recovery	Method Limits
Helium	100	85-115

Container Type: NA - Not Applicable

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Client Sample ID: LCSD

Lab ID#: 2103707B-11AA

VAPOR ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10032903c**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/29/21 10:40 AM**	

Compound	%Recovery	Method Limits
Helium	100	85-115

Container Type: NA - Not Applicable

Appendix F
Environmental Noise Assessment

Environmental Noise Assessment

Harbor View Residential

City of Pittsburg, California

June 8, 2022

Project #211007

Prepared for:

Raney Planning & Management
1501 Sports Drive, Suite A
Sacramento, CA 95834

Prepared by:

Saxelby Acoustics LLC

Luke Saxelby, INCE Bd. Cert.
Principal Consultant
Board Certified, Institute of Noise Control Engineering (INCE)

(916) 760-8821
www.SaxNoise.com | Luke@SaxNoise.com
915 Highland Pointe Drive, Suite 250
Roseville, CA 95678

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INTRODUCTION

The Harbor View residential project is located along the west of Harbor Street and south of 3rd Street in the City of Pittsburg, California. The project consists of the construction of 225 single-family residential lots.

Figure 1 shows the project site plan. **Figure 2** shows an aerial photo of the project site.

ENVIRONMENTAL SETTING

BACKGROUND INFORMATION ON NOISE

Fundamentals of Acoustics

Acoustics is the science of sound. Sound may be thought of as mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough (at least 20 times per second), then they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second or Hertz (Hz).

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment.



Product No.	Net du/ac	Arch product	Plan	Bed/bath	Notes	SF	Unit count
1	15-16	36' x 55'	Plan 1	3/3		1,792	33
			Plan 2	3/3.5		1,829	33
			Plan 3	3/3		1,891	33
			Plan 1-LW	3/3		1,792	2
						Total:	101
2	11-13	42' x 55'	Plan 1	3/3.5		1,980	35
			Plan 2	4/3.5		2,060	35
			Plan 3	4/3.5		2,120	35
						Total:	105
3	26-27	Live/Work	Plan 1	1/1		1,270	20
						Total:	20
						Grand Total:	226

420 E 3RD STREET

PITTSBURG | CALIFORNIA

INTEGRAL COMMUNITIES | 20-067

DATE 12 | 20 | 21

1"=100'-0" SCALE NORTH

0 100 200

SITE PLAN OPTION H | SP2

URBAN ARENA

Harbor View Residential

City of Pittsburg, California

Figure 1
Project Site Plan

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Harbor View Residential

City of Pittsburg, California

Figure 2

Noise Measurement Sites

Legend

- Project Site
- Noise Measurement - Long Term

125 ft 375 ft 625 ft

Projection: UTM Zone 10 / WGS84 / meters
Rev. Date: 10/26/2021

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The decibel scale is logarithmic, not linear. In other words, two sound levels 10-dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10-dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound, and twice as loud as a 60 dBA sound.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool is the average, or equivalent, sound level (L_{eq}), which corresponds to a steady-state A weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The L_{eq} is the foundation of the composite noise descriptor, L_{dn}, and shows very good correlation with community response to noise.

The day/night average level (DNL or L_{dn}) is based upon the average noise level over a 24-hour day, with a +10-decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, it tends to disguise short-term variations in the noise environment.

Table 1 lists several examples of the noise levels associated with common situations. **Appendix A** provides a summary of acoustical terms used in this report.

TABLE 1: TYPICAL NOISE LEVELS

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft.)	--100--	
Gas Lawn Mower at 1 m (3 ft.)	--90--	
Diesel Truck at 15 m (50 ft.), at 80 km/hr. (50 mph)	--80--	Food Blender at 1 m (3 ft.) Garbage Disposal at 1 m (3 ft.)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft.)	--70--	Vacuum Cleaner at 3 m (10 ft.)
Commercial Area Heavy Traffic at 90 m (300 ft.)	--60--	Normal Speech at 1 m (3 ft.)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing

Source: Caltrans, Technical Noise Supplement, Traffic Noise Analysis Protocol. September, 2013.

Effects of Noise on People

The effects of noise on people can be placed in three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction
- Interference with activities such as speech, sleep, and learning
- Physiological effects such as hearing loss or sudden startling

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called ambient noise level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it.

With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1-dBA cannot be perceived;
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference;
- A change in level of at least 5-dBA is required before any noticeable change in human response would be expected; and
- A 10-dBA change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

Stationary point sources of noise – including stationary mobile sources such as idling vehicles – attenuate (lessen) at a rate of approximately 6-dB per doubling of distance from the source, depending on environmental conditions (i.e. atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

EXISTING NOISE AND VIBRATION ENVIRONMENTS

EXISTING NOISE RECEPTORS

Some land uses are considered more sensitive to noise than others. Land uses often associated with sensitive receptors generally include residences, schools, libraries, hospitals, and passive recreational areas. Sensitive noise receptors may also include threatened or endangered noise sensitive biological species, although many jurisdictions have not adopted noise standards for wildlife areas. Noise sensitive land uses are typically given special attention in order to achieve protection from excessive noise.

Sensitivity is a function of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities involved. In the vicinity of the project site, sensitive land uses include existing single-family residential uses located west and south of the project site.

EXISTING GENERAL AMBIENT NOISE LEVELS

The existing noise environment in the project area is primarily defined by traffic on East 3rd Street, Harbor Street, and East 8th Street.

To quantify the existing ambient noise environment in the project vicinity, Saxelby Acoustics conducted a continuous (24-hr.) noise level measurement at three locations on the project site. Noise measurement locations are shown on **Figure 2**. A summary of the noise level measurement survey results is provided in **Table 2**. **Appendix B** contains the complete results of the noise monitoring.

The sound level meters were programmed to record the maximum, median, and average noise levels at each site during the survey. The maximum value, denoted L_{max}, represents the highest noise level measured. The average value, denoted L_{eq}, represents the energy average of all of the noise received by the sound level meter microphone during the monitoring period. The median value, denoted L_{50}, represents the sound level exceeded 50 percent of the time during the monitoring period.

Larson Davis Laboratories (LDL) model 820 precision integrating sound level meters were used for the ambient noise level measurement survey. The meters were calibrated before and after use with a B&K Model 4230 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

TABLE 2: SUMMARY OF EXISTING BACKGROUND NOISE MEASUREMENT DATA

Site	Date	L_{dn}/CNEL	Daytime L_{eq}	Daytime L_{50}	Daytime L_{max}	Nighttime L_{eq}	Nighttime L_{50}	Nighttime L_{max}
LT-1	10/20/2021	67	64	53	83	59	51	78
LT-2	10/20/2021	68	65	55	86	61	53	84
LT-3	10/20/2021	62	63	50	75	51	48	69

Notes:

- All values shown in dBA
- Daytime hours: 7:00 a.m. to 10:00 p.m.
- Nighttime Hours: 10:00 p.m. to 7:00 a.m.
- Source: Saxelby Acoustics 2021

FUTURE TRAFFIC NOISE ENVIRONMENT AT OFF-SITE RECEPTORS

OFF-SITE TRAFFIC NOISE IMPACT ASSESSMENT METHODOLOGY

To assess noise impacts due to project-related traffic increases on the local roadway network, traffic noise levels are predicted at sensitive receptors for existing and future, project and no-project conditions.

Existing, Near-Term, and Cumulative noise levels due to traffic are calculated using the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA RD-77-108). The model is based upon the Calveno reference noise factors for automobiles, medium trucks and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. Traffic noise levels are predicted at the sensitive receptors located at the closest typical setback distance along each project-area roadway segment.

The FHWA model was developed to predict hourly L_{eq} values for free-flowing traffic conditions. To predict traffic noise levels in terms of L_{dn}, it is necessary to adjust the input volume to account for the day/night distribution of traffic.

Project trip generation volumes were provided by the project traffic engineer (Fehr & Peers, 2022), truck usage and vehicle speeds on the local area roadways were estimated from field observations. The predicted increases in traffic noise levels on the local roadway network for Existing, Near-Term, and Cumulative conditions which would result from the project are provided in terms of the day/night average (L_{dn}) descriptor. It should be noted that the City's transportation noise standards are in terms of L_{dn}, thus the use of L_{dn} in **Table 3**.

Table 3 summarizes the modeled traffic noise levels at the nearest sensitive receptors along each roadway segment in the Project area. **Appendix C** provides the complete inputs and results of the FHWA traffic modeling.

TABLE 3: PREDICTED TRAFFIC NOISE LEVEL AND PROJECT-RELATED TRAFFIC NOISE LEVEL INCREASES

Roadway	Segment	Existing No Project	Existing + Project	Change	Near Term No Project	Near Term + Project	Change	Cumulative No Project	Cumulative + Project	Change
Railroad Ave.	North of E. 8th St.	53.8	54.4	0.6	54.7	55.2	0.5	55.0	55.4	0.4
E. 8th St.	East of Railroad Ave.	40.7	42.1	1.4	41.1	42.4	1.3	42.9	43.8	0.9
Harbor St.	North of E. 8th St.	56.8	58.6	1.8	56.9	58.6	1.7	57.9	59.3	1.4
Railroad Ave.	North of E. 10th St.	48.4	48.8	0.4	49.2	49.5	0.3	49.6	49.9	0.3
E. 10th St.	East of Railroad Ave.	63.7	64.0	0.3	64.1	64.4	0.3	65.2	65.4	0.2
Harbor St.	South of E. 10th St.	60.6	61.5	0.9	60.7	61.5	0.8	61.1	61.9	0.8

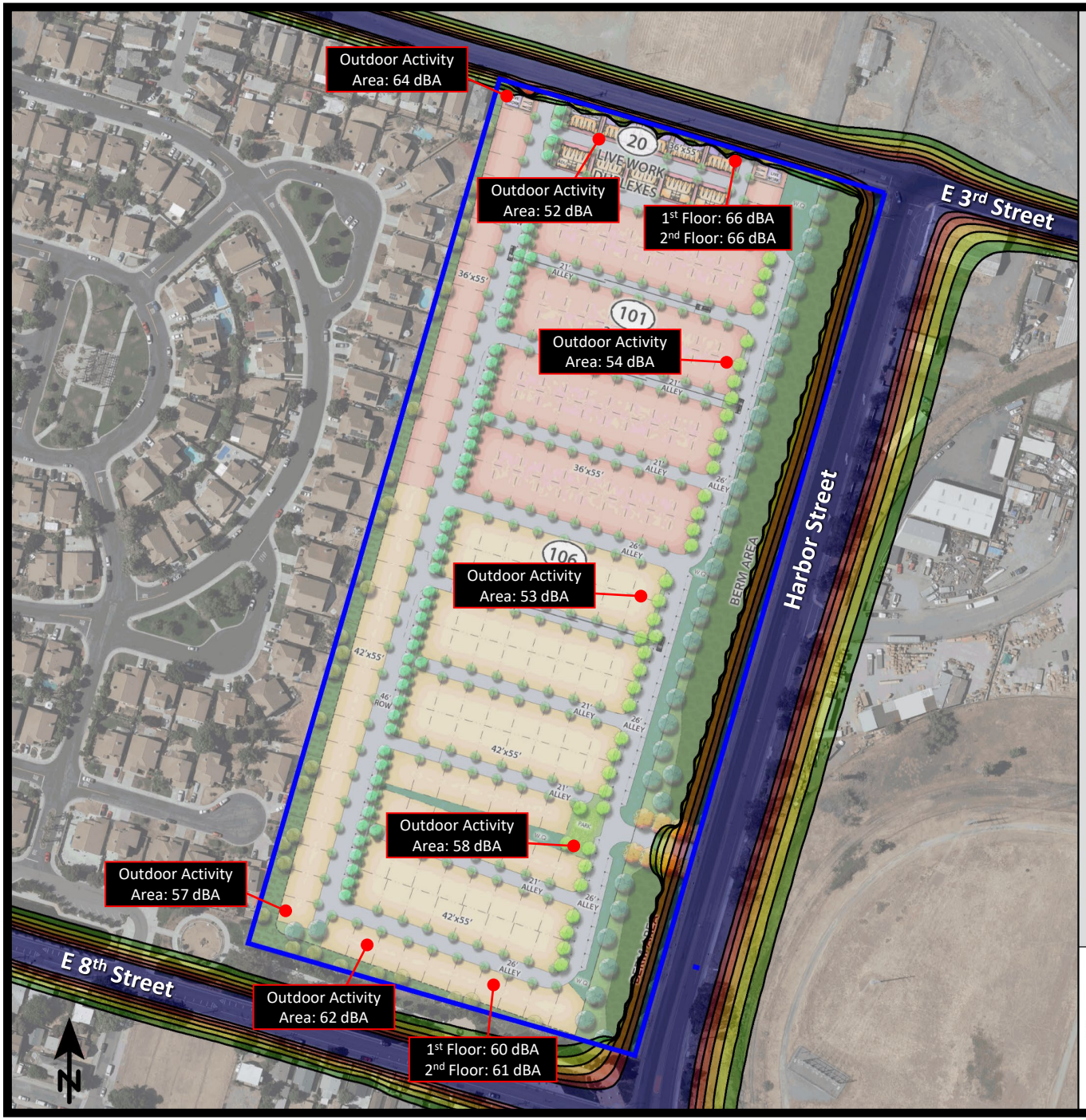
Note: All noise levels are predicted at closest sensitive receptors in terms of dBA, L_{dn}.

As shown in **Table 3**, the maximum noise level increase due to project-generated traffic is 1.8 dBA L_{dn} on Harbor Blvd. north of E. 8th St.

EVALUATION OF TRANSPORTATION NOISE SOURCES ON THE PROJECT SITE

ON-SITE TRANSPORTATION NOISE PREDICTION METHODOLOGY

Saxelby Acoustics used the SoundPLAN noise model to calculate traffic noise levels at the proposed residential uses due to traffic on Harbor Street, E. 3rd Street, and E. 8th Street. The proposed project buildings and surrounding structures were input into the SoundPLAN model to determine the traffic noise exposure on the project site. Future traffic noise levels for the local roadways were calculated based upon cumulative plus project traffic volumes (Fehr & Peers, 2022). The results of this analysis are shown graphically on **Figure 3**.



Harbor View Residential

City of Pittsburg, California

Figure 3

Cumulative Plus Project Transportation Noise Contours (dBA L_{dn}/CNEL)

Signs and symbols

Property Line

Levels in dB(A)

<= 65
65 - 66
66 - 67
67 - 68
68 - 69
69 - 70
> 70

1 : 2700

0 12.5 25 50 75 100 m

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CONSTRUCTION NOISE ENVIRONMENT

During the construction of the proposed project noise from construction activities would temporarily add to the noise environment in the project vicinity. As shown in **Table 4**, activities involved in construction would generate maximum noise levels ranging from 76 to 90 dB at a distance of 50 feet.

TABLE 4: CONSTRUCTION EQUIPMENT NOISE

Type of Equipment	Maximum Level, dBA at 50 feet
Auger Drill Rig	84
Backhoe	78
Compactor	83
Compressor (air)	78
Concrete Saw	90
Dozer	82
Dump Truck	76
Excavator	81
Generator	81
Jackhammer	89
Pneumatic Tools	85

Source: *Roadway Construction Noise Model User's Guide*. Federal Highway Administration. FHWA-HEP-05-054. January 2006.

CONSTRUCTION VIBRATION ENVIRONMENT

The primary vibration-generating activities associated with the proposed project would occur during construction when activities such as grading, utilities placement, and parking lot construction occur. **Table 5** shows the typical vibration levels produced by construction equipment.

TABLE 5: VIBRATION LEVELS FOR VARIOUS CONSTRUCTION EQUIPMENT

Type of Equipment	Peak Particle Velocity at 25 feet (inches/second)	Peak Particle Velocity at 50 feet (inches/second)	Peak Particle Velocity at 100 feet (inches/second)
Large Bulldozer	0.089	0.031	0.011
Loaded Trucks	0.076	0.027	0.010
Small Bulldozer	0.003	0.001	0.000
Auger/drill Rigs	0.089	0.031	0.011
Jackhammer	0.035	0.012	0.004
Vibratory Hammer	0.070	0.025	0.009
Vibratory Compactor/roller	0.210 (Less than 0.20 at 26 feet)	0.074	0.026

Source: *Transit Noise and Vibration Impact Assessment Guidelines.* Federal Transit Administration. May 2006.

REGULATORY CONTEXT

FEDERAL

There are no federal regulations related to noise that apply to the Proposed Project.

STATE

There are no state regulations related to noise that apply to the Proposed Project.

LOCAL

City of Pittsburg General Plan

Exterior and interior noise standards for residential land uses are established within the City of Pittsburg General Plan Noise Element. Policies contained in the Noise Element applicable to the proposed project include:

Guiding Policies

12-G-1 Protect public health and welfare by eliminating or minimizing the effects of existing noise problems, and by preventing increased noise levels in the future.

12-G-2 Discourage the use of sound walls to mitigate traffic noise along all major corridors, except along State Route 4.

Implementing Policies

12-P-1 As part of development review, use Figure 12-3 (**Figure 4** below) (Noise and Land Use Compatibility Table – summarized below) to determine acceptable uses and installation requirements in noise impacted areas.

Exterior use areas associated with new single-family residences are considered *conditionally acceptable* if noise levels range from 55 to 70 dBA DNL, *normally unacceptable* if noise levels range from 70 to 75 dBA DNL, and *clearly unacceptable* if noise levels exceed 75 dBA DNL.

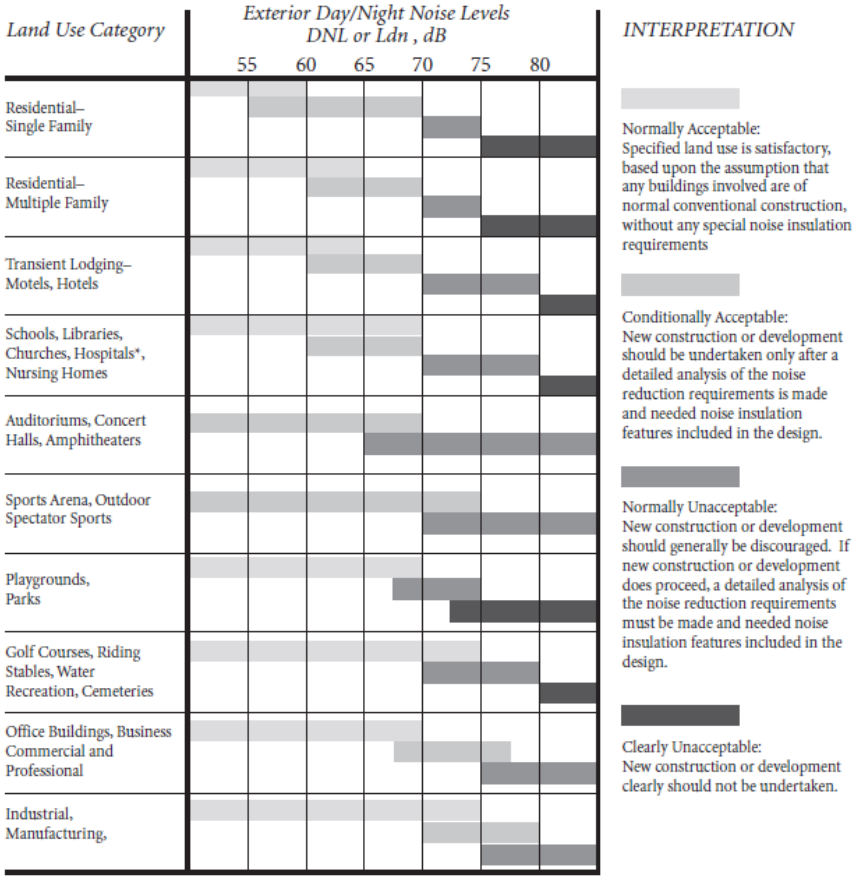
12-P-4 Require noise attenuation programs for new development exposed to noise above normally acceptable levels. Encourage noise attenuation programs that avoid visible sound walls.

12-P-6 Ensure that new noise-sensitive uses, including schools, hospitals, churches, and homes, in areas near roadways identified as impacting sensitive receptors by producing noise levels greater than 65 dB CNEL, incorporate mitigation measures to ensure that interior noise levels do not exceed 45 dB CNEL.

12-P-8 Develop noise attenuation programs for mitigation of noise adjacent to existing residential areas, including such measures as wider setbacks, intense landscaping, double-pane windows, and building orientation muffling the noise source.

12-P-9 Limit generation of loud noises on construction sites adjacent to existing developments to normal business hours between 8:00 AM and 5:00 PM.

FIGURE 4: LAND USE COMPATIBILITY CHART (TABLE 12-3 OF THE PITTSBURG GENERAL PLAN)



Source: Office of Planning and Research, State of California General Plan Guidelines, Appendix A: Guidelines for the Preparation and Content of the Noise Element of the General Plan, 1998.

*Because hospitals are often designed and constructed with high noise insulation properties, it is possible for them to be satisfactorily located in noisier areas.

Based upon Table 12-3 of the City of Pittsburg General Plan, residential uses are considered normally acceptable in ambient noise environments up to 60 dBA L_{dn}, and conditionally acceptable in noise environments up to 70 dBA L_{dn}. Policy 12-P-6 requires new sensitive receptors near roadways producing

noise levels greater than 65 dB CNEL to incorporate mitigation measures to ensure that interior noise levels do not exceed 45 dB CNEL.

Criteria for Acceptable Vibration

Vibration is like noise in that it involves a source, a transmission path, and a receiver. While vibration is related to noise, it differs in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to the vibration will depend on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities (ppv) in inches per second. Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of peak particle velocities.

Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. **Table 6**, which was developed by Caltrans, shows the vibration levels which would normally be required to result in damage to structures. The vibration levels are presented in terms of peak particle velocity in inches per second.

Table 6 indicates that the threshold for architectural damage to structures is 0.20 in/sec ppv. A threshold of 0.20 in/sec ppv is considered to be a reasonable threshold for short-term construction projects.

TABLE 6: EFFECTS OF VIBRATION ON PEOPLE AND BUILDINGS

Peak Particle Velocity		Human Reaction	Effect on Buildings
mm/second	in/second		
0.15-0.30	0.006-0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type
2.0	0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
2.5	0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of "architectural" damage to normal buildings
5.0	0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations)	Threshold at which there is a risk of "architectural" damage to normal dwelling - houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize "architectural" damage
10-15	0.4-0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage

Source: *Transportation Related Earthborne Vibrations.* Caltrans. TAV-02-01-R9601. February 20, 2002.

IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Appendix G of the CEQA Guidelines states that a project would normally be considered to result in significant noise impacts if noise levels conflict with adopted environmental standards or plans or if noise generated by the project would substantially increase existing noise levels at sensitive receivers on a permanent or temporary basis. Significance criteria for noise impacts are drawn from CEQA Guidelines Appendix G (Items XI [a-c]).

Would the project:

a. Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

b. Generate excessive groundborne vibration or groundborne noise levels?

c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Noise Level Increase Criteria for Long-Term Project-Related Noise Level Increases

The California Environmental Quality Act (CEQA) guidelines define a significant impact of a project if it "increases substantially the ambient noise levels for adjoining areas." Generally, a project may have a significant effect on the environment if it will substantially increase the ambient noise levels for adjoining areas or expose people to severe noise levels. In practice, more specific professional standards have been developed. These standards state that a noise impact may be considered significant if it would generate noise that would conflict with local project criteria or ordinances, or substantially increase noise levels at noise sensitive land uses. The potential increase in traffic noise from the project is a factor in determining significance. Research into the human perception of changes in sound level indicates the following:

- A 3-dB change is barely perceptible,
- A 5-dB change is clearly perceptible, and
- A 10-dB change is perceived as being twice or half as loud.

A limitation of using a single noise level increase value to evaluate noise impacts is that it fails to account for pre-project-noise conditions. **Table 7** is based upon recommendations made by the Federal Interagency Committee on Noise (FICON) to provide guidance in the assessment of changes in ambient noise levels resulting from aircraft operations. The recommendations are based upon studies that relate aircraft noise levels to the percentage of persons highly annoyed by the noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, it has been accepted that they are applicable to all sources of noise described in terms of cumulative noise exposure metrics such as the L_{dn}.

TABLE 7: SIGNIFICANCE OF CHANGES IN NOISE EXPOSURE

Ambient Noise Level Without Project, L_{dn}	Increase Required for Significant Impact
<60 dB	+5.0 dB or more
60-65 dB	+3.0 dB or more
>65 dB	+1.5 dB or more

Source: Federal Interagency Committee on Noise (FICON)

Based on the **Table 7** data, an increase in the traffic noise level of 5 dB or more would be significant where the pre-project noise levels are less than 60 dB L_{dn}, or 3 dB or more where existing noise levels are between 60 to 65 dB L_{dn}. Extending this concept to higher noise levels, an increase in the traffic noise level of 1.5 dB or more may be significant where the pre-project traffic noise level exceeds 65 dB L_{dn}. The rationale for the **Table 7** criteria is that, as ambient noise levels increase, a smaller increase in noise resulting from a project is sufficient to cause annoyance.

PROJECT-SPECIFIC IMPACTS AND MITIGATION MEASURES

Impact 1: ***Would the project generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?***

Traffic Noise Increases

As shown in **Table 3**, the maximum increase in traffic noise is predicted to be 1.8 dBA along Harbor St. near E. 8th St. under the proposed project. The existing traffic noise level for this segment is 56.8 dBA L_{dn}. Based upon the **Table 7** FICON criteria, where traffic noise levels are less than 60 dBA L_{dn} at the outdoor activity areas of noise-sensitive uses, a traffic noise level increase of less than 5 dBA L_{dn} is not considered significant.

Increases in noise levels due to project-generated traffic at all other roadway segments are predicted to be less than 1.5 dBA L_{dn}. Where existing traffic noise levels are greater than 65 dBA L_{dn} at the outdoor activity areas of noise-sensitive uses, a 1.5 dBA L_{dn} increase in roadway noise levels will be considered significant. Therefore, impacts resulting from increased traffic noise would be considered ***less-than-significant***.

Construction Noise

During the construction phases of the project, noise from construction activities would add to the noise environment in the immediate project vicinity. As indicated in **Table 5**, activities involved in construction would generate maximum noise levels ranging from 76 to 90 dBA L_{max} at a distance of 50 feet. Most of the building construction would occur at distances of 50 feet or greater from the nearest residences. Construction noise associated with streets would be similar to noise that would be associated with public works projects, such as a roadway widening or paving projects.

Construction activities would be temporary in nature and are anticipated to occur during normal daytime working hours. The City of Pittsburg General Plan policy 12-P-9 limits generation of loud noises on construction sites adjacent to existing developments to normal business hours between 8:00 AM and 5:00 PM.

Noise would also be generated during the construction phase by increased truck traffic on area roadways. A project-generated noise source would be truck traffic associated with transport of heavy materials and equipment to and from the construction site. This noise increase would be of short duration, and would likely occur primarily during daytime hours.

Although construction activities are temporary in nature and would likely occur during normal daytime working hours, construction-related noise could result in sleep interference at existing noise-sensitive land uses in the vicinity of the construction if construction activities were to occur outside the normal daytime hours. Therefore, impacts resulting from noise levels temporarily exceeding the threshold of significance due to construction would be considered ***potentially significant***.

Exterior noise at New Sensitive Receptors (Non-CEQA Issue)

Exterior Transportation Noise

Compliance with City standards on new noise-sensitive receptors is not a CEQA consideration. However, this information is provided here so that a determination can be made regarding the ability of the proposed project to meet the requirements of the City of Pittsburg for exterior and interior noise levels at new sensitive uses proposed under the project.

As shown on **Figure 3**, a single lot at the northwest corner of the project site is predicted to be exposed to exterior noise levels less than the City's 65 dBA exterior standard established by Policy 12-P-6.

Interior Transportation Noise

As illustrated on **Figure 3**, exterior noise levels at the proposed residential uses along E. 3rd Street are predicted to be 66 dBA L_{dn}/CNEL or less at second floor locations. This falls under the City of Pittsburg's "Conditionally Acceptable" range in the Land Use Compatibility Chart (**Figure 4**). The City requires building construction to be analyzed to ensure that interior noise levels do not exceed 45 dBA CNEL where noise levels due to transportation exceed 65 dBA CNEL.

Modern building construction methods typically yield an exterior-to-interior noise level reduction of 25 dBA. Therefore, where exterior noise levels are 70 dBA L_{dn}/CNEL, or less, no additional interior noise control measures are typically required. For this project, exterior noise levels are predicted to be 66 dBA CNEL or less, resulting in an interior noise level of 41 dBA CNEL or less based on typical building construction. This complies with the City of Pittsburg interior noise level standard of 45 dBA CNEL. Therefore, no additional noise control measures would be required to meet the interior noise level standards.

Mitigation Measures

1(a) The County shall establish the following as conditions of approval for any permit that results in the use of construction equipment:

- Construction activities (excluding activities that would result in a safety concern to the public or construction workers) shall be limited to between the daytime hours of 8 AM and 5 PM.
- Construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturers' recommendations. Equipment engine shrouds shall be closed during equipment operation.
- When not in use, motorized construction equipment shall not be left idling for more than 5 minutes.
- Stationary equipment (power generators, compressors, etc.) shall be located at the furthest practical distance from nearby noise-sensitive land uses or sufficiently shielded to reduce noise-related impacts.

Timing/Implementation: Implemented prior to approval of grading and/or building permits
Enforcement/Monitoring: City of Pittsburg Community Development Department

Implementation of mitigation measures 1(a) would help to reduce construction-generated noise levels. With mitigation, this impact would be considered ***less-than-significant***.

Impact 2: Would the project generate excessive groundborne vibration or groundborne noise levels?

Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage can take the form of cosmetic or structural.

The **Table 5** data indicate that construction vibration levels anticipated for the project are less than the 0.2 in/sec threshold at distances of 26 feet. Sensitive receptors which could be impacted by construction related vibrations, especially vibratory compactors/rollers, are located approximately 26 feet, or further, from typical construction activities. At these distances construction vibrations are not predicted to exceed acceptable levels. Additionally, construction activities would be temporary in nature and would likely occur during normal daytime working hours.

This is a **less-than-significant** impact and no mitigation is required.

Impact 3: ***For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?***

There are no airports in the project vicinity. Therefore, this impact is not applicable to the proposed project.

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Appendix A: Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
ASTC	Apparent Sound Transmission Class. Similar to STC but includes sound from flanking paths and correct for room reverberation. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by +5 dBA and nighttime hours weighted by +10 dBA.
DNL	See definition of Ldn.
IIC	Impact Insulation Class. An integer-number rating of how well a building floor attenuates impact sounds, such as footsteps. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz (Hz).
Ldn	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
Lmax	The highest root-mean-square (RMS) sound level measured over a given period of time.
L(n)	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L50 is the sound level exceeded 50% of the time during the one-hour period.
Loudness	A subjective term for the sensation of the magnitude of sound.
NIC	Noise Isolation Class. A rating of the noise reduction between two spaces. Similar to STC but includes sound from flanking paths and no correction for room reverberation.
NNIC	Normalized Noise Isolation Class. Similar to NIC but includes a correction for room reverberation.
Noise	Unwanted sound.
NRC	Noise Reduction Coefficient. NRC is a single-number rating of the sound-absorption of a material equal to the arithmetic mean of the sound-absorption coefficients in the 250, 500, 1000, and 2,000 Hz octave frequency bands rounded to the nearest multiple of 0.05. It is a representation of the amount of sound energy absorbed upon striking a particular surface. An NRC of 0 indicates perfect reflection; an NRC of 1 indicates perfect absorption.
RT60	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
Sabin	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 Sabin.
SEL	Sound Exposure Level. SEL is a rating, in decibels, of a discrete event, such as an aircraft flyover or train pass by, that compresses the total sound energy into a one-second event.
SPC	Speech Privacy Class. SPC is a method of rating speech privacy in buildings. It is designed to measure the degree of speech privacy provided by a closed room, indicating the degree to which conversations occurring within are kept private from listeners outside the room.
STC	Sound Transmission Class. STC is an integer rating of how well a building partition attenuates airborne sound. It is widely used to rate interior partitions, ceilings/floors, doors, windows and exterior wall configurations. The STC rating is typically used to rate the sound transmission of a specific building element when tested in laboratory conditions where flanking paths around the assembly don't exist. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Threshold of Hearing	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
Threshold of Pain	Approximately 120 dB above the threshold of hearing.
Impulsive	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
Simple Tone	Any sound which can be judged as audible as a single pitch or set of single pitches.

Appendix B: Continuous Ambient Noise Measurement Results

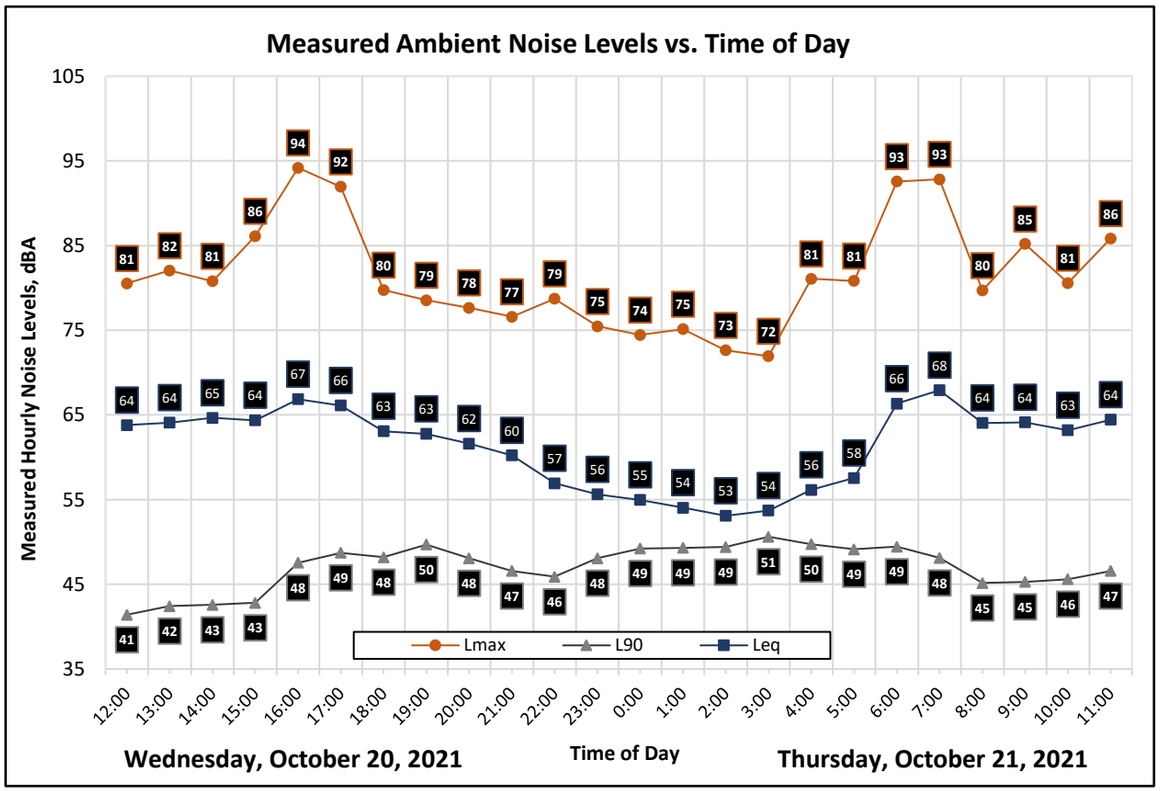


Appendix B1: Continuous Noise Monitoring Results

Site: LT-1
Project: Harbor View Residential
Location: Northern Project Boundary
Coordinates: 38.0322572°, -121.8788011°
Meter: LDL 820-1
Calibrator: CAL200

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Wednesday, October 20, 2021	12:00	64	81	53	41
Wednesday, October 20, 2021	13:00	64	82	54	42
Wednesday, October 20, 2021	14:00	65	81	56	43
Wednesday, October 20, 2021	15:00	64	86	53	43
Wednesday, October 20, 2021	16:00	67	94	54	48
Wednesday, October 20, 2021	17:00	66	92	56	49
Wednesday, October 20, 2021	18:00	63	80	52	48
Wednesday, October 20, 2021	19:00	63	79	54	50
Wednesday, October 20, 2021	20:00	62	78	51	48
Wednesday, October 20, 2021	21:00	60	77	50	47
Wednesday, October 20, 2021	22:00	57	79	49	46
Wednesday, October 20, 2021	23:00	56	75	51	48
Thursday, October 21, 2021	0:00	55	74	51	49
Thursday, October 21, 2021	1:00	54	75	51	49
Thursday, October 21, 2021	2:00	53	73	51	49
Thursday, October 21, 2021	3:00	54	72	53	51
Thursday, October 21, 2021	4:00	56	81	52	50
Thursday, October 21, 2021	5:00	58	81	50	49
Thursday, October 21, 2021	6:00	66	93	51	49
Thursday, October 21, 2021	7:00	68	93	54	48
Thursday, October 21, 2021	8:00	64	80	52	45
Thursday, October 21, 2021	9:00	64	85	50	45
Thursday, October 21, 2021	10:00	63	81	51	46
Thursday, October 21, 2021	11:00	64	86	53	47

Statistics	Leq	Lmax	L50	L90
Day Average	64	83	53	46
Night Average	59	78	51	49
Day Low	60	77	50	41
Day High	68	94	56	50
Night Low	53	72	49	46
Night High	66	93	53	51
Ldn	67	Day %		86
CNEL	67	Night %		14



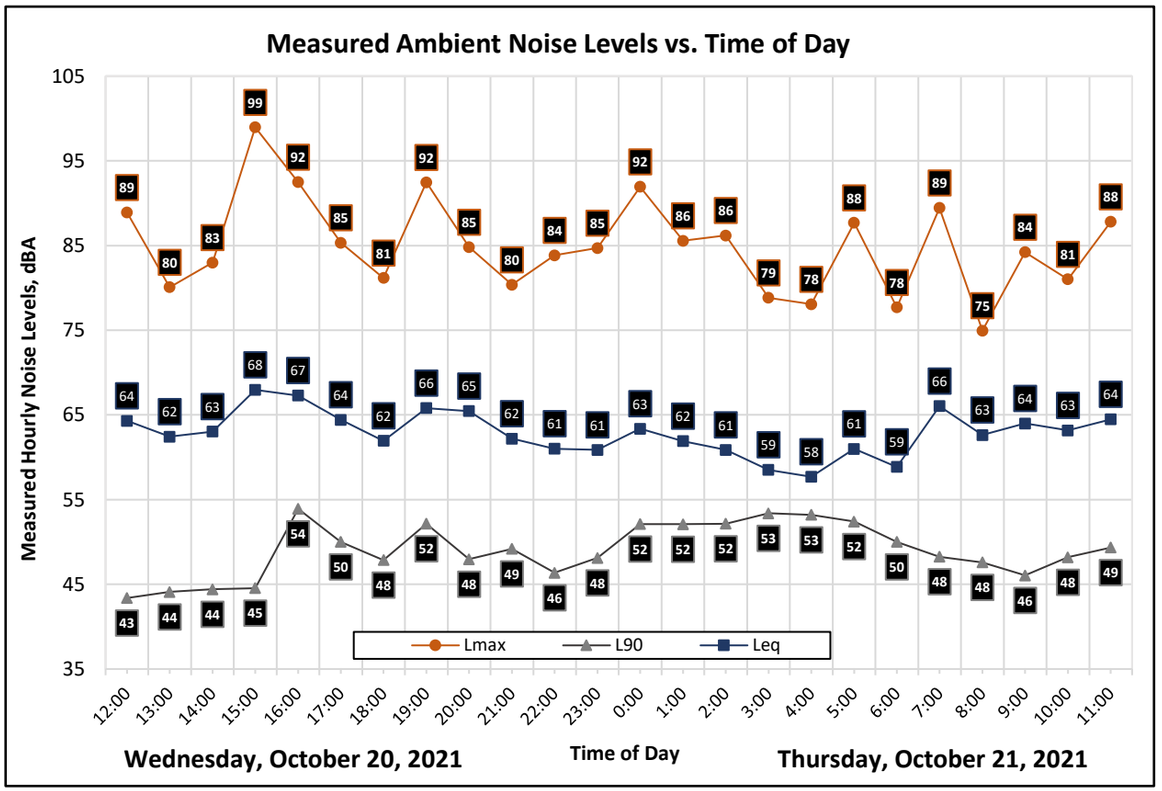


Appendix B2: Continuous Noise Monitoring Results

Site: LT-2
Project: Harbor View Residential
Location: Eastern Project Boundary
Coordinates: 38.0310870°, -121.8774275°
Meter: LDL 820-9
Calibrator: CAL200

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Wednesday, October 20, 2021	12:00	64	89	53	43
Wednesday, October 20, 2021	13:00	62	80	54	44
Wednesday, October 20, 2021	14:00	63	83	55	44
Wednesday, October 20, 2021	15:00	68	99	56	45
Wednesday, October 20, 2021	16:00	67	92	58	54
Wednesday, October 20, 2021	17:00	64	85	58	50
Wednesday, October 20, 2021	18:00	62	81	52	48
Wednesday, October 20, 2021	19:00	66	92	56	52
Wednesday, October 20, 2021	20:00	65	85	52	48
Wednesday, October 20, 2021	21:00	62	80	52	49
Wednesday, October 20, 2021	22:00	61	84	50	46
Wednesday, October 20, 2021	23:00	61	85	52	48
Thursday, October 21, 2021	0:00	63	92	54	52
Thursday, October 21, 2021	1:00	62	86	54	52
Thursday, October 21, 2021	2:00	61	86	54	52
Thursday, October 21, 2021	3:00	59	79	55	53
Thursday, October 21, 2021	4:00	58	78	55	53
Thursday, October 21, 2021	5:00	61	88	54	52
Thursday, October 21, 2021	6:00	59	78	53	50
Thursday, October 21, 2021	7:00	66	89	54	48
Thursday, October 21, 2021	8:00	63	75	54	48
Thursday, October 21, 2021	9:00	64	84	53	46
Thursday, October 21, 2021	10:00	63	81	55	48
Thursday, October 21, 2021	11:00	64	88	57	49

Statistics	Leq	Lmax	L50	L90
Day Average	65	86	55	48
Night Average	61	84	53	51
Day Low	62	75	52	43
Day High	68	99	58	54
Night Low	58	78	50	46
Night High	63	92	55	53
Ldn	68	Day %		81
CNEL	68	Night %		19



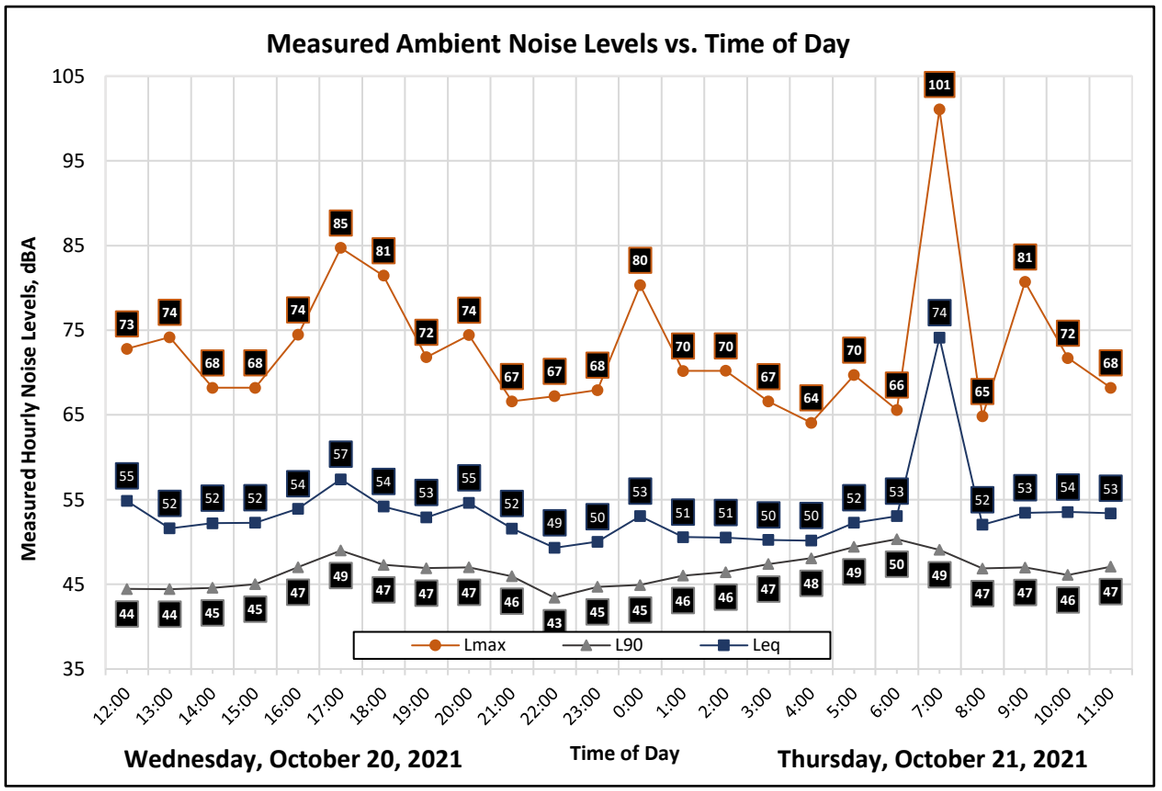


Appendix B3: Continuous Noise Monitoring Results

Site: LT-3
Project: Harbor View Residential
Location: Southern Project Boundary
Coordinates: 38.0282238°, -121.8789735°
Meter: LDL 820-3
Calibrator: CAL200

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Wednesday, October 20, 2021	12:00	55	73	49	44
Wednesday, October 20, 2021	13:00	52	74	49	44
Wednesday, October 20, 2021	14:00	52	68	49	45
Wednesday, October 20, 2021	15:00	52	68	49	45
Wednesday, October 20, 2021	16:00	54	74	50	47
Wednesday, October 20, 2021	17:00	57	85	52	49
Wednesday, October 20, 2021	18:00	54	81	50	47
Wednesday, October 20, 2021	19:00	53	72	49	47
Wednesday, October 20, 2021	20:00	55	74	50	47
Wednesday, October 20, 2021	21:00	52	67	48	46
Wednesday, October 20, 2021	22:00	49	67	45	43
Wednesday, October 20, 2021	23:00	50	68	46	45
Thursday, October 21, 2021	0:00	53	80	48	45
Thursday, October 21, 2021	1:00	51	70	47	46
Thursday, October 21, 2021	2:00	51	70	48	46
Thursday, October 21, 2021	3:00	50	67	49	47
Thursday, October 21, 2021	4:00	50	64	49	48
Thursday, October 21, 2021	5:00	52	70	51	49
Thursday, October 21, 2021	6:00	53	66	52	50
Thursday, October 21, 2021	7:00	74	101	51	49
Thursday, October 21, 2021	8:00	52	65	50	47
Thursday, October 21, 2021	9:00	53	81	50	47
Thursday, October 21, 2021	10:00	54	72	49	46
Thursday, October 21, 2021	11:00	53	68	51	47

Statistics	Leq	Lmax	L50	L90
Day Average	63	75	50	47
Night Average	51	69	48	47
Day Low	52	65	48	44
Day High	74	101	52	49
Night Low	49	64	45	43
Night High	53	80	52	50
Ldn	62	Day %		96
CNEL	62	Night %		4





Appendix C: Traffic Noise Calculation Inputs and Results



Appendix C-1
FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Project #: 211007
Description: Harbor View Residential - Existing Traffic
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway	Segment	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	Contours (ft.) - No Offset 60 dBA	65 dBA	70 dBA	Level, dBA
1	Railroad Ave.	North of E. 8th St.	4,350	85	0	15	1.0%	1.0%	25	45	-5	37	17	8	53.8
2	E. 8th St.	East of Railroad Ave.	300	96	0	4	1.0%	1.0%	30	50	-5	6	3	1	40.7
3	Harbor St.	North of E. 8th St.	2,790	81	0	19	1.0%	1.0%	35	75	0	46	21	10	56.8
4	Railroad Ave.	North of E. 10th St.	6,850	85	0	15	1.0%	1.0%	25	300	0	51	23	11	48.4
5	E. 10th St.	East of Railroad Ave.	6,360	85	0	15	1.0%	1.0%	30	35	0	62	29	13	63.7
6	Harbor St.	South of E. 10th St.	4,810	81	0	19	1.0%	1.0%	35	60	0	66	31	14	60.6

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Appendix C-2

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Project #: 211007
Description: Harbor View Residential - Existing Plus Project Traffic
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway	Segment	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	Contours (ft.) - No Offset 60 dBA	65 dBA	70 dBA	Level, dBA
1	Railroad Ave.	North of E. 8th St.	5,000	85	0	15	1.0%	1.0%	25	45	-5	41	19	9	54.4
2	E. 8th St.	East of Railroad Ave.	410	96	0	4	1.0%	1.0%	30	50	-5	7	3	1	42.1
3	Harbor St.	North of E. 8th St.	4,160	81	0	19	1.0%	1.0%	35	75	0	60	28	13	58.6
4	Railroad Ave.	North of E. 10th St.	7,520	85	0	15	1.0%	1.0%	25	300	0	54	25	12	48.8
5	E. 10th St.	East of Railroad Ave.	6,810	85	0	15	1.0%	1.0%	30	35	0	64	30	14	64.0
6	Harbor St.	South of E. 10th St.	5,870	81	0	19	1.0%	1.0%	35	60	0	76	35	16	61.5

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Appendix C-3

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Project #: 211007
Description: Harbor View Residential - Near Term Traffic
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway	Segment	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	Contours (ft.) - No Offset 60 dBA	65 dBA	70 dBA	Level, dBA
1	Railroad Ave.	North of E. 8th St.	5,340	85	0	15	1.0%	1.0%	25	45	-5	43	20	9	54.7
2	E. 8th St.	East of Railroad Ave.	330	96	0	4	1.0%	1.0%	30	50	-5	6	3	1	41.1
3	Harbor St.	North of E. 8th St.	2,810	81	0	19	1.0%	1.0%	35	75	0	46	21	10	56.9
4	Railroad Ave.	North of E. 10th St.	8,200	85	0	15	1.0%	1.0%	25	300	0	57	26	12	49.2
5	E. 10th St.	East of Railroad Ave.	7,000	85	0	15	1.0%	1.0%	30	35	0	66	30	14	64.1
6	Harbor St.	South of E. 10th St.	4,860	81	0	19	1.0%	1.0%	35	60	0	67	31	14	60.7

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Appendix C-4

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Project #: 211007
Description: Harbor View Residential - Near Term Plus Project
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway	Segment	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	Contours (ft.) - No Offset 60 dBA	65 dBA	70 dBA	Level, dBA
1	Railroad Ave.	North of E. 8th St.	5,990	85	0	15	1.0%	1.0%	25	45	-5	46	21	10	55.2
2	E. 8th St.	East of Railroad Ave.	440	96	0	4	1.0%	1.0%	30	50	-5	7	3	2	42.4
3	Harbor St.	North of E. 8th St.	4,180	81	0	19	1.0%	1.0%	35	75	0	60	28	13	58.6
4	Railroad Ave.	North of E. 10th St.	8,870	85	0	15	1.0%	1.0%	25	300	0	60	28	13	49.5
5	E. 10th St.	East of Railroad Ave.	7,450	85	0	15	1.0%	1.0%	30	35	0	68	32	15	64.4
6	Harbor St.	South of E. 10th St.	5,920	81	0	19	1.0%	1.0%	35	60	0	76	35	16	61.5

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Appendix C-5

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Project #: 211007
Description: Harbor View Residential - Cumulative
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway	Segment	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	Contours (ft.) - No Offset 60 dBA	65 dBA	70 dBA	Level, dBA
1	Railroad Ave.	North of E. 8th St.	5,700	85	0	15	1.0%	1.0%	25	45	-5	45	21	10	55.0
2	E. 8th St.	East of Railroad Ave.	500	96	0	4	1.0%	1.0%	30	50	-5	8	4	2	42.9
3	Harbor St.	North of E. 8th St.	3,600	81	0	19	1.0%	1.0%	35	75	0	55	25	12	57.9
4	Railroad Ave.	North of E. 10th St.	9,000	85	0	15	1.0%	1.0%	25	300	0	61	28	13	49.6
5	E. 10th St.	East of Railroad Ave.	9,100	85	0	15	1.0%	1.0%	30	35	0	78	36	17	65.2
6	Harbor St.	South of E. 10th St.	5,300	81	0	19	1.0%	1.0%	35	60	0	71	33	15	61.1

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Appendix C-6

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Project #: 211007
Description: Harbor View Residential - Cumulative Plus Project
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway	Segment	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	Contours (ft.) - No Offset 60 dBA	65 dBA	70 dBA	Level, dBA
1	Railroad Ave.	North of E. 8th St.	6,350	85	0	15	1.0%	1.0%	25	45	-5	48	22	10	55.4
2	E. 8th St.	East of Railroad Ave.	610	96	0	4	1.0%	1.0%	30	50	-5	9	4	2	43.8
3	Harbor St.	North of E. 8th St.	4,970	81	0	19	1.0%	1.0%	35	75	0	68	31	15	59.3
4	Railroad Ave.	North of E. 10th St.	9,670	85	0	15	1.0%	1.0%	25	300	0	64	30	14	49.9
5	E. 10th St.	East of Railroad Ave.	9,550	85	0	15	1.0%	1.0%	30	35	0	81	37	17	65.4
6	Harbor St.	South of E. 10th St.	6,360	81	0	19	1.0%	1.0%	35	60	0	80	37	17	61.9

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